Ernst Kurth at the Boundary of Music Theory and Psychology

by

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Biographical Sketch

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Abstract

This dissertation provides an in-depth account of the final published monograph of Ernst Kurth (1886–1946), *Musikpsychologie* (1931), together with discussion of its larger music theoretical, music psychological, and philosophical context, and its critical reception. Kurth is best known to Anglo-American audiences for three influential publications written between 1917 and 1925. In them, he presents analyses of the music of Bach, Wagner, and Bruckner that are as ambitious in scope as they are idiosyncratic. Rather than a précis of his earlier writings, *Musikpsychologie* offers an original theory of music-as-experienced—one that Kurth envisions as centrally located within the wider disciplinary network of *Musikwissenschaft*.

Part One of the dissertation outlines foundational aspects of Kurth's theory. Drawing on letters and contemporaneous reviews of *Musikpsychologie*, as well as Kurth's own references to secondary sources, it focuses on the psychological principles and philosophies that inform his study. The project evaluates Kurth's attempts to distinguish his work from other approaches to music and the mind, notably those of the "tone psychologists" (including Carl Stumpf) and Hugo Riemann's theory of *Tonvorstellungen*. It illuminates Kurth's concern for "musical forces" and metaphorical language. In his estimation, analogies between music and the observable world are inevitable yet limited in their ability to clarify the listening experience.

Within the context of the above foundations, Part Two of the dissertation examines Kurth's system of harmony as it appears in *Musikpsychologie*. This system is approached from three perspectives and three questions: a) chordal

fusion, or how it is that we sense simultaneous tones as harmonious; b) chordal tension, or why we feel tension when hearing simultaneous tones; and c) chordal movement, or what underlying principles govern our responses to the succession of chords. Many of the ideas presented in 1931 are found in germinal form in Kurth's habilitation thesis, *Die Voraussetzungen der theoretischen Harmonik* (1913). This study underscores points of connection between these two works and moreover, the evolution of Kurth's thinking. The final chapter considers issues of form and rhythm in *Musikpsychologie*, setting the course for future research. The dissertation includes extensive, original translation of the source material.

Contributors and Funding Sources

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PREFACE

In the past two decades, the work of Ernst Kurth (1886–1946) has gained greater recognition among Anglo-American scholars. This heightened awareness is due in large part to the research of Lee A. Rothfarb, who has produced several seminal translations and critical commentaries of Kurth's writings. Rothfarb's most frequently cited publications, *Ernst Kurth as Theorist and Analyst* and *Ernst Kurth: Selected Writings*,[1] focus specifically on three books in Kurth's output: *Grundlagen des linearen Kontrapunkts* (1917), *Romantische Harmonik und ihre Krise in Wagners 'Tristan'* (1920), and *Bruckner* (1925). Rothfarb views Kurth's central three tomes as "analytical monographs," and felicitously foregrounds Kurth's analytical discussions of music by Bach, Wagner, and Bruckner.[2] Moreover, he provides thoughtful accounts of the historical and cultural milieu in which Kurth worked as well as detailed biographical sketches.

Kurth's writings captured readers' imaginations both at home and abroad during their time. Milton Babbitt, for instance, recalls the significant impact Kurth had on composers and theorists alike in the 1920s and 1930s.[3] Through Rothfarb's translations, Kurth's writings have proven equally provocative today, as diverse

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[1] Respectively, Rothfarb 1988 and Rothfarb 1991.

[2] Rothfarb 2002, 940. Kurth analyzes the music of Bach, Wagner, and Bruckner in, respectively, Kurth 1917, Kurth 1920, and Kurth 1925.

[3] Babbitt (1991), writes with regard to Kurth's article, "Zur Motivbildungs Bachs" (1917): "There were other important *Bach-Jarbuch* articles, such as one in 1917 on motive structure in Bach by Ernst Kurth, who is now very celebrated. There you had, purely with regard to Bach, something that was of fundamental concern to composers five years later. A devastatingly saturated series of conversations about motivic saturation began to appear in journals" (127). Ernst Krenek, too, took a strong interest in Kurth's *Grundlagen des linearen Kontrapunkts* (1917) and paid a visit to Kurth in Bern. See Rothfarb 1988, 225; 233n33.

references to Kurth in recent literature illustrate.[4] We can safely say, then, that within our history of music theory, Kurth's membership in a group of canonic twentieth-century writers is secure. And yet, he is often situated at the fringe of this group—his approach to music presented as an alternative to those of more familiar individuals, notably Hugo Riemann, Heinrich Schenker, and Arnold Schoenberg.[5] For though Kurth's "dynamic modes of analysis" are familiar to us, the same cannot be said for the broader theoretical and philosophical framework undergirding his analytical findings.[6] Kurth the theorist remains an enigmatic figure.

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[4] See, for example: Matthew Riley's (2003) comparison of Kurth's "analytical vocabulary [in his writings on Bach]" with "the language that [twentieth-century] art critics used to describe interlaced ornament" (72); Byron Almén's (2005) temperament theory, in which Kurth is an exemplary "noetic individual" (59–60); and Seth Monahan's (2008) kinetic displacement theory, which "owes no small debt to Ernst Kurth's . . . energetic image of Wagner's music" (2).

[5] The brief discussions of Kurth in *The Cambridge History of Western Music Theory* exemplify his peripheral position in Anglo-American literature: Justin London includes Kurth as one of those "react[ing] to Riemann" in "Rhythm in twentieth-century theory" (Ch. 22, 695–97); Brian Hyer compares Kurth's analytical approaches to Romantic harmony to that of Schoenberg in "Tonality" (Ch. 23, 743); and Rothfarb, too, associates Kurth with other late-19th- and early-20th-century writers who "saw themselves as missionaries with the sacred duty of rescuing and reviving a moribund musical culture" in "Energetics" (Ch. 30, 939–44). The situation is very different in Europe, as exemplified by Helmut Federhofer's monograph (Federhofer 1981), the title of which places Kurth second after Riemann, presuming him to be better known than Schenker, who comes in third.

[6] I borrow this characterization of Kurth's approach from Parkany 1989, 82. "Energetic" is another popular description of Kurth's analytical writings. It should be noted, however, that the original monographs do contain more general, speculative passages. Kurth himself describes the contents of *Grundlagen* as follows:

> Aufbau einer völlig neuen Kontrapunkttheorie, die von der melodischen Linie als Einheit und Ursprung ihren Ausgang nimmt. . . . Nach dieser theoretischen Grundlegung (S. 1–146) wird der praktische Aufbau der linearen Kontrapunktik gleich am Bachschen Vorbild als ihrer höchsten Ausprägung durchgeführt.
>
> [Development of an entirely new theory of counterpoint, which takes as its starting point the melodic line as a unity and [point of] origin. . . . After this theoretical

Patrick McCreless cites an oft-mentioned impediment to understanding and extending Kurth's ideas:

> Kurth's dependence upon an analytical terminology which is psychological and metaphorical in character, and which indeed constitutes a personal and almost mystical language unique to his theories, was an obstacle to the acceptance of those theories in his own day and remains so for us now.[7]

That is, Kurth's method of analysis relies heavily on descriptive text that is "psychological and metaphorical" in tone, eschewing more familiar, positivistic music-theoretical frameworks. McCreless notes further with regard to *Romantische Harmonik* that actually, "what is most important to Kurth himself is his elaboration of the sources and manifestations of the Romantic psychology" even if "what is most interesting to us now are the analyses that he adduces as musical evidence to buttress his stylistic, psychological and historical hypotheses." To understand Kurth's ideas on music—and I would add, to comprehend Kurth's choice of musical evidence more fully—"require[s] a grasp of their philosophical and psychological underpinnings."[8]

I suggest that we can come much closer to understanding Kurth as a theorist, analyst, and moreover, as a historian and philosopher, through close

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foundation (pp. 1–146), the practical development of linear contrapuntal technique is worked through using the Bachian model as its highest expression.]
See Fischer 1986–87, 16. *Grundlagen* is exceptional in presenting an initial "theoretical" section, however; for the most part, Kurth's speculative formulations are interspersed among his analytical remarks. As Parkany (1988) describes, "in the best traditions of Teutonic idealism, [Kurth] apportioned his [three] critical publications into grandiose and unwieldy components, in each of which one composer's work is made the paragon for a broad aspect of musical construction" (264).

[7] McCreless 1983, 57.

[8] McCreless, 1983, 58.

study of *Musikpsychologie* (1931), Kurth's final publication.[9] In it, Kurth presents more systematically and clearly than ever before the essence of his original ideas about music and the musical experience. At the same time, his approach in this monograph departs from that of the three preceding books in significant ways. Kurth outlines his goals and methodology in the Foreword:

> Was hier als Musikpsychologie betrachtet wird, ist weder eine Tonpsychologie noch eine Ästhetik der Musik; daher auch keine Untersuchung des künstlerischen Schaffens, sondern jener psychischen Funktionen, die erst dem musikalischen Hören überhaupt zugrunde liegen, somit auch jeglicher Ästhetik, Theorie, Stilistik und weiteren Gebieten der Musikforschung. . . . Der Stoff unterliegt damit der Wechselbeziehung zweier Gebiete, der Musik und der Psychologie. Von allen tongesetzlichen Phänomenen war die Verbindung zur Psychologie zu suchen, somit vornehmlich an der Grenze beider Wissenschaften ein Material aufzuschichten.
>
> [What is here regarded as "*Musikpsychologie*" is neither a psychology of tone nor an aesthetic of music; thus this is not an investigation of artistic production, but rather of **psychic functions** that form the basis primarily of **musical hearing in general** and consequently of any aesthetics, theory, stylistics, and other areas of music research. . . . For this reason **the contents of this book are governed by the interaction of two areas, music and psychology**. The goal of this study is to locate the connection to psychology for all phenomena that are subject to tonal laws, and therefore, to assemble, above all, material on the frontier of both sciences [music and psychology].[10]

Indeed, in comparison to his prior analytical books, Kurth's use of music examples and references to specific works are minimal ("this is not an investigation of

[9] Kurth began to show signs of Parkinson's disease shortly after *Musikpsychologie* was published. According to Rothfarb (1988), "There were to be no more books [after 1931], though Kurth had planned and begun preliminary work on a history of opera, one of his favorite subjects" (22). Kurt von Fischer, a student of Kurth, provides a complete list of Kurth's works in Fischer 1986–87, 20. In his will, Kurth requested that all of his incomplete manuscripts be destroyed. See Alfred Einstein to Marie-Louise Kurth, 17 May 1947, E1.14, Volltextbriefe zum Inventar Nachlass Kurth, Institut für Musikwissenschaft, Universität Bern.

[10] Kurth 1931, x; emphasis added in bold.

artistic production"); musical notation is conspicuously absent.[11] One could even suggest, as Adorno does, that Kurth's orientation in *Musikpsychologie* is historically neutral.[12] This is not to suggest, however, that Kurth takes a stylistically insensitive approach—which would present a sharp about-turn for the author of *Grundlagen* and *Romantische Harmonik*—but conversely, that he focuses here on aspects of musical experience that govern musical practice across the centuries.[13] Further, Kurth's emphasis on "musical hearing in general" in the

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[11] Alfred Lorenz surmises that the cost of publication would have been prohibitive with notation. See Lorenz 1930, 187.

[12] Adorno (1931, 349) writes,

> Das Buch gibt ein großes Maß an Lösungen her und fast ein noch größeres an fruchtbaren Problemen. Das Drängendste erscheint mir: ob die Region Musik tatsächlich durch Rückgang auf ihre psychologische Konstitutionsweise sich erschließen läßt und ob vollends eine psychologische Begründung von Musik durch so allgemeine, historisch weithin indifferente Begriffe möglich ist, wie Kurth sie zugrunde legt.
>
> [The book [*Musikpsychologie*] provides considerable solutions and almost an even greater number of fruitful problems. The most pressing appears to me to be: whether the area of music can be accessible essentially through a reduction to the way it is structured psychologically, and whether a psychological foundation of music is fully possible through such general, to an extent **historically neutral** concepts, as Kurth takes them as a basis.] Emphasis added in bold.

[13] Dahlhaus (1973) voices a similar opinion specifically concerning Kurth's approach to tonality. See the epigraph to Chapter Four of this dissertation. Adorno (1933, 354–55), in turn, paints Kurth as forward-looking scholar—no less than an (unwitting) advocate of new music and an intellectual ally of Schoenberg (as long as discussions of Debussy and Skrjabin remain minimal):

> Es ist dabei, unterm Blickpunkt der aktuellen musikalischen Praxis, höchst aufschlußreich und bestätigend, daß viele der von Kurth *psychologisch* entwickelten Lehrmeinungen im Problemzusammenhang der Musik*theorie* bereits vor zwanzig Jahren in der Kurth offensichtlich unbekannten Harmonielehre von Schönberg als gültige Zeugnisse des kompositorischen Bewußteins vertreten waren. . . . Auch sonst enthält das Buch eine Fülle von Relationen zur neuen Musik, deren Wahrheitsgehalt um so verbürgter sich darstellt, je weniger Kurth die nach-Debussystische und nach-Skrjabinsche Produktion in den Kreis der Betrachtung zieht oder auch nur erkennt. . . . Auch die Forderungen des neuen *Reproduktionsstiles* melden sich in Kurths Buch hinter seinem Rücken zwar, doch vernehmlich an.

above passage underscores the purported universality of his ideas. Indeed, in a later passage, Kurth expresses his desire to reach a broad audience without advanced musical and/or psychological training:

> Damit ist dies Buch für jene Musiker bestimmt, die Interesse für Psychologie haben, zugleich will es aber dieser selbst dienen, auch dann, wenn der einzelne Leser keine näheren Beziehungen zur Musik haben sollte. Denn es galt, durchgängig deren Grundvorgänge bis zu Begriffen hinauszuleiten, die bereits der allgemeinen Psychologie angehören, und auch ohne Voraussetzung musiktheoretischer Sonderkenntnisse darzustellen.
>
> [This book is therefore designed for that musician who has an interest in psychology, but at the same time it will be useful even if some readers may not have a close relationship with music. It was a question of connecting music's basic processes throughout to concepts that already belonged in general psychology, and also to present them without the presumption of specialized music-theoretical knowledge.][14]

Lastly, Kurth's aim to "locate the connection to psychology" manifests itself in an unprecedented number of references to contemporaneous psychological sources, in addition to music-theoretical ones.[15] *Musikpsychologie* thus offers invaluable insight into not only Kurth's ideas but also the people and concepts to whom and which he was responding; more broadly, it provides a significant perspective from

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> [It is highly insightful and validating, under the point of view of current musical practice that many of what are for Kurth *psychologically* developed doctrines in the issues of music *theory*, were already taken up twenty years ago, apparently unbeknownst to Kurth, in the harmony treatise of Schoenberg as valid testimonies of compositional awareness. . . . Apart from that, the book contains an abundance of connections to new music, whose validity becomes even stronger, the less Kurth draws into consideration the post-Debussyian and post-Skrjabin production, or even only recognizes them. . . . Even the requirements of new *styles of reproduction* announce themselves distinctly in Kurth's book, though certainly behind his back.]

[14] Kurth 1931, x.

[15] In his retrospective article, Fischer (1986–87) remarks that *Musikpsychologie* is exceptional for its numerous bibliographical references (13).

which to consider his relation to the intellectual climate at the time. And this, in turn, as Arnold Whittall suggests, will allow "[Kurth's] analytical observations [to be placed] in their full and proper context."[16]

To date, the most comprehensive account of *Musikpsychologie* in the English-language literature appears within a recent dissertation by Youn Kim.[17] In it, Kim identifies a common concern for music in the mind in the nineteenth and early twentieth centuries, and she compares four very distinct theories of "musical hearing": those of Hermann von Helmholtz, Carl Stumpf, Riemann, and Kurth. Kim concentrates on points of connection and controversy among these four; as she suggests quite rightly, "these pioneers in the study of the perception of music shaped their thoughts through disagreements with each other."[18] The present dissertation takes up these threads as they pertain to Kurth. I delve deeper into some of the issues and controversies she highlights, demonstrating that many of Kurth's ideas in *Musikpsychologie* are indeed direct responses to the *Tonpsychologie* of Stumpf and Riemann's harmonic theory. In addition, I explore more traditional music-theoretical topics in Kurth's monograph, in particular his ideas about diatonic harmony, the tonal system, and their manifold extensions.

Overview of dissertation chapters

This dissertation is divided into two large parts. In Part One, I outline foundational aspects of Kurth's thinking, mostly as they are presented in

[16] Whittall 1992, 314.

[17] Youn Kim, "Theories of Musical Hearing, 1863–1931: Helmholtz, Stumpf, Riemann and Kurth in Historical Context" (Ph.D. dissertation, Columbia University, 2003).

[18] Kim 2003, 7.

Musikpsychologie but with an eye towards previous writings as well. His theory of harmony in the context of this foundation is at the heart of Part Two.

Drawing not on the natural sciences but on Gestalt psychology, Kurth positions his new psychology of music at the nexus of surrounding music research areas. In Chapter One, I assess the contemporaneous critical response to Kurth's new research program, and I highlight the philosophical threads in Kurth's writing that would have been immediately familiar to his contemporaries. Chapter Two takes a closer look at Kurth's attempts to distinguish his theory from others on music and the mind, notably that of the "tone psychologists," Stumpf among them, and the theory of *Tonvorstellungen* proposed by Riemann. We then narrow our focus in Chapter Three to examine a unique aspect of Kurth's writing: his employment of metaphors drawn from the physical and visual domains. We will see that his usage is deliberate and has, in his own estimation, limitations for understanding the true nature of musical phenomena and the listening experience.

Chapters Four through Six outline the broad theory of harmony Kurth presents in *Musikpsychologie*. As we will see in Chapter Four, he starts with a critique of Stumpf's theory of intervallic fusion, extending it to account for the sense of unity we perceive in chords. Chapter Five addresses dissonance: in particular, the distinction between acoustic and "musical" dissonance and sources for the latter. Chapter Six then illuminates Kurth's treatment of harmonic progression and chromaticism; we see how initial tendencies, or "leading-tone effects" inherent in the diatonic scale, bear directly on chordal motion and expansions of a diatonic framework. Finally, Chapter Seven begins with an

introduction to issues of form and rhythm in *Musikpsychologie*, setting the course for future research.

Translating and interpreting Kurth

Unless otherwise stated, all translations of *Musikpsychologie* along with other primary and secondary source materials are my own. In translating the former, I referred at various points to both the 1931 first edition and the 1947 reissue, which is an identical reproduction.[19] Kurth's emphases, represented in the original with greater spacing between alphabetic characters (as was customary), appear as underlined words in the translation. Where appropriate, my own emphases of his statements appear in bold.

In *Ernst Kurth Selected Writings*, Rothfarb outlines the primary stumbling blocks in translating Kurth: the metaphorical quality of his prose, which can "easily sound trite" or too "slick" when neutralized, or too "melodramatic" when rendered literally; the difficulty of translating recurrent expressions uniformly (very seldom does Kurth introduce a "term"); and Kurth's liberal use of synthetic compound words, which of course, is a challenge for any English-language translator of German.[20] In *Musikpsychologie*, where references to contemporaneous literature abound as fruits of Kurth's research, his "borrowed" terminology—either direct quotation or allusion—can send the translator scrambling for additional primary sources to gain greater perspective.

[19] The "Comment on the second edition" describes the 1947 second edition as an "unaltered imprint" (*unveränderter Abdruck*).

[20] Rothfarb 1991, xvi–xvii.

While I cannot claim to have overcome these obstacles tidily, I have endeavored to stay true to the spirit, context, and syntax of Kurth's statements. Throughout the dissertation, I present original passages alongside translated ones in the hopes that readers will appreciate Kurth's idiosyncratic writing style—especially where translation inadvertently fails to do so. For we must remember that translation is always to an extent "a rewriting of an original text." And as Susan Bassnett and André Lefevere voice assertively,

> All rewritings, whatever their intention, reflect a certain ideology and a poetics and as such manipulate literature to function in a given society in a given way. . . . Rewritings can introduce new concepts, new genres, new devices. . . . But rewriting can also repress innovation, distort and contain.[21]

In presenting only a partial translation of *Musikpsychologie*, the intentions and ideology of this translator are necessarily overt. Nevertheless, I have asked the reader to take a leap of faith: to trust that in making my arguments I have understood not only the essence but also the subtle details of Kurth's own, and that I have not willfully distorted or repressed the ideas of such a venerable figure for the benefit of modern-day comprehensibility. And indeed, throughout I have tried to avoid the "illusion of transparency,"[22] the illusion that Kurth's text is effortlessly graspable, by separating my voice from his wherever possible.

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[21] "General editors' preface" to Venuti 1995, vii.

[22] As Lawrence Venuti (1995) describes, "the illusion of transparency is an effect of fluent discourse, of the translator's effort to insure easy readability by adhering to current usage, maintaining continuous syntax, fixing a precise meaning. What is so remarkable here is that this illusory effect conceals the numerous conditions under which the translation is made, starting with the translator's crucial intervention in the foreign text" (1).

PART ONE

Musikpsychologie: Its Foundations and Language

CHAPTER ONE

Introduction

Musikpsychologie within *Musikwissenschaft*

As much as it is a response to specific scholars and approaches, *Musikpsychologie* is a response to the wide disciplinary network that is *Musikwissenschaft*—or rather, what Kurth views as a lacuna therein. As one of Guido Adler's most prized students at the University of Vienna,[1] Kurth was keenly aware of the disciplinary divisions and their roles as Adler had put forth in his polemical article, "The Scope, Method, and Goal of Musicology" (1885), and moreover, of Adler's stated endeavor to maintain "the analogy between the methods of art study and those of the natural sciences."[2] As Kevin Karnes has argued, Adler invoked the methods of the natural sciences for political ends; that is, to establish the study of music "within an academic culture increasingly enamored with the natural sciences."[3] This same disciplinary posturing can be seen in Kurth's writings, especially in his *Habilitationsschrift*, published as *Die*

[1] In a letter to Alexius Meinong (12.September 1919), Adler suggests several of his former students for a position at the University of Graz where Meinong was professor and Chair of Philosophy. Adler describes Kurth in the most glowing terms: "Der tüchtigste von allen ist der Privatdozent an der Berner Universität, mein einstiger Assistent Dr. Ernst Kurth, der ist auch ein vorzüglicher Musikdirektor, wie es für Graz besonders erwünscht wäre." [„The most capable of all of them is the professor at the University of Bern, my former assistant, Dr. Ernst Kurth, who is also an excellent music director, just the sort that would be particularly desirable for Graz".] See Meinong 1995, 270.

[2] Cited and translated in Karnes 2008, 5. A full translation of Adler's article, "Umfang, Methode und Ziel der Musikwissenschaft" (1885) is provided in Mugglestone 1981. Partial translations also appear in Bujić 1988.

[3] Karnes 2008, 9.

Voraussetzungen der theoretischen Harmonik und der tonalen Darstellungssystem (1913), and again in *Musikpsychologie*.[4]

Reacting to the proliferation of music-theoretical studies that are founded on acoustic principles, Kurth in *Voraussetzungen* writes:

> When speaking of **instinctive origins** rather than the unknown origins of music theory, one must be aware that these origins **lie more in psychological than in acoustical phenomena**. The attempts at explanation of such phenomena form precisely the fundamental ideas of the theoretical system, that is, hypotheses that concern the connection between the psychological perception of tone and the physio-acoustical facts. Scientific assumptions appear to be deficient in effecting a consistent and complete transition from acoustics to musical logic. As long as *tone psychology* provides no clear and definitive solution to that basic question as to the fundamental requirements for the construction of all music-theoretic systems, **it must be admitted at the outset that the whole of our music theory cannot do without a certain instinctive character alongside the objective, scientific one.**"[5]

From this we can infer that by 1913, turning to physio-acoustical facts to gain scholarly clout had become de rigueur (a well-known example is Riemann's appeal to the undertone series as a basis for minor). Kurth, then, suggests the need for a new theory that is more instinctive (or intuitive) to operate *alongside* current theories. Further along, he clarifies that an instinctive approach need not exclude objectivity—especially if this approach is based on mental processes. Against the

[4] Indeed, a comparison of the contents of these two publications, bookends of Kurth's output, sheds light on the subtle changes in Kurth's thinking over the course of his career; I explore connections between the two in the chapters that follow.

[5] Translated in Rothfarb 1979, 45; emphasis added in bold.

established approach of tone psychology, of which Stumpf's work was exemplary, Kurth puts forth a new approach called *music psychology*.[6]

By 1931, Kurth no longer positions his project alongside an existing discipline, but rather explicitly at the very center of *Musikwissenschaft*. That is, he envisions music psychology as the tie that binds and informs all other areas. This brazen yet reconciliatory attitude stems in part from his negative view of the scientific environment. Kurth writes, "the separation [of fields] becomes worse when one observes the dispute between the representatives of the individual methodologies; they are more out to exclude rather than to understand each other, whereupon the over-used catchphrases blossom and the positive [aspects] of each method decay."[7] In comparison, Kurth posits that music psychology touches upon a wide network of disciplines: aesthetics, hermeneutics, philosophy, stylistics, pedagogy, and more. After all, he notes, all music—and more specifically, musical experience—is a product of the mind:

> Dieser Musikpsychologie im engeren Sinne gehören aber jene Vorgänge an, die als psychische Funktionen bei den musikalischen Grundgegebenheiten zu erkennen sind, und diese überhaupt erst ermöglichen; ihr Ziel ist ferner die Erkenntnis, wie diese Erscheinungen ineinandergreifen und sich der Lebenseinheit der Musik einordnen. Im weiteren Sinne hingegen ergibt sich für die Musikpsychologie ein Umkreis von Teilgebieten, die nicht überall

[6] "[I]t is clear at this point that the basic music-psychological phenomena of the mental process are not completely identical with tone-psychological matters, but are rather a combined result of various psychological phenomena. Consequently, if the term *music psychology* is used in a sense which diverges somewhat from the term *tone psychology*, it would be incorrect to concentrate on the significance of aesthetic factors or on an incorporation of concepts which are too vague: to a certain extent music psychology, too, can be objectively defined" (trans. in Rothfarb 1979, 97).

[7] „Die Vereinzelung verschärft sich, wenn man die Kämpfe zwischen den Vertretern der einzelnen Methoden beobachtet; sie gehen mehr darauf aus, einander auszuschließen als zu verstehen, wobei zu allem die schlagwortartigen Überschärfungen blühen und das Positive der einzelnen Methoden zerstören" (Kurth 1931, 54n1).

> scharf von ihr zu sondern sind und sich im Grunde über alle Gebiete der Musikforschung überhaupt erstrecken, da Musik an sich eine psychisch bedingte Erscheinung ist. Nur die Berührung mit diesen weiteren Teilgebieten ist hier zu betrachten.
>
> [To music psychology in a narrow sense belong those processes that are understood as psychic functions within the fundamental musical givens that make these phenomena possible initially; further, music psychology's goal is the knowledge of how these phenomena intertwine and are arranged in the dynamic unity of music. However, given in a broader sense, music psychology results in a range of smaller disciplines that are not to be separated sharply from it and that generally reach over all areas of music research, since music in itself is a psychically conditioned phenomenon.][8]

What events led to Kurth's more assertive stance in 1931? Rothfarb notes that between 1928 and 1931, the University of Bern awarded Kurth a considerable sum of money to augment his seminar library.[9] Kurth was thus able to spend several years researching and amassing literature germane to his new study. Indeed, his growing interest in the burgeoning discipline of psychology is suggested in a 1929 letter from Herbert Jancke, professor of experimental psychology at Bern University from 1931 to 1937. Jancke mentions Kurth's current research interests and suggests some reading that will help Kurth better grasp the potential of psychology:

> Ich bin ungemein gespannt auf Ihr neues Werk. Ich finde, daß man in der eigentlichen Psychologie nicht über irrationalen Abgründen schwebt . . . sobald man sich die erkenntnistheoretischen Voraussetzungen dieser Disziplin, die die Metaphysik z.B. ausschließt, klargelegt hat. Zu manchen grundlegenden Fragen könnte Ihnen da die Schrift von Störring: „Die Frage der geisteswissenschaftlichen und verstehenden Psychologie", in der er sich als exakter Naturwissenschafter mit Jaspers, Dilthey, Spranger

[8] Kurth 1931, 57.

[9] Rothfarb relates that during the 1920s, four prestigious German universities offered Kurth attractive positions within their music departments. Kurth declined all of these offers and was richly rewarded by Bern for his loyalty. See Rothfarb 1988, 20.

> und Erismann auseinandersetzt, viel helfen, wie ich glaube. Wenn Sie es wünschen, will ich sie Ihnen schicken. Sie ist allerdings schwer geschrieben und hat einen schlechten Schreibstil, erfordert daher viel Zeit. Sie dürften aber über die exakten Möglichkeiten der Psychologie danach optimistischer denken.
>
> [I am immensely excited about your new work. I find that one does not hover over irrational depths in genuine psychology . . . as soon as one has clarified the epistemological conditions for this discipline, which excludes, for example, metaphysics. With regard to some fundamental questions, I think you could find the [following] essay by Störring to be very helpful: "The question of the humanistic and interpretive psychology," in which he, as a natural scientist, discusses [matters] with Jaspers, Dilthey, Spranger, and Erismann. I will send this to you whenever you wish. The writing is certainly difficult, has a poor writing style, and thus requires much time. But you may be able to think more optimistically afterwards about the precise possibilities of psychology.][10]

While Kurth did consult the source Jancke recommends,[11] Störring's work proved not as influential as Jancke had hoped. Instead, Kurth was drawn more intensely to a sub-field of research whose tenets resonated with his own ideas of musical experience: Gestalt psychology.

Gestalt psychology

In the words of a contemporary of Kurth, the Gestalt school of thought that originated in the late 19th century is based on the following premise: "[P]erception itself shows a character of totality, a form, a whole (*Gestalt*), which in the very attempt at analysis is destroyed; and this experience, as directly given, sets the

[10] Herbert Jancke to Ernst Kurth, 22 September 1929, J 1.1, Volltextbriefe zum Inventar Nachlass Kurth, Institut für Musikwissenschaft, Universität Bern.

[11] See Kurth 1931, 54n3, 69n1, 107n1.

problem for psychology."[12] Kurth wishes to portray his own views of music perception and cognition as current with the broader philosophical and scientific movement. He observes,

> Damit fügt sich auch die Musikpsychologie einer Betrachtungsweise ein, die der gesamten Psychologie heute mehr und mehr das Gepräge verleiht. Lange herrschte in ihr eine Richtung, welche die einzelnen Elementarempfindungen stark in den Vordergrund rückte, fast zum Selbstzweck werden ließ; ihr tritt neuerdings eine Betrachtung gegenüber, welche auf die gesamten „Gestaltkomplexe" ihr Hauptaugenmerk lenkt, d. h. in der eigentümlichen Gliederung psychischer Gesamteindrücke das Wesentliche erkennt.
>
> [To that extent, music psychology fits into an approach that today, more and more, imparts an imprint on the whole field of psychology. For a long time a trend prevailed in psychology that pushed the individual elementary sensations strongly into the foreground, almost becoming ends in themselves. Against this trend, a recent view has emerged that calls attention to the entire "Gestalt-complexes" as its main focus, that is, recognizes the essential in the specific articulation of complete psychic impressions.][13]

Moreover, the Gestalt approach reached beyond psychology to other disciplines. Noting this, Kurth remarks, "today, the view focused on the **experience of the whole** dominates all specializations (notwithstanding some individual differences) from speech and sensory psychology to the aesthetics of art."[14]

Christian von Ehrenfels's essay "On Gestalt Qualities" (1890), as Kurth himself recounts, is the founding document of Gestalt theory. In it, Ehrenfels responds to an observation made by physicist Ernst Mach in his *Beiträge zur*

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[12] Edna Heidbreder, *Seven Psychologies* (New York: D. Appleton-Century, 1933), 331, quoted in Hergenhahn 1986, 283.

[13] Kurth 1931, 24.

[14] „Heute beherrscht die aufs Erlebnisganze gerichtete Anschauung trotz einzelner Abweichungen alle Sondergebiete von der Sprach– und Sinnespsychologie bis zur Kunstästhetik" (Kurth 1931, 26).

Analyse der Empfindungen (1886): in music and geometry we perceive "tone-forms" (*Tongestalten*) and "space-forms" (*Raumgestalten*) such that the color or size of a circle, for instance, may vary without any disturbance to our perception of its circularity.[15] Mach attributed these stable perceptions or perceptions of likeness to a broad notion of "sensations" (*Empfindungen*),[16] replacing his earlier explanation that "muscular feelings" and "bodily resonance" were the source for space and form perceptions.[17] In his article, Ehrenfels calls attention to Mach's equivocation, noting that "sensations" in the strict sense of direct responses to a stimulus, are incongruous with the perception of music, a temporal art:

> Mach made the . . . claim that we are able directly to 'sense' spatial shapes and even tone-Gestalten or melodies. Now the second, at least, of these two [tone-Gestalten] must undoubtedly appear contradictory, not merely superficially but in its content, if it is not immediately pointed out that we are not talking here of 'sensing' in the usual sense. For if we can sense only that which is *simultaneously* present to us, then a melody, which is played out *in time*, cannot serve as an object of sensation.[18]

Ehrenfels surmises that what Mach had attempted to explain, unsuccessfully, was the "immediacy of certain impressions and . . . their independence from all intellectual processing on the part of the perceiving subject." Ehrenfels presents several examples of immediate impressions, including the following:

> Consider, say, the first lines of the folk tune

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[15] Johnston 1972/2000, 303.

[16] In *Beiträge*, Mach espoused his reductionist doctrine that sensations (*Empfindungen*) are the sole elements of experience. See Johnston 1972/2000, 184–85.

[17] Mach discusses "muscular feelings" and "bodily resonance" in "Vom räumlich sehen" (1865) in *Populärwissenschaftliche Vorlesungen* (Leipzig 1911); cited and translated in Ash 1998, 88.

[18] Ehrenfels 1890, 249, trans. Smith 1988, 82.

> *Muss i den, muss i den zum Städtle hinaus . . .*
> Played in C major this contains the notes *c* to *a*; *e* and *g*, each played thrice; *f* twice; and finally *c*, *d* and *a*. If one now plays this tune in F sharp major, then it does not contain a single one of the notes which it contained when played in C major. Nevertheless, their similarity is, to anyone even halfway musically inclined, immediate and capable of being recognized without reflection (via 'sensation', according to Mach).[19]

He then queries, "is a melody (i) a mere sum of elements, or (ii) something novel in relation to this sum, something that certainly goes hand in hand with, but is indistinguishable from, the sum of elements?" He surmises that Mach's use of the term "sensation," implies an unstated desire to convey the simplicity of Gestalten—that is, that Mach would choose option (ii).[20] For these formations, Ehrenfels offers, have "Gestalt qualities." Further, as William M. Johnston describes, Ehrenfels coupled this observation with an element of intentionality, such that "the mind intends Gestalt qualities, supplying them to interpret the foundation of data actually perceived."[21]

It is highly likely that Kurth was exposed to Mach's and Ehrenfels's work at the University of Vienna, where he studied from 1904 to 1908. Ehrenfels obtained a habilitation under Franz Brentano at the University of Vienna in 1888, having three years prior earned his doctorate at the University of Graz under Alexius Meinong, a life-long friend and correspondent of Adler.[22] Mach, too, had obtained both his doctorate and habilitation at the University of Vienna, and he returned to

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[19] Ehrenfels 1890, 258, trans. Smith 1988, 90.

[20] Ehrenfels 1890, 249, trans. Smith 1988, 83. Ehrenfels treats non-temporal and temporal Gestalt qualities separately.

[21] Johnston 1972/2000, 303.

[22] See Johnston 1972/2000, 302.

Vienna in 1895, after posts in Graz and Prague, to fill a new chair in the history and theory of inductive sciences. Though Mach was forced to resign prematurely in 1901 due to a stroke, he continued to live in Vienna for several years after. Luitgard Schader suggests further that Kurth's philosophy professors, the psychologists Friedrich Jodl and Wilhelm Jerusalem, both personal acquaintances of Mach, would have imparted their understandings of Gestalt principles in their teachings.[23] In citing Ehrenfels's work, Kurth concentrates on aspects that implicate Gestalt qualities, music, and creativity. Just like a circle made bigger or smaller, a transposed melody retains its original shape. Even further, Kurth refers to what Ehrenfels terms "Gestalt qualities of a higher order (*höherer Ordnung*)," that is, similarities that arise when Gestalt qualities are compared. Kurth writes,

> Die neuere Gestalttheorie nimmt ihren Ausgang on einem berühmt gewordenen Aufsatz von Chr. v. Ehrenfels, „Über Gestaltqualitäten" (Vierteljahrsschr. f. wiss. Philosophie XIV, 1890), der teilweise schon von Erscheinungen der Melodie ausgeht. Anknüpfend an Mach („Beiträge zur Analyse der Empfindungen", Jena 1886) weist Ehrenfels darauf hin, „daß wir Raumgestalten und selbst „Tongestalten" oder Melodien unmittelbar zur „empfinden" vermögen; denn auch beim Transponieren, das doch alle Töne einer Melodie verändere, bleibe diese gleich, und so bezeichnet Ehrenfels als Gestalt „das, was eine Vielheit von Erscheinungen sondert von einer zusammengefaßten Vielheit." Gestalt ist somit nicht das gleiche wie die Inhalte. Ähnlich sei auch z. B. ein Quadrat etwas anderes als eine Zusammensetzung seiner Bestandteile. So erwähnt Ehrenfels (s. 279) auch das Phänomen der Ähnlichkeit verschiedener Melodien und streift auch die schöpferische Bedeutung des Gestalterfassens (s. 283f.): „Der Geist, welcher psychische Elemente in neue Verbindungen bringt, ändert hiedurch mehr als Combinationen; er schafft neues."
>
> [The newer Gestalt theory stems from one of the most well-known articles by Chr. v. Ehrenfels, "On Gestalt Qualities," which partly proceeds from phenomena of melody. In response to Mach, Ehrenfels emphasizes, "that we are able to sense spatial wholes

[23] Schader 2001, 56ff.

> [*Gestalten*] and even 'tonal wholes' or melodies directly; for even with transpositions, where all of the tones in a melody are changed, the melody remains the same, and thus Ehrenfels designates as a Gestalt, "that which separates a multiplicity of phenomena from one of a consolidated multiplicity." The **Gestalt is therefore not the same as the contents**. Similarly, a square is also something other than a combination of its parts. Ehrenfels (p. 279) also mentions the phenomenon of the similarity of <u>different</u> melodies and touches on the imaginative meaning of the Gestalt comprehension (p. 283f.): "The intellect [*Geist*] that brings psychic elements into new connections, changes more than combinations; it creates something new."][24]

Kurth would have been particularly interested in these second-order Gestalts for their significance for compositional style. Indeed, Ehrenfels writes, "What we call a feeling for style in a given province of art almost certainly consists principally in nothing other than the capacity to grasp and to compare Gestalt qualities of the relevant category." Ehrenfels also notes that similarities between higher-order Gestalts resist conceptual formulation because there is an "almost boundless" range of possible Gestalt qualities involved.[25] Kurth, likewise, might well have thought it impossible to speak of musical style characteristics with conceptual precision.

An exchange between the psychologist Albert Wellek and Kurth, however, suggests that though he found the aforementioned ideas stimulating, Kurth had limited knowledge of specific differences among the various schools of Gestalt

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[24] Kurth 1931, 26n2. Kurth refers to the following passage in Ehrenfels 1890, 279; trans. Smith 1988, 105–6:

> That Gestalt qualities can exhibit similarity is obvious. . . . Thus we recognize the composer of a melody through its similarity with other, familiar melodies, though without our being in a position to specify more precisely in what this similarity consists.

[25] Ehrenfels 1890, 278; trans. Smith 1988, 105–6. For instance, one may recognize a resemblance among relatives in a family, but this resemblance may be impossible to formulate as relations of identity between individual traits.

psychology as they stood in 1931. In a letter to Kurth written in 1932, after the publication of *Musikpsychologie*, Wellek explains,

> Die grossen Gegensätze bestehen nämlich m.E. nur zwischen den neuen psychologischen Schulen und den überall noch verstreuten Vertretern veralteter Schulen; während innerhalb der massgebenden neuen Schulen in allen Grundfragen wesentliche Einigkeit herrscht. Als solche kommen, soviel ich sehe, heute im grossen Ganzen nur drei Schulen in Betracht: die Berliner, die Leipziger und die Wiener, also die Kreise um KÖHLER, KRUEGER, BÜHLER; zu welchen alle ich unmittelbare Beziehungen unterhalte. Hier nun besteht, wie gesagt, grundsätzliche Einigkeit fast in allen ganz grundsätzlichen Fragen, so z. B. bezüglich des Primats des Ganzen, des bloss abstraktiven [sic] Charakters der „Elemente", der phänomenologischen Ausgangsmethode usw.
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> [The major differences, in my opinion, only exist between the new psychological school and representatives of the antiquated school who are now dispersed all over, whereas within the authoritative newer schools there is considerable agreement in all fundamental issues. As such, as far as I see, only three schools come into consideration on the whole today: the Berlin, the Leipzig, and the Vienna school, that is, the circles around KÖHLER, KRUEGER, BÜHLER; to all of which I maintain direct relationships. Here there exists, as I said, fundamental agreement in almost all fundamental questions, so for instance regarding the primacy of the whole, the merely abstract character of "elements," the phenomenological output method, etc.][26]

In his list of roughly a dozen sources associated with Gestalt psychology, Kurth fails to group any of the authors he cites into schools of thought as Wellek does, and he leaves out Wolfgang Köhler entirely.[27] He is aware, however, that following Ehrenfels, the far-reaching influence of Gestalt principles emerged "particularly

[26] Albert Wellek to Ernst Kurth, 6 November 1932, W4.1, Volltextbriefe zum Inventar Nachlass Kurth, Institut für Musikwissenschaft, Universität Bern.

[27] See Kurth 1931, 25–27 and especially 26n2. His list includes works by Müller, Krueger, Bühler, Wertheimer, Driesch, Burkhardt, Hennig, Witasek, and Messer.

since Stumpf."[28] Indeed, as many modern authors have documented, it was Stumpf's students—in particular Max Wertheimer, Kurt Koffka, and Wolfgang Köhler—who stood at the vanguard of the Gestalt movement.[29] Curiously, though all three were musically knowledgeable, they did not deal extensively with music. About this Robert Gjerdingen writes,

> In what seems like a puzzling missed opportunity, the first generation of Gestalt psychologists did not make music a focus of their experiments. To be sure, musical subjects were mentioned frequently as exemplifications of Gestalt ideas—the holistic nature of melody, the grouping of rhythms, the triad as a unity . . . [but] these most musical of psychologists focused their actual work **much more on visual than on auditory phenomena**.[30]

Johnston cautions, too, that the fame of Wertheimer, Köhler, and Koffka "should not obscure the fact that the concept of Gestalt was devised by the Austrians Mach and Ehrenfels and refined by Wertheimer. It epitomized the preference of Austrian thinkers for interpreting phenomena as a whole."[31] As we shall see in the following chapters of this dissertation, this preference is strongly evident in *Musikpsychologie*. One could further maintain that in highlighting Gestalt qualities that the mind intends for not only melodies but also the single tone, complex vertical sonorities, and entire spans of motion (formal units), Kurth makes an important contribution to an influential line of research.[32]

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[28] Kurth 1931, 26; emphasis in original.

[29] See in particular Johnston 1973/2000; Ash 1995; and Gjerdingen 2002.

[30] Gjerdingen 2002, 969; emphasis added in bold.

[31] Johnston 1973/2000, 304.

[32] Schader (2001) argues that Max Wertheimer's ideas would have been particularly suggestive for Kurth just as he was about to embark on *Grundlagen* (see 66ff.). In a letter

Kurth's philosophical background

> Daß Kurth zu den kompositionstechnischen Tatsachen, welche die Musiktheorie registriert, die psychisch Wurzeln suchte, daß er ein Buch mit dem Titel „Musikpsychologie" schrieb, darf allerdings nicht darüber hinwegtäuschen, daß er als Psychologe im Grunde Metaphysiker gewesen ist. (Daher die Verlegenheit und das Mißtrauen von Psychologen angesichts des Kurthschen Werkes, die Neigung, es mit dem zwiespältigen Lob, es sei ‚anregend', abzutun.) Die Voraussetzungen seines Denkens lagen nicht in der empirischen Tonpsychologie . . . sondern in der Philosophie.
>
> [That Kurth sought psychological roots for compositional facts that music theory registers, and that he wrote a book with the title *Musikpsychologie*, certainly does not hide the fact that **as a psychologist he was fundamentally a metaphysician.** (Hence the confusion and suspicion of psychologists, whose inclination, in the face of Kurth's work, was to dismiss it with the ambivalent praise: "stimulating".) **The requirements of his thinking lay not in empirical tone psychology . . . but rather in philosophy.**][33]

While Kurth found in Gestalt psychology a relatively current framework on which to structure his ideas, his thinking is nevertheless grounded in certain time-honored philosophical tenets. Indeed, as Carl Dahlhaus notes in the passage above, the strong philosophical tenor of Kurth's writing may have surprised and even disappointed some of his critics, who expected a work with "Psychologie" in its title to have a more scientific inclination; we shall return to these criticisms further below. Yet in appealing to his audience—educated music lovers without formal training in music or psychology—Kurth's references and allusions to central philosophical figures, especially those of the German idealist movement, would

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to Kurth, Jancke writes that he has spoken to Wertheimer about *Musikpsychologie*, of which the latter was previously unaware. Jancke notes, however, that Wertheimer was familiar with Kurth's earlier writings and was very sympathetic towards them. Herbert Jancke to Ernst Kurth, 19 June 1929, J 1.5, Volltextbriefe zum Inventar Nachlass Kurth, Institut für Musikwissenschaft, Universität Bern.

[33] Dahlhaus 1973, 150; emphasis added in bold.

have served as familiar points of departure before embarking on more novel ideas. Indeed, his treatment of such figures is largely superficial, and he often refers to groups of thinkers in order to bolster his claims. Such is the case when he writes,

> Schopenhauer und Feuerbach, dann vor allem Dilthey und Bergson, betonten gegenüber der rationalistischen Psychologie, die ihre Schlüsse aus den gegenständlichen Vorstellungsinhalten zog, mehr die Unmittelbarkeit des Erlebens, das sich jenseits des Vorstellbaren abspielt.
>
> [Schopenhauer and Feuerbach, then above all Dilthey and Bergson, emphasize, in contrast to the rationalistic psychology, which draws its conclusions from the objective contents of the imagination, the immediacy of experience that happens beyond the imaginable.][34]

As we shall explore in more depth throughout this dissertation, Kurth's attention in *Musikpsychologie* is keenly focused on the "immediacy of experience" that occurs independently of conscious imagining.

To be sure, Kurth never associates his music psychology with a particular school of philosophical thought, and it is doubtful that it complies identically with a single one. Nevertheless, philosophical "influence" is a noteworthy issue in Kurth reception history, since it underscores idealistic aspects of his writings that have captured the attention of previous scholars. Over time, Kurth's views have become associated with a core group of philosophers: Immanuel Kant (1724–1804), Arthur Schopenhauer (1788–1860), Wilhelm Dilthey (1833–1911), and Henri Bergson (1859–1941). Of course, these four thinkers are hardly a motley crew; their philosophies are highly intertwined. It is worth considering, then, what particular aspects of their philosophies map onto Kurth's ideas.

[34] Kurth 1931, 53.

Kurth's distinction between the observable outer world and the unobservable inner world has a seemingly ready parallel in the transcendental idealism of Kant, specifically in the latter's distinction between phenomena (or appearances known through the senses) and noumena (or objects that are intelligible yet unknowable through experience). As such, Rothfarb's contention that Kurth's musical world is grounded in the Kantian opposition of appearance and ultimate Reality seems indisputable.[35] Further, when Kurth states at the start of *Musikpsychologie* that a tone is no "Ding an sich," he employs a familiar Kantian concept from *Kritik der reinen Vernunft* (1781). Indeed, one of the earliest reviewers of *Musikpsychologie* also cites the influence of Kant—albeit in a rather disparaging way: Kurt Herbst suggests that Kurth's emphasis on the impenetrability of the thing-in-itself is "a very weakly interpreted and outdated Kantianism!"[36]

Yet the extent to which Kurth actually interprets the philosopher directly is questionable.[37] Indeed, it is Kant's self-appointed "true heir," Arthur

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[35] Rothfarb 1988, 11.

[36] „Ein sehr schwach interpretierter und überholter Kantianismus!," Herbst 1931, 66. Herbst is responding in particular to the following statement by Kurth (1931,73): „Wir können—so wenig wie anderswo—nicht das Wesen der Dinge erklären, aber müssen die zusammenhängenden psychischen Funktionen erkennen, auf denen die Erscheinungen beruhen." ["We cannot—as little as elsewhere—explain the essence of the thing but must recognize the coherent psychic functions to which the phenomena belong."]

[37] The index to *Musikpsychologie*, compiled by Kurth's students Edwin Fischer and Paul Dikenmann, cites two direct references to Kant on pages 25 and 59. Kant's name appears only on the former page, however. Here, Kurth traces the emergence of Gestalt thinking: „Die Tätigkeit des Zusammenfassens, seit Plato in ihrer Bedeutung für die intellektuelle Tätigkeit erkannt, gewinnt hier eine neue Auffassung." ["The activity of compilation and summary, its significance for intellectual activity recognized since Plato, here gains a new interpretation."] Kurth then proceeds to find adumbrations of Gestalt thinking in the Middle Ages and later in the work of the German mystic and theologian Jakob Böhme

Schopenhauer,[38] to whom commentators have pointed most often as a strong influence in Kurth's writings.[39] One of Schopenhauer's critiques of Kant lies in the status of the thing-in-itself. As Robert Wicks describes, Kant regards the thing-in-itself as a "**mind-independent object** that is beyond all human experience, and which serves as the **primary cause** of our sensory experience," whereas Schopenhauer believes that "the relationship between the thing-in-itself and our sensations is more like that between two sides of a coin, neither of which causes the other, and both of which are of the same coin and coinage."[40] According to

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(1575–1624). He finds particularly strong evidence in the eighteenth century in the work of Leibniz and Herder, and particularly in Kant's theory of sensory perception as "synthesis." See Kurth 1931, 25.

Kant writes in the *Critique of Pure Reason*, "By *synthesis*, in its most general sense, I understand the act of putting different representations together, and of grasping what is manifold in them in one knowledge" (A77=B103). He presents three kinds of synthesis required to organize information: synthesis of apprehension (raw perceptual input), synthesis of recognition (concepts), and synthesis of reproduction in imagination (allowing the mind to go from perceptual input to concepts) (A97–A105). See Andrew Brook, "Kant's View of the Mind and Consciousness of Self," *The Stanford Encyclopedia of Philosophy (Winter 2011 Edition)*, Edward N. Zalta (ed.) (http://plato.stanford.edu/archives/win2011/entries/kant-mind/).

[38] Harald Höffding, *A history of modern philosophy* (New York: Dover Publications, 1955), vol. 2, 214.

[39] See Fischer 1948, 1986–87; Hsu 1966; Dahlhaus 1973; McCreless 1983; Rothfarb 1979, 1986–87, 1988; la Motte-Haber, 1986–87; Rehding 1995; and Kim 2003. Rothfarb (1988), for instance, notes: "Kurth's idealist outlook derives mainly from Arthur Schopenhauer" (12).

[40] Robert Wicks, "Arthur Schopenhauer," *The Stanford Encyclopedia of Philosophy (Winter 2011 Edition)*, Edward N. Zalta (ed.) (http://plato.stanford.edu/archives/win2011/entries/schopenhauer/); emphasis added in bold.

For Schopenhauer's full critique, see "Criticism of the Kantian Philosophy," the Appendix to Volume 1 of *The World As Will and Representation* (Schopenhauer 1958, 414–534; tr. E. F. J. Payne). In Schopenhauer's words, "Kant bases the assumption of the thing-in-itself . . . on a conclusion according to the law of causality, namely that empirical perception, or more correctly *sensation* in our organs of sense from which it proceeds, must have an external cause. Now, according to his own correct discovery, the law of causality is known to us *a priori*, and consequently is a function of our intellect, and so is

Schopenhauer, the entire world, and indeed each object in the world, is given to us in two ways, as "will" (*Wille*)—a "non-rational urge at the foundation of our instinctual drives, and at the foundational being of everything"—and as external "representation" (*Vorstellung*).[41] Kurth refers to both the "psychic activity of the will" in the listener and the "artistic will of the creator" that brings about music. By connecting will to *mental* processes that complement, rather than cause, observable outer-world phenomena (such as tone), Kurth is philosophically indebted to the writings of Schopenhauer (and, conversely, departs in at least one significant way from those of Kant).[42]

Scholars have also pointed to the writings of two later philosophers, Wilhelm Dilthey and Henri Bergson, as having helped shape Kurth's ideas about music. In modern times, Rothfarb for instance, suggests that the writings of

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of *subjective* origin. Moreover, sensation itself . . . is undeniably *subjective*" (Schopenhauer 1958, 436).

[41] Wicks, *op. cit.* As Wicks writes, "Schopenhauer's position on whether the thing-in-itself is Will consequently presents some interpretive difficulties." Wicks summarizes these difficulties in sec. 6 of his entry.

[42] As McCreless notes, following Rothfarb (1979, 16), Kurth "does not consider [music] to be an actual *embodiment* of the will, as did [Schopenhauer], but only an external result of the psychic force of the will" (1983, 58). A full inquiry into the relationship between Kurth's ideas and those of Kant and Schopenhauer remains absent from the Kurth literature. For the most part, commentators (listed above) who mention Schopenhauer in relation to Kurth do so in very general terms, prompted by the appearance of *Wille* in the latter's writings. The following by Rothfarb (1979, 30) exemplifies the compelling but as-yet-vague nature of Kurth's relationship to Schopenhauer: "Many ideas, and even turns of phrase, scattered throughout Kurth's writings derive from Schopenhauer's ideas on music. Without naming him, Kurth alludes to Schopenhauer as 'the great philosopher of the Romantic era' [Kurth 1920, 15; also 4 and 546]."

The index to *Musikpsychologie* lists three direct references to Schopenhauer: 41n3 ("Schopenhauer and Ed. v. Hartmann also see the conscious arising from the unconscious in a metaphysical sense") and 53 (where Kurth states that Schopenhauer emphasizes the immediacy of experience that takes place beyond the conceivable), both from Section 1; and 99n1 from Section 2 (where he mentions Schopenhauer's "generally all-encompassing 'will' and its different 'objectifications'").

Dilthey "provide a useful frame of reference for understanding Kurth's general music-theoretical disposition."[43] Adorno, in his 1933 review of *Musikpsychologie,* sees the author's appeal to Gestalt psychology as directly connected to the irrational (intuitive) philosophy of the neo-Kantian Dilthey: "His instrument, Gestalt psychology, is applied in the name of a vital *irrationalism*, just as it became effective for the theory of art, particularly in the work of Wilhelm Dilthey, whose range of activity in the different areas continues to grow noticeably and to which Kurth refers emphatically."[44] Indeed, Kurth places Dilthey among a diverse group of researchers—including Mach, Ehrenfels, Stumpf, Krueger, and Bühler—with a shared concern for the "holistic experience" *Ganzheitserlebnis*,[45] and he notes that Dilthey drew attention to the "psychic structural connection of the inner (spiritual) life" that stirs particularly strongly in artists.[46]

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[43] Rothfarb 1986–87, 27. La Motte-Haber (1986), too, detects in Kurth's work a background of *Lebensphilosophie*, "whereby the experience (*Erleben*) is the foundation of all things" (99), which, "itself refers to Dilthy" (103). Bohan Bujić writes, "[Dilthey's] insistence on life rather than metaphysics or science is responsible for the term *Lebensphilosophie* (philosophy of life, life philosophy) used to describe [his] philosophy. The idea of the experience of life as a foundation of philosophy is noticeable in the nineteenth century already in Kierkegaard and later in Nietzsche, but it was Dilthey who developed it into a more substantial system joining it to his concept of history as a form of the flow of life" (366).

[44] Adorno 1933, 356–57.

[45] Kurth 1931, 26.

[46] Kurth (1931, 27n1) writes,

> In seinen Lebensbeschreibungen schuf er jene Künstlerdarstellung, nach der sich aus der dispositionellen Gesamtstruktur größere Teilstrukturen herausfasern und in einzelnen Handlungen und Eigenschaften kundgeben—einen intuitive Psychologie, die, vorgebaut durch das Romantische Universalerlebnis, auch stets den Zusammenhang des Biographischen mit der überpersönlich-historischen Strukturdisposition aufweist. Von den theoretischen Werken vgl. insbesondere: aus Diltheys Gesammelten Schriften (Teubner, Leipzig), Bd. I, "Einleitung in die Geisteswissenschaften", Bd. V, Abhdlgn. zur Grundlegung der

Dilthey promoted the distinction between the natural sciences (*Naturwissenschaften*) and the human sciences (*Geisteswissenschaften*)—that is, the "humanities" as we commonly refer to them in English. And he emphasized the distinct roles of scholars working in the two different sciences. As Rothfarb interprets Dilthey,

> The natural scientist is limited to studying the physical properties of his object and thus can know it only *externally*. The cultural scientist may also study physical properties but because his object is a product of the human mind, he may penetrate yet deeper and gain a knowledge of its essence, i.e., he may know it *internally*, as one mind may know another. Dilthey calls this kind of deeper knowledge 'understanding' (*Verständnis*), which he considers absolutely necessary for studying artworks. It requires an act of 'self-projection' (*sichhineinversetzen*) of one's own mind into the mind of another in order to achieve a 'sympathetic experience' (*Nacherleben*) of its creative activity."[47]

Something like self-projection certainly resonates with many aspects of Kurth's agenda. In his previous books, Kurth undoubtedly assumed the role of a cultural scientist, attempting to achieve an "understanding" of the music he analyzed (and

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Geisteswissenschaften (vor allem: "Ideen über eine beschreibende und zerliedernde Psychologie"), Bd. VII, "Der Aufbau der geschichtlichen Welt in den Geisteswissenschaften."
[In his biographies he created that representation of the artist, according to which larger partial structures emerge from the structural whole, announcing themselves in specific episodes and characteristics, [thus forming] an intuitive psychology, which, prefigured through the romantic universal experience, always features the combination of biography with the historical-structural element that goes beyond the personal. Of the theoretical works, compare in particular those from Dilthey's complete works (Teubner, Leipzig): "Introduction to the Human Sciences," Bd. I; "Essays on the Establishment of the Human Sciences" (above all: "Ideas for a descriptive and analytical psychology"), Bd. V; and "Formation of the Historical World in the Human Sciences," Bd. VII].

[47] Rothfarb 1986–87, 27–28. See also Rothfarb 1988, 16.

perhaps a "sympathetic experience" with their creators).[48] In *Musikpsychologie*, however, Dilthey's self-projection is more pronounced: musical experience rests both in the creator of a musical work (who projects "inner musical excitations") and in the receiver of the work who must be actively engaged in the psychological processes in order to hear "music."[49]

In his Afterword to the republication of *Voraussetzungen*, Carl Dahlhaus attributes the "requirements of [Kurth's] thinking" to a different source: the metaphysics of Bergson. At the beginning of his influential essay, "Introduction to Metaphysics," Bergson reflects on two kinds of knowledge that we have of the world: "The first depends on the point of view at which we are placed and on the symbols by which we express ourselves. The second neither depends on a point of view nor relies on any symbol. The first kind of knowledge may be said to stop at

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[48] Dilthey writes in the essay "Das musikalische Verstehen": "What begins as a movement deep in the unconscious only finds expression as a dynamic relationship in the finished work, and it is only from the finished work that we can discover it. This is in fact the value of music—that it is the expression, the objectification, of what was, in the composer, a state of mind" (trans. Bujić 1988, 373).

[49] See Kurth 1931, 21 and 21n1. I discuss Kurth's ideas concerning the creative and receptive sides of music further in Chapter Two. Rothfarb also suggests that Kurth has a connection with Theodor Lipps (1851–1914) and his theory of **empathy**. He writes,

> According to Lipps [in his *Ästhetik* 1903, 1906], visual and/or aural perceptions lead to an "imitation" of events or emotions in the mind of the viewer/listener, who attains a "direct kinesthetic image" of them in the form of psychic impulses. When impulses match exactly those of the perceived events or emotions, the viewer/listener experiences an 'aesthetic empathy' (ästhetisches Einfühlen), which Lipps characterizes as the "inside of imitation." Clearly, Kurth's objective [stated in *Romantische Harmonik*, p. 2] to "awaken an internal sympathetic resonance with the animated creative forces" derives from Lipp's idea of empathy (Rothfarb 1986–87, 28).

In *Musikpsychologie*, Kurth only mentions Lipps in passing a few times, but moreover, Kurth significantly downplays a unidirectional stimulus-reception paradigm of aural perception that is suggested by Lipps's "empathetic" viewpoint. For a thorough history of this philosophical and psychological concept, see Stanford Encyclopedia of Philosophy, *s.v.* "Empathy," which includes a discussion on the relationship between empathy and understanding.

the *relative*; the second, in those cases where it is possible, to attain the *absolute*." Bergson observes that the traditional scientific method of analysis purports to focus on stable elements of an object; with this perspective, however, absolute knowledge is unattainable, since the object continually alters as elements accumulate. The object itself is inherently mobile. As a corrective, Bergson suggests the method of intuition, by which the observer attempts to "enter into" the object, to be in sympathy with it:

> It follows from this that an absolute could only be given in an *intuition*, whilst everything else falls within the province of *analysis*. By intuition is meant the kind of ***intellectual sympathy*** by which **one places oneself within an object** in order to coincide with what is unique in it and consequently inexpressible. Analysis, on the contrary, is the operation which reduces the object to elements already known, that is, to elements common both to it and other objects. To analyse, therefore, is to express a thing as a function of something other than itself. . . . In its eternally unsatisfied desire around which it is compelled to turn, analysis multiplies without end the number of its points of view in order to complete its always incomplete representation, and ceaselessly varies its symbols that it may perfect the always imperfect translation. It goes on, therefore, to infinity.[50]

Dahlhaus notes that several themes in Kurth's writings are particularly Bergsonian in tenor, and in particular "the method of intuition, of intellectual outlook that places itself empathetically in a process, rather than surrounding the process analytically, from the outside, with concepts."[51] In agreement with Dahlhaus, Felix Wörner has recently maintained, "numerous passages in Kurth's texts reveal striking similarities to Bergson's concept of metaphysics as well as his

[50] Bergson 1903, tr. Hulme 1913/2007, 6; emphasis added in bold.

[51] „Entscheidende Motive, von denen Kurths musiktheoretisches Denken bestimmt und getragen wurde, gehen auf Bergson . . . zurück: . . . die Methode der Intuition, der intellektuellen Anschauung, die sich in einen Vorgang einfühlend hineinversetzt, statt ihn von aussen analytisch mit Begriffen zu umstellen" (Dahlhaus 1973, 150).

concept of music theory as science."[52] To be sure, Kurth's declaration in *Voraussetzungen* for the need for an "instinctive" approach alongside an objective one is suggestive of Bergson.[53] From this publication onwards, Kurth also voices doubts about the explanatory power of visual representation (discussed further in Chapter Three), which we could compare to Bergson's warnings about symbols. Bergson writes, "If there exists any means of possessing a reality absolutely instead of knowing it relatively, of placing oneself within it instead of looking at it from outside points of view . . . of seizing it without any expression, translation or symbolic representation—metaphysics is that means. *Metaphysics, then, is the science which claims to dispense with symbols.*"[54] And the following statement by Kurth from *Musikpsychologie*, which Wörner also cites, could indeed be taken as an affirmation of Bergson's method,

> Daher ist auch für das wissenschaftliche Schauen irgendeine Erscheinung, z. B. ein Kunstil, nicht bloß aus der Analyse der Bestandteile ableitbar; da mit deren Zusammenwirken die neue, nur intuitiv erfaßbare Einheit einsetzt, so liegt es im Wesen einer wissenschaftlichen Betrachtung, daß sie neben philologisch zerlegender Eingänglichkeit auch der Intuition bedarf, die somit nicht irgendeinen künstlerischen Aufputz darstellt, sondern organisch aus dem Wesen der Vorgänge bedingt ist.
>
> [Therefore, even for scientific observation, any phenomenon, for example a style of art, is not deducible merely from the analysis of the constituent parts; since from their interaction the new entity emerges that is only intuitively graspable, it is in the essence of a scientific contemplation to require intuition, aside from philologically analyzable particularities. Thus intuition does not

[52] Wörner 2012, 131. Rothfarb, too, aligns Bergson's emphasis on mobility as the ultimate reality with Kurth's view of the musical world. See Rothfarb 1986–87, 31.

[53] Rothfarb (1989, 31) notes, "Kurth knew Bergson's ideas from reading the celebrated essay 'Introduction à la Métaphysique' (1903; Germ. 1906)."

[54] Hulme 1913/2007, 6.

> represent some artistic finery, but rather is organically determined from the essence of the processes.][55]

It is notable, however, that in *Musikpsychologie*, Kurth makes only passing mention of Bergson, and notably, not in relation to the above statement;[56] rather, the philosopher is listed as yet another scholar who privileges a holistic view of the world. In fact, though Kurth embraces intuition as a necessary condition for grasping musical features as Gestalts, he avoids referring to his approach as *metaphysical*, stressing instead a *psychological* perspective. In the main, Kurth asks his readers to be in sympathy not with "music" as an object, but instead with what we bring to music, what makes the *musical experience* something richer than simply hearing notes. *We* are the objects. (This is a rather contentious standpoint, as we will see below in the reviews.) We would then perhaps do well to heed Helga de la Motte-Haber's words of caution: "Bergson's metaphysics may have had a suggestive effect, but today has been over-estimated in its significance."[57]

As the preceding brief survey has demonstrated Kurth's writings resonate with several well-known philosophical tenets of the 19th and early-20th centuries. Given Kurth's broad education at the University of Vienna, his numerous references to various philosophers and their treatises are unsurprising. As Rothfarb reports,

> Kurth's enrollment schedules, filled out at the beginning of each semester, show that he studied a wide variety of subjects in his major and minor fields. . . . [His] studies in philosophy and other subjects

[55] Kurth 1931, 31.

[56] Kurth (1931, 46) only references Bergson's earlier work, "Essais sur les données immédiates de la conscience" (1889).

[57] La Motte-Haber 1986–87, 103.

> are equally extensive. . . . By the time Kurth graduated, he had accumulated fifty-five credit hours in philosophy, literature, and psychology, compared with forty-seven in musicology, so that in fact over half of his studies were in areas other than music.[58]

To this we could add that Kurth undoubtedly visited many courses and heard lectures outside of his major areas of interest for which he did not receive credit, as was the case in the European educational system of his time and later. Many of his predecessors and contemporaries, too, enjoyed such an education. Like them, Kurth was likely aware of general differences among the philosophical positions he cited, perhaps without having deeper knowledge of the finer details. In laying the foundation for his new theory, Kurth aligns himself with intellectual figures that would lend him the authority he desired and be immediately familiar to his readership.

Critical reception of *Musikpsychologie*

Was *Musikpsychologie*, with its intended populist appeal and fashionable use of Gestalt psychology a "hit"? It depends on whom you asked. For the book caught the attention of not only musicians but psychologists as well. **Table 1.1**, which displays the list of reviews held in Kurth's archive, suggests that the book was widely read (in different circles).

As Rothfarb notes, readers within the musical community looked upon the book favorably, hailing it as innovative and a significant contribution to

[58] Rothfarb 1988, 3.

Folder	Review
β7.1	Herbst, Kurt, *Musikpsychologie und Musikwissenschaft. Eine grundsätzliche Betrachtung über Ernst Kurths „Musikpsychologie“*, aus: Acta Musicologica, Leipzig, April-Juni 1931, S. 64–68.
β7.2	Wellek, Albert, *Iudicia De Novis Libris, Ernst Kurth: „Musikpsychologie“. Berlin 1931, Max Hesses Verlag*, aus: Acta Musicologica, Leipzig, Mai 1933, S. 72–80. (Mit Widmung von Albert Wellek)
β7.3	Simon, James, *Ernst Kurth / Musikpsychologie*, aus: Das Nationaltheater, Berlin, April 1931, S. 238.
β7.4	R., *Musikpsychologie,* aus: Der Bund, Abendausgabe vom 18. Februar 1931.
β7.5	Lorenz, Alfred, *Ernst Kurths „Musikpsychologie“*, aus: Die Musik, Berlin, Dezember 1930, S. 182–187.
β7.6	Wiesengrund-Adorno, Theodor, *Ernst Kurths „Musikpsychologie“*, aus: Frankfurter Zeitung, 11. März 1933, S. 10.
β7.7	Jacobs, W., *Musik. Ernst Kurth. Musikpsychologie*. Max Hesse Verlag, Berlin, aus: Die Literatur, Beilage zur Kölnischen Zeitung, 13. September 1931, [n.p.]
β7.8	Mersmann, Hans, *Musikpsychologie und Analyse*, aus: Melos, Zeitschrift für Musik, Mainz, März 1931, S.107–109.
β7.9	Harburger, Walter, *Musikpsychologie*, aus: Münchner Neuste Nachrichten, 4. Oktober 1931, S. 11.
β7.10	Westphal, Kurt, *Ernst Kurths Musikpsychologie*, aus: Schweizerische Musikzeitung und Sängerblatt, Zürich,1. April 1932, S. 233–237.
β7.11	Preussner, Eberhard, *Kurth, Ernst. Musikpsychologie. Gr. 80, XII, 323 S. Berlin 1931, Max Hesse Verlag*, aus: Zeitschrift für Musikwissenschaft, Leipzig, Juli/August 1934, S. 367–370.

Table 1.1. *Reviews of* Musikpsychologie *held in the Nachlass Ernst Kurth, Institut für Musikwissenschaft der Universität Bern*

Musikwissenschaft.[59] In a letter to Kurth, for instance, Adler praises his former student for conquering new intellectual territory, for his copious citations, and for his consideration of musical style, which Adler views as fruitful terrain for future research:

> Allein meine psychologischen Arbeiten und Studien sind seit fast drei Dezennien ins Stocken geraten und so getraue ich mich vorläufig nicht, in streng wissenschaftlicher Weise meine Ansicht mitzuteilen; allein schon jetzt kann ich sagen, dass mich die Eroberung von Neuland in Ihrem Buche bei einer so gewissenhaften Heranziehung der stetig wachsenden Literatur mit wahrer Befriedigung erfüllt, ebenso die Einbeziehung des Stiles in das psychologische Forschungsgebiet, und dass Sie nirgends in einen Gegensatz zu meinen Aufstellungen über Stil und Stilkritik geraten, über das Letztere werden noch Generationen zu arbeiten haben, um zu festen wissenschaftlichen Thesen vorzudringen.
>
> [My own psychological work and studies have been at a standstill for almost three decades, and so for the time being, I do not venture to tell you my opinion in a strictly scientific manner; I can say now, however, that the conquest of new territory in your book, with such attentive reference to the constantly growing [psychological] literature, truly satisfies me, as does the inclusion of style in the psychological field of research and that you are nowhere in opposition to my positions about style and style criticism; further generations will have to work on the latter in order to advance to firm, scientific theses.][60]

Moreover, in his review of *Musikpsychologie*, Alfred Lorenz positions music psychology at the center of *Musikwissenschaft*, thereby endorsing Kurth's own description of his work. Lorenz references not Adler's disciplinary divisions, however, but the organization that Riemann put forth in *Grundriß der Musikwissenschaft* (1908):

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[59] Rothfarb 1988, 21.

[60] Guido Adler to Ernst Kurth, 29 April 1931, A1.14, Volltextbriefe zum Inventar Nachlass Kurth, Institut für Musikwissenschaft, Universität Bern.

> Die *Musikpsychologie* ist damit eine neue, junge Wissenschaft geworden, deren Richtlinien in dem so betitelten Buch festgelegt und wohl begründet sind. Denn wenn Riemann die verschiedenen Teile der Musikwissenschaft als fünf angegeben hat—‚Akustik', ‚Tonpsychologie', ‚Musikästhetik', ‚Fachlehre' und ‚Musikgeschichte'—so schiebt sich jetzt an dritter Stelle die ‚Musikpsychologie' ergänzend ein.
>
> [Music psychology has thus become a new, youthful science whose directives are defined and well grounded in the book of the same name. For if Riemann [in *Grundriss der Musikwissenschaft* 1919] specified five different parts of Musikwissenschaft—"acoustics," "tone psychology," "music aesthetics," "music theory," and "music history"—"music psychology" must now insert itself in a complementary way in the third position.][61]

Rehding notes the "bottom-to-top" arrangement of Riemann's subfields, which start with the most general aspects and progress towards more specific aspects of music.[62] Lorenz situates music psychology on the third rung of this ladder of specificity, treating it as a critical step towards issues of aesthetics, musical structure, and style-historical concerns. Still others, like Adorno, looked favorably on Kurth's objective, that is, explaining the subjective dimension of music in systematic terms: "The chief merit (viewed broadly and from an external perspective) of Ernst Kurth's *Music Psychology*, 1931, which is attractively presented and published through Max Hesse, is that it resolutely and persistently brings the process of subjectification, which in the past century [new] music itself experienced, over into the realm of theoretical explanation."[63]

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[61] Lorenz 1930, 183. Riemann's subfields are more correctly: "Akustic," "Tonphysiologie (Tonpsychologie)", "Musikästhetik," "Die musikalische Fachlehre (Musiktheorie), "Musikgeschichte." See Riemann 1908/1928.

[62] Rehding 2003, 2.

[63] „Die ‚Musikpsychologie' Ernst Kurths, 1931, ansprechend ausgestattet, bei Max Hesse publiziert, hat, grob und von außen gesehen, ihr Hauptverdienst darin, daß sie den

For some contemporaneous psychologists, however, Kurth's investigation lacked the scientific rigor to which they were accustomed. Where they might have expected reports of laboratory studies or reviews of the most recent advances in psychology, they were greeted instead with familiar, or even "outdated" philosophical ideas. And most problematic, they looked in vain for a clear distinction between subject and object. Herbst, for instance, writes with frustration that Kurth confuses cause with effect:

> Um nun nach unserer Meinung das „Wie" psychologischer Wirkung feststellen zu können, muß erst einmal der wirkende Gegenstand als solcher selbst erkannt sein. (Wir unterstellen damit mit Kurth der Musikwissenschaft die Aufgabe, daß sie das Verhältnis von Gegenstand und Wirkung zu untersuchen habe, eine Annahme, die wir, um in dem Rahmen einer kürzeren Besprechung bleiben zu können, hypothetisch hier gelten lassen wollen.) . . . Kurth scheint sich nun diesem Problem entziehen zu wollen mit der Gleichsetzung des „Was" und des „Wie". . . . Demgegenüber müssen wir betonen, daß die musikalischen Gegebenheiten als solche wahrgenommen werden und ihre Wirkung auf die Psyche des Hörers ausüben. Diese Scheidung von Ursache und Wirkung scheint uns Kurth auch an anderen Stellen zumindest nicht erkennbar herausgearbeitet zu haben.
>
> [In order now to be able to establish, in our opinion, the "how" of psychological effect, the active object itself must be identified as a start. (With this we, with Kurth, charge musicology with the task that it must investigate the relationship of object and effect, a postulate that, in order to remain within the scope of a short discussion, we want to apply hypothetically here.) . . . Kurth seems to want to elude this problem with the equation of the "what" and the "how". . . . In contrast, we must emphasize that musical facts as such are perceived and exercise their effect on the psyche of the listener. It seems to us that also in other places Kurth at least imperceptibly worked out this distinction between cause and effect.][64]

Subjektivierungsprozeß, den im vergangenen Jahrhundert die Musik selber durchmachte, im Bereich der theoretischen Rechenschaft entschlossen und konsequent nachholt" (Adorno 1933, 350).

[64] Herbst 1930, 65–66.

Wellek voices a similar concern, yet in a more charitable fashion. He first applauds Kurth for his original and ambitious project, one that lacked precedent: "The undertaking of a systematic music psychology, such as Ernst Kurth has ventured in his most recent monumental work, is scientifically new. For the author is rightfully able to demarcate it as a completely distinct discipline against 'tone psychology' on the one hand [and] 'music aesthetics' on the other hand, and to tackle the challenge as it is understood without considerable systematic prerequisites in the literature."[65] But soon after, Wellek astutely highlights a problematic aspect of the book. If elucidating psychic functions within the listener is Kurth's aim, these psychic functions become the *object* of investigation. In the process, Kurth attempts to minimize potential variation in his *subject*—an unconvincing tactic, according to Wellek:

> Musik wird im Vorwort eine „geistige Tätigkeit" genannt, überhaupt durchaus als Vorgang im Subjekt gesehen (die psychischen Funktionen dabei sind Zielpunkt der Untersuchung); diese Tätigkeit, dieser Vorgang im aufnehmenden Subjekt, wird aber immer stillschweigend in einem Idealfall, als durchaus objektgerecht, gesetzt. So wird der Wertgesichtspunkt—der prinzipiell mit Recht der Ästhetik überwiesen war—dadurch, aber nur scheinbar, eliminiert, daß ohne alle Diskussion Normen des Musikhörens als die fraglich psychischen Funktionen schlechthin beschrieben werden. Damit bleibt ein ganzer Komplex musikpsychologischer Probleme völlig außerhalb, ja vielfach ungesehen, der keinesfalls von einer Musikpsychologie, auch nicht einer „im engeren Sinne" abgezogen werden kann: die möglichen Verschiedenheiten des Musikhörens im möglichen Subjekt. Das Subjekt Kurths ist und bleibt ein Idealsubjekt.

[65] „Das Unternehmen einer systematischen Musikpsychologie, wie es Ernst Kurth in seinem jüngsten Monumentalwerk gewagt hat, ist wissenschaftlich neu. Denn mit Recht darf der Verfasser sie gegen eine ‚Tonpsychologie' einerseits, gegen eine ‚Musikästhetik' anderseits als wohlunterschiedene Disziplin herausgrenzen und die so verstandene Aufgabe ohne nennenswerte systematische Voraussetzungen in der Literatur in Angriff nehmen" (Wellek 1933, 72). Wellek's positioning of music psychology between tone psychology and music aesthetics suggests that he had Riemann's classification in mind.

> [In the Foreword, music is deemed an "intellectual activity," generally viewed completely as a process in the subject (the psychic functions are, as a result, goals of the investigation); but this activity, this process in the receiving subject, is always positioned tacitly in the ideal case, entirely oriented towards the object. The valuable [subjective] point of view—which was basically transferred correctly to the aesthetic domain—is (only seemingly) eliminated, such that without discussion, norms of musical hearing per se are described as the psychic functions in question. For this reason, a whole complex of music-psychological problems that can in no way be removed from a music psychology, even one "in the narrow sense," remains entirely outside, indeed frequently unseen: the possible disparities of musical hearing in the possible subject. **Kurth's subject is and remains an ideal subject.**][66]

As we shall see, Wellek is correct: Kurth largely avoids discussing issues of musical training, experience, or aptitude. He conveys instead that his listening subjects—the readers—be they music academicians or *Liebhabern*, have similar responses to music (energetic motion, tension, weight, space, and so on), albeit in relation to their personal experiences with the world in general. Wellek also cautions fellow psychologists not to look too hard for recent studies or stringent methodology in *Musikpsychologie*, for "Kurth speaks his own language, as a music theorist much more than as a psychologist; and this language is not that of a psychology (certainly, to an extent deliberately so)."[67] Despite his strong criticism, Wellek concludes that *Musikpsychologie* should nevertheless be celebrated for bringing together two significant fields of research. And if it bears the hallmarks of an author who is only somewhat familiar with the intricate details of psychological

[66] Wellek 1933, 72–73; emphasis added in bold.

[67] "Kurth spricht seine eigene Sprache, schon als Musiktheoretiker, mehr noch als Psychologe; und diese Sprache ist (großenteils gewiß mit Absicht) nicht die einer Psychologie" (Wellek 1933, 76).

research, it also demonstrates that Kurth was a "brilliant improviser." Wellek writes,

> Wenn wir nun aus dem Gesagten die Summe ziehen, so dürfen wir die große Reihe der Einwendungen nicht die ganz außerordentlichen Verdienste des Werks verdunkeln lassen. Denn einmal schon handelt es sich um eine Arbeit von einer Größe und Neuheit, die schon an und für sich achtunggebietend ist; dann aber um ein Grenzgebiet, das eine gleich tiefe fachmännische Schulung in zwei so selten vereinigten Fächern: Musik und Psychologie, voraussetzt. So unvergleichlich ohne Zweifel Kurths Zuständigkeit auf dem ersten Gebiete ist, so lassen sich alle unsere Einwände auf den einen Satz bringen: er ist auf dem Boden der Psychologie Außenseiter. Ein genialer Improvisator allerdings, der ziemlich auf eigene Hand eine Psychologie erfindet, die wenn man über die Form und das Detail hinaus bis zum Kerne sieht, doch fast überall Wesentliches für sich hat.
>
> [When we draw conclusions from the aforementioned [detailed criticism], we should not allow the long string of objections to obscure the extraordinary merits of the work. **For it is a work of greatness and novelty, impressive in itself, but one [that is] on the boundaries [of disciplines], assuming an equally deep, expert schooling in two so rarely combined subjects: music and psychology.** If Kurth's competence in the first area is without doubt peerless, all of our objections may be reduced to one statement: on the foundation of psychology he is an outsider. **He is a brilliant improviser, however, who reasonably invents a psychology on his own, which, if one looks beyond the form and the detail towards the essence, has significance almost everywhere.**][68]

[68] Wellek 1933, 80; emphasis added in bold.

CHAPTER TWO

On *Musikpsychologie*, *Tonpsychologie*, and *Tonvorstellungen*

Kurth devotes the First Section of *Musikpsychologie* (1. Abschnitt "Tonpsychologie und Musikpsychologie") to establishing the motivations and goals for his new theory. While acknowledging the growing diversity of approaches to music research, Kurth nevertheless regards the whole field of *Musikwissenschaft* as incomplete. Missing is an in-depth, formal investigation into the role of the psyche in our musical experience. Predictably, Kurth endeavors to make a strong case for the originality of his ideas and their positive contribution to music research. But his manner of persuasion—the general course of his argument and his choice of words and references—conveys a more complicated agenda than simply carving a niche. Rather, it is suggestive of a scholar who recognizes the fractured intellectual climate around him and sees an opportunity to reformulate his own beliefs in order to reach out to a broader, more diverse audience. Having already made a name for himself as a thoughtful and insightful music analyst, Kurth seeks further recognition as an erudite scholar, one who is up to date with activities in his own field and beyond.

The present chapter consists of three parts. In Part 1, I summarize Kurth's ideas regarding the primacy of an "inner world," specific evidence for its existence in everyday musical experiences, and its significance for both receivers and producers of music. We shall see that Kurth avails himself of metaphysical ideas that would have been familiar to his readership at the time. Indeed, one can trace his idealist outlook to the popular philosophical tenets of his youth, discussed in

Chapter One, from which many other music scholars around the turn of the century also drew inspiration.

While he appeals to commonly held beliefs about music, Kurth also voices his dissatisfaction with previous research on music and the mind. He draws particular attention to the work of the "tone psychologists"—which shares, at least at first blush, a close kinship with Kurth's music psychology—and Hugo Riemann's theory of *Tonvorstellungen*. I examine Kurth's criticisms in Parts 2 and 3, respectively, of these variant notions of "music psychology."[1] Kurth turns to Gestalt psychology and philosophies of the unconscious to address the inadequacies of tone psychology and Riemann's theory.

Part 1: Kurth's "Inner World"

At the heart of any ontology of music lies the question of where music resides. Whether music is to be found, on the one hand, in the object (the sound signal or score) or on the other hand, in the subject (the listener). For Kurth, the answer is unequivocally the latter, and this viewpoint informs his theoretical writing. *Musikpsychologie*, for instance, opens with the following statement:

> Nirgends in der Welt schweift jene eigentümliche Wesenheit umher, die uns als Ton vertraut ist; nur was ihn verursacht, gehört der Außenwelt an; jedermann weiß, daß er kein **'Ding an sich'** ist, sondern **Erscheinungsform**, in der wir gewisse **Vorgänge** aufnehmen. Nirgends in der äußeren Welt ist andrerseits etwas von jenem inner Universum nachweisbar, in das wir das tönende Geschehen aufbreiten. Zwei Welten schließen einander aus, und es besteht zwischen ihnen kein reines Spiegelverhältnis.

[1] Kurth engages the ideas of Riemann and the tone psychologists throughout *Musikpsychologie*. In this chapter, I limit my focus to Kurth's criticisms as they appear in the First Section.

> [That particular essence that is familiar to us as tone exists nowhere in the world; only the production of tone belongs to the outer world. Everyone knows that it is not a **'thing-in-itself,'** but rather a **phenomenon** into which we incorporate certain **processes**. Then again, nowhere in the outer world is anything detectable from that inner universe, in which we process sounding events. The two worlds exclude one another, and a truly reciprocal relationship does not exist between them.][2]

Let us unpack these claims. To start, Kurth contends that what we understand as a sounding tone lies apart from the physical world. Though the physical world produces acoustic signals, tone is fundamentally an object of the senses, a phenomenon. And because we can perceive it, tone is *not* a Kantian "Ding an sich." Kurth adds, however, that we bring "certain [mental] processes" to this phenomenon, and these processes imprint the aural impression—or as he calls it later, the "'tabula rasa' [or] neutral foundation"[3]—with *musical* characteristics. Mental processing happens almost immediately upon listening; thus the "neutral foundation" is ineffable. Kurth writes, "The instantaneous (sound) is naturally the sensory listening impression, which is only presentable through itself, not through words or description, (and) least through physical-causal definition."[4] Unlike tone, the mental processes that inform our impression of the acoustical object—that

[2] Kurth 1931, 1; emphasis added in bold.

[3] Kurth 1931, 3.

[4] "Der unmittelbarste ist natürlich der sinnliche Gehörseindruck, der nur durch sich selbst, nicht durch Worte oder Beschreibung, am wenigsten durch physikalisch-ursächliche Definition darstellbar ist" (Kurth 1931, 1). I discuss Kurth's views on the relationship between the inner world and metaphorical language further below and in Chapter Three.

ultimately transform sound (*Klang*) into musical substance (*Stoff*)[5]—are unknowable to us, for they reside in an inaccessible inner universe.

If we cannot observe these psychic processes, how can we be confident of their existence? Kurth argues that though we may not be able to enumerate, measure, or manipulate the active psychic forces, we can recognize their handiwork. To this end, he provides numerous examples as evidence for psychological processing; I shall focus here on three broad ideas: the elasticity of our perceptions, the metaphorical language we use, and the role of inner-world processes in music composition.

The inner world at work

Though we traditionally produce—through the push of a button or a specific hand position, for instance—and notate tones as discrete objects, in reality, our hearing is very elastic. As basic evidence for this idea, Kurth cites a situation first discussed by Riemann: multiple violins playing in unison generally differ in their precise frequencies; nevertheless, a listener understands the instruments to be playing the same notes. Riemann emphasizes that the tonal system is more variable in practice (performance) than theoretical (or physiological) models allow, and thus he argues for a mental representation of the tone that reflects this variability:

[5] „Das ist der Kernpunkt bei allen diesen Erscheinungen: sie liegen in Wirklichkeit nicht in den Tonreizen, sondern werden von den verarbeitenden Kräften in sie hinein verlegt; sie erst verwandeln Klang in ‚Stoff'." ["That is the crucial point in all of these appearances (i.e., musical characteristics): in reality, they lie not in the sounding stimulus but rather are displaced into them from **the processed forces**; they first transform sound into 'substance.'"] Kurth 1931, 10.

a line encompassing a range of frequencies.[6] While Kurth, too, uses this example to showcase the effect of psychic processes, he considers Riemann's explanation inadequate from a perceptual standpoint. For Kurth, the tone itself appears to expand from within when played by multiple instruments with divergent frequencies:

> Mit Recht folgert auch Hugo Riemann ["Grundriß der Musikwissenschaft," 4. Aufl., 1928] aus der Möglichkeit, einen durch zwei Instrumente wiedergegebenen Ton trotz gewisser Intonationsdifferenzen als den gleichen Ton anzunehmen, „dass der einzelnen Tonhöhe eine gewisse Breite anerkannt werden muß"; Breite kommt aber nur etwas Körperlichem zu, was als unklare Scheinvorstellung in der Tat hier hereinspielt, und der Ton zeigt sich somit nicht nur wie auf einer Klangoberfläche verschiebbar, er erscheint auch selbst ausdehnbar.
>
> [From the possibility of a tone produced by two instruments, which, despite certain differences in intonation, is taken as the same tone, Hugo Riemann rightly concludes 'that a certain width must be granted to the single pitch'; but width only may be attributed to something physical, [a characteristic] that, in effect, acts as a vague illusion here. Thus the tone appears not only as if it were moveable on a sounding surface, but also seems expandable.][7]

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[6] As Riemann writes,

> Rein tonphysiologische Probleme sind dagegen Fragen wie die, wie es geschehen kann, dass man beim Zusammenspiel einer großen Zahl von Instrumenten (z. B. Violinen), Differenzen der Tonhöhe, welche das Ohr bei Einzelangabe nacheinander sehr wohl zu unterscheiden vermag, ignoriert und vielmehr als ein wirkliches Unisono empfindet; hier hat die Tonphysiologie zu konstatieren, dass der einzelnen Tonhöhe eine gewisse Breite zuerkannt werden muß, dass sie nicht einem mathematischen Punkte, sondern einer Linie, wenn auch sehr beschränkter Länge, vergleichbar ist.
>
> [Purely tone-physiological problems, however, include, for example, how it can happen that given the combination of a large number of instruments (e.g., violins), one can ignore differences in frequency that the ear is able to distinguish very well—particularly when they are successive—and sense a true unison. Here tone physiology has to state that a certain width must be awarded to the individual pitch, that it is comparable not to a mathematical point but rather to a line, even if with a very restricted length] Riemann 1908/1928, 46.

[7] Kurth 1931, 9. Kurth's modification of Riemann's analogy might seem overly fussy and to hinge merely on semantics. Metaphorical language, however, is very important to

He suggests, further, that when the intonation of a single instrument sounds awry within a given tonal context, our ears "tug at the tone," automatically comparing the expected and actual frequencies.[8]

Providing a more radical example of the elasticity of our pitch perception, Kurth suggests that in some contexts we may understand two notes of differing pitch categories (C and C♯, for instance) as equivalent. Here, he appeals to a "psychic activity of the will" (*eine psychische Willensaktivität*) that engenders an "alteration" in our hearing,[9] a position that underlies his analyses of 19th-century chromatic music. Readers of *Musikpsychologie* familiar with Kurth's earlier works would have noted the not-so-subtle reference to his concept of "alteration technique," first discussed in *Romantische Harmonik* (1920). As described in Rothfarb 1988, alteration technique involves the substitution or insertion of

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Kurth, and thus for him, Riemann's choice of words is suggestive of a broader psychological perspective that diverges from his own. I uncover further aspects of this dispute below in this chapter and in subsequent chapters as well, since they arise throughout *Musikpsychologie*.

[8] Tension arises when our ears compare the "modified" (out-of-tune) and "original" (in-tune) conditions. Kurth (1931, 9) writes:

> Es verschlägt nichts, daß man sich leicht vergegenwärtigen kann, in Wirklichkeit gebe es keine Klangoberfläche, sondern nur Tonreize, deren Abstand solche Verschiebbarkeiten erträgt; aber das erfolgt unter dem Gefühl, daß der veränderte Zustand gegen den ursprünglichen hin in Spannung bleibt, und das ist das Entscheidende: wir haben zunächst nicht das Gefühl, die Tondistanz zu verändern—mag uns auch das Ohr sofort darüber belehren—sondern am Ton zu zerren, seine Reichweite auszudehnen.
>
> [It does not matter that one could easily recognize that there is no sounding surface in reality, but only tonal stimuli whose distances tolerate such modifications. This process occurs under the impression that the modified condition remains in tension with the original one, and that is the crucial point: we do not have the impression of altering the tone distance—even if the ear immediately tells us so—but rather (the impression) of tugging at the tone, of expanding its range.]

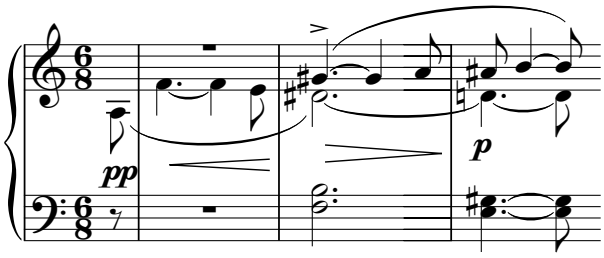
[9] Kurth 1931, 10.

chromatic tones into an otherwise diatonic framework. Kurth's analysis of the opening measures of Wagner's Prelude to *Tristan und Isolde*, shown in **Example 2.1**, illustrates this technique. Kurth interprets the opening vertical sonorities as a "simple cadential gesture . . . distorted by chromaticism"—that is, an altered local dominant B7 chord resolving to its "tonic," E7. The G♯ in the top voice is a melodic alteration or "neighbor-note insertion" striving toward the following chordal seventh, A. The F♮ in the bass voice is a chordal alteration; it produces a "sharpening" of melodic tension directed toward the following E. As Rothfarb notes, these two alterations "impart their collective kinetic energies to the overall sonority, now a highly unstable chord suffused with potential energy."[10] Of course, Kurth was certainly not the first to suggest that chromatic music originates in or intensifies a diatonic norm; this approach has a long-standing tradition in harmony pedagogy.[11] But his emphasis on the perceptual significance of alteration technique—as a means of heightening tension and forward drive—and its origins

[10] See Rothfarb 1988, 134–35, for a lengthier discussion of Kurth's analysis. Kurth first used the terms "potential" and "kinetic energy" in *Voraussetzungen* (1913, 71), and they appear in all of his subsequent books. The terms "potential" and "kinetic energy" have become inextricably linked to Kurth, for better or for worse. Some, like Milton Babbitt, saw these terms as "completely vacuous" and incomprehensible: "As far as I can ascertain, kinetic energy was when you ascended, and potential energy was when you started high and went low." See Babbitt 1987, 156. In *Musikpsychologie*, Kurth clarifies his use of these terms in the Second Section (2.Abschnitt), emphasizing their usefulness as analogies with physical phenomena. I discuss these terms in more detail in Chapter Three. Chapter Four provides a fuller account of alteration technique.

[11] For a discussion of how Kurth's approach to chromatic harmony differs from that of Heinrich Schenker, see Rothfarb 1988, 175. See Wason 1985 for a discussion of other dominant harmonic theories in the 19th and early-20th centuries.

in underlying psychic processes sets his analyses apart from more abstract explanations.[12]



Example 2.1. *Prelude to* Tristan und Isolde*, mm. 1–3, piano reduction*

In underscoring how our comprehension of pitch is flexible, Kurth points to musical phenomena (internal expansion of a single tone, heightened tension effects) to which listeners attend that override the purely acoustic signal. Elsewhere in the first section of *Musikpsychologie*, Kurth discusses how changing musical contexts surrounding a single tone can elicit different impressions for the listener. He speaks, for instance, of the varying degrees of gravitational pull that reside in different chord members:

> Dies Gravitieren des Tones ist z. B. schon die Ursache, daß er ganz verschiedene Wirkungen annimmt, je nachdem, auf welchen Akkord man ihn bezieht; ob man ihn als Grundton, Quint-, Terz- oder Septton usw. empfindet, bedeutet einen dynamisch gründlichste veränderten Zustand. Wenn man dies als 'harmonische Funktionen' des Tones bezeichnet, so ist das ein theoretischer Teilausdruck für Erscheinungen psychischer Natur, die sich in viel weitergehendem Maße auswirken.
>
> [This sense of gravity in the tone is, for example, the reason that the tone adopts entirely different effects, depending on which chord one uses as reference; whether one perceives the tone as the root, fifth, third, or seventh, etc., suggests a dynamic, most fundamentally modified condition. Whenever one labels these [root, fifth, third, or

[12] A compendium of analyses of the *Tristan* prelude, including Kurth's, appears in Bailey 1985.

> seventh] as "harmonic functions" of tones, this is an incomplete theoretical expression for phenomena of a psychological nature that operate to a much wider extent.][13]

As a single tone changes its chord function, our impression of its gravitational pull alters. Likewise, enharmonic reinterpretation is capable of altering the "energetic form" of the pitch or chord, and a pedal tone is affected by the "adjusting sound tensions" in the moving notes around it.[14]

One notes in the above examples the (unusual) vividness with which Kurth speaks about aural phenomena. Indeed, the author's descriptions borrow heavily from visual imagery and physical concepts. But, Kurth argues, even in everyday

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[13] Kurth 1931, 13–14. I discuss the gravitational pull of chord members further in Chapter Five. See Rothfarb 1991, 24n73, for alternative characterizations of chord functions from earlier music theorists.

[14] Kurth writes,

> Was aber besonders zu denken gibt, ist, daß die Schwere-Empfindung ohne weiteres vom Willen aufgehoben oder in eine andere Energieform umgedeutet werden kann; so vermag z. B. ein Ton mit noch so starker Schwere-Wirkung bei enharmonischer Umdeutung des Akkordes in einen Ton von anderer Energieform (z. B. Druckwirkung nach der Höhe zu) verwandelt zu werden, oder auch in einen konsonanten Ruheton, während die Klangspannungen sich in andere Töne verschieben. Ferner ist die Schwerewirkung nicht zu allen Zeiten mit gleicher Intensität in die Klänge hineinempfunden worden.
>
> [What is particularly suggestive is that the sensation of weight can be readily removed or reinterpreted into another energetic form by the will. Thus, for instance, a tone with strong gravitational effect is capable of changing to become a tone with **another energetic form** (e.g., strong tendency to ascend) during enharmonic reinterpretation of a chord, or even [of becoming] a consonant sustained tone while the sound tensions adjust themselves in other tones. Moreover, the gravitational effect is not experienced with the same intensity in all chords all of the time] (Kurth 1931, 12–13; emphasis added in bold).

Elsewhere, Kurth names three "foundational conditions" that account for the innumerable musical phenomena: energy, space, and matter. Music emerges through these phenomena, "first from a process of [physical] hearing (*Gehörsvorgang*) to a world of [psychological] listening (*Hören*)" (Kurth 1931, 20, emphasis in original). Thus without an awareness of these foundational conditions, one is not really listening to music, but rather only hearing sound. These foundational conditions are the focus of the Second Section (2. Abschnitt) of *Musikpsychologie*.

discourse we use metaphors and analogies to describe the musical phenomena we hear. Ultimately, "whether the language is of gravity, substance, elasticity, etc.; of deceptive ancillary images such as light, dark, and colorful impressions; of apparent physicality or of space, we are fundamentally observing not the tone but always only the psyche."[15] As he suggests, our language reflects an attempt to concretize the effects of mental processes that stem from an inner psychic world.[16] Moreover, when listeners employ such language, they display a degree of musical competence (*Befähigung*), which "is based not only in listening but also in the ability to absorb sounding impressions as bearers of organized forces."[17] In his appeal to a wide audience, Kurth underscores universal musical responses and experiences.

Psychic processes from creative and receptive sides

Thus far, we have limited our discussion of psychic processes to those that reside in the listener. And indeed, Kurth refers most often to the receptive side of

[15] „ob von Schwerkraft, Stoßkraft, Elastizität usw., von trughaften Begleitvorstellungen wie Hell-, Dunkel- und Farbigkeitseindrücken, von Scheinkörperlichkeit oder vom Raume die Rede ist, im Grunde beobachten wir dabei nicht den Ton, sondern immer nur die Psyche" (Kurth 1931, 11).

A similar passage occurs earlier (Kurth 1931, 7): „Wenn man ferner den tiefen Tönen etwas breites, mäßiges, den hohen etwas dünnes zuspricht, so zeigt sich schon vom Zusammenhang räumlicher mit Masse-Empfindung eine Spur. Und doch liegt von alledem im Tonphänomen an sich noch nicht die eigentliche Wurzel." ["Whenever one further characterizes the lower tones as somewhat wider, moderate, [and] the high tones as somewhat airy, there appears a connection from the combination of spatial and mass perception. And therefore, from all this, the real root does not yet lie in the tonal phenomenon itself."]

[16] An embodied response to music undoubtedly informs Kurth's metaphorical language as well. Suzanne Cusick (1994) notes the infrequency with which this perspective appears in traditional (syntax- and score-based) theoretical approaches to music. I discuss Kurth's metaphorical language further in Chapter Three in connection to more recent developments in cognitive linguistics and music cognition.

[17] Kurth 1931, 14.

our engagement with music.[18] Scattered throughout the first section of *Musikpsychologie*, however, are references to music creation, both compositional and performative. For instance, Kurth indicates that an "artistic will" is responsible for different impressions of the same tone.[19] And he distinguishes between true composers who intuitively "master substantial uniform motions" and dilettantes, who calculatingly "string together details."[20] Masterful compositions

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[18] So much so that at least one contemporaneous reviewer of Kurth's work, psychologist Albert Wellek, assumed that the subject of *Musikpsychologie*, and the purview of the new subfield Kurth proposes, lies solely in the listening activity. Wellek (1933, 72) writes, „Was nach alledem als legitimer Gegenstand der Musikpsychologie übrigbleibt, ist die Frage nach den ‚psychischen Funktionen', die dem Musikauffassen zugrunde liegen, d. h. das Hören als aufbauende Tätigkeit darzustellen." ["What remains as a legitimate subject of music psychology is the question of 'psychic functions' that lie at the basis of musical considerations, that is, to describe **listening** as [a] constructive activity."] Emphasis added in bold.

[19] He writes (1931, 19),

> Aber die akustisch gegebene, zumindest vorgebildete Erscheinung dient hier nur einer bestimmten psychischen Hörweise als Ausdrucksmittel; die physikalische Erklärung wäre schon deswegen nicht ausreichend, weil der gleiche Ton (gleichen Instruments) je nach dem künstlerischen Willen in verschiedener Weise diesen Eindrücken unterliegen kann.
>
> [But the acoustically given (at least prepared) phenomenon, here serves only as means of expression of a particular **psychic manner of hearing** as means of expression; the physical explanation would already, for this reason, be insufficient, since the same tone (of the same instrument) can underlie this impression in various ways, according to the **artistic will.**]

[20] He writes (1931, 33),

> Das Wort „Komposition" („Zusammensetzung", lateinisch genau gleichbedeutend mit dem griechischen „Synthesis") ist daher nur bedingt am Platze; soweit es die Gesamtheit in der Zusammensetzung heraushebt, trifft es etwas Richtiges, sobald man aber nur eine Zusammensetzung ursprünglich gegebener Einzelheiten damit versteht, führt es irre (so in einer Menge von Kompositions- und Stillehren). Analoges tritt beim reproduktiven Vorgang hervor; nur Stümper setzen aus Einzelheiten zusammen, das wirkliche Darstellungstalent meistert in einer Art geistiger „Weitgriffigkeit" größere Einheitszüge, zu deren Festigung es allerdings dann oft jede Einzelheit herausgreift. Auch wer eine Partitur überblickt, summiert sie nicht aus Stimmen, sondern löst sich diese aus dem erklingenden Ganzen.
>
> [The word 'composition' ('assembly,' specifically, the Latin equivalent of the Greek 'synthesis') is therefore only conditionally in place; to the extent that it brings out

originate in musical processes stemming from the composer's inner world. The composer subsequently tames these "irrational" psychic processes through "intellectual arrangement," resulting not in a "drive to chaos but rather to the cosmos."[21]

What remains, then, of the initial psychic processes emanating from the producer once a composition has reached the listener? Based on the above statements, one could imagine that, once transformed in the act of composing, they are irretrievable by any receiver of the artwork. And yet, we learn that in the creative process, "tonal imaginings (*Tonvorstellungen*)—that is, **inner musical excitations [in the artist]**—push outwards, by attaining their 'image' (*Bild*) in the sounding material and by **projecting themselves to others** in the form of the

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the whole in the compositional process, it rings true, but as soon as one only understands a composition as originating in details, it is misleading (as is the case in many composition and style treatises). Analogies emerge with reproductive processes; only dilettantes assemble together details, [whereas] the true compositional talent masters substantial unified motions in a kind of broad comprehensiveness; towards their consolidation, however, the talent then often singles out that detail. Whoever scans a score as well does not summarize the voices, but rather derives them from the sounding whole.]

[21] He writes (1931, 44–45),

. . . dass ein Kunstwerk im Bezwingen der elementaren Kräfte durch gedankliches Ordnen beruht. . . . Aus dem irrationalen Einschlag der psychischen Vorgänge ist eben nicht der Drang zum Chaos, sondern zum Kosmos abzuleiten. . . . Die Urbilder erfahren erst noch vielfach Veränderung, ehe sie zum Denkbild werden, und ebenso vielfache Umlagerungen.

[. . . that an artwork is based in the subjugation of elementary forces to intellectual arrangement. . . . The impulse not to chaos but rather to the cosmos is to be derived from the irrational impact of psychic processes. . . . The archetypes first experience multiple transformations, and similarly, in many cases, rearrangements, before they become the conceptualization.]

physical stimulus of tone generation."[22] In this formulation, the sounding material is only a conduit for transmitting "inner musical excitations" of the creator to the receiver. Musical listening, in turn, begins when the listener apprehends the composer's tonal imaginings and contributes his or her own mental processes through a "reproductive process":

> Das musikalische „Hören" setzt demnach erst beim Miterleben dieser inneren Kraftbewegungen ein und gelangt bei wachsender Vertrautheit mit dem Werk auch dazu, in den Tönen nur die Träger, die Äußerungsschicht des wirklichen schöpferischen Atems aufzunehmen. Nur äußerlich betrachtet, liegt demnach die Abfolge vor, die vom physikalischen Tonreiz zum psychologischen Eindruck leitet; aber solange diese Abfolge vom Hörer nicht selbsttätig umgekehrt wird, hört er noch nicht „Musik", wird er nur durch Klangreize berauscht oder auch verwirrt. Der „reproduktive" Vorgang (beim Hören wie auch beim Spielen) ist in Wirklichkeit ein neu reproduktiver, d. h. nachbildender Vorgang, kein „retro-produktiver", —das wäre einer, der sich der umgekehrten Abfolge bewusst würde.
>
> [Musical "listening" thus begins only with the experience of these inner force motions, and also aims, through growing familiarity with the work, towards the stage where **one perceives tones as only an expressive layer of the true creative breath.** Thus when only considered superficially, the succession that leads from physical tonal stimulus to psychological impression occurs; but **as long as the hearer does not independently reverse this succession, he will not yet hear "music," but only become intoxicated or even confused by sonic stimuli**. The "reproductive" process (while listening as well as playing) is in reality a newly productive one—that is, an imitative process not a "reverse-productive" one, which would be one conscious of the succession from psychological impression to physical stimulus.][23]

Thus the listener who fails to achieve this psychological connection with the music (and the composer) will be lost in the sound world.

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[22] „[D]ie Tonvorstellungen, die inneren musikalischen Erregungen schlagen nach außen, indem sie ihr ‚Bild' in der Klangmaterie gewinnen und sich im physikalischen Reiz der Tonerzeugung andern vermitteln" (Kurth 1931, 21).

[23] Kurth 1931, 21n1.

Past scholars have made diverse attempts to come to terms with Kurth's position concerning the role of the composer; such attempts are generally based on readings of Kurth's work before 1931. Rothfarb, for instance, has written, "according to Kurth, 'real' music resides in psychic motion, beginning with the composer's creative psychic stirrings. Sonic music is the final stage, the last reverberation of that generative psychic process."[24] Kurt von Fischer voices a similar opinion when he writes that for Kurth, "music and sound are regarded as proceeding from the composer's being and not from outside."[25] By attributing the source of "psychic stirrings" and "real" music to the composer, these two readings omit the purely receptive listener entirely. Rehding, however, provides a very different interpretation, one that emphasizes Kurth's interest in stylistic epochs.

> The notion that composers 'spring' from a certain age seems strongly to suggest that Kurth's Hegelian concept of *Geistesgeschichte* is totally determinist; it does not allow the composer any free will. . . . Moreover, if music is only the result of its basic forces which are naturally determined by history, there cannot be a creative process as such.[26]

Further, in an admittedly radical reading, Rehding suggests that for Kurth the true "master" of a musical work is "one who actively recreates it—whether it be the performer or even listener."[27] Rehding's interpretation thus underscores the importance of the receiver while de-emphasizing the role of the creator—indeed,

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[24] Rothfarb 1991, 23. See also Rothfarb 1988, 11.

[25] *Grove Music Online*, s.v. "Ernst Kurth."

[26] Rehding 1995, 42.

[27] Rehding 1995, 49.

obliterating the creator's individual psyche: the composer is merely a product of his time, operating within the prevailing Zeitgeist.

Given these divergent views, it would appear that the status of the composer is underdeveloped in Kurth's earlier works. In *Musikpsychologie*, Kurth certainly writes from a more refined standpoint, but at the same time, his prose raises a host of other unanswered questions. In certain passages, he offers the possibility of a kind of unidirectional transfer of psychic content from producer to receiver by way of the sounding object ("inner musical excitations . . . projecting themselves to others"). And in other places, he emphasizes psychic processes stemming from the receiver, reflected in the musical phenomena and metaphors discussed above. He is neither forthcoming about what is being transferred nor what remains after receivers inevitably contribute their own tonal imaginings to the musical experience. As a result, these aspects of Kurth's inner world remain inchoate.[28]

Kurth's inner world against Helmholtz's "material ear of the body"

Although Kurth's philosophical beliefs (outlined in Chapter One) are similar to those of many writers before him, they uniquely intersect with his resolve that an investigation of the inner world should be at the heart of any theory of music. A comparison of Helmholtz's and Kurth's positions is enlightening in this regard. Similar to Kurth, Helmholtz's beliefs were shaped by the writings of Kant—albeit

[28] Perhaps the most pressing questions are: Is there a single inner world shared by all? And if music resides in this, is music the same for everyone? Given Kurth's dedication to music pedagogy for musical amateurs and children and his interest in stylistic epochs, one could pose the following hypothetical response: There is something a priori that we bring to sounding tones, which allows all of us to interpret the musical object, the sounding world, as anything but a conglomerate of tones. Perhaps each individual hears music in a slightly different way, but a community will have similar responses.

with an "empirical twist," as Trevor Pearce notes. Pearce writes that Helmholtz, along with psychologist-philosophers like Johann Friedrich Herbart and Moritz Drobisch "embraced Kant's doctrine that knowledge requires both the receptive faculty of sensibility and the active faculty of understanding. . . . They believed that the spontaneous and universal rules by which we actively order experience were susceptible to physiological and psychological explanations."[29] In a speech given in 1855, for instance, Helmholtz credits Kant with "[explaining] the part played by the particular, innate laws of the mind, the organization of the mind, in our representations."[30] In his own work, Helmholtz made a distinction between mere sensations (*Empfindungen*) and representations of the mind (*Vorstellungen des Geistes*). For music in particular, this distinction results in the following dualism: "the audible sensation, as it developed without any intellectual inference, and the conception which we form in consequence of that sensation. We have, as it were, to distinguish between the **material ear of the body** and the **spiritual ear of the mind.**"[31] Unlike Kurth, who, as we have seen, is keenly focused on the latter, Helmholtz ultimately privileged the former in his research.

To be sure, Helmholtz acknowledged that a psychological component belonged within a study of music. In his influential and widely read *Die Lehre von*

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[29] Pearce 2008, 86.

[30] Helmholtz's speech is entitled "Ueber das Sehen des Menschen." Quoted and translated in Pearce 2008, 87. Veit Erlmann's recent book contains a discussion of "Helmholtz's physiological acoustics in the so-called neo-Kantian revival" (Erlmann 2010, 219). Helmholtz first rose to prominence with his work on vision. For an overview of his career, see Green and Butler 2002.

[31] Helmholtz 1857/1995, 64; emphasis added in bold. See Steege 2007 and 2012 for thorough accounts of Helmholtz's musical work.

den Tonempfindungen als physiologische Grundlage für die Theorie der Musik (1863), he proposes a three-fold division of labor for exploring the transference of sound to sensation and sensation to perception:

> First we have to discover how the agent reaches the nerves to be excited, as light for the eye and sound for the ear. This may be called the *physical* part of the corresponding physiological investigation. Secondly we have to investigate the various modes in which the nerves themselves are excited, giving rise to their various *sensations*, and finally the laws according to which these sensations result in mental images of determinate external objects, that is, in *perceptions*. Hence we have secondly a specially *physiological* investigation for sensations, and thirdly, a specially *psychological* investigation for perceptions.

Ultimately, however, Helmholtz's belief in the primacy of the receptive faculty comes to the fore. Upon evaluating the relation between music and these three divisions, Helmholtz concludes, "it is actually the tone sensations (*Tonempfindungen*) that constitute the material of the art [music]; we do not build from these sensations, at least insofar as they are shown to advantage in the music, any representations."[32] And, moreover, "[M]usic stands in a much closer relation to pure sensations (*Sinnesempfindungen*) than all the other arts, which have much more to do with sense-perceptions (*Sinneswahrnehmungen*)." Thus for any theory of music to be of worth, it must take a physiological approach to the sensation of tones.[33]

In *Musikpsychologie*, Kurth includes a tripartite approach to music study so strikingly similar to that of Helmholtz that it could only be a direct response:

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[32] Pearce 2008, 88; c.f. Helmholtz/Ellis 1895.

[33] "It is especially the physiological part, the study of the sensations of hearing (*Gehörempfindungen*), from whose results the theory of music as a natural science must learn." Quoted and translated in Pearce 2008, 88; c.f. Helmholtz/Ellis 1895, 4.

> Der äußern, physischen Welt gehören zunächst alle Vorgänge der Tonerzeugung und der Luftschwingungen an, die jene bis ans Ohr vermitteln. Mit den Vorgängen, die schon innerhalb des Gehörorgans liegen, ist das Gebiet der Physiologie betreten; es sind jene, in denen die Luftschwinungen aufgenommen und durch feinste Nervenerregungen ans Gehirnzentrum vermittelt werden. Die eigentliche Brücke ins Innere aber schlägt die auf die äußere Reizung reagierende Empfindung; mit dieser Umsetzung beginnt der psychologische Teil des Prozesses. Diese Scheide zwischen innen und außen festzuhalten, ist viel wesentlicher als die Scheidung in die drei Gebiete, die am musikalischen Vorgang beteiligt sind: Physik, Physiologie und Psychologie.
>
> [To the outer, physical world belongs first of all, all the procedures of tonal creation and the vibrations in the air (oscillations) that convey these tonal procedures to the ear. The area of physiology touches on the processes that already lie within the listening organs; these are the processes by which the oscillations are absorbed and transmitted through precise sensory excitations to the center of the brain. However, the sensation that responds to the outer stimulus, builds the actual bridge to the inner world; the psychological part of the process begins with this transfer. It is much more important to emphasize the separation between the inner and outer worlds than the separation in the three areas that participate in the musical process: physics, physiology, and psychology.][34]

Kurth's description emphasizes that the three research areas—physics, physiology, and psychology—are highly intertwined; unlike Helmholtz, he omits any enumeration that suggests an ordering or rank to these approaches. Kurth notes that physical processes "undoubtedly accompany the path of conduction deeply within to the *origin of tonal perception*," but "how far and in what forms remains hidden from certain frontiers of the physiological science." And the origin of tonal perception will remain a mystery for physiological science so long as this approach "begins with a 'physics' of nerves and ends in a psychology of stimuli."[35] Conversely, Kurth emphasizes not sensations but rather the psychical processes we

[34] Kurth 1931, 2.

[35] Kurth 1931, 2.

bring to these sensations. Investigating such psychical processes requires a reorientation in conventional scientific observation:

> Raum, Masse, Druckwirkung, Bewegungsbild—sie alle existieren nicht und existieren doch, —je nachdem von welcher Einstellung, welcher der beiden Erscheinungssphären aus wir an den Ton gelangen. Wenn eine Saite schwingt, Beitöne erzeugt und fortpflanzt, so ist das der Klang; dass aber Spannung und Gravitationen ihn durchsetzen, —das sind wir, darin spiegelt sich nicht das klingende Phänomen, sondern unsere Psyche.
>
> [Tonal space, mass, the effect of pressure, the image of motion—they are all non-existent and exist nevertheless, —it all depends on the particular viewpoint and from which of the two phenomenal spheres we reach the tone. When a string vibrates, producing and propagating overtones, this is the sound (*Klang*); but that tension and gravity permeate it, —that comes from us; it is not the sounding phenomenon that is reflected in it, but rather our psyche.][36]

Kurth acknowledges that Helmholtz recognized aspects of music beyond "unchanging natural laws"—that is, the "psychic functional conditions" at the basis of aesthetic sensibilities—but he also emphasizes that his predecessor did not pursue these conditions further. He writes,

> So betont selbst Helmholtz, der Hauptvertreter der physiologischen Musikforschung, das System der Musikgesetze beruhe, „nicht bloß auf unveränderlichen Naturgesetzen" (a. a. O. S. 370), sondern sei zum Teil, „auch die Konsequenz ästhetischer Prinzipien"; nur ist dazu eben zu bemerken, dass noch ein unterhalb der allgemeinen „ästhetischen" Gefühlsbedingungen gelegenes Gebiet, nämlich das der psychischen Funktionsbedingungen, in Frage kommt. Dies schient auch Eberhard Preußner vorzuschweben, wenn er („Allgem. Pädagogik u. Musikpädagogik", Leipzig 1929, S. 43) schreibt: „Eine eigentliche Musikpsychologie besitzen wir noch nicht, . . . nicht mehr die ästhetischen Normen interessieren, sondern die Voraussetzungen für das ästhetische Erleben, die psychologischer Natur sind." (Im Original nicht gesperrt gedruckt.)
>
> [Helmholtz, the primary representative of physiological music research, similarly emphasizes that the system of musical laws rests 'not only on unchanging natural laws' ([1863], p. 370) but also is in

[36] Kurth 1931, 11.

> part 'the consequence of aesthetic principles;' this is only to note that another area situated beneath the general 'aesthetic' emotional terms, namely the conditions of psychic function, comes into question. This also appears to be what Eberhard Preußner has in mind when he writes ('Allgem. Pädagogik u. Musikpädagogik' 1929, S. 43): 'We do not yet possess an actual music psychology, . . . [one that is] interested no longer in aesthetic norms but rather the requirements for the aesthetic experience, which are of a psychological nature.' (Not emphasized in the original).][37]

Of course, by the time of *Musikpsychologie*, scientists, philosophers, and music theorists, in particular Hugo Riemann, attempted to move beyond mere sensations, towards the study of sound perception and cognition. Yet their activities fell short of what Kurth had in mind for a psychological study of music—even though they may have shared similar goals. It is to the inadequacies that Kurth viewed in *Tonpsychologie* and Riemann's theories that we now turn.

Part 2: *Musikpsychologie* as a Response to *Tonpsychologie*

As a discipline concerned with the psychological effects of acoustic signals, tone psychology is a contribution to the third branch of Helmholtz's three-fold division of music study. Kurth's readers would have been familiar with the term "Tonpsychologie" largely because of Carl Stumpf's two-volume magnum opus of the same name, which was in part a response to Helmholtz's work. As Mitchell G. Ash writes of *Tonpsychologie*, volume 1 (1883), "The bulk of this book consisted of careful observations made on [Stumpf himself], which showed that psychological factors are immediately influential in hearing and thus implied that the strictly physical approach taken by Helmholtz twenty years earlier was

[37] Kurth 1931, 58n1.

insufficient."[38] Burdette Green and David Butler describe the relationship between Stumpf's and Helmholtz's research as follows:

> Helmholtz modified the traditional 'outside to inside' model by drawing attention to the anatomy of the ear and the sensory phase of perception—a step toward attending to the 'inside.' Stumpf shifted the emphasis from anatomy to mental activity, thereby opening the possibility of the 'inside to outside' model that figured prominently in later research.[39]

Kurth's research undoubtedly emerged from this shift of emphasis. Indeed, many considered and still consider Kurth's book to be a direct response to Stumpf, not least because of its similar title; just as Stumpf's *Tonpsychologie* could be read as a play on Helmholtz's *Tonempfindungen*, so too could Kurth's *Musikpsychologie* be read as a deliberate lexical jab at Stumpf.[40] I contend, however, that Kurth is reacting not to a certain individual but rather to a general mindset and methodology of which Stumpf's research is representative. During the time in which Kurth wrote his book, tone psychology was hardly a cohesive school of investigation, but rather an approach to sound perception adopted by an assortment of philosophers and experimental scientists. This disciplinary ambiguity allows Kurth to formulate his own specific definition of tone psychology, thereby portraying a clear antithesis to his research program. While acknowledging the important step previous investigators took in shifting attention to the role of mental activity, Kurth argues that it is insufficient in explaining musical

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[38] Ash 1998, 30.

[39] Green and Butler 2002, 296.

[40] For instance, La Motte-Haber (1986–87), writes, "[Kurth] placed his music psychology against Stumpf's tone psychology. Four chapters of his book are dedicated to [fostering] this difference, which is more than only a terminological one" (95, my translation).

phenomena.

In what follows, I consider Kurth's description of tone psychology as he portrays it in the first section of *Musikpsychologie*. In particular, I discuss his characterization of music psychology as a complementary approach to the earlier research program and his focus on Gestalt psychology as a particular remedy for tone psychology's deficiencies. Kurth's portrayals have clearly helped shape modern-day descriptions of tone psychology and music psychology. At the same time, however, recent scholarship has tended to oversimplify the relationship between the two fields, often presenting a clear dichotomy where none existed. A brief comparison of Stumpf's and Kurth's approaches highlights the nuanced differences between the two research programs.

Tonpsychologie according to Kurth

In a section titled "areas of inquiry in tone psychology," Kurth provides a long list of specific activities that are tone-psychological in nature. The following is an excerpt:

> Die Tonpsychologie untersucht die „Apperzeption" (d. h. die gesamten Aufnahmevorgänge) des Tones, und zwar größtenteils experimentell; sie analysiert sodann die Empfindungen und Sinnesurteile, ferner die „Tonqualitäten", untersucht Unterschiedsempfindlichkeiten, Gedächtnisanlage, die Reaktionen auf den Reiz und die Funktionen der Aufmerksamkeit, misst die Intensitäten und die Empfindlichkeit für deren Veränderungen. Sie prüft die Einwirkung der Entfernung vom Tonerreger zum aufnehmenden Ohr; die Anlagen bezüglich der Gehörsschärfe und ihrer Störungen. Sie erörtert Grundprobleme wie die Parallelität der Tonreihe mit den Schwingungszahlen, und forscht nach den Grenzen von Geräusch und Klang.
>
> [Tone psychology explores the 'apperception' (i.e., the total absorption processes) of the tone and does so mostly through experiments; [it] analyses the sensation and sensory judgments in

> addition to the 'tone qualities'; [it] investigates sensory differences, memory ability, stimulus reactions, and functions of concentration; [and it] measures the intensity and responsiveness to their changes. It tests the effect of distance from the sound source on the receiving ear and ability with respect to hearing acuity and its diminishment. [Tone psychology] considers such problems as the parallelism of the overtone series and scales, the perception of combination tones and beats, and searches for boundaries between noise and sound.][41]

Kurth concludes his list with the following assessment: "With all of these and several more singular phenomena, analysis and comparison [i.e., the primary activities of tone psychology] always want to trace them back to the causes,"[42] and he notes that "tone psychology searches generally for the boundary between the last, precise bodily process and the first, primitive conscious process."[43] According to Kurth, then, tone psychology is a pursuit of one-to-one correspondences between outer-world stimuli and observable, measureable responses. A pursuit, he contends, that is far too narrow.

For Kurth, tone psychology was less a departure from Helmholtz's program than simply an extension of it, that is, a discipline more concerned with the body than the mind: "Tone psychology, which proceeds from the conversion of the

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[41] Kurth 1931, 48–49. Though Kurth leaves "apperception" undefined, he is likely referring to Helmholtz's adaptation of the term from Leibniz in Helmholtz/Ellis (1895). As Erlmann (2010) describes, apperception, or conscious perception, involves the recognition of "a sensation as only one part of the total sum of sensations present at a given moment, such as when we hear partials with the help of a Helmholtz resonator" (238). Thus exploring apperception would involve an investigation into the details of a whole. See also Kim 2003, 87ff.

[42] This is perhaps a not-so-subtle reference to Helmholtz's "Über die physikalische Ursache der musikalischen Harmonie" (1857). See Kim 2003, 90; 340.

[43] „Bei allen diesen und noch mancherlei Einzelerscheinungen wollen Analyse und Vergleich stets auch auf die Ursachen zurückleiten. Wesentlicher aber als alle die Miniergänge der Tonpsychologie ist deren allgemeinster Grundzug. Sie sucht überall die Grenze zwischen letztem, feinstem körperlichen Vorgang und erstem, primitivem Bewußtseinsvorgang" (Kurth 1931, 49).

physical into the psychic phenomenon, is essentially **physiologically** orientated and searches to reach musical laws[.]"[44] To be sure, Kurth acknowledges that in its concern for mental activity, tone psychology is a "distinct field" from those that investigate stimulus creation and musical production. He even cites Stumpf's own differentiation between acoustics and tone psychology: "Physical-physiological acoustics and psychological acoustics share the same material: tone sensations. But whereas the former investigates the antecedents, the latter investigates the consequences of sensations."[45] Herein, however, lies Kurth's dissatisfaction with tone-psychological investigations. He emphatically states, "psychic fundamental processes (from the smallest to the largest parts) are **not** causal outcomes of tone sensations."[46] He identifies the preoccupation with causes and their effects, between "stimulus and experience," as the "weakest point" of "physiologically oriented tone psychology." For while it may be that "stimulus effects evoke a consciousness," we must acknowledge that "an originating psyche also exists in autonomous form." And while prior investigations of sensory responses are "of

[44] „[Tonpsychologie] geht von der Umsetzung des physischen ins psychische Phänomen aus, ist also im wesentlichen physiologisch orientiert und sucht von da weiter gegen die Musikgesetze auszustreifen" (Kurth 1931, 2).

[45] „Mit der physikalisch-physiologischen Akustik hat die psychologische das Material gemein, die Tonempfindungen. Aber erstere untersucht die Antecedentien, letztere die Folgen der Empfindungen" (Stumpf 1883, 6; quoted in Kurth 1931, 55n1).

[46] „Gerade das stimmt aber nur von jenem Standpunkt aus, von dem die Musikpsychologie nun abweicht: für sie sind die psychischen Grundvorgänge (wenigstens zum großen Teile) nicht ursächliche Folgen der Tonempfindungen" (Kurth 1931, 55n1).

undisputable, to some extent considerable, importance" for music research "they still do not reach the central point of music's psychology."[47]

The central point is this: listeners are not passive receptors of information, but rather play an active role in the musical experience: "Tone psychology treats the changing role of stimulus and reaction; against it, there stands an 'action,' the carrying out of that psychic ability that first captures, forms, and reorganizes the stimulus."[48] Without considering the active mind of the receiver, tone psychology falls short of understanding *musical* processing. Kurth argues, "Tone psychology is therefore more aligned with the sensory area of music than with music itself."[49] Hence Kurth puts forth a complementary theory in *Musikpsychologie*, one that first considers contributions of the inner world.[50]

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[47] „Der schwächste Punkt der physiologisch orientierten Tonpsychologie ist, dass sie eine genaue Entsprechung zwischen Reiz und Erlebnis annimmt. . . . Die Lehre, dass Reizwirkungen ein Bewusstsein hervorrufen, ist unzweifelhaft in weitem Maße richtig, aber eine schaffende Psyche existiert auch in autonomer Gestaltung; alle die genannten Untersuchungen sind denn auch für Musik von unbestreitbarem, teilweise sehr erheblichem Belang, aber sie gelangen doch nicht ins Zentrum ihrer Psychologie" (Kurth 1931, 50–51).

[48] „Die Tonpsychologie behandelt das Wechselspiel von Reiz und Reaktion; dem steht eine ‚Aktion', das Walten jener psychischen Tätigkeit gegenüber, die erst ihrerseits den Reiz ergreift, ausprägt und umbildet" (Kurth 1931, 51).

[49] „Die Tonpsychologie ist daher mehr auf das Sinnesgebiet der Musik als auf diese selbst gerichtet" (Kurth 1931, 51).

[50] Kurth emphasizes repeatedly that his goal is to provide an alternative to, rather than replacement for, psychological investigations that set forth from acoustic and physiological premises. He (1931, 56) states,

> Somit wäre es ganz unangebracht, einer Verdrängung der Tonpsychologie das Wort zu reden, so wenig wie es denkbar ist, in der Allgemeinpsychologie den Experimentalmethoden jemals abzusagen; Sie sind eben nur in neuartige Verbindung mit den jeweiligen neuen Betrachtungsweisen zu bringen. In der Musikpsychologie liegt zwar eine Betrachtungsweise, die der Tonpsychologie entgegendringt, aber nicht um sie umzustoßen, sondern um auch sie von andrer Seite her zu durchdringen, sich mit ihr zu ergänzen.

Kurth's treatment of the single tone illustrates his novel perspective. He recognizes that the single tone is not only an object of the senses but also a musical phenomenon that is at once more complex and less quantifiable than prior experimental results would have it. Furthermore, he consigns consideration for individual components of a tone (overtones, partials) to the domain of physics, physiology, or acoustics. A true psychological perspective, in contrast, must necessarily consider inner-world forces that contribute to the perception of tone as a single entity subsuming many elements. He posits, "The tone itself arises psychologically as an extraordinarily manifold unity, as it is physically."[51] The acoustical focus of the tone psychologists, then, results in "an enormous simplification," for "inconceivably large amounts of data and highly complicated activities are transformed into something completely different, something primitive in restricted procedures."[52] That is, Kurth acknowledges the multiplicity inherent in the individual tone but laments that tone psychology has ignored the tone's dynamic, incalculable, and, immediate properties. From Kurth's music-psychological perspective, "the tone presents itself as a phenomenon that music-psychological processes unite with the outer world, sensualizing it," whereas from

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> [Therefore it would be entirely inappropriate to argue for abandoning tone psychology, as little as it is reasonable to reject experimental methods in general psychology; they are to be brought simply into novel connection with the respective new approaches. In music psychology, in fact, there is a point of view that opposes tone psychology that does not invalidate, but rather permeates and extends it.]

[51] „Der Ton an sich zeigt sich psychologisch als eine ungemein vielfältige Einheit, wie er es physikalisch ist" (Kurth 1931, 23).

[52] „Kurz, schon die von der Tonpsychologie verfolgte Umsetzung akustischer Vorgänge ins Tonempfinden ist als eine ungeheure Vereinfachung gekennzeichnet; unübersehbare Zahlen und hochkomplizierte Vorgänge sind zu ganz andern, ja primitivem Eindruck, gleichsam in verkürztem Verfahren, verwandelt" (Kurth 1931, 5).

the tone-psychological perspective, "the tone represents the sensualizing of physical processes."[53]

Said differently, Kurth calls attention to the reductive nature of tone psychology in contrast to the more generative approach he takes in his own music psychology. He suggests that for tone psychologists, a tone represents a conglomerate of components, while for him, it is a unified entity born from inner-world processes; only when the tone is treated as an outer-world object are multiple components discernable. Indeed, in contrast to the tone-psychological perspective, Kurth emphasizes that, "the tone, as it is once perceived, is a transformation that is not arbitrarily formed but rather is already given as a sensory 'Gestalt' or 'sensory image' (*Sinnenbild*)."[54]

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[53] And further, "What in tone psychology means the tone breaking into the inner world, here means in music psychology an escape from the inner" (Kurth 1931, 1–2). Elsewhere, Kurth (1931, 7) states,

> Während sich von der äußeren Entstehungswelt her unübersehbare Kraftvorgänge stetig im Ton sammeln, dringt aus der musikalischen Innenwelt eine Dynamik in ihn ein, die so starke Veränderungen bewirkt, daß sie sogar vielfach Widersprüche zu den akustisch-physiologischen Gegebenheiten darstellen, während sie sich mit ihnen vereinen.
>
> [While undeniable forces from the outer world of origin constantly collect in tone, there is also a dynamism that penetrates it from the musical inner world; [this dynamism] effects such strong changes that the forces actually often display contradictions with the acoustic-physiological conditions, while they unite with them.]

He leaves the "contradictions" in question unspecified.

[54] Kurth 1931, 2. Rather than hearing the individual tone as the sum of components, components emerge (present themselves) only when we listen "into" the tone. "One can actually break apart the tonal impression into components, without 'dismantling' the tonal impression in them. Rather, the tonal impression combines many components that lift themselves from it only as individual tension motions of an overall impression" (Kurth 1931, 24).

Kurth's generative approach is recursive, extending beyond the single tone. In fact, he later states that "the tone is not the source of music" at all;[55] instead, the "basic processes" of music "also penetrate [the tone] fully, such that one already becomes aware of them."[56] In other words, the tone is a microcosm for the inner workings of music. For Kurth, individual tones in music are always part of a larger context, a musical shape.

> Als ein hochkompliziertes Gebilde steckt **er [der Ton], sich selbst** überlassen, voll wechselnder Unbestimmtheiten, die in jedem Augenblick zur Verbindung bereitliegen, **erst der musikalische Zusammenhang** bindet ihre Fülle zu **einer bestimmten Ausprägung**; sie ergibt den Charakter des Tones und stellt sich gleichfalls als ein unmittelbarer Einheitseindruck dar, in den eine Vielfalt zusammenschlägt, wieder in einem Vereinfachungsprozeß wie der physiologisch aufgenommene Ton (vgl. S. 5). . . . Die einzelnen Komponenten des Tonphänomens wirken auch nicht bloß nebeneinander, sondern beeinflussen sich im Ineinanderdringen gegenseitig. Keine erscheint eigentlich in „reiner" Form.
>
> [As a highly complex structure, **the tone itself** contains fully changing indeterminacies that are left to themselves and ready for combination at any moment; only **the musical connection** binds the abundance of indeterminacies into a **certain [melodic] shape**. This shape provides the tonal character and represents itself similarly as an instantaneous impression of unity in which a variety of indeterminacies is combined, once again in a simplification process, like the physiologically affiliated tone. . . . The individual components of the tonal phenomenon take effect not simply side by side, but rather influence each other in reciprocal interpenetration. None of them appear actually in "pure" form.][57]

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[55] Kurth 1931, 56.

[56] „Zunächst zeigt der Einzelton als Ausgangsbetrachtung, dass man von ihm nicht ausgehen kann, um die Musik zu erklären; wohl aber durchdringen deren Grundvorgänge auch ihn völlig, so dass man sie schon von ihm aus gewahr wird" (Kurth 1931, 20).

[57] Kurth 1931, 23; emphasis added in bold. Likewise, he writes, "analogies lie near the world of color; the same red, for instance, can appear very different when it is set against a yellowish or bluish or else another colored background" (36).

Thus Kurth makes an analogy between the "variety of indeterminacies," or context-dependent attributes inherent in a melodic phrase and those in a tone. He also emphasizes that individual components, be they in the melodic shape or the single tone, lose their true form when analyzed in isolation; we can only understand them as parts of a whole.[58]

At the end of the first section of *Musikpsychologie*, Kurth succinctly summarizes the primary difference in approaches between tone- and music psychology. The notion of "wholeness" in contradistinction to tone-psychological "parts" arises as a central point:

> [D]ie Tonpsychologie ist mehr auf die Einzeleindrücke (Ton, Intervall, Akkord, rhythmische Einheit usw.) gerichtet, die Musikpsychologie mehr auf das fließende Ganze, so dass sie die Einzeleindrücke schon von diesem aus betrachtet. Der Physiologe sagt: unser Gehörssinn ist nötig, um Schallwellen zu erfahren—während der Musikpsychologe von seinem Standpunkt sagen darf: die Schallwellen verursachen nur die Sinnesreizung, in der wir die Vorgänge der Musik erfahren. Wie sie sich dort auf Wellenlehre und Schall gründete, so hier auf „Willenslehre" und Schall.

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[58] Kurth acknowledges, however, "It would be one-sided to concentrate exclusively on the tone as a relative sensation, that is, its effect only in the context of a tone row (melody) or a simultaneity; each tone also carries an absolute effect through its frequency (*Tonhöhe*) and timbre (*Klangfarbe*)" (Kurth 1931, 37). That is, we can also consider the unique quality of each of the tones that stems from its individual components.

Just as Kurth insists that one cannot consider individual components in isolation, so too does he suggest that one cannot compose music by focusing on individual tones in isolation (1931, 37n1):

> Wem nur ein Einzelton zum Spielen vorgelegt und das Weitere verdeckt würde, der stünde seinem Ausdruck hilflos gegenüber, und erst recht, wenn man ihm diesen durch Worte und Vortragsbezeichnungen andeuten wollte; jede derartige Vorschrift ist vieldeutig, das Individuelle, Einmalige im Ton entsteht erst aus seiner Zugehörigkeit zu einem Ganzen, das über ihn hinausgeht.
>
> [Whomever is provided with only a single tone to play, and the rest are concealed, would be helpless with regard to its expression, and even more so, if one wanted to indicate [such an expression] to the performer through words and expressive marking; every such direction is ambiguous, [for] the individuality and singularity of the tone arises initially from its membership in a whole that transcends it.]

> [Tone psychology is more aligned with the **single impressions** (tone, interval, chord, rhythmic unit, etc.), music psychology more with the **flowing whole**, in that it examines the individual impressions from this [whole]. The physiologist says: our sense of hearing is necessary in order to experience sound waves—whereas the music psychologist from his standpoint is permitted to say: the sound waves bring forth only the sensory stimulus in which we experience the processes of music. Just as [musical processes] are founded [in tone psychology] on the theory of wave and sound, here, [in music psychology, they are founded] on the **"theory of will" and sound**.][59]

Note, again, the ease with which Kurth connects tone psychology with physiology—indeed, employing them interchangeably. In order to differentiate his new research program from tone psychology, he must emphasize that tone psychology adds very little beyond what Helmholtz had already achieved.[60] And since tone-psychological investigations deals inadequately with the psychic will, they fail to cohere with other theories of music.[61] While Helmholtz claimed that "it is precisely the physiological part in especial [sic]—the theory of the sensations of hearing—to which the theory of music has to look for the foundation of its

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[59] Kurth 1931, 51.

[60] Kim suggests that Kurth deliberately ignores the last section of Helmholtz's book, which contains a discussion of will. See Kim 2003, 314.

[61] Indeed, Kurth (1931, 55) concludes,

> . . . und schon das bewiese, dass zwischen physikalisch-physiologischem Reiz und psychischer Wirkung gar keine starre Entsprechung besteht. Dieses Fehlen gleichbleibender, fester Zusammenhänge zwischen beiden vermöchte allein schon zu erklären, warum zwischen Tonpsychologie und Gesetzen der Musiktheorie keine durchgreifenden ursächlichen Verbindungen herzustellen waren, und alle derartigen Versuche (an denen es nie fehlte), schon vor dem Innenleben der schlichtesten Klangverbindung scheiterten.
>
> [. . . and that would already prove that a rigid correspondence between physical-physiological stimulus and psychic effect does not exist. This lack of invariable, fixed correspondence between the two alone may explain why **no interpenetrating, causal connections produced between tone psychology and the laws of music theory could be established**, and all such attempts (of which there is no lack), already failed in the face of the inner life of simple chord progressions.]

structure,"[62] Kurth argues that since "energetic processes represent themselves in tones," this necessitates a "'sensitization' (*Sensibilierung*) to the psychic."[63]

Modern accounts of *Tonpsychologie* and *Musikpsychologie*

Having examined Kurth's characterization of Tonpsychologie and his response to it in the form of Musikpsychologie, we turn now to recent portrayals of the two fields in the English-language literature for comparison. Late-twentieth- and twenty-first-century accounts are largely consistent in their descriptions of tone psychology. Like Kurth, they note that tone psychology is largely an extension of Helmholtz's research, treating acoustics and physiology as handmaidens to psychological research. Modern authors have also emphasized activities and objects under tone-psychological investigation that echo Kurth's descriptions, above. We learn, for instance, that "the physical bases for perceived consonance and dissonance, the role of the overtone series in determining various properties of sound, and the effect of alternate tuning and temperaments on musical perception,"[64] were particularly fruitful areas of research for tone psychologists.

Some accounts have also used the presence or absence of the above topics as means of distinguishing between the two fields; tone-psychological investigations limited their scope to acoustical or atomistic aspects of music, while music-psychological investigations took a wider purview. Elizabeth West Marvin notes, for example, that the nature of "stimuli" marks "the primary difference" between

[62] Helmholtz/Ellis 1895, 4.

[63] Kurth 1931, 55.

[64] Marvin 1989, 60.

the two areas of investigation.[65] Further, she writes,

> [The] dichotomy has continued to resurface between those who take the scientific study of sound as their point of departure in music-theoretical discourse, and those whose theories result directly from their aural perception of [meaningful] relationships inherent in sounding music. In the early part of this century, the contrast between the fields of Tonpsychologie and Musikpsychologie provides just one example of this philosophical and methodological split.[66]

She thus portrays tone psychology as a "scientific" (experimental) discipline that investigated responses to a-contextual sound objects, while music psychology was a theoretical and experiential pursuit grounded in broader musical contexts. We have observed that context is indeed an important consideration for Kurth; he reminds the reader that tones occur within a broader melodic phrase, for instance. At the same time, however, we have also seen that Kurth does not shy away from discussing the isolated tone, since he uses it to illustrate the inner world at work and the notion of a Gestalt.

Marvin is not the only author to emphasize a binary distinction between Tonpsychologie and Musikpsychologie.[67] Gjerdingen, for instance, characterizes the distinction as one between "bottom-up" (Tonpsychologie) and "top-down" (Musikpsychologie) pursuits, and he notes that this dichotomy existed at the time rather than emerging retrospectively: "Earlier in the twentieth century there was a

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[65] That is, "For the tone psychologists, [stimuli] consisted almost entirely of individual tones and intervals isolated from musical context, while for the music psychologists musical context was of primary importance to their study of the listener's interpretive faculties" (Marvin 1989, 83).

[66] Marvin 1989, 59.

[67] Indeed, the organization of the *Cambridge History of Western Music Theory* exemplifies this distinction as well. As Gjerdingen (2002) writes, "Though the distinction seems less clear-cut today, this chapter recognizes its historical force and focuses on the latter category, with the former receiving extended treatment in Chapter 9, passim" (956).

frequent distinction made between *Tonpsychologie* (the study of vibration, the ear, and the sensation of sound) and *Musikpsychologie* (the study of music as a form of cognition)."[68] He notes that tone psychologists were those who followed in the footsteps of Wundt, while music psychologists could trace their intellectual heritage back to Stumpf.[69] Citing exemplars of the two fields, Marvin, in contrast, lists Helmholtz, Henry Watt, Géza Révész, and Stumpf as tone psychologists, while Riemann, Kurth, and Gottfried Weber are representative theorists who pursued music psychology. That Stumpf appears on opposing disciplinary sides suggests a less rigid dichotomy than brief historical overviews are able to convey. A closer comparison of Kurth's and Stumpf's views serves to illustrate.

Philosophy, psychic functions, and Carl Stumpf

In his description of tone psychology, above, Kurth notes the experimental aspect of this earlier research. Modern authors, too, have stressed the clinical nature of its pursuits. Mitchell G. Ash notes that though Stumpf, the researcher

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[68] Gjerdingen 2002, 956. Kurth similarly states: "Tone psychology investigates the surface layer of hearing, music psychology the deeper layer; tone psychology deals in the region of actual 'hearing' (*Gehörs*), while music psychology in that of psychologically contingent 'listening' (*Hören*), which is not at all exhausted with this word whose meaning is not fully captured with it. For tone psychology, the ear is the analyzable organ; for music psychology, it is the organ of a summarizing (*zusammenfassenden*) mental ability" (Kurth 1931, 51).

While Marvin and Gjerdingen present tone and music psychology as generally coexistent, Green and Butler 2002 characterize tone psychology as a nascent form of music psychology: "tone psychology may be viewed as a philosophically oriented phase of music psychology whose scope was limited to psychoacoustics and the experiential aspects of elementary tonal organization" (296).

[69] "The field itself eventually split, with the Wundtians pursuing the 'bottom-up' investigation of the auditory system (*Tonpsychologie*) and the Stumpfians developing 'top-down,' Gestalt psychology and what Ernst Kurth termed *Musikpsychologie* (1931)" (Gjerdingen, 962). Note, however, that Gjerdingen is not necessarily referring to Stumpf himself as developing "top-down" psychology, but rather to Stumpf's students.

most often connected to tone psychology, and Wilhelm Wundt, the researcher most often connected to "elementary analysis," had their infamous differences,[70] they both nevertheless valued laboratory experimentation, the purpose of which was to "characterize the phenomena under discussion precisely." Ash further emphasizes that "the all-important goal of scientific training in both of Germany's most prestigious institutes was to create an elite of suitable experimenters, who could accurately observe and report their own experiences."[71]

Yet Stumpf went to great lengths to identify himself as a philosopher. For instance, when he joined the Prussian Academy of Sciences in 1895 he "defended himself against the charge that he had often 'left the circle of philosophy' in his research" and insisted that "he had no intention of 'replacing philosophy with specialized investigations or positivistic worship of the facts.'"[72] Indeed, his psychological writings, including the article "Erscheinungen und psychische Funktionen" (1907), a work Kurth cites on more than one occasion in *Musikpsychologie*, were often framed as philosophical ones. [73]

[70] The Stumpf-Wundt debate of 1890 centered around the extent to which introspection should trump objective judgment if there was a discrepancy between the two. Stumpf insisted that though Wundt's student had collected 110,000 judgments of non-experts, a single judgment from a musically informed observer bore more weight. See Ash 1998, 40; Gjerdingen 2002, 960–61; and Kim 2003, 101–6 for further details.

[71] Ash 1998, 40.

[72] Ash 1998, 34–35.

[73] In *Abhandlungen der Königlich Preußischen Akademie der Wissenschaften aus dem Jahre 1906. Philosophisch-historisch Abhandlungen* 4 (1907). Regarding this issue, Kim (2003) writes, "Furthermore, and perhaps more importantly, his psychological works were closely intertwined with his philosophical stance. Stumpf published a number of writings in which the basic issues of psychology are discussed in the context of philosophy" (99).

Further, Stumpf's philosophical leanings were in line with those of Dilthey, who recommended Stumpf for a position in the philosophy faculty at the University of Berlin,[74] and Kant was one of his "guiding lights in philosophy."[75]

Stumpf's philosophical side comes to the fore when he discusses psychic functions. This is a broad term encompassing a variety of mental activities: 'We designate as *psychical functions* . . . the noticing of appearances and their relations, the integration of appearances into complexes, the formation of concepts, grasping and judging, the emotions, desiring and willing."[76] Stumpf emphasizes the *active* nature of these mental processes; they are immediately given and independent of sensations and other (outer-world) appearances.[77] And it is these psychic functions that are the impetus for *Tonpsychologie*; as Stumpf writes in the preface to the first

[74] "[Dilthey] found Stumpf's conception of empirical psychology and the idea of psychological research as a propaedeutic to higher philosophical concerns attractive. . . . Dilthey had achieved his aim of installing a version of experimental psychology in Berlin that was congenial to him" (Ash 1998, 33).

[75] For instance, Stumpf writes in *Tonpsychologie* 1883, viii: "One could in fact set the whole first part of the Transcendental Doctrine of Elements of the *Critique of Pure Reason* to music" (epigraph of Pearce 2008). Stumpf also notes, though, "The greatest methodological achievement in philosophy since Descartes I find not in Kant or Hegel, but (with Brentano [Stumpf's teacher]) rather in Locke and Leibnitz, and to these I would add Berkeley." Trans. Murchison 1930/1961, 416.

[76] Trans. Pearce 2008, 101n90; cf. Kim 2003, 112.

[77] Ash 1998 notes that Stumpf uses the word "Erscheinung" (appearance) in two different senses, "both for [1] sensations and relations as opposed to psychical functions and for [2] all of the immediately given, including psychical functions, as opposed to inferences from the given" (37). Kurth's usage is equally flexible. Cf. Kurth 1931, 43: "It arises in the musical phenomenon (*Phänomenen*) in particular that the unconscious psychic functions are already, in many ways, the condition for appearances (*Erscheinungen*) of conscious cognition."

volume, "it is called 'tone psychology' because it sets out to describe the psychic functions that are stimulated by tones."[78]

Kurth also employs this term frequently in *Musikpsychologie*; recall, for instance, his characterization of music psychology in the Foreword (cited in Chapter One) as an investigation of "psychic functions that form first the basis of musical hearing in general, and consequently any aesthetics, theory, study of style, and further areas of music research." [79] Kim has noted, rightly, that Kurth freely employs the term "psychic functions" without always acknowledging Stumpf.[80] Arguably, however, Kurth is not claiming authorship of this term, for he does reference Stumpf's article "Erscheinungen und psychologische Funktionen" (see 46n1). And further, Stumpf's reputation was so well established at this point, that Kurth's readers would likely have made an association with the older scholar.

I have argued above that Kurth's criticisms of tone psychology's methodology and general premises are not necessarily direct attacks on Stumpf; indeed, it is likely that Kurth saw his book as stemming from the same impetus that drove Stumpf's *Tonpsychologie*. For Stumpf's philosophical goal was ultimately unfulfilled. As Ash writes,

> After this hopeful beginning . . . Stumpf presented not a fully developed account of psychical functions, but a highly technical survey of issues, literature, and results, in visual and aural sensation, space perception, and psychophysics. . . . Despite his claim that psychology was a necessary propaedeutic to philosophy, Stumpf had

[78] Trans. Kim 2003, 111–12. Kim also notes that just as Stumpf writes, "there can be no psychology of tone," so too does Kurth write, "there can be no psychology of music" (Kurth 1931, 316; my translation).

[79] Kurth 1931, i.

[80] See Kim 2003, 316.

> allowed his dedication to empirical research to take him far away from his original philosophical goal.[81]

Stumpf himself notes,

> The separation of natural sciences and mental science is based on the fundamental differences of sense data and psychic functions, or of the respective contents of external (sensuous) and internal (psychological) perception. . . . The investigation of sensory phenomena as such, which at the present time occupies such an important place, is not really psychology but simply **phenomenology**, a kind of prescience equally pursued by physicists, physiologists, and psychologists. Psychologists especially have taken it up because it offered a chance for exact experimental investigation and an opportunity to test the laws governing the psychic functions involved. I also have devoted most of my time to **phenomenological preparatory work**, but my real aim has always been to understand the functions.[82]

If Stumpf had succeeded ultimately in preparing the way for true psychological research by examining outer-world phenomena, the task then fell to Kurth to "recognize the coherent psychic functions to which the phenomena belong"[83]—perhaps in a way Stumpf had initially intended.

Part 3: *Musikpsychologie* as a Response to Riemann's Theory of *Tonvorstellungen*

Riemann was arguably the first theorist to investigate the third branch of Helmholtz's threefold division of music and to criticize the research of Stumpf and other tone psychologists. Towards the end of his life, Riemann notes, "The hope that Stumpf would transport the foundation of music theory from a physiological to a psychological domain has not been fulfilled, and music listening still appears

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[81] Ash 1998, 38.

[82] Trans. Murchison 1930/1961, 424–25; emphasis added in bold.

[83] Kurth 1931, 73.

as a physical process in Stumpf, even more so than in Helmholtz. The 'logical activity' of musical hearing, which I had postulated already in 1873 [Riemann's dissertation], plays no role in his work."[84] What Stumpf failed to realize, according to Riemann (1905), is that "Musical hearing involves not only a physical passivity but also a mental activity, a progressive comparison and association of successive tones and chords."[85] If we take Riemann at his word, mental activity as part of the musical experience was an ever-present concern from his dissertation onwards. In two articles (from 1914–15 and 1916) on *Tonvorstellungen,* however, Riemann brings this concern to the fore, presenting a culmination of his ideas on music and the mind.[86] In the first of these publications, Riemann writes, "If . . . the theory of tonal imagination undertakes to explain just how listening to music can represent a psychic experience, then the way in which the theory must proceed is prescribed: that is, it is a question first of all of *where the roots of the psychic values of the elements of music* (melody, harmony, rhythm, meter) *may be found*."[87]

In Chapter One, we examined the general intellectual climate in which both Riemann and Kurth were active. Given their common background, it is hardly surprising that their concerns bear a striking resemblance. Both Riemann and

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[84] Riemann 1914–15; trans. Wason and Marvin 1992, 81.

[85] Trans. Harrison 1994, 262.

[86] The two essays are "Ideen zu einer 'Lehre von den Tonvorstellungen,'" *Jahrbuch der Musikbibliothek Peters* 21/22 (1914/15): 1–26 and "Neue Beiträge zu einer Lehre von den Tonvorstellungen," *Jahrbuch der Musikbibliothek Peters* 23 (1916): 1–21. Harrison (1994, 262n19) cites a similar passage in *Musikalische Syntaxis* (1877, p. viii), for instance, that anticipates Riemann's outlook in his later articles. Rothfarb, in contrast to Harrison, considers the two *Tonvorstellung* articles as indicators that Riemann "veered sharply toward a psychological outlook toward the end of his life" (1989, 16n20).

[87] Trans. Wason and Marvin 1992, 93.

Kurth insist on the primary role of the mind in musical processing, and further, that the investigation of mental activity is a scientific pursuit. That is, each believed in the "generality of his own musical experiences,"[88] and that these experiences could be "objectively" understood.[89] Each also believed strongly that his explanations had pedagogical value: Kurth notably with an eye towards amateurs and *Liebhabern*, and Riemann with a focus on practicing musicians and university students.

The two confronted each other in print in 1918. Riemann reviewed Kurth's *Grundlagen* in an article titled, "Die Phrasierung im Lichte einer Lehre von den Tonvorstellung," and Kurth responded in the article "Zur Stilistik und Theorie des Kontrapunkts." It is clear from these writings that the commonalities in outlooks—particularly expressed in Kurth's *Grundlagen* and Riemann's "Ideen"—were not lost on either author.[90] Though he is critical of Kurth's interpretation of Baroque phrase structure, Riemann nevertheless refers to Kurth as his "comrade-

[88] Harrison 1994, 281.

[89] This striving for objectivity is already evident in both of their dissertations: we see it in Riemann's concern with reason in *Über das musikalische Hören* (1873), later published as *Musikalische Logik* (1874), and in Kurth's assertion in *Voraussetzungen* (1913) that "to a certain extent music psychology, too, can be objectively defined" (Rothfarb 1979, 97). Thus it is with high praise that Ernst Bücken describes the purpose of Kurth's work as making "an objective matter out of a subjective one, a process which is to be understood as a transfer of the psychic element back into the art object, and as an examination of this element in that object" (Bücken 1924–25, 358–59). C.f. Pearce 2008, 90: "For Riemann, 'the theory of harmony . . . is a part of the science of music [*Musikwissenschaft*], in particular of the natural science of music [*musikalische Naturforschung*]'" (original in Riemann 1882, 159).

[90] Though Riemann wrote his *Tonvorstellung* articles a few years before Kurth published *Grundlagen* in 1917, Kurth explains that he did not see them until after *Grundlagen* had gone to press. The onset of the First World War delayed publication of Riemann's articles until 1916.

in-arms (*Mitstreiter*) for the theory of tonal imagination."[91] For his part, however, Kurth acknowledges a superficial similarity in their ideas but is less eager to align himself with Riemann. Further, he expresses dismay that Riemann has mischaracterized his work.

Indeed, from the outset of his career, Kurth conveyed respect for Riemann's accomplishments but repeatedly pointed to weaknesses in Riemann's theories—which Kurth endeavored to resolve. In the Preface to *Grundlagen*, Kurth writes,

> That I frequently mentioned Hugo Riemann in particular arises from the outstanding significance of this scholar, which cannot be ignored in any area of *Musikwissenschaft*; thus if I repeatedly run counter to Riemann's theory in this book (especially regarding the fundamentals of harmony) and draw attention to the errors that even this mighty pioneer has committed in individual instances, then I would like emphatically to avoid the accusation of a lack of respect for the lifetime's work, for which the field of musicology has Riemann to thank, or of failing to recognize his enormous achievement.[92]

This raises the question: How does Kurth differ from Riemann? That is, with what kinds of universal musical experiences are they concerned, and what, in Kurth's view, are the "errors" Riemann commits? The answer depends in part on what period in their careers we examine, as the concerns of both scholars shift over time. It is thus fruitful to examine the relationship between Kurth's and Riemann's ideas before and after 1914, the date of Riemann's first *Tonvorstellung* article.

Kurth and Riemann before 1914: differences in perception

In *Voraussetzungen* (1913), Kurth focuses his criticism on Riemann's dualist theories of music, primarily as they appear in the latter's *Musikalische*

[91] „Hier erweist sich mir Kurth als ein wackerer Mitstreiter für die Grundlegung einer Lehre von den Tonvorstellungen" (Riemann 1918, 27).

[92] Trans. adapted from Kim 2003, 327.

Logik (1873) and *Musikalische Syntaxis* (1877), and "Das Problem des harmonischen Dualismus" (1905).[93] Kurth suggests that Riemann's approach is no more scientific (read: empirical) than any other music theory, since tone-psychological assumptions form the backbone of its hypotheses:

> When Riemann puts forth his theory as a logic as opposed to a formalism [*Schematismus*], this is justified only as long as one relies on the tone-psychological premises of the dualists. As soon as the sovereignty of this view is breached, the scientificity of another system can also be established by means of tone-psychological assumptions. . . . The dispute concerning the scientificity of music theories is, of course, thus relegated simply to preliminary psychological proofs, and as long as these remain hypothetical, the idea of the scientificity of music theory is relative. In this sense, the scientific status of Riemann's theories, too, remains relative, even though the system as such is carried out with mathematical exactitude.[94]

Riemann's early campaign for the existence of undertones and his later invocation of the relationship between frequency and wavelength relied heavily on the kind of tone-psychological assumptions about which Kurth speaks.[95] Though Riemann

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[93] As Daniel Harrison has documented, Riemann's belief that "*The major and minor chords are, as regards their mathematical and acoustical relations, the polar opposites of each other*" is held constant in all of his writings, though his evidence for this claim evolves (Riemann 1887, quoted and translated in Harrison 1994, 256). And though Riemann specifically mentions major and minor chords in this passage, he ultimately desires to prove the opposite yet equal status of major and minor keys—*pace*-Helmholtz. See Harrison 1994, 265; and 241–42.

[94] Adapted from Rothfarb 1989, 22.

[95] Harrison (1994) captures Riemann's equivocal line of reasoning in 1887: "The positioning here is exquisite: undertones have 'not yet been sufficiently well established' to assert them as physical entities, yet the supporting evidence is not 'inconsistent' with this 'hypothesis,' which makes their existence 'indeed probable'" (256).

In 1905, Riemann, desiring a natural basis for the minor chord, puts forth an explanation that depends on an acoustical relationship between frequency and wavelength: "The consonance of major has its essence in the simplest ratios of increasing frequencies [4:5:6], while, on the contrary, the consonance of minor rests upon the simplest ratios of increasing mass (i.e., of the wave length, string length, etc.), so that the principle of major

looked to empirical evidence, he did so purely as a starting point, believing that his abstract theoretical systems, with their "mathematical" precision, could achieve coherence independently of experience. In *Die Natur der Harmonik* (1882), for instance, Riemann writes,

> If experience tells us that we are capable of conceiving of a tone as a representative of a minor chord as well as a representative of a major chord (without either *Klang* actually being sounded), then **this is a scientific fact on which we can build** as well as on acoustical phenomena. Once we have arrived at this conclusion, we need hardly be concerned with a physical explanation.[96]

In later writings, Riemann indicates that his dualist principles could operate independently of sounding music: "*These series do not require verification through acoustic phenomena*, the enlistment of which only complicates and makes difficult the understanding of relationships quite simple in themselves."[97]

For Kurth, however, the only valid theoretical approach, the only *musikalische Logik*, is one that not only coheres with but is also based on *psychological* premises. In *Voraussetzungen*, psychological logic is synonymous with aural perception.[98] Hence Kurth's primary source of dissatisfaction with

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can be identified with increasing intensity and the principle of minor with increasing volume [i.e., space]" (trans. Rothfarb 1979, 127).

[96] Trans. Rehding 2003, 89; emphasis added in bold.

[97] Riemann 1905, 45; trans. Harrison 1994, 258. Rehding (2003, 82–87) discusses the influence of Riemann's teacher, Hermann Lotze, on this manner of thinking.

[98] For instance, Kurth points to the arbitrariness of Riemann's explanation of minor in terms of frequency and wavelength:

> For the psychology of hearing [the above relationship] is meaningless, for, when the conception of 'increasing mass' is referred to, it is also coupled with an increasing sensation of weight, and this sensation always evokes the impression of the lowest tone as a basis upon which the other tones weigh. . . . In our perception we recognize only weight pressing upon a base and not pendulous weight, and

Riemann: "in Riemann's system a certain intellectual uniformity in the manner of observation frequently leads to crass contradictions with natural musical perception, despite all of its logical justifications."[99] He took issue in particular with Riemann's generation of chords in the minor mode.

Figure 2.1 presents major and minor key system following Riemann's descriptions in *Skizze einer neuen Methode der Harmonielehre* (1880).[100] Here, each chord in the major mode (first system) is generated upwards from a tonic below, while each chord in the minor mode (second system) is generated *downwards* from a tonic above, or what we would call the fifth of the chord.

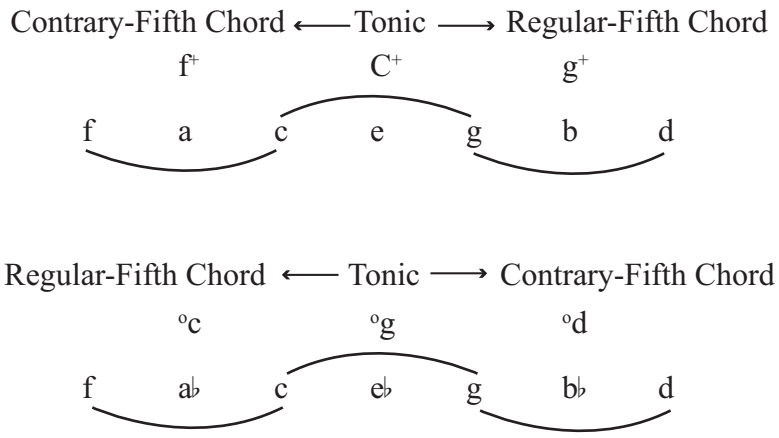

Figure 2.1. *Key systems according to Riemann's* Skizze einer neuen Methode der Harmonielehre

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even the most comprehensible, systematic presentation is incapable of changing anything in the psychology of our musical perception.
See Rothfarb 1979, 127–28; translation of Kurth 1913, 79–80.

[99] Trans. Rothfarb 1979, 47.

[100] Example 2 is an adaptation of Harrison 1994, Figure 6.3, which presents relative keys. See Harrison, 1994, 274–76, for a full discussion of *Skizze*.

Kurth considers the implausible perceptual implications of this system for common compositional procedures:

> If, for example, a folk melody occurs in a minor as well as a major version, as is often the case, such a change of mode on the same tonic is certainly not based upon the complicated process in which the tonic leaps a fifth to form the foundation for the other mode, after which the new recasting of the melody is transferred back [i.e., in a recapitulatory section] to the original tonic—both transpositions having to occur unconsciously and in a flash."[101]

We thus read that Riemann's system contains a logical and "complicated" explication for the "antithesis of the two dominants" but it lacks an explanation for "the immediate and simple antithetical effect in a naïve musical sensibility."[102] Kurth sees in Riemann's theory an overriding need to balance both sides of a dualist system at the expense of reflecting the immediate experiences of listeners in general.[103]

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[101] Rothfarb 1979, 129; translation of Kurth 1913, 81.

[102] Trans. Rothfarb 1979, 155. Kurth may be referring to Riemann's *Handbuch der Harmonielehre*, 5th edn, which offers a "more complicated" option for interpreting the progression V–IV; see Rehding 2003, 76.

[103] Kurth also rejects Riemann's proposal that *all chords* are understood in relation to tonic, dominant, or subdominant harmonies. In Riemann's *Katechismus der Harmonie- und Modulationslehre* (1906), for instance, the accrual of non-chord tones and altered individual notes can yield "Tonic functioned chords having no tones in common with tonic—indeed, chords that can easily take another functional designation" (Harrison 1994, 285–87). Kurth argues that such interpretations do not cohere with "the natural interpretation of these chords by the musician, and to their treatment in works of art" (Kurth 1913, 155). And as examples, he cites the submediant and mediant harmonies in major, which he argues, "show such a marked independent harmonic power that the stated dependence of these chords upon one of the primary chords, as a result of the 'incorporation of neighbor tones,' also exemplifies basic ideas carried to extremes in the dual system" (Kurth 1913, 158). Yet such "basic ideas" are found in Kurth's own writing, as we shall see in Chapters Five and Six of the present study; indeed, on the face of it, Riemann's system seems not so different from Kurth's own alteration technique, with its "neighbor-note insertions" (recall Example 2.1). And the strength of both approaches is their flexibility and ability to explain complicated chromatic passages in terms of prototypical progressions. Kurth, however, balks at the rigidity with which Riemann uses this initial premise, that is, at the assumption that alterations are contained in all

Though Kurth dismisses the notion that chordal successions in minor and major could be heard in opposite fashions, he does not dismiss dualistic thinking outright. In *Voraussetzungen*, he admits a kind of conceptual dualism that accounts for the ease with which we accept minor scales, chords, and keys as readily as their major counterparts. Kurth writes,

> Since the overtone series is the only given reality, the physical basis of [Riemann's] theory would no longer be dual, but the organization of the system would still be based upon a type of psychological dualism. Riemann, in citing the slight [variation in] intonation of intervals which are not found among the overtones, e.g., the lower fifth, presents as evidence of the existence of undertones *in the imagination*, a type of mirror formation which, practically speaking, could be a decisive element.[104]

Minor as equal and opposite to major has not a natural foundation but rather a psychological one. Kurth's suggestion for salvaging the dualist perspective bears significance in Riemann's later work. Indeed, Harrison notes that Riemann's inability to provide an acoustic explanation for major/minor duality would eventually lead him to consider such a "psychological-philosophical explanation." Notably, however, while Riemann acknowledges that there is an "imagining spirit" that creates "forms" from "raw materials," he stops short of saying that the duality of major and minor is an *act* of this spirit.[105] As Harrison clarifies, "The reason that Riemann is not inclined to claim that dualism is an act of the tonal imagination is clear: he wants to avoid charges of radical subjectivism, charges that

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harmonies outside of the three primary chords. For Kurth, chromatic alterations are singular agents of tension and striving that function within individual lines.

[104] Trans. Rothfarb 1979, 62–63.

[105] Riemann 1905, 25; tr. Harrison 1994, 262.

would taint his theoretical principles as the creation solely of an unbridled, arbitrary, and even delusional imagination."[106]

Kurth and Riemann after 1914: differences in cognition

It is with caution that Riemann brings the faculty of "imagining" (*Vorstellung*) into focus in the 1914–15 and 1916 articles. Perhaps more pertinent to Riemann's approach than imagining itself are "categories of thought" that "guide and determine the *living, working musical imagination*" and "impose rules upon it."[107] It is no wonder then that for Kurth, Riemann's new outlook is simply another vehicle to promote his well-worn harmonic and rhythmic ideas. He remains resolute in his criticism of Riemann, writing in *Musikpsychologie* that the theory of *Tonvorstellungen* "leads only to a repetition of Riemann's harmonic system as well as a notable loosening (*Auflockerung*) of this rhythmic theory and remains, unfortunately, only a sketch."[108] He does, however, credit Riemann with taking a step in the right direction—though only towards the end of his life: "To be sure, Riemann emphasizes something quite essential when he grants the imagination the ability to fill out what is actually there (for instance, incomplete chords), [and] even to position [it] in necessary context."[109] If earlier in his career

[106] Harrison 1994, 263.

[107] Trans. Wason and Marvin 1992, 85.

[108] „[D]ieses ‚Postulat' mündet dort allerdings nur in eine Wiederholung von Riemanns harmonischem System sowie eine bemerkenswerte Auflockerung seiner Rhythmus-Theorie aus und ist leider nur skizzenhaft geblieben" (Kurth 1931, 47).

[109] „Wohl aber betont Riemann etwas sehr Wesentliches, wenn er den Vorstellungen die Fähigkeit zuspricht, Vorhandenes (z. B. Akkordbruchstücke) zu ergänzen, überhaupt in wichtige Zusammenhänge zu stellen" (Kurth 1931, 47–48).

Kurth focused on the perceptual salience of Riemann's claims, in 1931, he sets his sights on their conceptual plausibility.

That a theory of *Ton*vorstellung places emphasis on the single tone certainly contributes to Kurth's assertion that this concept "no longer suffices."[110] Equally problematic, however, is the second word in the compound: "Vorstellung." Notoriously difficult to translate, this word invokes numerous meanings—concepts both concrete and abstract, in terms both conversational and philosophical.[111] According to Wason and Marvin (1992), Riemann's usage of Vorstellung in "Ideen" comes closest to that of Schopenhauer: an "exceedingly complicated physiological process in the brain of an animal, the result of which is the **consciousness** of a *picture* there."[112] Consciousness is in fact the sticking point for Kurth. That is, he parts ways with Riemann on the extent to which musical experience depends on it and in turn, musical discourse should take it into

[110] Kurth 1931, 95.

[111] Wason and Marvin (1992) offer the first renditions of this term in the context of Riemann. Given Riemann's broad usage, they pose several translations as the context demands. *Tonvorstellung* is rendered as "tonal imagination," "tonal understanding," "tonal images," and "tonal conception." This flexibility in their translation stems from careful consideration of prior translations of the term in Kant and Schopenhauer; see pp. 72–74 of their article. Daniel Harrison (1994) commends their "felicitous" translation and notes that they "most often translate the term as Riemann eventually wanted it understood, although they also translate it on occasion as Riemann used it in his earlier writings, where it was linked more explicitly to physical stimulus"—that is, as 'representation' (262n18). In contrast, Hyer (1995) takes issue with the first of Wason and Marvin's suggestions and the one they employ in the title—"tonal imagination"—on two main grounds: 1) that "it obscures the crucial genealogical connection between 'imagination' and 'representation'—between 'imagination,' that is, and 'image,'" and 2) that "imagination" in plural form is "unintelligible" (102–3); he thus prefers the term "image."

[112] Schopenhauer, *The World as Will and Representation*, trans. E. F. J. Payne (1958), xvii; quoted in Wason and Marvin 1992, 73; emphasis added in bold.

consideration.[113] For him, Riemann's theory is representative of a one-sided focus on conscious representation that was endemic in the systematic branch of Musikwissenschaft.[114] Recall, for instance, that Kurth identifies the goal of tone psychology as the search for "the boundary between the last, precise bodily process and the first, **primitive conscious process**." He champions his own *Musikpsychologie* as a counterbalance, one that places the unconscious at the center of musical experience. Kurth calls our attention to the immediately perceptible whole, something attributed to the mind, rather than bodily sensation: "This complete impression is initially an unconscious [impression], a direct process, it is not based in a thinking, intentional summary."[115]

Yet whereas the danger of focusing solely on conscious activity in tone psychology lies in the neglect of willful mental activity, in Riemann's theory, something else is ignored. As Kim has posited, Riemann's Vorstellung is the "*product* of mental activity, rather than [a] mental faculty or activity in itself."[116] In contrast to this association of conscious representation with product, Kurth emphasizes *processes* (*Vorgänge*) that rest in the unconscious. While acknowledging that an artwork, such as a piece of music, "is based in the conquering of elementary forces through intellectual ordering," Kurth places

[113] Kim 2003 characterizes the difference between Riemann's Tonvorstellungen and Kurth's music psychology as one of "mind versus soul" (330–31; also 169–72).

[114] He cautions, "One finds today in the musicological literature the concepts 'conscious' and 'unconscious' often schematically separated, whereas for psychology only a continual gradation between the two can be given" (Kurth 1931, 41). Nevertheless, he employs this opposition.

[115] „Dieser Gesamteindruck ist zunächst ein unbewußter, ein unmittelbarer Vorgang, er beruht nicht in einer denkenden, beabsichtigten Zusammenfassung" (Kurth 1931, 25).

[116] Kim 2003, 174.

emphasis on the struggle towards this end: intellectual ordering must always contend with unconscious processes.[117] Said differently, musical experience, be it composition, performance, or listening, begins first with primitive "archetypes" that "first experience multiple transformations, and similarly, in many cases, rearrangements, before they become the conceptualization."[118] Theoretical approaches that concentrate solely on the final outcome of these transformations distort the dynamic aspect of the musical experience.

Like Kurth, Riemann discusses the phenomena of "high and low," "light and dark," and even tension in musical discourse. Whereas Kurth suggests that the dynamic aspects of music exist in the mind prior to our complete understanding of them—"if weight and other tension forces are sensed, these are not suggested or constructed from understanding but rather are psychic phenomena with which music-theoretical knowledge must grapple by analyzing them, classifying characteristic causes, etc."[119] —Riemann's approach situates them in the observable vibrating body.[120] Furthermore, Riemann awards written notation the

[117] „Daran ändert auch die selbstverständliche Tatsache nichts, daß ein Kunstwerk im Bezwingen der elementaren Kräfte durch gedankliches Ordnen beruht" (Kurth 1931, 44). Further along, Kurth notes, „Gerade das Denken wäre eine recht oberflächliche Angelegenheit, wenn man die unbewußten Vorgänge außer acht ließe, mit denen es sich auseinanderzusetzen hat." ["Mental activity would be a truly superficial issue if one ignored the unconscious processes that it has to confront"] (Kurth 1931, 45).

[118] „Die Urbilder erfahren erst noch vielfache Veränderung, ehe sie zum Denkbild werden, und ebenso vielfache Umlagerungen" (Kurth 1931, 45).

[119] „Oder wenn Schwere und andere Druckspannungen im Tone empfunden werden, so sind diese nicht vom Verstande suggeriert oder konstruiert, sondern sind psychische Erscheinungen, mit denen sich die musiktheoretische Erkenntnis auseinandersetzen muß, indem sie sie analysiert, typischen Ursachen einordnet usw." (Kurth 1931, 43).

[120] "Aesthetics has long known that 'high' and 'low' are actually transferals [sic] of the designation of spatial perceptions to a completely heterogeneous domain; however, the

ability to mirror such inner emotional responses.[121]

> The hearing of changes in pitch level is transformed into a vision of changes in location, and we already have a presentiment of the *ultimate identification of the essence of visual and aural imagination*. . . . Thus one can even say that as a consequence of **a single tone's position in tonal space**, a particular aesthetic value is already appropriate to it—a value of pleasant or unpleasant sensation, of joy or suffering, which is determined by its distance from the limits of rising and falling tension. Our **notation** yields the possibility of a clear determination of this aesthetic value through the position on the staff that it assigns to the particular pitch-level.[122]

In addition to the traditional staff, Riemann famously employs *Tonnetze* and a complex system of analytical symbols for harmonic functions. He uses the former to trace transformations of chords and key relationships—and given his words above, to trace changes in tension as well—and the latter to indicate alterations or intensifications of chords from basic tonic, dominant, and subdominant harmonies.

For Kurth, however, the transformations and tensions Riemann purports to document are essentially different from the inner course of motion (*Bewegungsvorgang*), central to Kurth's dynamic view of music. Its outer character, "pictoral motion," is familiar to us through the externalization of our conscious representation, for example through notation, but its unconscious,

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dissemination of this transferal among all people of the earth certainly demonstrates a justification for its use. . . . All of these designations are certainly understandable when one considers that the vibrating body, which emits the various tones, presents smaller dimensions the higher the tones it produces [become], and larger dimensions the lower the corresponding tones are" (Riemann 1914–15, 93).

[121] Indeed, Brian Hyer (1995) argues that visual representation is a central concern in Riemann's harmonic theory.

[122] Trans. Wason and Marvin 1992, 93; emphasis added in bold.

primordial nature—that is, music's *absolute* character—is intangible.[123] Kurth emphasizes that the psychic force remains "spellbound in the inner world," remaining different than "conscious will and conscious imagining."[124] Thus Riemann's visual aids (symbols, Tonnetze, even staff lines), employed to represent "the consciousness of a *picture* there," serve only to alter the irrational immediacy that forms Kurth's musical experience. In Chapter Three, we will delve further into Kurth's position concerning the connection—hardly *identification* as it is for Riemann—between aural and visual domains.

Kurth positions Riemann's theory alongside older philosophies that considered the unconscious to be an embryonic state, where conscious thoughts lie before they are fully formed.[125] As such, he argues, "it appears doubtful whether the identification of a 'theory of tonal imaginations' can be enough; surely **not if one accepts the unconscious processes only as weakened images** (*geschwächte*

[123] „denn der Bewegungsvorgang nähert sich erst im Hinausdringen an bewußte Vorstellungen dem Charakter äußerer, bildhafter Bewegungen, während er in seiner unbewußten, ursprünglichen Eigenart etwas ganz anderes ist und auch der Musik ihren absoluten Charakter wahrt." ["The evolution of motion first approaches the outer character, pictoral motion, in the externalization of the conscious representation, while it is in its unconscious, primordial characteristic something completely different and also preserves the **absolute character** of the music"] (Kurth 1931, 44).

[124] „Doch das sind nur Einzelbeispiele unter vielen, die ständig belegen, daß die psychische Gewalt, die ins Innere gebannt bleibt, weitaus zwingender und anders in ihrer Wirkung sein kann als aller bewußter Wille und bewußte Vorstellung." ["Yet those are only individual examples of many, which constantly verify that the psychic control that remains spellbound in the inner world can be much more compelling and different in its effect than all conscious will and conscious imagining" (Kurth 1931, 44).

[125] Gottfried Leibniz exemplifies such a stance with his "petites perceptions." See Kurth 1931, 41n4.

Vorstellungen), and this appears to inform Riemann's agenda throughout."[126] Kurth, in contrast, elevates the unconscious to a "self-existing power," as something "fundamentally other."[127] Rather paradoxically, however, the unconscious is something that is ungraspable through awareness and conceptualization. Kurth notes that focused examination produces differing results in the two states of mind:

> Im bewußten Leben wird das Ganze eines Eindrucks um so klarer, je mehr es sich gliedern läßt, im unbewußten ist es umgekehrt: jede Gliederung droht die Totalität zu trüben. Denn indem man die Einzelheiten aus dem Ganzen herauslöst, sind sie nicht mehr psychische Inhalte, sondern werden zu Begriffen, sie erfahren einen „Abstraktion" (Herausziehung) aus dem Ganzen, werden aus ihrer Einbettung im psychischen Ureindruck, somit aus ihrem ursprünglichen Charakter herausgehoben.
>
> [In conscious life, the entirety of an expression becomes clearer the more it is organized; in the unconscious [life], it is the reverse: any structuring threatens to cloud the totality. Because one extracts the particulars from the whole, they are no longer psychic contents, but rather become concepts; they experience an "abstraction" (extraction) from the whole, [and] are lifted out of their embedding in the **psychic original-impression and thus from their original character**.][128]

Music rests, for Kurth, in such "psychic original-impressions"—in indefinable forces within the unconscious. Conversely, "Purely conscious (*rein gedankliche*) constructions are not found in music, but rather only an interference

[126] „Was aber jenes Grundpostulat betrifft, so erscheint es fraglich, ob die Bezeichnung einer ‚Lehre von den Tonvorstellungen' genügen kann; sicherlich dann nicht, wenn man die unbewußten Vorgänge nur als geschwächte Vorstellungen anerkennt, und das scheint Riemanns Ansichten durchwegs zugrundezuliegen„ (Kurth 1931, 47).

[127] „Man betrachtet also das Unbewußte nicht mehr allein als eine unklare Vorstufe deutlicher Bewußtheit, sondern als eine selbstbestehende Macht, somit als etwas grundsätzlich anderes" (Kurth 1931, 41–42). La Motte-Haber 2008 notes that Kurth's position aligns with philosophical tracts by Fechner and von Hartmann, and Kurth mentions these two philosophers favorably in his discussion of the unconscious.

[128] Kurth 1931, 29.

(*ein Eingreifen*) of thinking in unconscious fundamental processes." Theories that strive to identify psychic impressions through analysis and categorization will never reach music's origins. Moreover, "simple, rationalistic logic," such as Riemann's, ultimately "**interferes** with the irrational fundamental phenomena of music."[129]

"Ought to" and instincts

The possibility remains that Kurth misreads Riemann or deliberately overlooks points of agreement between him and his predecessor. Is Riemann's logic as antithetical to Kurth's thinking as the latter contends; is it truly devoid of psychological content? Pearce, for instance, notes that, following his teacher Christoph Sigwart, Riemann emphasizes "logic as the active synthesis of representations" throughout his career.[130] Sigwart defines logic as the art of thinking, and thinking "describes a *pure inner vitality* of representing which thus even appears as a spontaneous action arising from the force of the subject alone."[131] Pearce therefore concludes, "Musical hearing, for Riemann, requires logical activity, which is a spontaneous, representative function of the human intellect."[132] If Riemann were indeed faithful to Sigwart's definition, there should

[129] „Durch den Irrweg, einfach rationalistische Denkgesetze den irrationalen Grundphänomenen der Musik aufzuzwängen, trieb im 19. Jahrhundert auch Riemanns Theorie" (Kurth 1931, 44). Kurth characterizes Riemann as, "the main representative of the 'musical logic', which wanted to impose its laws throughout the strong oppositions of psychology, **as if the 'activity of listening' were of an absolute intellectual nature**" (48).

[130] Pearce 2008, 92.

[131] Sigwart 1873, 1; trans. Pearce 2008, 94.

[132] Pearce 2008, 94.

be no reason for Kurth to object to Riemann's propositions; after all, notions like "inner vitality" and "spontaneity" map readily onto the activity of the will and unconscious responses that Kurth emphasizes.

Reading Riemann, however, one has the impression that this is not the case. *Ideen*, like most of Riemann's writings, is not only pedagogically focused, but it also sets forth *the* correct approach to harmony and singing instruction. He writes,

> That our music pedagogy will be capable of making a highly meaningful step forward through **conscious inclusion of the musical imagination** in schooling by means of **rational, methodical training** of the tonal-imaginative faculties is a certainty. This training will result in an entirely new instruction, especially for the elementary teaching of singing, because relevant exercises are nothing other than training in the most precise imagining of the individual intonations.[133]

And later,

> The high ethical worth of music lies therein, that it enables the receiving hearer to experience again what the heaven-inspired artist experienced before. Of course, the degree of strength of this "experiencing again" depends on the capacity to follow the artist's succession of ideas—a capacity that assumes talent, but that **can be developed considerably through serious study**. Thus it is true that **the ear may be educated** and that **music may be taught and learned**.[134]

One of the "first, most basic exercises" of his proposed curriculum calls for the student to imagine each individual note as a root, third, and fifth in both major and minor triads, presenting "six possibilities for the representation of a tonal complex." Later, the student puts this imagination training to use. For instance, in order to sing A–D in C major, the student must think of these notes as the third of the subdominant (S) moving to the fifth of the dominant (D). Further, imagining

[133] Trans. Wason and Marvin 1992, 84–85; emphasis added in bold.

[134] Trans. Wason and Marvin 1992, 92; emphasis added in bold.

a $\hat{5}$–$\hat{1}$ motion would be a "fatal white lie," Riemann cautions; the "development of excellence" rests instead on the "auxiliary mental image" (*Hilfsvorstellung*) of intermediary S and D roots, shown in **Figure 2.2.**

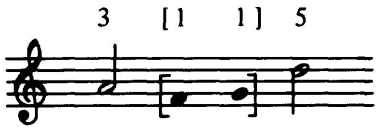

Figure 2.2. *An auxiliary mental image (*Hilfsvorstellung*) from* Ideen (Example 11)

With this as a starting point, Riemann pronounces that "The elementary singing method of the future that takes into account the theory of tonal imagination will give thorough consideration to the systematic practice of all such melodic motions to a component of another harmony, and it will have to order the resulting difficulties progressively and work on their conquest."[135] Thus it would seem that the "spontaneity" of logical activity is not a universal musical experience, but one hard-won through focused instruction. Rehding has argued similarly that "[Riemann] exhibited a utopian concern with how we *ought* to hear music, and conversely, he argues that musical compositions ought to comply with harmonic dualism, even though the existing repertoire does not do so, or does so only partly." This stance further informs his aesthetic opinions of past composers and dictates guidelines for present and future ones.[136]

Kurth, too, had pedagogical concerns. Like Riemann, Kurth emphasizes in

[135] Trans. Wason and Marvin 1992, 106.

[136] Rehding 2003, 9. Harrison (1994) states similarly, "[Riemann] was determined that his views and proven methods be incorporated as widely as possible into the pedagogy of theory—and thus into the discipline itself" (281).

Musikpsychologie that training and conscious attention can work in part to shape the musical development of an individual. For instance, he notes that many mental functions of which we are initially aware become unconscious through experience, uniting with processes that are inherently unconscious. From the receptive (analytical, perceptive) side, this occurs "for all functions of mental sequencing and thinking."[137] From the productive side, he characterizes the development of performers and composers as a progression from an infantile state of creativity to one in which actions become second nature. In both "reproductive" and compositional activities, technical abilities that were initially acquired through conscious concentration later "happen by themselves . . . [i.e.,] become 'mechanized' . . . without requiring any further attention." Yet while Riemann champions technical abilities that are learned through rote, Kurth's interests lie in the role of unconscious—spontaneous—processes that are acquired through less-concrete means: habituation—and, notably, the "reliability of instinctive action."[138] The latter suggests that successful performers and composers are those whose natural instincts are repeatedly rewarded. Indeed, Kurth cautions, "one must not surrender to the illusion that thinking can annihilate unconscious

[137] „Jene Rückwirkung gilt aber in hohem Maße auch von allen Funktionen des geistigen Ordnens und Denkens, das auch oft tief ins Gefühl zurückwirkt, dort Wurzeln faßt und sich mit unterbewußten Vorgängen verbindet, in denen eine gleichartige Disposition auch schon keimhaft vorgebildet liegt, eine Erscheinung, auf die man in der Musikpsychologie auf Schritt und Tritt stößt" (Kurth 1931, 43–44).

[138] „. . . es gibt z. B. eine Menge Funktionen, die ihren Ursprung in bewußter Tätigkeit haben, sich ihr aber durch **Gewöhnung** entzogen und zur Zuverlässigkeit instinktiver Handlung tief einkerbten. Das ist bei einer Menge technischer (sowohl **reproduktiver wie auch kompositionstechnischer**) Fähigkeiten der Fall, die anfangs in bewußter Konzentration erworben, später **ganz von selbst abrollen**, sich sogar bei kompliziertem Gefüge ‚**mechanisierten**', **ohne die Aufmerksamkeit mehr zu beanspruchen**" (Kurth 1931, 43–44; emphasis added in bold).

processes; this has never been asserted from the psychological side, but music theory has nevertheless fallen for this misconception repeatedly."[139] Undoubtedly, he recognized in Riemann a missed opportunity to address not how listeners should hear music, but how we *do* hear music.[140]

[139] „Aber man darf sich nicht der Täuschung hingeben, daß das Denken die unbewußten Vorgänge aufheben kann; das ist auch von psychologischer Seite nie behauptet worden, die Musiktheorie verfiel aber diesem Irrtum wiederholt" (Kurth 1931, 44).

[140] I borrow the contrast of "ought to" and "do" from Rehding 2003, 9.

CHAPTER THREE

"Force, Space, Matter": Metaphors for Musical Experience

In the previous chapter, we examined several motivations for *Musikpsychologie*. We saw that Kurth's late work assigns a central role to unconscious processes that shape our holistic experience of music. His perspective serves as a corrective to the preponderance of approaches that are overly reductionist (tone-psychological) or rely on calculated logic (Riemann). The present chapter explores specific ramifications of Kurth's "unconscious processes" in greater detail.

Our knowledge of the unconscious stems from a combination of introspection and observation. We might ask: How do we feel, and what do we imagine as we listen to music? How is this experience unique, and how do we describe it? Kurth begins the Second Section (II. Abschnitt) of *Musikpsychologie* by distinguishing between two opposing views of musical listening: as a passive process (*Verarbeitung*) of sounding material—akin to mere reception—and as the act of processing (*Verarbeiten*)—mimetically performing and thereby transforming—this material.[1] While those working in the tone-psychological realm

[1] Kurth (1931, 76) writes,

> Wenn man in die Gesetze der Musik einblicken wollte, so ging man—analog der Tonpsychologie—von der klingenden Materie aus und betrachtete ihre ‚Verarbeitung'. Doch gerade dies Wort hätte schon stutzig machen müssen. „Verarbeitung" ist bereits ein passiver Begriff, auf die Materie bezogen; der aktive wäre das „Verarbeiten", und es kommt darauf an, in der verarbeitenden Kraft, ihren Wegen und Ausstrahlungen, das Grundlegende zu sehen.
>
> [If one wanted insight into the laws of music, one began—along the lines of tone psychology—with the sounding matter and considered its "processing". Yet it is just this word that should have given pause. "Processing" is already a passive concept, drawn from matter; the active would be "to process," and it is necessary in order to see the essentials in the processed force, its channels and transmissions.]

In a recent article, Cox proposes a "mimetic hypothesis" that accounts for "how music becomes internalized into the bodies and minds of listeners" (Cox 2011, [1]). Steve

are arguably concerned with the former, namely how a stimulus is received, Kurth focuses his attention on the latter. That is, he is concerned with our experience of *musical forces*. These originate in the mind and body of the listener, and they contribute to the drive, momentum, tension, suspense, and ultimately, unity, we sense in the musical work. And because listening to music is a fundamentally visceral and intangible activity, any attempt to concretize these forces—to describe them and share them with others, to make sense of them for ourselves—unavoidably involves relating musical listening to other worldly experiences. Examining such relationships provides insight into the aural unconscious. According to Kurth, the pervasiveness of *metaphorical* concepts in musical discourse implies that we have analogous responses to phenomena in the musical realm and to those of the visual, material, and corporeal domains.[2]

Together, the four parts of this chapter develop the following premises: music listening is an active process through which we experience (feel, imagine, intuit) force, space, and matter; and we conceptualize this activity through

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Larson's theory of "musical forces," which he first outlined in Larson 1997, also calls attention to the role of the body in the listening experience. Larson (2012) writes, "our immediate experience of musical motion is shaped primarily by our *embodied intuitive* understanding of physical motion—not by our *intellectual* understanding of physics." Following Lakoff and Johnson (1980/2003 and 1999), Larson explains that by "embodied," he means, "our understanding is shaped by the somatic 'feel' of what we know—that we 'know' with our bodies as well as with our minds" (22). Though Kurth's own ideas about the body are far less explicit than those of modern authors, we can nevertheless identify shared concerns across the centuries. I thank Arnie Cox for our discussions concerning mimetic cognition, which helped illuminate many of these reverberations.

[2] For a thorough account of metaphorical thought through the ages, see Spitzer 2004.

metaphorical language, which in turn, serves as a window onto the inner world.[3] Part 1 is a brief discussion of what musical forces are and are not. At the center of our discussion is Kurth's (rather buried) argument that we compare our experiences within the abstract musical world to our embodied responses to the physical world.

The metaphorical linkage of musical forces to movement and the body entails what is perhaps Kurth's calling card: energy. In Part 2, we explore what Kurth calls the "most remarkable and abundant" manifestation of force, *Bewegungsenergie* ("energy of motion"). After summarizing the nature of this concept, I draw an important connection between *Bewegungsenergie* and melody. I argue that this connection, while implicit, is crucial to our understanding of harmony in Kurth's writings, and it provides a new perspective from which to examine Heinrich Schenker's criticism of Kurth.

In Parts 3 and 4, we explore other experiences of music and inquire into their metaphorical origins. We look first at musical space, which is rooted in *Bewegungsenergie*. We then turn to the musical image and "afterimage." In the latter section, Kurth challenges the traditional reliance on visual representations in music theory.

Part 1. Physical Forces and Musical Forces

> Wenn aber überhaupt von psychischen Energien und von Begriffen wie Spannung, Bewegung, Schwere, Auftrieb, Druckkraft usw. gesprochen wird, so ist zunächst auf die grundsätzliche Frage nach

[3] These parts correspond to Kurth's chapters in the Second Section, though not in the same order. For ease of understanding the relationship among his topics, I have rearranged the order of presentation: Part 1 (Kapitel 3), Part 2 (Kapitel 1), Part 3 (Kapitel 4 and 5) and Part 4 (Kapitel 2).

> dem Charakter dieser Kräfte zurückzukommen: liegt eine Gleichheit mit physikalischen Kräften oder nur eine Analogie-Erscheinung vor?
>
> [Whenever we speak of psychic energy and concepts like tension, motion, gravity, buoyancy, pressure, etc. in general, we return to the fundamental question about the character of these forces: are we speaking of an equivalence to physical forces or only an analogous phenomenon?]

The answer to Kurth's question, in his own words, "cannot be difficult."[4] Instinctively we know that musical forces cannot be equivalent to physical ones; and we can certainly borrow words from one domain and employ them in another without asserting that they have equivalent meanings. And yet, this question is deceptively simple. For one might further ask how analogies with physics aid our understanding of the more abstract concept of music, and why, for that matter, we would be inclined to speak of music in physical terms in the first place.

As Kurth notes, these questions touch on broader philosophical debates. With regard to the forces of music as opposed to those of the physical world, he writes, "in some ways, one views both types of forces only as different manifestations of the same unknown effect, which would only separate into experience (psychic world) and perceptibility."[5] That is to say, because neither musical nor physical forces are visible and concrete, they could very well stem from the same ephemeral source. Another view would be that the two types of forces are completely independent. And yet another view would be that one begets the other: "the psychic (forces) are [perhaps] only a **consequence** of the processes of motion

[4] Kurth 1931, 98.

[5] „So etwa indem man beiderlei Kräfte nur als verschiedene Kundgebungen eines gemeinsamen unbekannten Wirkens ansieht, das sich dabei nur in Erlebbarkeit (psychische Welt) und Wahrnehmbarkeit" (Kurth 1931, 99).

that are initially perceived" or conversely, "the emphasis could be placed on the phenomenon, such that a sensation of motion is **transferred** into every external perception of motion."[6] Kurth's own position emerges over the course of his Second Section, Chapter 3 (II. Abschnitt, 3. Kapitel "Psychische und physische Energie"). Initially, he is content to side-step such questions of ontology and *not* take a strong stance, stating simply, "the word 'analogy' transcends the sense of mere aesthetic similarities and suggests certain **deep commonalities** of force conditions that ensnare themselves in tones as well as with the extra-musical conditions."[7] We shall return to these deep commonalities further below.

Let us turn first to the differences. Repeatedly, Kurth cautions that analogies should not be used glibly for the risks of "reification" (*Verdinglichung*), "oversimplification" (*Vergröbergung*), and quick conclusions are great.[8] He thus finds it more fruitful to concentrate on the differences between the physical and

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[6] „[E]s kann die Grundannahme herrschen, daß beiderlei Kräfte selbstberechtigte, unabhängige Grunderscheinungen sind, oder daß die psychischen etwa erst Folgen der zuerst wahrgenommenen Bewegungsvorgänge sind; oder es kann umgekehrt das Schwergewicht in die Erscheinung gelegt werden, daß in jede äußere Bewegungswahrnehmung eine Bewegungsempfindung übertragen wird" (Kurth 1931, 99).

[7] „Kurz, das Wort ‚Analogie' geht über den Sinn bloßen ästhetischen Vergleichs hinaus und weist auf gewisse tiefe Gemeinsamkeiten der Kraftzustände die sich in Tönen fangen, mit den außermusikalischen" (Kurth 1931, 99).

[8] Kurth (1931, 100) writes,

> Jegliche psychologische Darstellung ist teils auf abstrakte Begriffe, teils auf „Bilder" angewiesen, die der äußeren Wahrnehmungswelt angehören und nun als unsichtbare, unkörperliche Geschehen verdeutlichen sollen; das bedingt immer die Gefahr seiner „Verdinglichung", der Vergröberung des wesenlos-geistigen Charakters, ferner die Gefahr einer Beurteilung nach physischen Voraussetzungen.
>
> [Any psychological presentation is partially dependent on abstract concepts, partially on "images," which belong to the outer perceptual world and now should clarify the invisible, incorporeal events: this always brings up the danger of their "reification"—that is, the oversimplification of the non-corporeal, spiritual character, [and] further, the danger of assessment based on physical prerequisites.]

psychological domains, stating, "the oppositions often contribute to the most essential clarifications."[9]

Our experience of mass with regard to these forces illustrates a primary difference. Physical forces are agents that can cause an object with mass to accelerate or deform. Kurth notes that such forces are "only understood in their effects" and are measurable. That is, "their measurement lies in the acceleration that they confer on a mass, and in the work undertaken during a certain time (be it a spatial or inner transformation [deformation] of the mass). Mass is primary—a precondition for the concept of force."[10] Here, Kurth invokes basic laws of classical mechanics: Newton's Second Law, F = *m*a, which measures the amount of force required to accelerate a fixed mass, and the work or energy required by this force over a certain distance (though he says "during a certain time," above), which is calculated by the formula W = Fd. He notes that in physics, force is dependent in part on mass. In music, however, this is not the case. Musical forces are agents that produce the impression of mass—fullness, "heaviness"—in the tones, which themselves are not objects but only impulses: "In music, it is somewhat reversed in that only the sensation of force produces the impression of

[9] „Bei allen der Physik entnommenen Ausdrücken und Analogien muß man daher auch die Unterscheidungen beachten, ja gerade die Gegensätze führen oft zu den wesentlichsten Aufklärungen, wie sich wiederholt zeigen wird."
["Thus, with all of the expressions and analogies drawn from physics, one must also note the differences; indeed the oppositions often contribute to the most essential clarifications, as is repeatedly revealed."] Kurth 1931, 98.

[10] „Physikalische Kräfte werden nur an ihren Wirkungen erkennbar. Ihr Maß liegt in der Beschleunigung, die sie einer Masse verleihen, in der während bestimmter Zeit geleisteten Arbeit (sei es räumlicher oder innerer Veränderung der Masse). Die Masse ist also dort das Primäre, Voraussetzung für den Kraftbegriff" (Kurth 1931, 104–5).

mass in the tones, which are themselves free of mass (physically speaking); [that is, they are] not objects but rather impulses."[11]

Notice the point of view in the paragraph above. Kurth discusses physical forces as agents whose influence we can observe in objects out in the world. This perspective is consistent with the way physicists often describe forces, using examples such as a ball rolling down the hill or an apple falling from a tree; in a third-person point of view, forces are easily measurable. But there is another perspective: a first-person stance that registers the effect of forces on oneself. In the following excerpt, we see this point of view emerge in Kurth's thinking about not only the musical world but also the physical world.

> Hier nun eröffnet sich ein weiterer Unterschied zu den physikalischen Kräften. Dort kann man nämlich schon den Begriff der Kraft nur erschließen, indem man ihre Wirkungen bemerkt und hypothetisch auf eine Ursache zurückführen muß. Die psychischen Kräfte sind auch aus ihren Wirkungen zu erschließen, doch kommt als etwas wesentliches jener Eindruck des inneren Verspürens hinzu; das gibt uns jene unmittelbare Bestätigung, welche bei allen in der Außenwelt erkennbaren Kräften fehlt. Dabei aber muß man sich auch vergegenwärtigen, daß wir andrerseits in die Kräfte der Außenwelt etwas hineinlegen, was wir von den psychischen Spannungsgefühlen her ganz unmittelbar kennen. Denn wenn wir uns eine physikalische Kraft vorstellen, so beruht das eben doch nicht so ausschließlich darin, daß wir auf sie aus ihren Auswirkungen zurückschließen: wir fühlen irgendein Drängen, Wollen, eine Lebensströmung, kurz schöpferisches Kraftempfinden in sie hinein. Man könnte es jedoch auch umgekehrt ausdrücken: wir fühlen aus den Kraftvorgängen etwas heraus, und sei es in noch so subjektiver (anthropomorpher) Umänderung. Wir erfüllen die Physik, das ganze Kraftsystem der äußeren Welt, mit einer inneren Dynamik, wie sie auch in der Musik waltet, ohne diese darum zu einer Physik der Psyche zu vergröbern. Und hier liegt wohl hauptsächlich das Gemeinsame, was die

[11] „Die Masse ist also dort das Primäre, Voraussetzung für den Kraftbegriff; in der Musik ist es insofern wieder umgekehrt, als erst die Kraftempfindung den Masseeindruck in den Tönen erzeugt, die an sich (physikalisch betrachtet) von Masse frei, kein Gegenstand, sondern Reize sind" (Kurth 1931, 105).

> unbestimmte Analogie zwischen innerer und äußerer Bewegungsenergie ausmacht.
>
> [Now a further difference from the physical forces reveals itself. There, one can of course only infer the concept of force, in that one notes its effects and must attribute [them] hypothetically to a cause. The psychic forces are also inferred from their effects, but **that impression of inner sensation** is added as something significant; this gives us that direct confirmation which is lacking in all of the recognizable forces in the outer world. But at the same time, **on the other hand,** one must also realize that **we attribute something to the forces of the outer world that we know directly from the psychic feelings of tension**. For when we imagine a physical force, this is not exclusively because we reason a posteriori from its effects: [rather] **we feel some power, will, [and] a dynamic striving**—in short, creative force sensations—within it. Conversely, though, one could also express it as follows: we sense something in the force processes, even if it is in a subjective (anthropomorphic) transformation. **We satisfy the demands of physics [and] the whole system of forces in the outer world with an inner dynamism** just like the one that also rules in music, without thereby causing physics to degenerate into a physics of the psyche. **And this is essentially the commonality that forms the general analogy between inner and outer energy of motion.**][12]

Kurth begins by noting that a "further difference" between the physical world and the psychic (musical) world is our ability to experience forces in the musical world through an "inner sensation" that is lacking in the physical world. But by the end of the paragraph, he concludes that the "commonality" between the musical and physical world is our involuntary empathy with the external stimulus. Elsewhere, Kurth writes with regard to musical psychic forces,

> Die Auswirkung aller psychischen Kräfte, ihre typischen Verlaufswege und Umsetzungsformen zeigen sich einmal am „Objekt" der Musik, an allen Verarbeitungserscheinungen, denen die Tonmaterie unterliegt. Diese liegen vom kleinsten Gebilde an zur „Deutung" offen, d.h. aus ihrer Wirkung auf uns und aus den psychischen Geschehnissen in uns rekonstruieren wir das psychische Geschehen in ihnen. Das Vorhandensein eines Dranges aber, das Erleben aller Spannungsformen usw. ist letzten Endes nur durch Selbstbeobachtung gegeben und zu bestätigen.

[12] Kurth 1931, 107–8.

> [The effect of all psychic forces, their typical courses and forms of impression arise at once in the "object" of music, in all manufactured phenomena, under which the tonal matter lies. These are displayed openly, from the smallest forms to the "interpretation"—i.e., **from their effect on us and from the psychic events in us we reconstruct the psychic occurrences in it.** However, the existence of a force, the experience of all tension forms, etc., is ultimately only given and verified through **introspection**.][13]

That is, just as in the physical world, the third-person perspective in the musical world is a fallacy: we are always contributing something—an "inner dynamic"—to the forces that we are observing. It follows from this that many of Kurth's compound words include "Empfindung" as the second noun to emphasize the feeling or sensation of the first noun. Examples include: *Schwerkraftempfindung* (sensation of gravity), *Kraftempfindung* (sensation of force), and *Bewegungsempfindung* (sensation of movement or kinesthesia). Musical forces, then, are not simply analogous to physical forces. More accurately, the experience of music—the feelings we have when we listen/perform/imagine music—is the feeling of force acting on a body.[14]

[13] Kurth 1931, 105.

[14] Recasting this idea in terms of recent metaphor theory, we might express this as a conceptual metaphor: MUSICAL EXPERIENCE IS THE FEELING OF A BODY UNDER FORCE, where the physical experience acts as a "source domain" for understanding the more abstract "target domain" of musical experience. George Lakoff and Mark Johnson (1980/2003) are most frequently credited with coining the term "conceptual metaphor" and for bringing this idea to the attention of cognitive linguists and more recently, music theorists alike. For a recent example of work in this area, see Larson 2012 (especially 20–23, 46ff., regarding metaphors as types of analogies and embodied understanding as distinct from intellectual understanding).

Part 2. "Energy as Elucidated by Psychology"

We turn now to the product of musical forces: musical motion.[15] For Kurth, our recognition and feeling of motion as we listen to music stems not from an association with motion "in the visible corporeal world," but instead from an analogous sense of motion in the physical world: "we realize the changing position of [physical] bodies with that feeling of a motion that in reality lies within us."[16] We understand music as flowing and having forward direction because we sense what Kurth calls the "energy of motion" (*Bewegungsenergie*), or "kinetic" energy. The following passage emphasizes the importance of *Bewegungsenergie* as well as its uniqueness among the aggregate of "motions" we experience:

> Aus der Tiefe der Lebensenergie lösen sich verschiedene spezifische Äußerungsformen von Kräften körperlicher wie geistiger Art. Eine davon und vielleicht die merkwürdigste, jedenfalls an Sondererscheinungen reichste, ist die Bewegungsenergie, in der sich das musikalische Erleben und Vorstellen entladet und die sich in verschiedenen Spannungsformen äußert. In ihr lebt das Grundgefühl des Wirkens, einer „Arbeit". Ihre einfachste Form erkennt man an jedem melodischen Gebilde als einen durchtragenden Zug. Es ist eine Energie, die den Tonverlauf in sein eigentümliches Bild treibt und damit auch jeden seiner Töne durchwirkt; nicht minder wesentlich ist, daß man sie als die zwischen den Tönen streichende Kraft erkenne, nicht als nachträgliche Verbindung, sondern als tragende Einheit. Sie verdient um so mehr Beachtung, als hier eine einzigartige Bewegungsempfindung vorliegt, die weder mit physischer noch mit einer sonstigen psychischen Bewegung gleichzusetzen ist; sie ist also auch verscheiden z. B. von der Bewegung, welche die gesichtsmäßige Anschauung vollführt, wenn sie über verschiedene Gegenstände gleitet, und sei es auch in der bloßen Vorstellung. Auch bei andern

[15] As Kurth himself underscores (1931, 78n1), citing Isidorus, Guido, Marchettus, theorists have related music with motion for centuries. Yet as Rothfarb (2002) notes, the central position of motion, isolated from other affects, is a hallmark of "energeticist" writings, including Kurth's (927–28). Rothfarb follows Schäfke 1934 (393–450) in his use of this term and characterization.

[16] „[W]ir erfüllen umgekehrt die Lagenveränderung von Körpern mit jenem Gefühl einer Bewegung, das in Wirklichkeit in uns liegt" (Kurth 1931, 108).

geistigen Handlungen herrscht ein durchtragender Zug, z. B. beim Lesen, beim Sprechen und allen Akten des Verstehens, bei Gefühls- und Affektverläufen usw.; denn all das beruht in größeren Zusammenfassungen; aber keiner von diesen Bewegungsvorgängen ist an Suggestivkraft dem melodischen vergleichbar, sie sind ihm vielleicht wurzelverwandt, aber doch anderer Art. Dann aber liegt das Beachtenswerte darin, daß unmittelbar aus dieser allgemeinsten Grunderscheinung gewisse Spannungszustände hervorgehen, die sich immer mehr differenzieren, je weiter man sie gegen jene spezifischen Erscheinungsformen hin verfolgt, die sie in der Tonmaterie und Technik der Musik annehmen; sie haben für die ganze Musik konstruktive Bedeutung.

[From the depths of living energy, different specific manifestations of forces, physical as well as mental, release themselves. One of these and perhaps the most remarkable and most abundant, at least with regard to particular phenomena, is the **energy of motion**, in which the musical experience and imagination discharge, and which **expresses itself in different forms of tension. In it lives the fundamental feeling of the effect, of something "effected."** One recognizes its simplest form as **a consistent characteristic of every melodic structure**. It is an energy that animates the course of any tonal flow in its individual profile and thereby also affects every one of [the melody's] tones; it is no less important in that one recognizes [this energy] as the **force moving between the tones**—not as an additional connecting device but rather as the **fundamental unity**. It deserves that much more attention, because **a singular experience of motion exists here that is neither synonymous with physical [motion] nor with other psychical motion**; it is also different, for instance, from the motion that the visually oriented outlook displays whenever it is cast over different objects, even if this [visual outlook] is merely a mental operation. A continuous motion also prevails with other mental activities, e.g., in reading, in speaking and all acts of comprehension, in emotional and affective developments, and so on; for all of these belong to a larger aggregate; but none of these motion processes is as similarly **suggestive of force** as the melodic—they may have related roots to the melodic motion but are of another type. The important point here, however, is that certain **states of tension** emerge directly from this most general fundamental phenomenon; [these] are more and more differentiated from one another the farther one traces them towards those specific phenomenal forms they take within the tonal matter and technique of music; **they have constructive significance for all of music**.][17]

[17] Kurth 1931, 77. As Rothfarb (2002) notes, even as early as *Voraussetzungen*, Kurth "portrays music as suffused with energy, both kinetic (melodic) and potential (harmonic). The onset of a melody, and particularly melodic ornaments, illustrate an 'initial melodic

The energy of motion is immediately apparent in the melodic line ("a consistent characteristic of every melodic structure"), contributing not only to the sense of propulsion we feel but also to the unifying tendency that allows us to comprehend something more than a succession of individual tones. Our understanding of melodic motion is enhanced when we compare it to other types of motion we experience in the world. Immediate examples exist in the realm of physical motion (running, riding a bicycle), where there is actually *loco*motion. There are also activities we do that involve motion in less obvious ways: when our eyes scan a page as we read, for instance, and when we have a conversation. In that we may feel a sense of directionality and drive, these sensations of motion are related, though not identical, to melodic motion. For in music, motion and melody are highly intertwined and inseparable; indeed an experience of melody necessarily

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energy,' the dominant-tonic cadence an 'initial tonal energy' as a basic element in a 'harmonic-tonal play of forces'" (940). Kurth dismisses the idea that energy in music cannot exist, in a humorous and biting note (1931, 104n3):

> Wenn nun jemand daraus folgerte, die kinetische Energien usw. existierten nicht, alles sei ausschließlich aus der Klangmaterie abzuleiten (wie es in der Tat der Standpunkt der alten Theorie war und mir auch vorgehalten wurde), so ist es dasselbe, wie wenn man sagte: Magnetismus ist Unsinn, es gibt nur Eisen. Mit Leuten, für die nur existiert, was sie sehen, ist nicht zu rechten; man kann ihnen höchstens den Rat geben, sich nicht mit psychologischen und vor allem nicht mit künstlerischen Dingen zu beschäftigen. Für die Melodik ist ihre Folgerung, daß nur Töne gegeben sind und alles weitere eine intellektuell herbeigeführte Verbindung zwischen ihnen, womit einmal gerade der Intellekt das Pech hat, für eine Eselsbrücke beansprucht zu werden.
>
> [If someone concluded . . . that kinetic energy, etc., did not exist, that everything is derived exclusively from sounding matter (as is essentially the viewpoint of the older theory, and as has been hurled at me), it is the same when one says: magnetism is nonsense, there is only iron. With people for whom what exists is only what they see, there is no contest; one can give them at most the advice not to occupy themselves with psychological, and especially not with artistic matters. Their conclusion is that melody is the given tones alone, and anything further would be an intellectually induced connection between them.]

entails a sensation of motion and the force that induces this motion—even if our bodies remain stationary.

Kurth also notes that other "states of tension" stem from *Bewegungsenergie*. A later passage provides further insight into what these may be:

> Schon damit ist aber eine doppelte Erscheinungsform psychischer Grundkräfte berührt: das Ausströmen im melodischen Verlauf, andrerseits im Hinblick auf den einzelnen Ton der in ihm wirkende lebendige Drang. Die Musik bildet sich in stetigem Ineinanderwirken „kinetischer" und „potentieller" Energie. Diese Ansammlung unverbrauchter Kraft (oder auch nur unentladener Reste von Bewegungsenergie) bewirkt schon im Einzelton auch eine hohe Intensivierung, und sie drängt zur Erscheinung harmonischer „Klangspannungen" hinüber.
>
> [A dual form of appearance of psychic fundamental force has been touched upon: the release in a melodic stream, and on the other hand, from the viewpoint of the single tone, its active, living impulse. **Music develops in a continual reciprocity of "kinetic" and potential" energies.** The collection of unspent force (or unreleased remnants of *Bewegungsenergie*) [i.e., potential energy] causes a high level of intensification, even in the single tone, and [further] permeates the phenomenon of harmonic 'chordal tensions' [in a multi-voiced texture].][18]

Whereas kinetic energy is the propulsive force that we feel moves music forward, potential energy, the "unspent remnants of *Bewegungsenergie*," is the sense that energy accumulates within individual tones and chords, which in turn creates feelings of tension and suspension. Thus (the behavior of) *Bewegungsenergie* generates two-fold effects of suspension-resolution, intensification-denouement, tension-release, and so on, making it the primary, and even *primordial*, force governing music.

Like musical forces, *Bewegungsenergie* is hardly the result of a mere perception of unfolding tones and undulating sound waves. If this were the case,

[18] Kurth 1931, 80.

Kurth notes, we would perceive a non-modulating tone or a repetition of tones as static, devoid of direction and motion. On the contrary, we sense a forward drive even within a single sustained tone. And we sense that this single sustained tone amasses energy, a "penetrating tension" that carries over into new tones as former ones fall away. As Kurth writes, "energy is not only concentrated in the moment of tonal entrance [the onset of the tone] but also pours out through the prolonged tonal duration; it pervades the sustained tone just as it does in the hiatus between tones that are changing."[19] We can readily recall the experience of listening to Adagio movements, for instance, where the tones have that much more of "a restrained intensity," due to the slow tempo.[20] This feeling of restraint suggests that we are far from passive receptors of acoustical signals. Indeed, in Kurth's words, we sense energies, "which accumulate in the tone out of the psychic energy of motion."[21]

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[19] „In dieser käme noch etwas wesentliches nicht zum Ausdruck: daß nämlich (im Gegensatz zu den dimensionslosen „Punkten") die einzelnen Töne von recht verschiedener Dauer sein können, daß überhaupt die Energie sich nicht bloß auf den Moment des Toneintritts konzentriert, sondern sich auch durch die gedehnte Tondauer ausgießt; sie durchzieht den gehaltenen Ton ebenso wie den Unterbruch zwischen den wechselnden Tönen" (Kurth 1931, 79).

[20] „Jedenfalls ist sie auch nicht etwa auf schnelles Gleiten beschränkt, sie wohnt ebenso den langsamsten Tonfolgen inne, wobei sich natürlich aus der Langsamkeit die um so stärkere verhaltene Intensität der Einzeltöne ergibt" (Kurth 1931, 79).

[21] „Daß andrerseits dieser psychische Vorgang nicht irgendein verborgenes Weiterwirken der Tonschwingungen darstellt, geht auch schon aus der einfachen Tatsache hervor, daß ein schwingender Ton für sich als ruhend empfunden würden, und dies Gefühl nur durch Energien aufgehoben wird, die sich aus der psychischen Bewegungsenergie in ihm ansammeln."

[Then again, that this psychic process does not represent any hidden continuation of sound waves also emerges from the simple fact that a vibrating tone would be perceived as static, and this sensation is only suspended through energies, which accumulate in the tone out of the psychic energy of motion.] Kurth 1931, 79.

***Bewegungsenergie*, harmony, and Schenker's criticism**

Those familiar with Kurth's prior writings, and *Grundlagen des linearen Kontrapunkts* in particular, will undoubtedly feel a twinge of familiarity with the above ideas. And indeed, Kurth himself calls attention to the connection with his earlier work. Moreover, in a footnote, he cites two misrepresentations of his ideas perpetuated by self-proclaimed admirers of *Grundlagen*: that he is a champion of the atonal style who implicitly advocated for a freer contrapuntal practice, and that by emphasizing melody, he ignores the harmonic dimension. Kurth writes in *Musikpsychologie*,

> Den Inhalt dieses Buches bildet eine Kontrapunktlehre, die unmittelbar aus der Anschauung des Bachschen Stiles gewonnen ist und sich damit gründlich von den überkommenen Lehrwerken unterscheidet Es zeugt von der Oberflächlichkeit der heutigen Anschauungen, daß in einigen Köpfen die Meinung entstehen konnte, dies biete der modern-atonalen Technik eine Grundlage; der Kontrapunkt, den ich lehre, ist etwas vollkommen anderes als rücksichtslose Linienzusammenflickung; da ich im Gegenteil das Bachsche Vorbild dem Unterricht zugrundelege, ist es auch keine geringere Mißdeutung, wenn mir Leute, die kaum das halbe Inhaltsverzeichnis gelesen haben können, Abwendung von den harmonischen Wirkungen zuschrieben, die ich im Gegenteil durchgängig betone und nur durch ein ergänzendes Gegenprinzip bereichere, das sie durchdringt, nicht aber von ihnen wegdringt.
>
> [The content of this book comprises a contrapuntal theory that is derived directly from the perspective of the style of Bach, and for this reason is fundamentally distinguished from the traditional treatises. It speaks to the superficiality of current viewpoints that according to some minds, it provides a foundation for the modern-atonal technique; the counterpoint that I teach is something entirely different than reckless linear combination; since, on the contrary, I take the Bach model as a basis for teaching, **it is no smaller misinterpretation when people, who could hardly have read half of the table of contents, attribute the avoidance of harmonic effects to me, which I, in contrast, continually emphasize and only enrich**

> **through a complementary counter-principle that penetrates them but does not depart from them.**][22]

Kurth swiftly dispels the first claim of atonal endorsement, noting that anyone who reads the book in its entirety will realize that his contrapuntal theory is derived from the music of Bach (the subtitle also makes this clear).[23] His rebuttal to the second claim—that he disavows harmony—feels forced in comparison, perhaps more emphatic denial ("I . . . continually emphasize [harmonic effects]") than reasoned argument. How can it be that Kurth believes he has never ignored harmony yet his critics repeatedly state otherwise? The answer lies in a perpetual misunderstanding of the "complementary counter-principle"—*Bewegungsenergie*—which Kurth elucidates most clearly in *Musikpsychologie*.

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[22] Kurth 1931, 77n2. He further points to a more extensive response to these claims in the Foreword to the third edition of *Grundlagen*.

[23] He does not mention specific composers here or in his Foreword to *Grundlagen* 3e, but evidence that Kurth was a major influence on contemporary composers is found in the writings of Schoenberg. In his essay "Linear Counterpoint" (1931), Schoenberg, who incidentally admits to having not read *Grundlagen*, paints a picture of the influence Kurth had on young composers:

> [I]n order not to lose all safety, building on sand, [people who "built on Kurth"] chose ruins as their foundations; they claimed to be turning back to "old forms". Claimed-for those were not forms but, at the most, manners, methods, styles, ways of acting and behaving. They wrote toccatas and the like, "à la Handel," in a "running" or motoric way; they assumed a "cantata-*tone*," a "concerto-grosso-*tone*"; favored canons in fifteenth-century style, or inexact ones, and a new imitative style appeared, which I had to call "imitation-imitation." Trans. Black 1975, 292.

Schoenberg mentions Hindemith and Krenek in the same essay as "certain genuine talents" who at the same time demonstrate a "disturbing lack of responsibility" (294). Krenek is known to have had a strong interest in *Grundlagen*, stating to his biographer,

> In the bookcase of the classroom I discovered a book . . . : *Die Grundlagen des linearen Kontrapunkts* by Ernst Kurth. I borrowed it and devoured it with fascination. I have no doubt that this approach to music as an autonomous being following its own laws, as an interweaving of streaming energies had a decisive influence on me, when later in Berlin I turned towards a style which behaved atonally and lacked somewhat in discipline. (Quoted in Rehding 1995, 68; original in Kolleritsch 1982, 10.)

Krenek also paid a visit to Kurth in Bern (see Rothfarb 1988, 225; 233n33).

Before turning to how *Bewegungsenergie* interacts with harmony, however, let us study a particularly scathing criticism of Kurth: that of Heinrich Schenker.

In a now-infamous passage in *Meisterwerk*, to which his students would frequently allude,[24] Schenker writes the following passages with regard to *Grundlagen*:

> [Kurth] succumbs to this continual deliberate evasion of any precision in concept and word as a result of his basic viewpoint that melodic construction ('line', 'spinning-out') is an independent force which, above and beyond a naturally given, foundational vertical conception, sets its own goals and boundaries both high and low, in mountain and valley, and so forth. . . . [H]is interpretation constantly dangles between acknowledgment and denial of chordal foundations and remains, like the guiding idea in general, in a state of indefiniteness.[25]

And:

> His opening words, on p. 1 [of *Grundlagen*] are: 'Melody is motion' [*Melodie ist Bewegung*]. And this, in turn, he sometimes calls 'streaming force,' sometimes 'energy of motion,' [*Bewegungsenergie*], 'phase of motion' [*Bewegungsphase*], 'linear force' and so forth. Words—words that say nothing about motion as such, nor anything about the particular motion in music or even the specific motion in an individual artwork.[26]

For Schenker, Kurth's words rang empty. But for our understanding of Kurth, words are everything. The frustration Schenker conveys is not completely unfounded, however, since there are correspondences between Kurth's terms that readers must infer. That is, Kurth uses the term "Melodie" (or das Melodische, or

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[24] Helmut Federhofer (1981) points to Oswald Jonas's criticisms of Kurth's analyses in *Einführung in die Lehre Heinrich Schenkers* (1972), esp. pp. 46, 93. More recently, John Koslovsky (2009) relates that Salzer's opposition of *Bewegungsmusik* as "'undirected' music that lacks the basic principle of counterpoint: that is, the coordination of two or more independent lines" to *Kunstmusik* that is "based in counterpoint [and] expresses structured and goal-directed polyphony" is an implicit critique of Kurth (224–26).

[25] Schenker 1925, 95; 1994, 51.

[26] Schenker 1925, 96; 1994, 52.

die Melodik) in *Grundlagen* as a *synecdoche* for the all-encompassing notion of *Bewegungsenergie*. Hence in the opening sentence of *Grundlagen* that Schenker cites, and statements like "melody is a streaming force," Kurth is not attempting to anthropomorphize melody itself or suggest that we can hear or see motion directly. Rather, Kurth's statements underscore embodied responses to music. All music entails the feeling of *Bewegungsenergie*—a sense of motion, on the one hand, and that of a streaming force, on the other—and as we saw above, it is most readily experienced in the individual melodic line.[27]

Kurth refers to the relationship between *Bewegungsenergie* and harmonic effects as complementary: while the energy of motion engenders the sensation of forward direction, harmony is experientially "grounded" by what he describes in various places as a gravitational force. I explore this gravitational force in greater detail in Chapter Five. For now, let us note simply that we feel tones drawn in several directions, including downwards; **Figure 3.1** (below) illustrates the connections Kurth makes between melody and energy of motion, and between energy of motion and harmonic effects. Most notably, *Melodie* encompassing a melodic line implies *Bewegungsenergie*. **Figure 3.2** clarifies that *Bewegungsenergie* carries the melodic line forward while flowing through the grounded harmonic effects.

[27] Kurth 1917, 18; cited in Kurth 1931, 78.

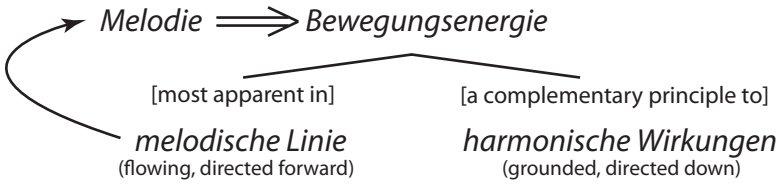

Figure 3.1. Melodie *as a substitute for* Bewegungsenergie

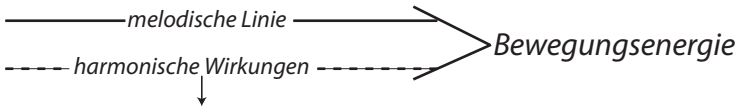

Figure 3.2. Bewegungsenergie *in relation to the melodic line and harmonic effects*

Figures 3.1 and 3.2 suggest that true to Kurth's insistence, the effects of harmony present an important and indeed enriching element to our sense of *Bewegungsenergie*. It is this downward-forward opposition intertwined with the opposition of potential and kinetic energy, respectively, that generates our sense of intensity, striving, and resistance. Given that for him, musical experience is one of a nuanced interplay of forces, it is no wonder that he bristles at the suggestion of music critic Richard Wallaschek that melody is simply "disassembled (*auseinandergelegte*) harmony,"[28] or why he finds it "inadequate" to speak of the harmonic implications of each tone in an unaccompanied melodic line.[29]

[28] Wallaschek 1905, 42; cited in Kurth 1931, 78n1.

[29] Kurth cites a passage by Wallaschek (1905, 215) in which the latter says, "A melody whose harmony one cannot understand or for which one cannot identify, is generally not understood, and one is unable to memorize it." Kurth argues that this cannot be the case, since amateurs are able to memorize melodies without any knowledge of harmony. See Kurth 1931, 79n1. One could argue that Wallaschek and Kurth have different meanings of the word "verstehen" in mind. Wallaschek is most likely referring to learned comprehension, while Kurth has in mind unconscious comprehension of melodies from a tonal perspective.

Rothfarb has suggested that Schenker initially failed to understand Kurth because they did not speak the same analytical language. Further, Rothfarb contends that Schenker, having read Kurth several years before publishing his own ideas, may in fact have benefited from Kurth's insights:

> Kurth no doubt appeared vague to Schenker because, among other reasons, Kurth does not approach the music with the same analytical criteria or vocabulary in order to describe what he hears. . . . Kurth's approach to the music may in fact have helped Schenker to crystallize his ideas in the early 1920s, allowing him then to attack Kurth with newly developed analytical resources.[30]

The extent to which Schenker owes a debt to Kurth requires further investigation beyond the scope of the present chapter. Suffice it to say that Schenker was not a sympathetic reader of Kurth's work. Most importantly, however, Schenker and Kurth were writing at cross purposes, not only using different analytical criteria and vocabulary but also speaking to different audiences with different types of musical engagement in mind. Kurth's writing in *Grundlagen*, viewed through the lens of *Musikpsychologie*, suggests that he had no interest in describing the "motion [of the tones] as such, nor anything about the particular motion in music or even the specific motion in an individual artwork," as Schenker would like. Rather, Kurth attempts to uncover how and why it is that our response to music is one of motion within us.

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[30] Rothfarb 1988, 37. Conversely, Brian Hyer argues, "Kurth would not be able to acknowledge the observations that Schenker makes about these measures [of Bach's Fugue in B major, *Well-Tempered Clavier,* Book 2] in his own analysis because he summarily rejects all harmonic considerations a priori. As Kurth sees it, harmonic forces inhibit the free development and spinning forth of the melodic process" (Hyer 1990, 87). As I have argued above, Kurth's rejection of harmonic considerations is unfounded; it is through our experience of "inhibiting" harmonic forces that the feelings of resistance and striving arise.

***Bewegungsenergie* as a unifying force**

Perhaps paradoxically, we are only partially able to discern the underlying energetic force in a sounding melody. This is similar to the fact, as Kurth reminds us, that an awareness—"clear consciousness"—of our psychological states is only available in fits and starts.[31] Previously, we saw that Kurth's viewpoint is consonant with Gestalt principles generally; that is, the "whole" is perceptually foremost, encompassing parts. This principle is further refined here: we immediately experience *Bewegungsenergie*, and if we attend further, we notice its externalization, the melodic shape.[32] By attending to the melodic shape, we can subsequently analyze individual tones—but these are "only the perceptible traces of a darker force."[33] Because the mere collection of individual tones fails to provide the "structural unity" *Bewegungsenergie* affords, "one can in no way parse the apparently simple course of motion, the dynamic (vitality) of a line, into particular [events]." Doing so "would fragment the simple, immediate impression into

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[31] Kurth writes (1931, 109),

> Wir können uns jener Grundbewegungen nur bewußt werden wie des Ichgefühls, des Daseinempfindens; wir vermögen auch in der Musikpsychologie nie das unmittelbar Psychische, die Seele selbst zu erfassen, wohl aber als ihre Funktion die gesamte musikalische Innendynamik.
>
> [Our awareness of fundamental motions is like that of the sense of self—the sensation of being; in music psychology we are also never able to comprehend the immediate psyche, the soul itself, but rather the whole musical inner dynamic as its function.]

[32] Taken further, this principle also lies at the heart of larger "forms." See the Conclusion in the present dissertation.

[33] „So sind auch im melodischen Gebilde Töne **nur die erkennbaren Spuren einer dunklen Kraft**, die zu reich an Inhalten ist, um in all deren flüchtigem Hinströmen gefaßt zu werden" (Kurth 1931, 79; emphasis added in bold).

innumerable technical perceptions if one wanted to depict, in the isolated tones, how motions discharge themselves and later swell up."[34]

Kurth mentions that he articulated a similar sentiment in *Grundlagen*: "the melodic [dimension] is not a collection of tones but rather 'a primordial coherence from which tones unhinge themselves.'"[35] Yet it is only when we consider that *Melodie* is a proxy for *Bewegungsenergie* in Kurth's writings (as shown in Figure 3.1) that we can understand "das Melodische" not only as an audible pitch succession but moreover as an underlying directed force from which a pitch succession emerges.[36]

Kurth takes one step further in his engagement with Gestalt principles in this section of *Musikpsychologie*. Responding to the oft-cited axiom first proposed by Ehrenfels, Kurth states, "it is not enough to say that the melody is more and something other than the sum of tones; it is also more than a sum of intervals and other partial processes."[37] Indeed, he emphasizes, "only outwardly does the

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[34] „All das aber zeigt schon, daß man gar nicht ins einzelne jenen scheinbar so einfachen Bewegungszug, die Dynamik einer Linie analysieren kann. Man würde den schlichten, unmittelbaren Eindruck in unzählige technische Wahrnehmungen zersplittern, wollte man ins einzelne darstellen, wie die Bewegungen sich ausladen und wieder anschwellen" (Kurth 1931, 81).

[35] „[D]ie gesamten Folgerungen für die Theorie und musikalische Innendynamik beruhen aber erst in der weiteren Grundtatsache, daß **das Melodische keine Zusammenfassung von Tönen ist, sondern „ein ursprünglicher Zusammenhang, aus dem sich Töne herauslösen"** (Kurth 1931, 78; quotation of Kurth 1917, 18; emphasis added in bold).

[36] See Kurth 1931, 103n1, for a discussion of the difference between the tone-psychological "tonally developing sound," whereby pitches are filtered out from noise, and music-psychological "tonally developing energy."

[37] „Somit genügt es längst nicht zu sagen, die Melodie sei mehr und etwas anderes als eine Summe von Tönen; sie ist auch mehr als eine Summe aller Intervalle und sonstigen Teilvorgänge" (Kurth 1931, 82). To paraphrase Ehrenfels (1890), melody must be

melodic tendency for unity present itself as a bundling of component elements" and even then, only retrospectively so. As Kurth mentions several times, the unity in question is a "Gestalt"; not a visual whole, however, but the sense of a tension force—an all-encompassing, changing (i.e., dynamic), and ultimately immeasurable force with a "psychic-irrational origin."[38]

This alternative view of unity has significant ramifications for performance and composition. Kurth suggests, "The best test of [compositional] inventiveness is whether a composer 'discharges' a phrase before it finishes." Also the main characteristic of the great writer of harmony is listening both backwards and forwards, which "does not leave even the boldest modulations to chance." These harmony-driven individuals have "ever-important tonal goals in sight" through such a comprehensive overview. The composer of polyphony (*Polyphoniker*), likewise, "in the midst of complexity, 'hears' the points of relaxation in advance, whereby they first become events." The internal dynamic unity thus enables phrasing and long-range hearing (though Kurth does not say this explicitly); it is the tie that binds larger stretches of music. Though he acknowledges that latent talent and training certainly play an important role, especially in complicated

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something more than the sum of its tones, since melodies are recognizably similar even if their notes are completely dissimilar (see discussion in Chapter One).

[38] „Nur äußerlich stellt sich die melodische Einheitsstrebung wie eine Zusammenraffung von Teilelementen dar; streng genommen ist das nicht der Fall, die Einheit ist, wenigstens auf gewisse Strekken [sic], das Ursprüngliche, die „Gestalt". Für den nachträglich sichtenden Verstand erscheint sie in zeitliche Abfolge auseinandergelegt, ihr psychisch-irrationaler Ursprung ist aber die Einheit einer Spannkraft" (Kurth 1931, 82).

realizations, Kurth emphasizes that the "higher aesthetic tendency for unity" is "rooted in a primitive psychological state."[39]

While it may be a unifying force, *Bewegungsenergie* is not a uniform one. Rather, as Kurth describes, "Among its characteristics belongs, above all, that it does not represent a consistent motion forward but rather a continuous, animate change of intensity, even in the simplest melodic line. (Such a representation of an even streaming would arise only if one imagined energy as an external, retroactive staking-out from tone to tone)."[40] Later, in a passage with strong Goethian undertones, he speaks further about the continuous growth and re-growth of *Bewegungsenergie*: "The singularity of each psychic force is evident in the curious, concise form of the tonal line; in the instance of fading, new escalations can stream in, **procreating**, in a manner of speaking; **all melodic spinning-forth is due to this**

[39] Kurth (1931, 82–83) writes,

> Der beste Prüfstein für Erfindungskraft ist, ob einen ein Satz vor seinem Ende „entläßt." Auch das Hauptmerkmal des großen Harmonikers ist das Vor- und Zurückhören, das selbst die kühnsten Tonartswendungen nicht dem Zufall überläßt und weit überspannend stets bestimmte Tonartsziele vor Augen hat; ähnlich „hört" der Polyphoniker bei allen Verwicklungen die Entspannungen voraus, wodurch sie erst zu Ereignissen werden. Intellekt und ein höheres ästhetisches Gefühl spielen natürlich in um so höherem Maße mit, je weiter sich die Formteile entfalten; aber was auch hier zu betonen bleibt, ist die Erscheinung, daß dies höhere ästhetische Einheitsstreben schon durchaus in einem primitiven psychologischen wurzelt.

Kurth cites several sources from child psychology to support the view that unity is "rooted in a primitive psychological state"; see Kurth 1931, 83n1.

[40] „Zu ihren Merkmalen gehört vor allem, daß sie schon in der einfachen melodischen Linie kein gleichförmiges Dahinstreichen, sondern stetigen, lebendigen Intensitätswechsel darstellt. (Schon diese Vorstellung eines glatten Durchströmens entstünde nur dann, wenn man sich die Energie als ein äußerliches, nachträgliches Abstecken von Ton zu Ton dächte)" (Kurth 1931, 80).

regeneration ability."[41] More than simply dynamic, *Bewegungsenergie* is a mutable, living, and even organic force. The relationship between *Bewegungsenergie* and exterior, surface-level features of music is one of the most difficult aspects of Kurth's philosophy with which to come to terms. In the passage below, for instance, he impresses upon the reader that the energy of motion is generally independent from contour, tempo, rhythmic activity, and meter:

> Auch erschöpft sie sich nicht etwa mit dem Steigen und Sinken der Tonhöhe; das Auf und Ab wäre ein flaches, uninteressantes Spiel, wenn es nicht von einer viel reicheren Innendynamik durchflutet wäre. Sie beruht vor allem auch im Wechsel über die verschiedenen Intervalle, mit deren Weitung der Linie ein stärkerer Atem eingehaucht erscheint. Ferner genügt es nicht schlechtweg vom Schwellen und Abnehmen der Spannkraft zu sprechen: die Vielfalt des inneren Lebens beruht bei einer Melodie auch wieder in der sehr wechselnden Schnelligkeit, mit der sich dies Steigern oder das Abnehmen vollziehen können. Bald geschieht es in einem langsam sich ändernden Innendruck, bald über ganz kurze Strecken im rapiden Überstürzen größerer Intensitätsgegensätze. Also nicht nur auf Intensität an sich, sondern auf die Schnelligkeit ihres Wechsels kommt es an, was natürlich nicht mit Schnelligkeit des Tonverlaufs an sich zu verwechseln ist.
>
> [It is also not exhausted with the ascent and descent of pitch; moving up and down would be a flat, uninteresting game if it were not pervaded by a much richer inner dynamic. It rests particularly in the change across the different intervals; a more powerful [intense] breath appears submerged with their widening of the line. Finally, **it is not enough to speak simply of swelling and abatement of tension force**: the multiplicity of inner life is based on a melody and further in the **ever-changing speed with which this rising or abatement could take place**. Sometimes it occurs directly in a slowly changing inner pressure, sometimes directly over entire short stretches in rapid bursts of large intensity extremes. Thus it is a matter not only of intensity itself, but also in the speed of change [of intensity], which is

[41] „So zeigt sich in der merkwürdig gedrängten Form der Tonlinie die Eigentümlichkeit jeder psychischen Kraft, in Augenblicken des Nachlassens aus sich selbst neue Steigerungen einströmen zu lassen, sich gewissermaßen fortzupflanzen; alle melodische Fortspinnung beruht in dieser Erneuerungfähigkeit" (Kurth 1931, 81).

> naturally not to be confused with the speed of the tonal course [tempo] itself.][42]

If we study the above more closely, however, Kurth seems to suggest that there is some inter-dependence between the notes as they appear and our experience of them. For instance, he says that we experience *Bewegungsenergie* more intensely when it accompanies wider intervals. Some readers might also remark on the absence of traditionally discussed tension-inducing elements, including tonal and acoustic dissonance. Kurth saves such discussion for Third Section of *Musikpsychologie*, where he discusses the tonal system in greater detail. I address these elements in Chapters Four through Six. In cordoning off all talk of dissonance treatment (suspensions, syncopation, and the like), he calls attention to the psychologically generated "inner tensions."

Having established the primacy of a "force stream" (*Kraftstrom*) for single lines, Kurth addresses the role of energetic motion within a multi-voiced texture (*Mehrstimmigkeit*).[43] While one might conceive of this texture as a conglomeration of separate, intertwined forces—"*Bewegungsenergien*"—which encompass

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[42] Kurth 1931, 80–81.

[43] Kurth distinguishes between two different types of multi-voiced texture: homophony and polyphony. In homophony, "the voices arrange themselves . . . [in] a common rhythm, such that the melodic content seems to concentrate in a single (usually the highest) stream of tones," whereas in polyphony, "in addition to the overall impression, the impression of individual lines is stronger." Moreover, "between both extremes, there are countless hybrid forms in which energy can interpenetrate and accumulate in 'sonic-tensions'" (Kurth 1931, 84–85).

> [Hauptmerkmal der Homophonie, bei der alles akkordlich zusammenfließt, ist, daß sich die Stimmen auch gemeinsamen Rhythmus einordnen (oder annähern), so daß sich auch der melodische Gehalt in einer einzigen (meist der höchsten) Tonbahn zu konzentrieren scheint; bei der Polyphonie besteht stärker das Bild der Einzellinien neben dem Gesamtbild. . . . Zwischen beiden Grenztypen gibt es aber unzählige Zwischenformen, in denen die Energien sich durchdringen und auch zu ‚Klangspannungen' stauen können.]

individual lines, Kurth claims that it entails an altogether "different manifestation of force." That is, a unified streaming of voices carries the multi-voiced fabric like a single wave, swelling and contracting, and prevailing over "any technical and stylistic variety that the inner distribution of voices can assume."[44] Our ability to discern aurally particular melodic lines within the total fabric is, from a phenomenological standpoint, secondary. In fact, Kurth emphasizes that as new voices accrue, they do not "boost the effect [of *Bewegungsenergie*]; rather, they submit to a whole." It is through our "contrapuntal hearing" that the unified force can appear to "pull apart in diverse ways" as it is compositionally realized. Moreover, the unified force is a "framework on which the [technique of combination] is fixed, even if it is often unconscious."[45]

Part 3. "The Musical Spatial Phenomenon"

In the final two chapters of the Second Section, Kurth turns our attention to two further music-psychological phenomena: space and the impression of matter. Just as with the energy of motion, we have a sense of these phenomena when we listen

[44] „Mehrstimmigkeit ist gegenüber einstimmigem Verlauf eine andere Erscheinungsform der Kraft; darin, daß sie eine Einheitsströmung darstellt, beruht erst jede technische und stilistische Sonderform, welche die innere Stimmenzerfaserung annehmen kann" (Kurth 1931, 83). As Kurth notes (84n1), his description polyphonic music as analogous to waves—the "symphonic wave technique"—first appears in *Bruckner* (1925, Volume 1, Section 2). There and here, he insists that as we listen to orchestral music, we are able to recognize an "overall structure (*Gesamtstruktur*)" in the "cross section (*Querschnitt*)" of the wave, which is in contrast to our recognition of individual lines in the "longitudinal section (*Längsschnitt*)."

[45] „Nicht also, daß mit der Mehrstimmigkeit neue Stimmen hinzukommen, vermöchte schon eine Wirkung zu erhöhen, sondern daß sie sich in ein Ganzes fügen. Gewiß kann im polyphonen Stil öfters eine „Zusammensetzung" von Themen usw. vorliegen, aber dies beruht schon darin, daß mehrstimmigem Hören eine Einheit vorschwebt, die sich verschiedenartig zerfasern kann. Sie ist überhaupt Voraussetzung für jede Kombinationstechnik, gewissermaßen der Rahmen, in den sich diese einspannt, wenn auch oft unbewußt" (Kurth 1931, 84).

to music, as our metaphorical language conveys. Kurth further argues that they are "not random constructions of fantasy" but something we immediately and spontaneously sense. But just as on the one hand, our experiences of musical space and matter are very real, on the other hand, they are unknowable by definition:

> Alle Zeichen jener Unwirklichkeit erscheinen nun dem merkwürdigen Phänomen der Raumvorstellung aufgeprägt. Die Kraft vermögen wir unmittelbar zu erfühlen und wir erkennen in tönenden Symbolen ihre Verlaufsformen; sie gibt sich also gefühlsmäßig und sinnlich kund. Die Materieempfindung vermögen wir im sinnlichen Eindruck aufzunehmen, freilich beruht sie erst in einer psychisch bedingten Umwandlung der Tonreize. Der Raum aber entzieht sich sowohl der deutlichen Erfühlung wie auch dem klaren Bewußtwerden; die Raumvorstellung verfließt sogar gerade dann, wenn man sie in die Regionen der Deutlichkeit, eines geometrisch-anschaulichen Raumes heben will. Raum und Materie sind die Erscheinungen einer Zwischenschicht zwischen unterbewußten Tiefenvorgängen und der eigentlichen Klangwelt. Dennoch sind auch Raum- wie Materieempfindungen in der Musik psychologische Phänomene, Grundfunktionen des Hörens, nicht etwa zufallsbedingte Phantasiegebilde.
>
> [All indications of that unreality seem imprinted in the characteristic phenomenon of **spatial imagination**. We are able to sense the force directly and we recognize in tonal symbols the forms it takes; it manifests itself emotionally and sensually. We are able to accept the sensation of matter in the sensory impression; to be sure, it first lies independently in a psychically conditioned transformation of tonal stimuli. But **space eludes the explicit realization just as it does becoming clearly conscious of it**; the spatial imagination slips away just when one wants to elevate it to the realm of clarity, [into] a geometric-observable space. Space and matter are phenomena of a bordering layer between deep subconscious processes and the actual sounding world. **Nevertheless, spatial and material impressions in music are psychological phenomena, basic functions of hearing, and not random constructions of fantasy**].[46]

The sense of space that Kurth discusses is different from that of the tone psychologists, who were concerned with the localization of tones, that is, the "ability to recognize the location of tonal stimulus in the outer region, to state, for

[46] Kurth 1931, 116.

instance, even with closed eyes, the location from where a sound originates, and likewise, the rough distance from the ear."[47] Kurth argues that this kind of spatial reasoning, which is based on a sense of space outside the musical impression, is the opposite of the inner spatial imagination.

Space first arises within the single tone, in that we perceive the tone as an entity, separated from its neighbors; likewise, a chord is a "delimited whole (*abgegrenztes Ganzes*)."[48] Further, numerous impressions emerge whenever we consider pitches in a broader context. Music theorists traditionally regard the construction of intervals as the first *expansion* of space in the musical system (what Kurth refers to as "intervallic staking-out" (*Intervallabsteckung*). Since we measure tones in "separations" (*Abständen*) and refer to the distance between two tones as an "interval" (i.e., the "space between" [*Zwischenraum*]), there is little doubt about the conceptual strength of the spatial analogy in this context. This is a very static view of music, however, and Kurth urges us to recall that propulsive motion represents the primary phenomenon of music. Indeed, musical space is closely tied to the feeling of motion; our musical discourse reflects the connectedness of these two domains in terms like "melodic line," theoretical expressions like contrary and parallel motion, and when we refer to melodic contours in terms of range, steepness, or flatness. We "project" the play of forces into an imaginary space, moreover, in an "unclear, imagined field of impact." More strongly, space is a

[47] „Es scheint nämlich, daß die bisherige Tonpsychologie, Stumpf mit einbegriffen, die Raumempfinden sogar mit der sogenannten Lokalisation der Töne verknüpft; darunter versteht man die Fähigkeit, den Standort der Tonerzeugung im äußeren Raume zu erkennen, z. B. auch mit geschlossenen Augen die Richtung, aus der ein Schall kommt, angeben zu können, ebenso ungefähr die Entfernung vom Ohre" (Kurth 1931, 128).

[48] Kurth 1931, 117.

"secondary" phenomenon that emerges from motion. Motion defines space; space, in turn, "is inextricably connected to the original process, motion."[49]

We experience the effect of motion when we compare harmonic and melodic intervals, in that the latter creates the illusion of space more readily than the former—"an indication that motion enhances a spatial impression." With this in mind, we must change our traditional conceptions of the space occupied by music. That is, it "cannot rest on the simple coexistence of individual tones or individual intervals or individual chords; the unities are only functions of totalities, operating primarily spatially as unities within a transformed sense of space." To experience force in music is to experience "a 'somewhere' wherein this takes place."[50] Thus rather than referring to the space between two tones as an "interval," Kurth suggests that an expression like "transition" (*Übergang*), which suggests momentum and motion, would be more appropriate.[51]

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[49] „Die Hauptursache der Raumempfindung in der Musik liegt erst darin, daß ein Kräftespiel sie durchsetzt; wir projizieren diese Bewegung in imaginären Raum, in ein unklar vorgestelltes Auswirkungsfeld. . . . Gleichwohl ist die Raumempfindung der Musik immanent, denn sie ist schon dem Ursprungsvorgang, der Bewegung unlösbar verknüpft" (119). See Larson 2012, 66–67 for a similar argument. Larson also notes that Pitch Space is an *entailment* of the metaphor "Musical Succession Is Physical Motion" (2012, 331).

[50] „[M]ann kann dies sogar schon beim Einzelintervall erkennen, indem das Raumgefühl stärker beim Nacheinander als beim gleichzeitigen Zusammenklang beider Töne durchdringt, -ein Beweis, daß Bewegung für sich einen räumlichen Eindruck fördert. . . . Auch dieser kann unmöglich auf einfachem Nebeneinander von Einzeltönen oder Einzelintervallen oder Einzelakkorden beruhen; die Einheiten sind nur Funktionen der Gesamtheit, wirken vor allem räumlich als Einzelheiten innerhalb eines umspannenden Raumgefühls. . . . Erleben wir ein Wirken und Ineinanderdrängen von Kräften, so erleben wir rein psychisch auch ein ‚Irgendwo', worin sich dies abspielt" (Kurth 1931, 131).

[51] „Streng genommen wäre daher statt des Wortes ‚Zwischenraum' ein Ausdruck wie ‚Übergang' oder sonst einer, der das Bewegungsmoment enthält, treffender gewesen" (Kurth 1931, 132).

Beyond a spatial experience, music is a multi-dimensional experience. We sense not only how high or low a pitch is in relation to another but also the width of a passage or even its depth. Speaking generally, we sense *height* when we assign a given tone "a place *a priori* in a space that is generally accepted through the 'expanse' of all music." Kurth even notes (undoubtedly naïvely) that the use of height expressions in musical terminology extends beyond the Austro-Germanic tradition to other cultures, indeed in "all languages."[52] Often, however, one spatial term leads to another one pertaining to matter, since in everyday parlance, we make connections between the spatial and material domains. Hence we may regard higher tones as "lighter" or "sharper" than lower tones, which we may associate with "weighty" or "coarse."[53] Beyond the basic sense of height, there are richer ways in which we perceive and conceive of music occupying space—whether we call it vastness, expansiveness, etc.

Kurth maintains, "[M]usic has its own **inner geometry**, which is different from the outer spatial impression and determines the structures of intervals, chords, melodic shapes, etc.; and that evokes whole other laws for its inner dynamic as well as for the tonal symbols."[54] Just as in his discussion of musical

[52] „Stärker hingegen macht sich beim Einzelton die Raumempfindung darin geltend, daß man ihn als „hoch" oder „tief" empfindet, ihm also von vornherein eine Stellung in einem allgemein durch die „Weite" aller Musik hindurch angenommenen Raum zuweist. In allen Sprachen, auch bei exotischen Völkern, ist die musikalische Terminologie von räumlichen Ausdrücken durchsetzt" (Kurth 1931, 117).

[53] This is an interesting way of accounting for the diversity of words different cultures use to conceptualize music. That is, we can say that musical terminology has universal roots if space and matter are naturally conceptually intertwined outside of music.

[54] "Oder vielmehr: die Musik hat ihre eigene innere Geometrie, die von der äußeren Raumanschauung verschieden ist und die Strukturen von Intervallen, Akkorden,

forces, Kurth highlights the differences between musical space and physical space in greater detail. He focuses on the dimensions of width and depth in the hopes of clarifying these abstract phenomena.

Width, depth, and dimensionality

That our musical sensations of width are fundamentally different from our experience of width in the physical world, or said differently, that notation is a limited tool for recording what we perceive—a suggestion rather than an identity relationship—is demonstrated in our *inability* to feel reversal of motion along the horizontal dimension. As Kurth writes, in the musical experience,

> [N]ur in der „Höhendimension" kann man Töne auf- oder abwärts, beliebig hin und her verlaufen lassen, in der „Breitendimension" gibt es keine Umkehr, da sie in Wirklichkeit ein zeitlicher Verlauf ist: ein Zurückwenden in der Art des äußeren Raumes gibt es da nicht.
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> [Only in the "height" [the vertical] dimension [or pitch space] can we allow tones to move freely up and down, here and there; in the "width" [horizontal] dimension there is no reversal of motion, since in reality this is a temporal process: a backwards move as happens in external space does not exist.][55]

Of course, one could counter that the idea of turning back is actually widespread and even instrumental in much of Western music. Obvious examples are the "reprise" of a primary theme following intervening material, the retrograde form of a fugal subject, or the R (or RI) form of a twelve-tone row. Kurth addresses such examples, arguing that these impressions of 'returning' are only figurative ones. Along with Lorenz's "arch form" (*Bogenform*) or the "crab canon," these

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melodischen Verlaufsformen usw. bestimmt; und das ruft ganz andere Gesetze für ihre Innendynamik auch für die Tonsymbolik hervor" (Kurth 1931, 120).

[55] Kurth 1931, 122.

examples are spatial impressions of returning that we carry over from the visual domain; that is, they are contingent on certain schematizations (ABCBA) or a specific layout of the notated music.[56] Rather than a perceptible motion backwards, or from right to left, compositional devices like these take place within a temporal framework that is inherently *forward* directed.

If musical width has only limited similarities with width in the physical world, the musical depth dimension is even more removed from its physical counterpart. An analogy to the physical world would require a perception of movement between fore- and background. That is, one would have to ask, "does the melodic line move in a plane (analogous to the direction of the sheet of paper of a transcription) or does it also sweep towards fore- and background, for example in a spiral, or otherwise?" Kurth remarks on the "strangeness" of these questions, suggesting that musical depth is not immediately given.[57] And yet, there are many examples in our discourse about music that indicate the veracity of something like musical depth.

The first is connected to our perception of dynamics. Bach and Bruckner, Kurth states, are especially good at evoking depth in their use of dynamic shading,

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[56] Kurth 1931, 122n1.

[57] „. . . entspricht der dritten [Dimension], der Tiefendimension (Entfernung von vorn zum Hintergrund) überhaupt keine unmittelbare Musikempfindung. Das zeigt schon das Sonderbare an einer Frage wie dieser: bewegt sich die melodische Linie in einer Ebene (analog dem Blatt der Niederschrift) oder schweift sie dabei auch nach Vorder- und Hintergrund, etwa spiralig oder sonstwie? Das Befremdliche an solcher Frage, die doch vom Standpunkt geometrischer Deutlichkeit ganz nahe läge, beweist, wie sehr sich die musikalische Raumvorstellung einer Verdeutlichung entzieht" (Kurth 1931, 122–23).

In 123n1, Kurth discusses the work of Révész and Drobisch, both of whom discuss the spiral as a symbol for octave equivalence. The reference to fore- and background will resonate with modern readers familiar with Schenker's theory of structural levels.

whether through gradual changes in volume or orchestration. These effects play a significant role in the general aura of any historical style period:

> Schon die alten „Echo"-Wirkungen (Wiederholungen eines Motivs im pp) rufen unmittelbar Eindrücke der Raumferne hervor, oft genug dienen sie symbolisch Unendlichkeitswirkungen; aber verfeinerte und vervielfältigte Schattierungen, zumal registerartige Abhebungen kennzeichnen in ähnlichen, wenn auch dunklen Eindrücken ganze Stilperioden, besonders die Musik stark metaphysischen Charakters.
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> [The old "echo"-effects (repetitions of motives in *pp*) immediately call up impressions of spatial distance; these often serve as symbolic effects of open-endedness; but refined and multitudinous shadings, especially brought into relief by registration-like [techniques] characterize (in similar if dark impressions) entire stylistic periods, especially in music of a strongly metaphysical character.][58]

He also notes that the effects of nearness or farness are coupled with the effects of light and dark "from the thinner to fuller layers of sound," which themselves correspond to impressions of high and low—thus demonstrating the entangled nature of the dimensions and their associated effects in the musical spatial imagination.[59]

One might also take the idea of tonal points in a melodic line further and posit a plane or area of tension that appears between two lines of polyphony. This begs the question—along geometric lines—of whether there is a "third dimension" consisting of undulating areas. Or, put differently, whether two-voice polyphony resembles crossing lines in a two-dimensional plane whereas "chords that are more compact would cluster into more physical, three-dimensional impressions." Undoubtedly, chords can—in certain contexts—have the effect of corporeality or

[58] Kurth 1931, 123–24.

[59] „Die Tiefendimension hängt aber nicht bloß damit zusammen, daß leisere Klänge den Eindruck von Hintergrundsferne hervorrufen; gerade hier spielen auch die Hell-Dunkel-Wirkungen von dünneren bzw. volleren Klangschichten mit" (Kurth 1931, 124).

the impression of mass (*Masse-Eindruck*); in other words, they seem three-dimensional. (This is also further evidence for the close connection between matter and space.) But Kurth quickly dismisses the artificial distinction between polyphonic area and harmonic physicality, noting that linear and harmonic effects interpenetrate one another: "even daring contrapuntal lines also always evoke harmonic phenomena."[60] We must thus take care to avoid crude correspondences between our physical understanding of depth and the musical sensation of depth.

Kurth concludes that dimensionality is not an originating phenomenon, but one that accompanies the undefined sense of space (i.e., is "pre-formed [*vorgebildet*]"). To speak of dimensionality is to perform an analytical act, to try to lift out the impression of a complex from the layer beneath consciousness. Yet as one progresses from height to width, and width to depth, the clarity of the sense of space is reduced; conversely, progressing in the opposite direction yields greater clarity but further removal from musical reality.[61] Our attempts to elucidate this

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[60] „Eine weitere, ebenso bedenkliche Konsequenz wäre dann die Erwägung, daß eigentlich melodische Polyphonie als Kreuzung von Linien „flächig" wäre, während kompaktere Akkorde sich zu mehr körperhaften, also dreidimensionalen Eindrücken ballten. Diese Scheidung von Fläche und Körperhaftigkeit wäre aber schon deswegen ganz undenkbar, weil lineare und harmonische Wirkungen einander überall durchdringen, und noch so kühn kontrapunktierte Linien immer auch harmonische Erscheinungen hervorrufen" (Kurth 1931, 126). Kurth's emphasis on the interaction of the linear and vertical is notable, given the claims cited above from Schenker that he ignores this in *Grundlagen*.

[61] Kurth writes,

> . . . die (ohnedies nur sehr bedingte) Deutlichkeit des Raumgefühls nimmt ab, wenn man von der Höhen- zur Breitendimension und von dieser zur Tiefendimension fortschreitet. In der Tat leitet die Verdeutlichung des Raums immerfort aus der musikalischen Wirklichkeit heraus, und das erschwert ungemein die Erkenntnis vom psychischen „innern" Raum, in dem sich die musikalische Dynamik abspielt.
>
> [The clarity (in any case only extremely limited) of the feeling of space diminishes whenever one proceeds from the height to the width dimension and from these to the depth dimension. Essentially, the clarity of space continually leads out of the

richer sense of space, are futile, for doing so causes the impressions to vanish: "[Space] is not perceptible, not tactile and actually barely conceivable, because as mentioned, with the transition into clearer view, **the phenomenon is destroyed**; it lies actually only in an illusory idea, which is obscurely awakened with [the play of forces]."[62] For musical space, like psychic energies, can only be understood in analogy—rather than identity—with the external space, which is based on explicit visual-intellectual realization.[63]

Part 4. "The Problem of the Motion Image"

Thus far, we have discussed the psychological reality of musical forces, the manifestation of forces in the energy of motion (*Bewegungsenergie*), and the sense of space and dimensionality that this energy engenders. Now, our questions relate to the sense of unity *Bewegungsenergie* creates and the temporal—or *atemporal*—consequences of such unity. That is, whether and how one could conceive of musical events simultaneously when music is by its very nature bound by time. Put differently, how can a musical "image" exist despite, or alongside, musical "motion"?

With regard to the bifurcated—simultaneous and successive—experience of musical listening, Kurth writes,

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musical reality, and this immensely complicates recognition of the psychic "inner" space in which the musical dynamic occurs.] Kurth 1931, 127.

[62] „Er ist nicht sichtbar, nicht ertastbar und eigentlich kaum vorstellbar; denn wie erwähnt: mit dem Übergang in klarere Anschauung wird das Phänomen zerstört, es beruht eigentlich nur in einer Trugvorstellung, die dunkel miterweckt ist" (Kurth 1931, 119).

[63] Kurth contrasts this view with authors who purport to model musical space geometrically, for instance, Erhard Ermatinger, though he never goes so far as to say this approach is futile. See Kurth 1931, 127n3.

Das Phänomen der Bewegungseinheit führt aber schon innerhalb einstimmiger Linie zu noch weiteren musikpsychologischen Folgerungen. Betrachtet man zunächst einen geschlossenen Bewegungszug kleinsten Ausmaßes, ein Motiv, so ist darin jeder Ton zunächst zwar auf den nächstfolgenden gerichtet; vor allem ist aber beizufügen, daß die lebendige Spannung eines Tones weit darüber hinaus mit dem ganzen geschlossenen Bewegungsbild zusammenhängt. Schon der Weiterführungsdrang bezieht sich nicht allein auf den nächstfolgenden Ton, sondern auf die ganze Kraftbewegung, die sich noch in einheitlichem Zuge erfüllt; aber auch mit ihrem vorangehenden Teil steht jeder Ton in lebendiger Spannungsbeziehung. Er wirkt nicht als Augenblick, sondern je nach dem Kraftzug, innerhalb dessen er aufblitzt. Gegen Anfangs- und Endton wie gegen den Höhepunkt zu setzen sofort Spannungsbeziehungen ein, auch bildet sich aus jedem Bewegungsverlauf eine Art Gravitationspunkt, der wie eine Zentrum die Spannungen auf sich hinwirken läßt; aber nicht bloß die Spannwirkungen zu andern Tönen hin kommen für einen herausgegriffenen Einzelton in Betracht, sondern auch die charakteristische Verlaufsform als Ganzes. Die geringste Veränderung an ihr verändert schon den Spannungszustand im Einzelton, das ganze System der dynamischen Beziehungen wird verschoben. Der fundamentale Unterschied dieser Betrachtungsweise zum früheren Standpunkt ist somit der, daß sie die Bewegungsenergie als Vorerscheinung betrachtet, die allen übrigen Erscheinungen ihren Zusammenhalt und zugleich diesem seine einmalige Eigenart gibt.

[The phenomenon of the unity of motion leads to yet broader music-psychological consequences even within individual [musical] lines. When one first considers a cohesive directed motion of the smallest dimension, a motive, each tone would indeed be directed to the next one; but it is most important to add that **the living tension of tone relates far beyond that to the entire cohesive image of motion**. The drive towards continuation relates not only to the following tone but also to the entire span of force that is fulfilled in a unified motion; each tone also stands in a living tension-relationship with its foregoing part. It operates not as a momentary event, but according to the force of motion in which it occurs. In the face of the beginning and ending tones, just as at the climax, tension relations enter; from each course of motion a center of gravitation arises, which, like a focal point, permits the tensions to affect it. **For a single tone, we observe not simply the straining effects towards other tones, but also the characteristic continuous form as a whole.** Even the slightest change in the continuous form alters the tension state in the single tone. The entire system of dynamic relationships is disarranged. The fundamental difference between this point of view and the earlier standpoint is thus that it regards **the energy of motion as a prior**

> **phenomenon** that provides coherence to all other phenomena, and, at the same time, a unique individuality to that coherence.][64]

Not only are individual tones directed forward towards a goal but they are also embroiled in tension relationships with each other, continually altering the shape of the whole motive. Conversely, a change in the entire "continuous form" (*Verlaufsform*) will necessarily affect the individual tones ("the entire system of dynamic relationships is disarranged").[65]

Kurth's description of dynamic musical unity (buoyed by *Bewegungsenergie*) as a "cohesive image of motion" invites comparison to the principles of Gestalt psychology once more. And indeed, as Kurth says, "the basis for the application of Gestalt psychology as a whole to music is provided [in the above discussion]—Gestalt-motion in place of combinatory activity."[66] Early Gestalt psychologists noticed this as well, turning their attention—albeit in a cursory way—to music. Yet analogies with Gestalt principles, which are most relevant to visual perception, only go so far.

Indeed, Kurth sees a danger in making easy correspondences between music and any kind of visual representation, primarily because it stifles the uniqueness of the musical experience. Limiting musical motion to the possibilities afforded by visual representation destroys the special intangibleness of music. Moreover, in

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[64] Kurth 1931, 85–86.

[65] This suggests that there are consequences for motivic transformation, an issue I discuss further below.

[66] „Damit ist aber der gesamten Gestaltpsychologie für ihre Anwendung auf die Musik erst der Untergrund gegeben, Gestaltbewegung an Stelle kombinatorischer Tätigkeit gesetzt" (Kurth 1931, 86).

representing music as a visual image, what were originally unconscious processes associated with music perception become conscious decisions:

> Hier ist die Bewegung in ihrer eigentlichen Fülle eine wesentlich unbewußte Empfindung; stellt man sich das „Bild“ wie einen äußeren Bewegungsvorgang vor, so zeigt sich schon eine jener Veränderungen, die mit dem Übergang in deutliche Vorstellung vor sich gehen, und es büßt auch schon einen Teil seiner zwingenden Kraft ein.
>
> [[Looking at music qua music and not its relationship to the other arts,] motion in its characteristic fullness is an essentially unconscious sensation. If one conceives [its] “image” as an external motion-process, one of those alterations that lead in a transition to a clear conception emerges, and [the motion-process] also forfeits some of its compelling power.][67]

Of course, this is not to dismiss strong correspondences between sound and symbol that composers have employed for centuries; Kurth mentions the role of clear [external] representation in text settings, for instance, and we must remember that he was, after all, highly interested in opera.[68] His concern here, however, lies with the *analysis* of “absolute” music, specifically that the portrayal of psychic motion as an “image” leads to a “banal” destruction of absolute music’s non-representational character. Thus he cautions that “image” can only be used in

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[67] „Hier ist die Bewegung in ihrer eigentlichen Fülle eine wesentlich unbewußte Empfindung; stellt man sich das „Bild“ wie einen äußeren Bewegungsvorgang vor, so zeigt sich schon eine jener Veränderungen, die mit dem Übergang in deutliche Vorstellung vor sich gehen, und es büßt auch schon einen Teil seiner zwingenden Kraft ein“ (Kurth 1931, 86–87).

[68] Kurth earned his Ph.D. from the University of Vienna in 1908 with a doctoral thesis entitled “Der Stil der opera seria von Gluck bis zum Orfeo,” under the supervision of Guido Adler (Rothfarb 1988, 4). At the end of his life, Kurth began to show signs of Parkinson’s disease shortly after *Musikpsychologie* was published. According to Rothfarb (1988), “There were to be no more books [after 1931], though Kurth had planned and begun preliminary work on a history of opera, one of his favorite subjects” (22). It is doubtful that this preliminary work is extant, since in his will, Kurth requested that all of his incomplete manuscripts be destroyed. See Alfred Einstein to Marie-Louise Kurth, 17 May 1947, E1.14, Volltextbriefe zum Inventar Nachlass Kurth, Institut für Musikwissenschaft, Universität Bern.

connection with music if it has a psychological meaning and not an external picture:

> Somit wäre der Begriff „Bild“ bei der Bewegung besser ausgeschaltet, wenn er nicht psychologisch noch eine ganz andere Bedeutung hätte, die mit äußerem „Bild“ gar nichts zu tun hat. Die Grundfrage muß lauten, ob eine zeitliche Abfolge (das Nacheinander von Tönen) als ein Bild in der Art von etwas Gleichzeitigem zu erfassen ist.
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> [[I]t would be better to discard the concept of “image” with motion if it does not have a psychological, but rather an entirely other meaning, since motion has absolutely nothing to do with the external “image.” The fundamental question must be whether a temporal sequence (the succession of tones) is to be captured as an image in the sense of something simultaneous.][69]

It is Kurth’s objective to reinterpret the notion of “image,” that is, to define the *musical image*.

Defining the musical image

As a first step, Kurth turns back to the visual dimension—not the externalized image, however, but visions in our mind’s eye. He discusses the phenomenon of “after images,” which everyone experiences, and the related but more acute phenomenon of “eidetic ability,” commonly known as photographic memory.[70] Kurth makes a case for an aural memory akin to these types of memory

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[69] Kurth 1931, 87.

[70] Regarding the eidetic ability Kurth (1931, 88) writes,

> Zunächst könnte man dabei an eine Erscheinung denken, die in der neueren Psychologie des Gesichtssinnes viel beachtet wurde. Dort gibt es ein Nachwirken eines Eindrucks, das sich als bloßes „Vorstellungsbild“ kundgibt; Versuche zeigen, daß ein Bild, das eine Zeitlang dem Auge vorlag, auch noch seiner Entfernung eien Zeitlang gleichwohl dem innern Auge vorhanden ist, so daß die Versuchsperson oft noch hinterher Einzelheiten entdeckt. Die Fähigkeit, solche „Anschauungsbilder“ hervorzubringen, nennt man die eidetische Fähigkeit, und die mit ihr ausgestatteten Menschen (meist sind es Kinder) „Eidetiker“. Bei den einen ist dabei das Anschauungsbild starr, bei andern beweglich durch das hereinspielende Vorstellungsleben, welches oft ergänzt, ändert, das Bild mit Leben erfüllt.

in vision. In particular, certain musical effects, such as arpeggios, rely on the "'after-sounding' development"; indeed, Kurth even posits that the ability to retain a previously sounding stimulus is one of the aesthetic and psychological roots of musical Impressionism. At a more general level, the tonal context, in itself, depends on the remembrance of previously sounding tones and chords. Indeed, as Kurth writes,

> Doch nicht bloß für Zusammenklänge, auch für die Entwicklung aufeinanderfolgender Teile haben solche Gehörsresiduen, die unbewußt weiter wirken, ihre Bedeutung, so sicher (Wenngleich nicht ausschließlich) für das Festhalten des Anfangsakkords und damit die Herausbildung des Tonartsgefühls.
>
> [Such residual hearing, which further operates unconsciously, achieves significance not only for simultaneities but also for the development of successive parts, certainly (albeit not solely) for the retaining of starting chords and with it, **the development of the sense of key**.][71]

That is, our retention—continual "hearing"—of previous events carries significance for present events; in turn, present events are much richer in the context of former ones. As a first proposition, then, Kurth offers the visual

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[First, one could think of a phenomenon that has received much attention in recent psychology of vision. There, there is an after-effect of impression that announces itself as a simple "representational image"; tests suggest that an image that existed for a time before the eye nevertheless also remains for a time in the inner eye after its removal, so that the study participant often identifies particulars after the event. The ability to produce such a "visual image" was called the eidetic ability and those endowed with this ability (mostly children), "Eidetics." Although with some of them, the visual image is fixed, with others it is mobile through the imaginary life that plays into it, which often supplements, changes, and fills the image with life].

[71] Kurth 1931, 88.

phenomenon of after-image as an analogy to the musical image. That is, the musical image is a mental *trace*.[72]

And yet, in proposing analogies with photographic memory and visual afterimages, one inevitably emphasizes impressions of static musical events, or no better, impressions of *individual* events from the past that progress one after the other. In this latter regard, Kurth turns a critical eye to Riemann's *Tonvorstellung*, explaining that it "no longer suffices" as a theory of melody perception. For one, it does not take into account the unconscious assimilation of previously sounding tones and upcoming ones with the sounding present—what Kurth calls "backward and forward hearing" (*das Zurück- und Vorwärtshören*). Put differently, Riemann's theory is silent about the *unity* of moving melodic line. In Kurth's view, Riemann unduly emphasizes, on the one hand, the ability to "read ahead" and on the other, the function of *memory* to retain tones and "unfurl" them "one after another until the current [tone] in the imagination." Kurth takes issue with this conceptualization of the musical imagination, because it implies a "temporal reversal"—that is, it traces events from some former moment in time towards the present moment, which, as we saw in the discussion of width, this is impossible. Kurth's complete argument against Riemann runs as follows:

> Das Zurück- und Vorwärtshören, die Aufnahme verklungener und kommender Töne, als wären sie in einem Male mit dem eben erklingenden gegenwärtig, macht das unbewußte Erlebnis der Melodie aus. Mit Recht bezeichnet zwar Riemann im ersten Aufsatz über die „Tonvorstellungen" die Fähigkeit des „Vorauslesens" als „eines der größten Wunder der menschlichen Begabung"; aber schon dabei erkennt man, daß der Begriff der Tonvorstellung hier nicht

[72] As Rothfarb (1991, 22) notes, Kurt Koffka would later put forth the idea of a mental "trace" produced by the force of a tone reaching forward. See Koffka, *Principles of Gestalt Psychology*, 1935, 450–51.

mehr ausreicht und dem Begriff der Bewegungseinheit weichen muß; (vgl. 47). Selbst da spiegelt sich noch der Unterschied von Ton- und Musikpsychologie. Darum genügt es auch nicht, wenn Riemann jene Fähigkeit mit dem Gedächtnis begründet, das die vergangenen Töne festhalte; denn obwohl das nicht zu bestreiten ist, kommt es ja nicht auf das weitere Vorschweben der einzelnen Töne, sondern erst des zusammenhaltenden Kraftzuges an. Und ihm dient das Gedächtnis nur als eine Funktion, wobei auch nicht zu übersehen ist, wie stark dem Gedächtnis schon die (ihm nur verwandte) psychologische Erscheinung des Tonnachbildes, vollends des Bewegungsnachbildes dient. (Bei der analogen vorwärtsgerichteten Erscheinung, dem Voraushören, spielt ja kein Gedächtnis mit!) Zudem würde das Gedächtnis doch auch nur die von ihm festgehaltenen Töne nacheinander bis zum augenblicklich erklingenden in der Vorstellung abrollen lassen; das Eigentümliche des Phänomens aber liegt darin, daß die Gesamtvorstellung als ein „gleichzeitiges" Bewegungsbild vorschwebt. Die gedächtnismäßige Vorstellung zaubert dann nur die paradoxe Erscheinung einer zeitlich nach rückwärts zu gestaffelten Gleichzeitigkeit vor; in Wirklichkeit existiert die psychische Fähigkeit, in einem Augenblick zusammenzuhalten, was sich bei der Ausgießung des musikalischen Kraftverlaufs in zeitlichem Nacheinander aufrollt und mit räumlichen Eindrücken („Anordnungen") behaftet erscheint. Für die wache Vorstellung ist das Zeitbewußtsein wie die Raumanschauung etwas Gegebenes das in seiner Eigenart nicht weiter ableitbar erscheint; wie diese aus dem Nebeneinander von Gesichts-oder Tasteindrücken, so entsteht jenes aus der gegenseitigen Beziehung von Gedächtnistatsachen.

[The unconscious experience of melody consists of backwards and forwards hearing, and the assimilation of already sounded and upcoming tones as though they were there at the same time as the sounding [tones] are. In the first essay on "Tonvorstellungen," **Riemann correctly identified the ability of "reading ahead" as "one of the greatest wonders of human ability**"; but one already recognizes that **the concept of tonal imagination no longer suffices here and must give way to the concept of unity of motion**. The difference between tone- and music psychology is reflected even there. For this reason, **it is also not sufficient when Riemann bases that ability on memory, which retains the passing tones**; for even though this is not to be contested, **it is a matter not of further imagining of the individual tones, but rather of the collective force of motion**. And for him [Riemann], memory serves only as a function, whereby one cannot overlook how strongly and fully the psychological phenomenon of tonal-afterimage and motion-afterimage (which for him is only related) serves memory. (With the analogous forward-directed phenomenon, [i.e.,] forward hearing, memory plays no role!) Furthermore, memory would only be

> allowed to unfurl the tones held by it, one after another, up to the current [tone] in the imagination; but **the uniqueness of the phenomenon rests in the fact that the entire thing imagined exists as a "simultaneous" image of motion.** The memory-based imagination conjures, then, only the paradoxical phenomenon of a temporal reversal towards gradual simultaneity; in reality, there exists the psychic ability to gather in an instant what unfolds in temporal succession from the outpouring of the musical force-span and appears captured via spatial impressions ("arrangements"). For the watchful imagination, the consciousness of time, like the spatial view, appears as something given that in its character is not further derivable; just as the spatial view originates from the coexistence of sight or tactile impressions, [the consciousness of time] originates from the interrelationship of memory data.][73]

As Kurth understands it, Riemann's conception of "Vorauslesen" (and by extension, *Voraushören*) is an additive one—a true trace—perhaps akin to replaying a piano roll in one's imagination. It fails to capture the nature of musical experience, however, whereby we perform an instantaneous assemblage "from the outpouring of the musical force-span (*Kraftverlauf*)."[74] And while a trace can denote simultaneities, it fails to express the feeling of motion—*Bewegungsenergie*—that we retain as present events recede into the past. This is the "principal problem" with defining the musical image:

> So springt als Hauptproblem die Frage heraus, wieso Bewegung als ein „Bild" und dann als „Nachbild" erscheinen kann, wobei das Wort „Bild" gleichfalls nicht im Sinne gesichtsmäßigen Anschauens (z. B. auf Grund der Niederschrift) gelten darf, sondern im allgemeineren psychologischen Sinne einer simultanen Vergegenwärtigung des gesamten, aber zeitlich verlaufenden Inhalts.
>
> [As a principal problem, the question emerges of whether motion can appear as an "image" and then as "afterimage," where, at the same time, the word "image" may not have the meaning of visual impression (e.g., as the basis of a transcription) but rather, in a more

[73] Kurth 1931, 96. See Wason and Marvin 1992, 84, for the relevant passage about *Vorauslesen* in Riemann 1914–15.

[74] Kurth 1931, 96.

> general psychological sense, **of a simultaneous realization of entire, yet temporally flowing contents.**][75]

What is needed, then, is a way to emphasize that the "course of motion preserves itself as 'form.'"[76] And so, Kurth returns to the drawing board, and as a second proposition, suggests that the musical image is *captured motion*.

Capturing musical motion

We turn now to some specific ways we capture or "preserve" motion as we listen to music. The first way pertains to listeners' ability to retain the essence of an initial motive as it undergoes various transformations. Kurth notes that the "most peculiar" of what he regards as psychological phenomena lies in "the possibility of fully transforming a motive" through changes in interval, contour, rhythmic diminution and augmentation, or any combination of these; and yet the motive will still be "accepted as the same." This act of comparison and ultimately equation of the original and altered motive, which we perform while listening and that composers exploit, indicates that "intervals, their direction, rhythm, and harmony as well—in short, all of what one can single out as technical phenomena—do not constitute the substance and can give way fully to other forms." It further indicates that, "the residual commonality is based on something that is beyond the real sounding, in a characteristic of the course of motion (*Bewegungsverlauf*)." At the risk of repeating an old adage [and himself!], this is

[75] Kurth 1931, 90.

[76] „Man kann das Kernproblem auch dahin zusammenfassen, daß ein Bewegungsverlauf sich als ‚Form' erhält" (Kurth 1931, 90). This turn of phrase may be a disguised reference to Hanslick's well-known characterization of the content of music as "tonally moving forms" (*tönend bewegte Formen*). See Hanslick/Payzant 1986.

proof positive that there is "a characteristic of the whole that is different from the characteristic of all parts and to a large extent is independent of it." Indeed, even if a motive is simply restated, unchanged, our recognition of it rests not in comparing each note to the corresponding note of the earlier version, but rather by taking notice of its entire motion-image.

When discussing motivic transformation, Kurth emphasizes, once more, the dynamic (aural, embodied) dimension of musical experience over the visual one. He notes that even if an "unmusical" person regards newer instances of a motive as a "[visual] transformation" (*Umbildung*) of a previous motive—that is, emphasizing the correspondences that appear in a score—there is, more accurately, a "transformation of motion" (*Umbewegung*). When we perform motivic comparisons, we are in fact comparing various captured motions: "[T]he progression of motion is a psychic reality of its own formal content, which creates a residuum in memory as an 'afterimage.'"[77] Thus Kurth suggests that musical afterimages are not the memory of lingering individual notes but rather the retention of a musical gesture, and in particular, its uniquely propulsive quality.

Beyond motives, the musical afterimage plays a role in the reception and production of entire compositions. From a pedagogical and performative perspective, it accounts for the ease with which the average person is able to recall and reproduce the broad strokes (contour, general harmonic profile) of an unfamiliar tune and the comparative difficulty of isolating individual notes from

[77] Kurth 1931, 91–92.

memory.[78] As Kurth remarks, "afterimages of motion impress for a longer duration than afterimages of tones or chords; one comprehends a melody often more easily from its formal quality than would be the case with individual tones or chords."[79] Likewise from a compositional perspective, the afterimage of motion shapes artistic creations. Kurth suggests that while we all capture certain courses of motion as "forms," the composer retains these on a long-term basis and is able to bring out characteristic elements from the captured "image" in his creations: "the characteristic feature lies dormant in the 'image' of the directed motion, which is also the characteristic feature through which the innovative production announces itself."[80] He notes how master composers recurrently draw on certain characteristic linear progressions; such progressions arise under closer inspection of melodies that seem quite different externally. The progressions express a certain personality, which only manifests itself in particular forms of motion.[81] Returning, then, to the

[78] Kurth (1931, 90) writes, "non-musicians or amateur musicians . . . often find it easier to sing back an entire motivic phrase than to sing back particular tones." [Daß er sogar für das bloße Gedächtnis bedeutsamer ist als die klingenden Eindrücke, zeigt eine Beobachtung, die man alltäglich bei Unmusikalischen oder Halbmusikalischen[78] machen kann: **das Nachsingen eines ganzen Motivbildes fällt ihnen oft leichter als das Nachsingen bestimmter Töne**.]

[79] „Nachbilder von Bewegungen prägen sich auch zu längerer Dauer ein als Nachbilder von Tönen oder Klängen; man merkt sich weitaus leichter eine Melodie, wird öfter von ihr förmlich gequält, als daß dies mit einzelnen Tönen oder Klängen der Fall wäre" (Kurth 1931, 90).

[80] „. . . anderseits schlummert in seinem [der Bewegungszug] ‚Bilde' auch die Charakteristik, in der sich neuschöpferische Produktion kundgibt" (Kurth 1931, 92).

[81] „Dabei mag man sich auch erinnern, wie einzelne Meister immer wieder zu bestimmten, für sie charakteristischen Linienzügen neigen; diese schälen sich bei näherer Beachtung oft aus äußerlich recht verschiedenen Melodien als Untergrundsgemeinsamkeit im Persönlichkeitsausdruck heraus, der sich in gewissen Bewegungsformen stabilisiert" (Kurth 1931, 93). We might say that for Kurth, music is generated not from *Ursätze* (after Schenker), but rather from "*Urbewegungsformen*."

question of whether a temporal succession can be captured simultaneously as an image, Kurth answers with a definitive "yes." Moreover, without this motion image, there would be no music. Indeed, "the transformation of motion into 'image' is a **basic psychic function** whose outcome is to be recognized from various angles."[82]

* * *

This chapter has examined a central concern in Kurth's writings: the experience of music in relation to familiar and embodied responses to the physical world, notably the feeling of *force*. The force that underlies all of music, *Bewegungsenergie*, is not only responsible for our sense of motion, but also that of *space*, associated sensations of *matter*, and *unity*. As a complement to downward-directed harmonic effects, *Bewegungsenergie* also contributes to feelings of tension and striving forward. In Part Two of the dissertation, we shall investigate further sources of tension as we take a closer look at the "vertical dimension" of music.

[82] „[D]ie Verwandlung von Bewegung in „Bild" ist eine psychische Grundfunktion, deren Folgen noch von verschiedensten Seiten her zu erkennen sein werden" (Kurth 1931, 97).

PART TWO

Music Theory in the Context of *Musikpsychologie*

A Note on the Theory of Harmony

> Kurth held as a goal, unlike Riemann, not a closed, "natural" system of harmony, but rather **a psychological explanation for historical phenomena that does not distort their historical character.** The psychologizing of music theory that he sought, however, thus meant at the same time a historicizing without having to accept the uniformity of the "energetic" principle and to exchange it for a variety of ever-changing explanations adjusted according to the individual historical epochs. Kurth was even more convinced—and here is the point where the historical and systematic approaches converge—that **the same principles, on which tonal harmony is based on the one hand, and which led on the other hand, to its disintegration** (which Kurth records without prejudice already in 1913), applied: the **principle of fusion,** upon which the stabilization of the intervallic structures of the 16th century to the chords of the 17th century understood as the primary singularities is based, legitimized chains of unresolved seventh and ninth chords that evade tonal explanation at the end of this development; and **the leading-tone tendency,** the constitutive moment of the tonal cadence, led finally to an alteration harmony, which defies the boundaries of tonality.[1]

[1] Dahlhaus 1973, 152.
Kurth zielte, anders als Riemann, nicht auf ein geschlossenes, „natürliches" System der Harmonik, sondern auf eine psychologische Erklärung geschichtlicher Phänomene, die deren geschichtlichen Charakter nicht verzerrt. Die Psychologisierung der Musiktheorie, die er versuchte, bedeutete also zugleich eine Historisierung, ohne daß er jedoch die Einheitlichkeit des „energetischen" Prinzips preiszugeben und mit einer Vielfaltwechselnder, auf einzelne historische Epochen beschränkter Erklärungsgründe zu vertauschen brauchte. Kurth war vielmehr überzeugt- und damit ist der Punkt bezeichnet, an dem der historische und der systematische Ansatz konvergieren—, daß die gleichen Prinzipien, die einerseits die tonale Harmonik begründeten, andererseits auch deren Zerfall, den Kurth schon 1913 vorurteilslos registrierte, herbeiführten: Das Verschmelzungsprinzip, auf dem die Verfestigung der Intervallzusammensetzungen des 16. zu den als primäre Einheiten verstandenen Akkorden des 17. Jahrhunderts beruhte, legitimierte am Ende der Entwicklung Verkettungen unaufgelöster Sept- und Nonenakkorde, die sich einer tonalen Erklärung entziehen; und die Leittontendenz, konstitutives Moment der tonalen Kadenz, führte schließlich zu einer Alterationsharmonik, die sich über die Grenzen der Tonalität hinwegsetzte. Das Buch über „Die Voraussetzungen der theoretischen Harmonik" zeigt, daß Kurth dem musikalisch Neuen das sich um 1910 ereignete, nicht als Dogmatiker, der um sein System bangt, sondern als Historiker, der zu verstehen sucht, begegnete.

Part Two of the present study begins with an exploration of Kurth's system of harmony as it appears in *Musikpsychologie*. We approach this system from three perspectives and three questions, each in a self-contained chapter: chordal fusion, or how it is that we sense simultaneous tones as harmonious; chordal tension, or why we feel tension when hearing simultaneous tones; and chordal movement, or what underlying principles govern our responses to the succession of chords.[2] Many of the ideas discussed in the following chapters are found in germinal or similar form in *Voraussetzungen*, and I highlight points of connection between Kurth's views in the 1913 and 1931 monographs throughout. As the passage above from Carl Dahlhaus's Afterword to the 2nd edition of *Voraussetzungen* indicates, Kurth's approach to music was and remains historically sensitive. To this we must add that his approach in *Musikpsychologie* is informed by more recent research in the burgeoning field of psychology, reflecting a sharper focus on music as it is experienced.

[2] This ordering corresponds to Kurth's own in his Third Section (III. Abschnitt), 142–249; I retain the titles of his chapters as well.

CHAPTER FOUR

"The Sounding Simultaneity" and the Theory of Fusion

Just as we comprehend a single tone instantaneously, we experience a sounding simultaneity—or harmony—as an immediate unity. More than in the tone, however, we also sense that this unity is comprised of individual (yet perhaps unspecifiable) components. In other words, even the simplest musical phenomena appear to us as systems or complexes: "Consideration for the impressions of a complex (*Komplexeindrücke*), however, must also be put first, for they are based not merely in new, comprehensive singularities, but rather influence the components and alter their character."[1] In his use of the term *Komplexeindrücke*, Kurth appeals to the research of Felix Krueger, whom he cites on multiple occasions in *Musikpsychologie*.[2] As Kurth notes, Krueger establishes the following three axioms for the relationship between parts and whole:

> 1. Each experiential whole from the outset outweighs its parts in clarity and immediate urgency, and in this way, has importance as a special quality.

[1] „Voranzustellen ist aber auch hier der Gesichtspunkt der Komplexeindrücke (s. S. 23ff); den sie beruhen nicht bloß in neuen, übergreifenden Einheiten, sondern wirken auf die Komponenten zurück und verändern deren Charakter" (Kurth 1931, 142).

[2] Kurth first discusses "complex" under the subheading "Zum Wesen der Komplexerscheinung" in Section I (pp. 23ff.) where he refers to the term *Komplexqualität*, citing Krueger's "Komplexqualitäten, Gestalten und Gefühle" (1926) (Kurth 1931, 25n3); he refers to this work again in 142n1 and 143n2. Krueger was critical of what he viewed as a lack of originality with the Berlin school of Gestalt psychology and proposed an alternative "holistic psychology" (*Ganzheitspsychologie*) that, inspired by Dilthey, emphasized the role of feeling and will and added the dimension of time. See Ash 1998, 311. Kurth (1931, 25) discusses Krueger's work as a reflection of "the theory of holistic experiences (*die Lehre von den Ganzheitserlebnissen*)." Krueger is notable, too, as the teacher of Wellek; both belonged to the so-called "Leipzig school" of Gestalt psychology. Before Krueger, Ehrenfels (1890, 259) refers to melodies as "complexes of tone presentations (*Complexe von Tonvorstellungen*)."

> 2. The actual observation of the whole and the characteristic of the qualities that lead to a whole inhibit the separate perception of parts or partial moments; conversely, usually to a lesser extent, the specific phenomena of wholeness are affected through isolated capture of parts.
>
> [3.] Those distinguishable parts in a psychic complex are at all times qualitatively co-determined through their grouping together and through the quality of wholeness of the complex.[3]

With these axioms in mind, Kurth notes that in the musical world,

> Statt von Zusammensetzung ist vom Zusammenwirken zu sprechen. Somit zeigen sich nicht bloß die Komponenten des Tones in der neuen größeren Einheit verändert, sondern auch das Tonphänomen selbst im zweitönigen Intervall, dieses im mehrtönigen Akkord, die Klänge wieder in der Klangbewegung usw.
>
> [Rather than combination, [the relationship of components] is one of interaction. Thus it is not merely the components of the [individual] tone that appear to change in the new larger unity; rather, even the tonal phenomenon changes in the two-note interval, in the multiple-note chord, in chords within chord progressions, etc.][4]

Further, he reframes Krueger's position to establish the relationship between components and complex in our impressions of tone combinations. Kurth refers to this relationship in two opposite ways, as both the "law of resultant formation (*Resultantenbildung*)" and the "law of components (*Komponentengesetz*)." In taking a two-term [dualistic] approach, he privileges neither the complex itself—the resultant—nor the components of this complex. For the sake of simplicity, yet in keeping with the spirit of Kurth's standpoint, we shall refer to these two laws collectively as the "Resultant-Formation/Components (RF/C) principle." There are three parts to the RF/C principle:

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[3] Points 1 and 2 are a quotation from Krueger 1926, 24, and appear in Kurth 1931, 142n1. Point 3 is a quotation from Krueger 1926, 55, and appears in 143n2.

[4] Kurth 1931, 142–43.

1. der Wirkung der Komponenten an sich auf das Ganze;
2. der Rückwirkung der Komponenten an sich auf die Komponenten und
3. der modifizierenden Wirkung jeder Komponente auch auf die einzelnen übrigen Komponenten.

1. The effect of components in themselves upon the whole;
2. [T]he reciprocal effect of the whole upon the components; and
3. [T]he modified effect of each component upon the individual remaining components.

And echoing Krueger's third point, Kurth goes on to write,

> In allen drei Teilerscheinungen äußert sich, daß die Komponenten nicht nur quantitative verschieden auftreten, sondern qualitative Veränderungen erfahren. Der Gesamteindruck beruht somit stets in Gleichzeitigkeit und Gleichgewicht zwischen diesen dreierlei gegenseitigen Beeinflussungen. Eine psychische Grundfunktion beruht also bei allen Tonmischungen darin, daß stetig der Zutritt neuer Elemente in Veränderung aller bisherigen umgesetzt wird.
>
> [In all three phenomenal parts, the components not only emerge quantitatively but also experience qualitative transformations. The entire impression thus always rests on the simultaneity and equilibrium of these three reciprocal influences. A basic psychic function rests in all mixtures of tones, in that the entrance of new elements is steadily implemented in the transformation of all former elements.][5]

In this final sentence, Kurth takes a step beyond Krueger by adding a temporal aspect: as new components enter the complex, they transform the complex as a whole and all of its former elements; in turn, the complex transforms these newly entering elements. Rather than describing the experience of a moment in time (a static perception), Kurth focuses on the perpetual evolution of our experience during the act of listening.

[5] Kurth 1931, 143.

Fusion

Against the RF/C principle Kurth evaluates Stumpf's theory of fusion, which emerged from a series of laboratory experiments on musically untrained subjects ("non-musicians"). Stumpf presented several pairs of simultaneous tones on the piano or organ and asked his subjects whether they perceived one sound or two. The more frequently subjects were unable to perceive two distinct tones, the more unified or "fused" these tones were. He defined fusion, in other words, as "that relationship according to which two contents (special contents of sensation) form not simply a sum but rather a [perceptual] whole."[6] Based on his results, Stumpf produced an ordinal scale of fusion, from the interval most often perceived as a single tone (most fused) to that least often perceived as a single tone (least fused):

> Halten wir uns zunächst in einem Tongebiet, welches durch das Schwingungsverhältnis 1:2 abgegrenzt ist, so bemerke ich folgende Stufen der Verschmelzung verschiedener Töne, von der stärksten bis zur schwächsten Stufe. Erstens die Verschmelzung der Octave (1:2). Zweitens die der Quinte (2:3). Drittens die der Quarte (3:4). Viertens die der sog. natürlichen Terzen und Sexten (4:5, 5:6, 3:5, 5:8), zwischen welchen ich in dieser Hinsicht keine deutlichen Unterschiede finde. Fünftens die aller übrigen musikalischen und nicht-musikalischen Toncombinationen, welche, für mein Gehör wenigstens, untereinander keine deutlichen Unterschiede der Verschmelzung, vielmehr alle den geringsten Grad derselben darbieten. Höchstens die sogenannte natürliche Septime (4:7) könnte noch um etwas mehr als die anderen verschmelzen.
>
> [If we limit ourselves initially to a tonal area delineated by the frequency ratio 1:2, I note the following degrees of fusion of the different tones, from the strongest to the weakest degree. First, the fusion of the octave (1:2); second that of the fifth (2:3); third, that of the fourth (3:4); fourth, that of the so-called natural thirds and sixths (4:5, 5:6, 3:5, 5:8), among which I find, in this respect, no clear differences; fifth, that of all remaining musical and non-musical tone combinations that, at least according to my hearing, have no clear

[6] *Tonpsychologie*, II. Bd., 1890, 128. See Kurth 1931, 144, for historical precursors to Stumpf's research. For Kurth's description of Stumpf's experiment, see Kurth 1931, 151.

> differences of fusion among each other, [and] rather all present the same lowest degree. At most, the so-called natural seventh (4:7) could fuse a little more than the others.][7]

There are many similarities between Kurth's complex impressions and Stumpf's findings. As James Sully, a contemporary critic of Stumpf, notes in his 1891 review of *Tonpsychologie*, a "peculiarly interesting feature" of Stumpf's investigations is the discovery that "clang-masses" (simultaneities) take on the quality of the most predominant "ingredient" (component). For Stumpf, this means that the lowest tone will determine the quality of the chord. In the main, this feature corresponds to Kurth's first point, above, that components affect the whole complex. Conversely, the "pitch of a tone" changes when a second tone of different frequency joins it; the first tone is drawn towards the second. This feature is very similar to Kurth's third point that one component affects another. And all things being equal, the higher tone of an interval will have more intensity than a lower one, a tone is stronger in isolation than in the presence of other tones, and "a tone-mass does not make a stronger impression than its constituents."[8] That is, one is able—with attention, Sully notes—to single out individual components but will perceive them differently within the complex than without. These findings correspond to Kurth's second point, that the whole affects its components.

Kurth undoubtedly appreciated Stumpf's work. Praising his predecessor, he writes,

> Mit Recht betont auch Stumpf sofort, daß die Verschmelzung keine „Hypothese" darstellt, sondern ein „sinnliches Phänomen" (S. 129). Wenn dies auch etwas selbstverständliches darzustellen scheint, so

[7] Stumpf 1890 (vol. 2), 135.

[8] Sully 1891, 279.

> enthüllt es doch auch schon einen der scheinbaren Widersprüche, die an den Wurzeln der Musiktheorie liegen: wir empfinden den Zusammenklang als eine Mehrheit und Einheit zugleich.
>
> [Stumpf correctly emphasizes immediately that fusion does not present a "hypothesis" but rather a "sensory phenomenon" (p. 129). Even if this appears to present something obvious, it also reveals one of the apparent contradictions that lie at the root of music theory: we sense harmony as a plurality and unity at the same time.][9]

The value of Stumpf's work for Kurth lies in its broader implications. The theory of fusion presents concrete evidence for the importance of the inner world, that is, for the role of our psyche in reshaping the external stimulus—whether that external stimulus is the single tone (and its concomitant partials) or a dyad (and its concomitant tones). Yet while Stumpf would attribute the fusion phenomenon to particular nerve responses in the brain, Kurth views fusion as an unconscious "psychic activity" that goes beyond physiological activity. He writes,

> Stumpf stützt die Verschmelzungslehre durch die Hypothese sog. „spezifischer Synergien", d. h. die Fähigkeit bestimmter Nervengebilde, eine bestimmte Empfindung zu erzeugen, hier also die der eigentümlichen Einheit zweier Töne. Damit vollzieht er die Rückverknüpfung der psychischen Erscheinung an eine physiologische. Daran kann sich die weitere Frage knüpfen, wieweit etwa beides schon physikalisch vorgebildete Vorgänge widerspiegelt. Stumpf erkennt aber schon im Aufnahmevorgang nichts rein Passives, sondern hebt mit der Verschmelzung eine Tatsache psychischer Aktivität heraus, die also auch über die physiologische Erklärung der Erregung gleicher Resonanzfasern (nach Helmholtz) hinausgeht. Doch bedeutet bereits das Wort „Verschmelzung" auch auf das Hereinspielen dunkler, unbewußter Materie-Empfindungen, die Stumpf unausgesprochenerweise als gegeben annehmen mußte, worin sich auch der psychologische Charakter der Erscheinung kennzeichnet. . . . [W]enn man an die klangliche Dynamik denkt, erkennt man, wie stark eine psychische Aktivität den Verschmelzungseindruck steigern oder umgehen kann. Der einfachste Beweise findet sich schon darin, daß man gleichzeitige Töne nach Belieben „verschmelzend" oder voneinander losstrebend hören kann.

[9] Kurth 1931, 144.

> [Stumpf supports the theory of fusion through the hypothesis of the so-called "**specific synergies**," i.e., the ability of a certain nerve structure to produce a certain sensation—here, the idiosyncratic unity of two tones. For this reason, he establishes, in an inverse relationship, a psychic phenomenon in a physiological one. Further tied to this is the question of to what extent either reflects physically trained processes. With fusion, however, Stumpf recognizes nothing truly passive in the recording process, but rather highlights a fact of psychic activity, which also surpasses the physiological explanation of the excitement of equal resonating fibers (following Helmholtz). The word "fusion" indicates the entrance of hidden, unconscious matter-sensations that Stumpf had to accept as given—implicitly [in an unspoken way]—and in which the psychological character of the phenomenon is characterized. . . . When one considers the chordal dynamic, one recognizes how strongly a psychic activity can enhance or restrain the impression of fusion. The most immediate evidence is found in one's ability to hear at will simultaneous tones as "fused" or loosely striving away from one another.][10]

Thus *Tonpsychologie* merely called attention to one of the great mysteries of music theory: our ability to hear a complex of tones as an unbreakable whole—a "fused" chord—or feel it as an energetic chord that contains dynamic components. It is the role of *Musikpsychologie* to delve further into the nature and origins of this ability.

As a whole, Kurth finds Stumpf's theory correct in its general premises but extremely limited in its scope and explanatory power. In revising and extending Stumpf's theory, and forfeiting experimental rigor, Kurth strives to account for a richer variety of phenomena and a wider range of listening experiences.

Reconsidering fusion (I): beyond the interval

Kurth's first modification extends the theory of fusion to other simultaneities beyond the interval. Indeed, he argues that as the cardinality of the simultaneity increases, the "unified sensation" may predominate more strongly than the individual sensations of components, at least for "untrained ears": "the

[10] Kurth 1931, 155–56. See also Stumpf 1890, 106ff.

summarizing tendency of our psyche grows by itself with the fullness of the collection."[11] Again emphasizing that we have the ability to sense plurality and unity at once, Kurth writes,

> Diese Veränderung geht allerdings nie so weit, daß das einzelne Intervall dem musikalisch geschulten Ohr unerkennbar bliebe; aber gewisse subtile Eigentümlichkeiten vom Intervalleindruck an sich weichen andern feinen Eigentümlichkeiten, die als Mischungseindrücke hervortreten. Man hört von der Gesamtwirkung aus auch hier wieder in die Einzelwirkungen hinein, die ihre Komponenten bilden. Umgekehrt gießt sich jede neu hinzutretende Ton- und damit jede neue Intervallwirkung sofort über den ganzen Klang aus, beeinflußt auch alle seine übrigen Intervalle in der Wirkung. Es ist ein sehr ähnlicher Prozeß, wie wenn in eine Farbenmengung eine neue Farbe einfließt. Es gibt also eine verschmelzende Einwirkung vom ganzen Akkord aufs Intervall selbst und eine, die vom Intervall aus den Akkord durchdringt. Beides hängt engstens zusammen: ein Intervall, das die Einheitsverschmelzung eines ganzen Klanges fördert, gewinnt auch selbst innerhalb von diesem eine mildere Verschmelzung.
>
> [This transformation never goes so far that the single interval remains unrecognizable to the musically trained ear; but **certain subtle characteristics from the intervallic impression itself weaken other more delicate characteristics that emerge as impressions of**

[11] Kurth (1931, 145) writes,

> Wenn man nun wieder über die Zweizahl der Töne zu akkordlichen Bildungen hinausgeht, so wächst die Zahl der zusammenwirkenden Einzelheiten, und zugleich gewinnt—zumindest bei nicht geschultem Gehör—das einheitliche Empfinden wieder stärkeres Übergewicht gegenüber der Einzelempfindung für die Komponenten. Anders ausgedrückt: die zusammenfassende Tendenz unserer Psyche wächst von selbst mit der Fülle des Zusammenzufassenden.

Kurth clarifies, however, that increased forces (be they tones, instruments, or acoustical volume) contribute to a change in the *qualitative* impression of fusion, rather than a direct increase in the intensity of the chord:

> [D]enn ein Zusammenklang ist nach einem der ältesten und bekanntesten Gesetze der Akustik auch der Klangstärke nach keine volle Summer der einzelnen Tonstärken. Es scheint, daß ein Teil der Intensität für jenen Vorgang einer Vereinheitlichung verbraucht, also in andere Energieverwertung umgesetzt wird.
>
> [For according to one of the oldest and most well-known rules of acoustics, harmony, as well as the strength of the chord, is not the complete sum of individual strengths of tones. It appears that part of the intensity is required for that process of unification, thus it is implemented in another application of energy.] Kurth 1931, 146.

> **mixture.** One hears the resulting entire effect and again the individual effects that form its components. Conversely, **every newly appearing effect of the tone, and thus of the interval, diffuses itself immediately over the entire chord, also influencing all of its remaining intervals in the effect.** It is a very similar process to whenever a new color is incorporated into a blend of colors. There is also a fused influence from the entire chord on the interval itself and one that emerges from the chord and pervades the interval. The two [influences] are closely related: **an interval that supports the fusion of an entire chord itself acquires a milder fusion from within this.**][12]

Thus just as the RF/C principle governs the interval, it also impacts the chord. Not only does each interval—itself a "fused" entity—transform the chordal complex but the chordal complex also transforms the interval. Given a C major triad, for instance, one could pick out the C–E, E–G, or C–G intervals, but one experiences them differently within the context of the triad than when they sound in isolation. Indeed, we have a weaker impression of these concomitant intervals.[13] Kurth notes, for instance, "something from the specific effect of a perfect fifth is lost in the triad, what the musician in particular calls its 'emptiness'; one says that it is 'completed' through the [addition] of the third."[14]

Kurth's extension of fusion beyond the interval underscores an important difference in the way he and Stumpf conceive of "chord." For Kurth, a chord is more than a sum of three or more tones, and moreover, more than a sum of intervals: "It presents not a simple combination of these but rather a unity of a

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[12] Kurth 1931, 148.

[13] Likewise, in the Cmaj7 chord, Kurth notes that several pairs of intervals are fused—"not merely the stacked thirds (e.g., c–e, e–g, g–b) but also the further pairs of intervals (c–g, c–b, e–b), and so forth"—but there is an "immediate whole impression" of the chord that cannot be explained as the summation of fused intervals (Kurth 1931, 147).

[14] „So geht z. B. im Dreiklang etwas von der spezifischen Wirkung der reinen Quint verloren, ihre von den Musikern besonders beachtete ‚Leere'; man sagt, sie werde durch die Terz ‚ausgefüllt'" (Kurth 1931, 147).

higher degree, as it further fuses the fused stimulus of its particular intervallic components."[15] His predecessor, one could argue, treated chords as extensions of intervals—harmonies arise when single notes join a dyad. In a statement to which Kurth refers in multiple publications, Stumpf writes: "The degree of fusion of two given tones would in no way be influenced by the addition of any third and further tones."[16] This is a perspective Kurth deems untenable, for it fails to account for the "reciprocal effect" of the whole upon the components (the second part of the RF/C principle) within three- or four-note chords.

Even more generally, the main difference between Stumpf's and Kurth's viewpoints is one of compositional practice. Kurth posits that the chordal context affects not only the clarity with which we sense individual intervals but also their degree of fusion. That is, the fusion of an interval within a chord is independent of the degree of fusion this interval carries in isolation. As examples, he cites the m3 and the M2, which both fuse well in chords—for instance in the Mm6/5 chord—yet according to Stumpf's results, yield relatively low degrees of fusion in isolation. Conversely, fourths and fifths fuse well as single intervals but poorly as stacked fourths or fifths. The music of Debussy and Skriabin employ such sonorities, argues Kurth, "not as parts of a chord but as independent sound stimuli; [composers] often place together two or more fourths in such a way that they fuse

[15] „Denn auch der Akkord ist mehr als eine Summe von drei oder mehr Tönen, er ist jedesmal zugleich eine neue Einheit; aber es ist auch mehr als eine Summe von Intervallen. Er stellt keine bloße Kombination von diesen dar, sondern insofern auch eine Einheit höheren Grades, als er die Verschmelzungsreise seiner eigenen Intervallkomponenten selbst wieder verschmilzt" (Kurth 1931, 146–47).

[16] *Tonpsychologie*, vol. 2, 136. Kurth cites this statement in *Voraussetzungen* (1913), 49 (see Rothfarb 1979, 93).

less and actually seem isolated, and their unique sound (as a whole) is more strongly enhanced."[17] Thus rather than experiencing quartal and quintal harmony as units (as one would triadic harmony), one is easily able to pick out individual fourths and fifths—an acoustical phenomenon that Kurth argues composers of the early twentieth century exploit.[18] Kurth notes that though in practice one frequently experiences intervals in a broader context of chords, tone psychology (or "theory") has hardly broached this subject:

> Man muß also auch hinsichtlich der Verschmelzung das Intervall in doppeltem Sinne als eine Einheit erkennen: einmal als Einheit aus der Verschmelzung seiner eigenen zwei Töne zu spezifischem Klangreiz, dann aber (über Stumpf hinausgehend) als Einheit, die selbst zu einem verschmelzenden und charakterisierenden Element innerhalb der Klänge wird. Letzteres hat die Praxis sogar immer als das Vorwiegende betrachtet, die Theorie kaum gestreift.

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[17] „Quarten untereinander verschmelzen schlechter, ebenso Quinten untereinander; aus diesem Grunde finden sich auch z. B. in impressionistischen Tönungen (besonders bei Debussy und Skrjabin) Quarten oder Quinten oft geflissentlich nicht als Teile eines Akkords, sondern als selbständige Klangreize ausgewertet, man setzt oft zwei oder mehrere Quarten zusammen, derart, daß sie weniger verschmelzend, sondern im Gegenteil eher isoliert wirken und ihren spezifischen Klangreiz verstärkt (summiert) zur Geltung bringen" (Kurth 1931, 149).

[18] Kurth voices a similar sentiment already in *Voraussetzungen*, with reference to Arnold Schoenberg: "According to the synthetic, psychological concept of fusion, intervals of every type may be combined in principle, as long as they produce the impression of an amalgamation exhibited by compositional technique. . . . Chordal construction in fourths may also be seen today—at least in its beginnings (cf. the imaginative discussions about chords in fourths of Arnold Schönberg [*Harmonielehre*, Vienna, 1911])" (Rothfarb, 1979, 135).

Later in *Musikpsychologie*, Kurth again mentions that more recent composers, e.g., Skriabin, have attempted to generate chords that are based on stacked fourths and fifths, but he maintains that these do not have a "natural foundation" like stacked thirds. Indeed, stacked thirds have the perfect level of fusion, in which the chord sounds like a whole, but nevertheless, layers emerge: „Wir müssen daher annehmen, daß die Terz nicht nur durch ihren Verschmelzungscharakter, sondern durch ihren eigentümlichen Spannungscharakter jene konstitutive Kraft gewinnt." ["We must thus accept that the third obtains that constitutive force not only through its character of fusion but also through its peculiar character of tension" (Kurth 1931, 199).]

> [With regard to fusion, one must also recognize the interval as a unity in a double sense: first as unity from the fusion of its own two tones towards a specific sounding impression, but then (which surpasses Stumpf) also as a unity that itself becomes a fused and characteristic element within the chords. Practice has mainly considered the latter, but theory has hardly touched upon it.][19]

To a certain extent, the RF/C principle is already embedded in traditional music theory. For instance, it comes into play when we designate a chord as consonant or dissonant. Kurth compares a dissonant seventh chord with the consonant triad formed by its lowest three tones. In the chord C–E–G–B, only the interval C–B is dissonant, yet we treat the chord as a whole as a dissonance (in accordance with the first part of the principle); thus one speaks of the resolution of a "dissonant chord" even if only one note within the chord has a stronger tendency to resolve in a particular direction (for instance, if the C–E–G–B chord were a IV7 in G major). Conversely, rather than hearing the resulting simultaneity as a bipartite, consonant-dissonant structure, one experiences a total sensation, whereby the dissonant interval disrupts the consonant status of the triad (in accordance with the second part of the principle) and each interval in the triad (in accordance with the third part of the law)—that is, if one is listening in a musical way. For Kurth writes, "Every student of music can arguably isolate the clear effect of the partial consonances, but the musical people realize right away that this effect is clouded within the whole, and thus far removed from its consonance, without

[19] Kurth 1931, 149.

actually being transformed into a dissonance."[20] To listen musically, then, is to succumb to a holistic experience.

Likewise, in the resolution of the dissonant seventh chord, intervals that would be consonant in isolation are not merely maintained, but rather "strive together with the dissonances" as they move into a new chord.[21] That said, it is possible to draw one's attention to intervals within the chord. Kurth writes,

> Der Musikalische vermag aber andrerseits auch sein Augenmerk auf einzelne Teildissonanzen zu richten, denn der verschmelzende Klang ist sowohl ein Ganzes als eine Summe von Einzelkomponenten. Aber die Psyche ist imstande, in weitem Maße nach bloßem Willen mehr die eine oder mehr die andere dieser Wirkungen hervortreten zu lassen (worin sogar ganze Stilwandlungen beruhen).
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> [On the other hand, the musical person is also able to focus attention on individual partial dissonances, since the fused chord is both a whole and a sum of individual components. But the psyche is able to emphasize, to a large extent with nothing but the pure will, more of one or more of the other of these effects (entire transformations in style are based in this [ability]).][22]

Kurth's repeated mention of musical training and aptitude, and his emphasis on changing contexts, bring us to his second set of criticisms of Stumpf's fusion theory.

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[20] „Jeder Geschulte kann wohl die klare Wirkung der Teilkonsonanzen herausisolieren, aber gerade der Musikalische merkt dennoch, daß sie innerhalb des Ganzen getrübt ist, ohne daß deshalb im entferntesten ihre Konsonanz auch schon in eine Dissonanz verwandelt würde" (Kurth 1931, 150).

[21] "Die Auflösung beruht auch nicht darin, daß die konsonanten Bruchteile sich zu erhalten und nur die Dissonanzen auszuscheiden streben, sondern daß sie mit diesen zusammen in einen neuen, auflösenden Klang drängen" (Kurth 1931, 150n1).

[22] Kurth 1931, 150.

Reconsidering fusion (II): Stumpf's experimental design, results, and conclusions

Not only does Kurth find Stumpf's theory of fusion too narrow in scope, but he also takes issue with Stumpf's experimental design and some of the more specific results and conclusions from the experiments. Though Kurth agrees with Stumpf that listeners experience simultaneities as fused complexes, he disagrees that all listeners experience fusion in the same manner all the time. Arguing that musical experience and aptitude are independent variables that cannot be ignored, Kurth writes,

> Stumpf beschränkt sich eben auf Einzelanalysen, soweit sie bei Zweiklängen experimentell nachzuweisen sind, und dabei rächt sich wohl noch eine andere Unzulänglichkeit seiner Methode: seine experimentellen Untersuchung beschränken sich nämlich ausdrücklich auf unmusikalische Versuchspersonen. Dieser Gedanke ist für den Gesichtspunkt der Tonpsychologie und Elementaranalyse ausgezeichnet; denn Stumpfs wohldurchdachtes Ziel war dabei, gerade durch Unvoreingenommene die natürlichen Gehörsanlagen festzustellen. . . . Demgegenüber muß man mit dem Übergang von tonpsychologischem auf musikpsychologisches Gebiet auch über das Feststellungsexperiment an Unmusikalischen weit hinausgehen, und gerade auf die musikalischen Wirkungen abstellen. Und das führt zur Erkenntnis, daß die Verschmelzungsgrade nichts absolutes, sondern etwas relatives und zudem variables sind, und sicher bis zu gewissem Grade auch etwas individuelles, wie es eben in der Natur psychischer Phänomene oft liegt.
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> [Stumpf limits himself to analyses of singularities, as far as they are proven experimentally in intervals, and he is thereby paying the price for another inadequacy of his method: **his experimental investigations are limited and expressly directed at non-musician subjects**. This approach is perfect from the standpoint of tone psychology and elementary analysis, for Stumpf's carefully thought-out goal was to establish the natural auditory system impartially. . . . In contrast, **in the transition from the tone-psychological to music-psychological area**, one must **go further beyond the experimental findings** on non-musicians and target the musical effects. And that leads to the recognition that the **degrees of fusion are never absolute but rather to some extent relative**, and moreover, **variable**, and surely

> to a certain degree, also **to some extent individualistic**, as is often in the nature of psychic phenomena.][23]

Stumpf's attempt to demonstrate the universality of fusion by using only non-musicians in a laboratory setting is unable to get at the heart of musical experiences more generally.

More to the point, however, is this: if the experimental design were ever to account for musical effects of fusion, that is if, in modern terms, it were to have greater ecological validity, intervals must be presented within a broader context. But of course, this approach poses problems for control, which Kurth knows full well. He writes,

> Diese Erscheinungen führen zudem wieder über die Verschmelzung einzelner Tonpaare hinaus zu einer Verschmelzung des Intervalls (als Ganzen) mit anderen Intervallen und Akkorden; wollte man nun in dieser Hinsicht auch eine Graduierungsskala aufstellen, so entzöge sich das bereits weitgehend solcher Experimentaluntersuchung, schon deshalb, weil hier noch weniger Stumpfs bloße Umfrage bei Unmusikalischen genügen könnte. Doch auch sonst müßte der Versuch einer Graduierungsskala hier bereits sehr erschwert sein, weil die Relativität der Wirkungen jede absolute Rangordnung für die Einzelintervalle auflöst; es hängt ganz von den übrigen gleichzeitigen Intervallen ab, wie stark sie verschmelzen; was nicht hindert, einzelnen Intervallen eine besondere Eignung hierfür zuzusprechen.
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> [These phenomena lead even further beyond the fusion of a single tonal pair to a fusion of the interval (as a whole) with other intervals and chords. In this regard, if one wanted to establish a graduated scale, more advanced [conclusions] from such experimental investigation would have been unavailable, **since Stumpf's simple inquiry of non-musicians would be even less capable of meeting this goal.** Besides, the attempt at a graduated scale must also be greatly hindered since the relativity of the effects dissolves any absolute ranking for the individual intervals. **The strength of fusion depends**

[23] Kurth 1931, 152.

> **entirely on the remaining simultaneous intervals**, which does not prevent isolated intervals from corresponding to a particular usage.][24]

While on the one hand (as previously quoted), "the musical person is also able to focus attention on individual partial dissonances," on the other hand, "non-musicians would be less capable of meeting this goal"—that is, they would be less able to pick out individual intervals from a larger complex. Yet we cannot ignore that "the character of an interval undergoes certain transformations of effect not only according to its insertion in a chord but also through melodic integration, i.e., it is subject to the law of resulting formation [i.e., the RF/C principle]."[25] Thus because both non-musicians and musicians experience intervallic fusion differently depending on the musical context (as the RF/C principle states), a fixed measure of fusion for each interval is elusive. Stumpf's ordinal ranking simply "dissolves" once we speak about the experience of intervals within chords or even melodies.

Further, Kurth argues that other non-pitch domains can influence the degree of fusion one perceives in a complex. Whenever a single tone within a simultaneity is louder than the others, our sense of fusion is impaired. Several other factors impact the experience of a unified complex:

> 1) timbral differences ("Access to new instruments does not always mean reinforcements, but rather often only color change or even weaker fusion"),[26]

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[24] Kurth 1931, 153–54.

[25] „Dazu kommt, daß der Charakter eines Intervalls nicht nur je nach der Einfügung in einen Akkord, sondern auch melodischen Zusammenschluß gewisse Wirkungsveränderungen erfährt, d. h. dem Gesetz der Resultantenbildung unterliegt" (Kurth 1931, 157).

[26] „Zutritt neuer Instrumente bedeutet nicht immer Verstärkung, sondern oft nur Umfärbung oder auch weichere Verschmelzung, Abschleifung von Grelligkeiten, zuweilen

2) registral spacing ("with the large space, for example over several octaves, fusion [of an interval] becomes weaker," and "fusion always seizes the middle voices more strongly than the outer voices [in a chord]"),[27]

3) the location of the pitch sources ("If, for instance, one tone is heard from the left, while the other tone is heard from the right corner of a room, one senses duality much stronger than unity, even with tones an octave apart").[28]

Thus even an interval that is "struck separately" is "inextricably bound with the instrumental sound colors, intensities, and attack" and in the case of melodic intervals, "with rhythmic accentuation differences."[29] This is in contradistinction to Stumpf, who argues that tonal register (*Tonregion*), intensity (*Stärke*), deviations in frequency, method of presentation (monophonic instead of stereophonic), and whether the interval is simple or compound have no bearing on the degree of fusion.[30]

All told, Stumpf's initial impetus for his experiments, their implementation, and his results reveal something of the psychic inner world at work, but are largely

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geradezu Dämpfung, namentlich bei Zutritt dunkler Klangfarben in den Mittellagen" (Kurth 1931, 146).

[27] „Auch bei großem Abstand, etwa über mehrere Oktaven hinaus, wird sie geringer. . . . Schließlich bleibt zu ergänzen, daß die Verschmelzung stets die Mittelstimmen stärker ergreift als Randstimmen" (Kurth 1931, 154).

[28] „Die Verschmelzung wird ferner beeinträchtigt durch verschiedene „Lokalisierung" der Töne d. h. wenn z. B. der eine aus der linken, der andere aus der rechten Ecke eines Raumes gehört wird; man empfindet dann viel stärker die Zweiheit statt der Einheit, sogar bei Oktavtönen" (Kurth 1931, 154).

[29] „Im Grunde ist auch der qualitative Eindruck des Intervalls selbst nie für sich herausgrenzbar; denn schon das für sich angeschlagene Intervall ist bereits unlösbar mit der instrumentalen Klangfarbe, Stärke und Anschlagsart verbunden, das melodisch zerlegte Intervall überdies mit rhythmischen Betonungsunterschieden" (Kurth 1931, 157).

[30] See Kim 2003, 125, for a list of what she terms Stumpf's "seven subsidiary laws of fusion," among which is the claim that degree of fusion is unaffected by the addition of a third tone.

irrelevant to musical practice. Further, the clinical, tone-psychological approach—particularly the narrow subject pool and musically impoverished stimuli—poses a sizeable barrier to research into three- and four-note simultaneities in context. Even if we were to accept that intervals could be studied in isolation, it is impossible to predictably define the degree of fusion for each, given their changeability over time, other non-pitch factors (timbre, volume, etc.), and the variability of subject responses. Thus "what one would like to call the specific impression of every interval is actually almost something imaginary, in spite of the sensual quality of impression."[31]

Reconsidering fusion (III): fusion as consonance

In our discussion of fusion thus far, we have discussed Stumpf's experiments as well as Kurth's dissatisfaction with their results and conclusions. We cannot ignore, however, an important corollary Stumpf puts forth, first in *Tonpsychologie*, and more explicitly in his 1898 article "Konsonanz und Dissonanz": fusion is a feature of consonant intervals. Responding to Helmholtz's definition of *dissonance* as roughness caused by acoustic beats among upper partials of simultaneous tones, Stumpf writes that the consonance of two tones lies "not with overtones or other causes outside of the consonant tones themselves but rather on an idiosyncratic sensory bearing of these tones to one another; consequently, they are less easily and less completely recognized as a plurality than

[31] „Somit ist das, was man den spezifischen Eindruck jedes Intervalls nennen möchte, eigentlich fast etwas ideelles, trotz der sinnlichen Eindrucksqualität" (Kurth 1931, 158).

the dissonant tones."[32] Stumpf's own definition of consonance, however, was not without its own problems, and it proved so unsatisfactory to Riemann that he took Stumpf to task in several publications, most notably in the articles "Was ist Dissonanz?" (1898) and "Das Problem des harmonischen Dualismus" (1905). As Rehding summarizes, "Riemann attacked the psychologist's notion of consonance, arguing that in proposing four levels of 'fusion' [ignoring the fifth, 'lowest' level, cited above], Stumpf had, like Helmholtz before him, introduced a relativized notion of dissonance. Riemann argued instead that consonance and dissonance are absolute phenomena, and that the basic unit of consonance is inextricably bound up with triadic shapes."[33] In his 1898 article, for instance, Riemann notes that by Stumpf's logic, a triad with two consonant major thirds, that is, an augmented triad, would be consonant—clearly a departure from musical reasoning. As a concession to Riemann, Stumpf (1911) proposed the twin concepts of "concordance" and "discordance" for consonance and dissonance at the chordal level;[34] a chord is concordant as long as each of its tones is consonant with another. He nevertheless maintains that there is a fundamental difference in our perception of consonance and concordance: "consonance is a matter of direct sensorial perception, [while] concordance is a matter of interpretation and of

[32] „[Die Consonanz zweier Töne beruht] . . . nicht auf Obertönen oder sonstigen Ursachen ausser den consonirenden Tönen selbst, sondern auf einem eigentümlichen sinnlichen Verhalten dieser zu einander, demzufolge sie weniger leicht und vollkommen als eine Mehrheit erkannt werden als die dissonirenden" (Stumpf 1886 [vol. 1], 101); original cited in Kim 2003, 131.

[33] Rehding 2003, 108–9.

[34] Kim 2003, 140ff., provides a lengthy account of the debate between Riemann and Stumpf.

relational reasoning."[35] Riemann was unhappy with this explanation, however, since he wanted a natural basis for the primacy of major and minor triads.

Kurth undoubtedly took notice of this debate as it was unfolding and was familiar with Stumpf's 1911 article,[36] so it is curious that in his own critique of fusion theory in *Voraussetzungen*, he fails to reference Riemann's criticism or Stumpf's subsequent addition of concordance. Perhaps Riemann's criticism resembled his own too closely? Indeed, Kurth, too, is dissatisfied that Stumpf's fusion experiments cannot account for the immediate sense of unity major and minor triads engender.[37] Yet, unlike Riemann, Kurth is very much concerned with style-historical changes and differences in compositional practice—which, notably, Stumpf's definition of *concordance* does acknowledge.

It is clear that even in 1913, Kurth found Stumpf's fusion theory compelling to an extent, for rather than accepting another term to account for triads, he would rather propose an alternative type of fusion. Kurth's displeasure with Stumpf lies in what he deems a "passive" and "analytic" notion of fusion. This is

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[35] „Konsonanz ist eine Sache der direkten sinnlichen Wahrnehmung, Konkordanz ist eine Sache der Auffassung und des beziehenden Denkens" (Stumpf 1911, 136); cited in Kim 2003, 150.

The 19th-century theorist Arthur von Oettingen also introduces the term "concordance" in contradistinction to "consonance" but in a manner opposite to Stumpf's usage. Peter Rummenhöller (1967, 86) writes, „Bezüglich der Auffassung der Klänge trennt von Oettingen die akustische von der musikalischen. ‚Konsonanz' nennt er nur die *musikalische* Auffassung der konsonanten Klänge, die in akustischer Hinsicht konsonanten nennt er ‚Konkordanz.'" ["With respect to the concept of chords, von Oettingen separates the acoustical from the musical. He calls 'consonance' only the *musical* perception of consonant chords, and the chords that are consonant in the acoustical sense he calls 'concordance.'"]

[36] Kurth cites "Konsonanz und Konkordanz" (1911) later in the book; see Rothfarb 1979, 162n1.

[37] See Rothfarb 1979, 94.

suggested, he argues, by Stumpf's contention that fusion is "an existing relationship and not a process."[38] In contrast, Kurth points to changing categories of consonance and dissonance—in particular, the "growing receptiveness toward [dissonance]"—as evidence that fusion can also be "active" and "synthetic." And he proposes the terms synthetic fusion and "fusibility" to describe the "'merging' of tones into one unit"—or our aural understanding that certain tones belong together in a given context.[39] Rothfarb (1979) posits further that analytic fusion "stems from an unconscious psychological process in the brain which analyzes the relationship of two tones and judges them as naturally unified (fused) or distinct." Kurth's so-called synthetic fusion, in contrast, is "based upon a conscious act by which we can understand two tones or more, according to context, as 'synthetically' fused."[40]

As Rothfarb notes, "Kurth's idea of synthetic fusion clearly stems from the important role of the third in his harmonic thinking."[41] Indeed, Kurth cannot accept without comment Stumpf's ranking of intervals. Though the interval of a fourth has a higher degree of analytic fusion than the third, the third serves as the "building material of a constructive [tonal] system," for it "evokes the feeling of a concentration compared to the empty fourth." Said differently, the third is the most "solid" interval, and Kurth argues, "the criterion for synthetic fusion"—the

[38] Stumpf 1890 (vol. 2), 129.

[39] Rothfarb 1979, 92ff.

[40] Rothfarb 1979, 215n1. Recall that Stumpf attributes fusion to brain activity or "synthetic synergies" (see above).

[41] Rothfarb 1979, 215n1.

extent to which a chord sounds unified—"would most certainly lie in the sensation of this solidarity."[42]

By 1931, Kurth's position has evolved, and he only very briefly mentions concordance and Riemann in *Musikpsychologie*.[43] Most significantly, Kurth no

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[42] Rothfarb 1979, 135n1.

[43] Kurth writes (146n3),

> Die Gesetze der Intervallverschmelzung werden hier vor allem durch das Phänomen der Dreiklangseinheit durchkreuzt, wovon noch zu sprechen sein wird. Diese wirkt auch zusammenhaltend auf die Töne und als akkordliches Einheitsphänomen auf ihre Auswahl und Wirkung stets zurück. Indem Stumpf mit der Verschmelzungslehre selbst nicht über Zweiklänge hinausging, war eben übersehen, daß von Dreitönigkeit an neue Verschmelzungskomplexe entstehen, deren wesentlichster in der eigenartig starken Einheit des Naturklangs vorgebildet ist (vgl. S. 174, Anm.). Dem suchte Stumpf später durch Aufstellung des „Konkordanz"-Begriffes Rechnung zu tragen, der sich auf Zusammenstellung ausschließlich konsonanter Tonpaare gründete und eigentlich eine Brücke zwischen Stumpfs Zweitonverschmelzung und dem Tonalitätsprinzip darstellte. Damit war ein Zwiespalt zwischen Verschmelzungs- und Konsonanzbegriff zumindest von der Dreistimmigkeit an aufgetan. Wundt (a. a. O. II, 120, 419 u. 431) scheidet denn auch den Begriff der Konsonanz schon von dem der einfachen Verschmelzung. Vgl. vor allem S. F. Nadel, „Zur Psychologie des Konsonanzerlebnisses" (Zschr. F. Pscyh. 101).
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> [Most importantly, the laws of intervallic fusion work at cross purposes with the phenomenon of triadic unity, about which there is still more to say. This also acts to hold the tones together, and as the phenomenon of chordal unity, bears on their selection and effect. By not going beyond the dyad with his theory of fusion, Stumpf overlooked the fact that beyond the triad, new complexes of fusion arise whose most essential nature is modeled in the peculiarly strong unity of the Chord of Nature (cf. p. 174, notes). Stumpf sought to recognize the importance of this later by setting up the concept of "concordance," which is based on the combination of pairs of tones that are exclusively consonant. [The idea] actually presents a bridge between Stumpf's intervallic fusion and the principle of tonality. For this reason, a conflict between the concepts of fusion and consonance can arise with, at the very least, three-note combinarions and beyond. Wundt (op. cit. II, 120, 419 and 431) also separates the concept of consonance from that of simple fusion. Cf. primarily S. F. Nadel, "Zur Psychologie des Konsonanzerlebnisses" (Zschr. F. Psych. 101).]

In a later aside, Kurth highlights the persisting focus on elements in Stumpf's revised theory. Kurth seems to confuse his publications, however, as he references Riemann's augmented-triad example as an objection to concordance:

> Indem nun Stumpf die Frage von Ober- und Differenztönen loslöst und auf ein psychisches Phänomen zurückführt, setzt er auch schon die Tonempfindungen

longer feels the need to distinguish between analytic/passive and synthetic/active fusion; instead, he challenges the idea that fusion is a purely physiological phenomenon. Kurth believes that all fusion—be it of intervals or chords—is psychologically motivated. Further, his RF/C principle underscores that every tone in an interval and every interval in a chord affects and is affected by the surrounding context. And finally, our experience of intervals and chords as fused (or not) takes place *unconsciously*.

He makes few allusions to the issue of fusion as equivalent to consonance in *Musikpsychologie*. Yet, he implicitly acknowledges that fusion and consonance are closely related—but only if fusion is first broadened beyond Stumpf's limited intervallic rankings. For instance, whereas in *Voraussetzungen* he posited that "fusibility" contributed to changing categories of consonance and dissonance, in *Musikpsychologie*, he attributes this to habituation (*Gewöhnung*). That is, we become accustomed to the effect of any interval as it is retained and repeated, and from this, we sense a greater degree of fusion in the interval. This type of habituation accounts not only for short-term responses to intervals (within an individual work), but to aesthetic shifts over the course of history. Thus Kurth

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selbst als Elemente voraus. Eine mehr als zweitönige Konsonanz nennt er „Konkordanz" und stellt als deren Voraussetzung hin, daß alle Kombinationen von je zweien ihrer Töne konsonieren; nicht nur der ‚übermäßig Dreiklang' beweist, wie ihm Riemann entgegnete, die Unhaltbarkeit diese Satzes, sondern die ganze dynamische Dissonanzlehre, die im folgenden auszuführen sein wird.

[While Stumpf now removes the question of over- and difference-tones and ascribes it to a psychic phenomenon, he also requires the tone sensations themselves as elements. He calls a consonance of more than two tones a "concordance" and presents as its requirement that all combinations of every two of its tones [must be] consonant; not only the "augmented triad," as Riemann countered, proves the indefensibleness of this statement, but also the entire dynamic theory of dissonance, as will be shown subsequently.] Kurth 1931, 166.

argues that habituation accounts for the "belated acknowledgment" of thirds and sixths as categorically consonant.[44] This is in stark contrast to Stumpf's conclusion that the degree of fusion of any interval—that is, one's perception of its "oneness"—is immutable once sounded.[45]

Kurth's focus on thirds, sixths, and triads, both here and in *Voraussetzungen*, underscores the central position of the "Chord of Nature" (the major triad) in his theory of harmony. As I illustrate in Chapters Five and Six, the Chord of Nature is an emblem of reprieve in Kurth's dynamic, highly dissonant-driven view of chordal progression. Before we proceed, however, let us turn to one final critical statement Kurth directed at Stumpf in 1913. Issuing a strong warning against the facile use of psychological findings, he writes,

> [A]s already indicated, the use of a procedure from a peripheral area of psychology is dangerous for music theory, as may be seen when, following the example of the explanation of consonance, ordinary or marginally verifiable phenomena are elevated, without justification,

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[44] Kurth (1931, 153) writes,

> Solche Gewöhnung an den Zusammenklang im Sinne einer Milderung kommt nicht nur in der individuellen Gehörsweise vor, sondern durchzieht die ganze Musikgeschichte: mit der Zeit werden Verschmelzungen stärker, die zuerst geringere Grade aufwiesen. Dies scheint schon bei der verspäteten Anerkennung von Terzen und Sexten als Konsonanzen mitgespielt zu haben, zeigt sich deutlich in der gesamten Vorentwicklung des harmonischen Hörens, dann in der voll entfalteten Tonalität wie in ihrer romantischen Weitung, wobei das letzte Jahrhundert ein besonders schnelles, sogar dauernd beschleunigtes Fortschreiten in dieser Richtung zeigt.
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> [Such habituation to the simultaneity in the sense of mitigation arises not only in the individual manner of hearing, but also throughout the entire history of music: with time, fusions that initially presented weaker degrees have become stronger. This appears to have played a role in the belated acknowledgment of thirds and sixths as consonances; [it] arises clearly in the entire preliminary development of harmonic hearing, [and] then in the fully developed tonality, just as in its extension in Romanticism. The last century exhibits a particularly rapid, continually accelerated progression in this direction.]

[45] Stumpf, 1890 (vol. 2), 129, 207, 208.

> to become the foundations of further development. **In no case is it possible to establish a system of music theory with the phenomenon of fusion as Stumpf formulates it, even though, conversely, a system may prove the correctness of its basic premise.**[46]

By 1931, Kurth hardly views psychology as a "peripheral area," or at least, he faces this "source of danger" head on. This change in opinion is a testament not only to the increasing prominence of psychological research over the 18 years separating *Voraussetzungen* and *Musikpsychologie* but also to Kurth's own shifting conception of who he is as a music scholar. For Kurth succeeds in proving the correctness of Stumpf's basic premise by establishing not a system of music theory in the traditional sense, but a music-psychological approach in a very novel sense.

[46] Rothfarb, 1979, 90.

CHAPTER FIVE

"Dynamism in the Chord"

Having explored how we might sense a single chord as a unity through the RF/C principle, we now turn to the dynamic experience of this chord, that is, the sense that it is active and perhaps even alive. In particular, we discuss two sources for the tension we feel in a chord: dissonance (in two varieties, acoustic and musical) as well as the tension between chordal root and chordal bass. In the first case, we will see that dissonances are always reckoned against an ideal Chord of Nature, creating a sense of urgency and forward drive. We will look at three categories of dissonance, focusing in particular on the alteration dissonance, a concept with which Kurth became associated. Fusion (and the RF/C principle) accounts for the thorough integration of dissonant tones into a previously consonant framework. In the second case, Kurth discusses competing gravitational centers in the chord and how they operate within inverted chords.

Musical dissonance and the Chord of Nature

Kurth distinguishes between dissonance as a purely "acoustic phenomenon" and "dissonance as a phenomenon of the will." The latter denotes the feeling of "energetic tension," of music striving towards a goal, seeking resolution and rest; Kurth refers to this experience more simply as "musical dissonance."[1] Acoustic dissonance (and its opposite, consonance) and musical dissonances (and

[1] „Die Dissonanz an sich wäre ein reiner Klangreiz, die musikalische Dissonanz aber ist eine energetische Spannung." ["Dissonance in itself would be one of pure sound stimulus, but the musical dissonance is an energetic tension."] Kurth 1931, 71. This characterization of musical striving can be traced back to Marchetto of Padua, if not Aristotle. See Cohen 2001.

consonances) are independent and can even contradict one another. When they do, they yield paradoxical phenomena such as the apparent consonance, that is, "intervals that are unresolved energetically but sound consonant."[2] Kurth, unfortunately for his reader, fails to provide any examples—nor does he mention that Riemann had previously proposed this term for triads that sound consonant but are modifications of his three main "harmonic pillars" (T, S, D) and therefore are conceptually dissonant.[3] Indeed, Kurth treats apparent consonance as an established category.[4] He extends this concept to its limits, however, noting that every (acoustically) consonant interval, including the octave, can be a musical dissonance in some context. Suspensions are particularly good at effecting this change from acoustic consonance to musical dissonance; Kurth writes, "Furthermore, one can also consider the individual consonant interval such that one of the tones or even both are sensed as tension tones (e.g., suspended)."[5]

And yet the reverse cannot be said; an acoustic dissonance (second, seventh), "does not fully approach [musical] consonance," even though it can seem more consonant relative to other forms of dissonance or, as part of a chord,

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[2] „bei energetisch ungelösten, klanglich aber konsonanten Intervallen" (Kurth 1931, 171–72).

[3] See Rehding 2003, 55ff. Riemann's first example of *Scheinkonsonanz* in *Harmony Simplified* (1896) is the cadential 6/4. See Wason 1985, 125.

[4] The "interpretation dissonance" (*Auffasungsdissonanz*) of Rudolf Louis and Ludwig Thuille offers a further precedent for Kurth's musical dissonance. This term appears in their broadly used *Harmonielehre* (1906), which went through more than 10 editions. Thus by 1931, the notion of apparent consonance may well have been established.

[5] „Zudem kann man auch jedes einzelne konsonante Intervall so umhören, daß einer der Töne, sogar beide als Spannungstöne (z. B. vorhaltsartig) empfunden werden" (Kurth 1931, 172).

through the effect of fusion.[6] This distinction suggests fundamental differences in the way we *experience* consonance and dissonance. Two comparisons Kurth makes highlight these differences:

> Doch bleibt zu betonen . . . daß die Einwirkung des Willens, die energetische Hörveränderung, durchgreifender ist gegenüber Konsonanzen als gegenüber Dissonanzen. Jene liegen gewissermaßen passiver, willenloser der musikalischen Aktivität offen, diese hingegen bilden selbst Widerstände, die schwerer zu überwinden sind
>
> [It remains to be emphasized . . . that the energetic transformation of hearing is more radical with regard to [acoustic] consonances than [acoustic] dissonances. The first lie to some extent passively, without will, open to the musical activity; the latter form resistances that are difficult to overcome.][7]
>
> Im weitesten Sinne hängt daher Konsonanz mit Ruhegefühl zusammen, Dissonanz mit Fortführungsdrang.
>
> [In a broader sense, consonance is accompanied by a sense of rest, dissonance with the drive for continuation.][8]

We thus experience music most often in a dissonant state, since we sense unrest even among acoustic consonances. This dissonant state is the source of continuation, the feeling of motion and striving that we discussed in Chapter Three.

Indeed, the centrality of "overcoming resistance" and the "drive for continuation" in the musical experience leads Kurth not only to emphasize musical

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[6] „Jedes konsonante Intervall (sogar die Oktave) kann ‚dissonieren', und dabei auf höchst verschiedene Art dissonant gehört werden; hingegen kann eine akustische Dissonanz (2, 7 usw.) nicht vollständig zur Konsonanz werden. Wohl aber kann sie sich konsonanter Wirkung nähern, und war auf zweierlei Weise, entweder im Vergleich mit viel stärkeren energetischen Dissonanzbildungen oder aber durch erhöhte klangliche Verschmelzungswirkung" (Kurth 1931, 172).

[7] Kurth 1931, 172.

[8] Kurth 1931, 174.

dissonance but also to reevaluate the term "dissonance" itself. He concludes that it is in fact a misnomer:

> Statt energetischer „Dissonanz" sollte man streng genommen: energetische „Distendenz" sagen; denn sie betrifft eine Unausgeglichenheit der Spannungen, da aber diese nur im „sonus" verspürbar werden so ist gegen die Ausdrucksweise von energetischer „Dissonanz" auch nichts einzuwenden.
>
> [Instead of energetic "sounding apart" one should, strictly speaking, say energetic "drifting apart"; for it concerns an imbalance of tensions, but as these only become noticeable in the "sonic" [world], there are no objections to the expression of energetic "dissonance."][9]

That is, often when we experience intervallic relationships or chords as dissonant, we are sensing conflicting inclinations of the tones. We only need consider an interval, for instance, whereby "one [tone] appears relaxed and at rest while the other belongs to an unfulfilled course of motion; or one is infused with potential tension while the other with flowing motion; or one carries an alteration tendency while the other an effect of weight." Since, however, we can only perceive these divergent tendencies through *sonus*, "dissonance" is a reasonable substitute. And in cases where "both [tones] are at rest or both are in the same type of tension or

[9] Kurth 1931, 173–74. As Kurth notes, changes to the source of dissonance accompany stylistic changes. A broader historical context reveals that the same intervallic succession can suggest different degrees of tension or musical dissonance. In the polyphonic style of Bach's time (before 1750), larger intervallic motions (e.g., e–g–c) in the melody were an expression of greater tension, while in the homophonic style of the classical era, they often brought about more stability. Different styles of music construct different norms, deviations from which lead to intensifications in tension; we in turn employ listening strategies that pick up on such norms and deviations. In the pre-classical "linear polyphony," one experiences "the growing difference in intensity" that arise as intervals become larger, while in the classical homophonic style, it is the "frequency-proportions" [ratios] that contribute to intensification in tension. The former leads to the aforementioned larger melodic steps, while the latter leads to dissonant chords. See Kurth 1931, 173.

motion"—in other words, when they are acoustically jarring but striving in the same direction—"dissonance" is more apt.[10]

Thus while the acoustic and contextual dissonances are independent phenomena, we sense in both a drive for continuation that subsides once we attain consonance, or a sense of rest. Historically, the Chord of Nature, a major triad derived from the first five partials of the overtone series, is the epitome and symbol of consonance, and moreover, the basis for the tonal system in many theoretical treatises.[11] Kurth notes that within the realm of tonal music, the Chord of Nature is experientially significant: we sense all chords in the tonal system gravitating towards the Chord of Nature; the Chord of Nature, in turn, provides an energetic balance to all other sensations of dissonance. He finds it notable that this energetic balance takes place alongside a physical balance, which the particular union of the three tones in the Chord of Nature produces:

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[10] „Diese liegt, ganz allgemein gesprochen, schon dann vor, wenn zwei gleichzeitige Töne verschiedenen Spannungszustand tragen, z. B. einer in Ruhezustand gelöst erscheint, der andere unerfülltem Bewegungszug angehört, oder der eine von potentieller Spannung, der andere von fließender Bewegung durchsetzt ist, oder der eine Alterationsstrebung, der andere Schwerewirkung trägt usw. Hingegen fehlt die energetische Dissonanz zweier Töne untereinander, wenn beide in Ruhe oder beide in gleichartiger Spannung oder Bewegung sind (was natürlich nicht ausschließt, daß beide zusammen noch einem klanglich oder energetisch ungelösten Zusammenhang angehören" (Kurth 1931, 174). See Krebs 2006 (article) for a discussion of Dissonanz. Kurth's distinction between *Alterationsstrebung* and *Schwerewirkung* is an allusion to two of the three kinds of dissonances he discusses; we turn to these further below.

[11] Suzannah Clark (1999) provides a fascinating account of the overtone series in Schenker's *Harmonielehre* and *Der Freie Satz*. Briefly put, Schenker regards the overtone series as Nature's "hint," one that was up to the artist to divine. That the overtone series as well as organic replication are infinite while the tonal system and its elements (such as the triad) are finite reflects the necessary intervention of the artist. Clark (1999) writes, "As Schenker saw it, humans needed to create a closed musical system, to limit nature because nature had imposed limits on them: the ear (God-given) is capable of hearing only a certain number of partials; the voice (God-given) can sing only within a certain range. . . . [N]ature created us with a limited ability to perceive and to make sound; and we (particularly, the artist) therefore needed to limit nature" (87).

> Die durchgreifende Bedeutung des Naturklangs (Durdreiklangs) liegt denn auch darin, daß er unter den Akkorden als der Inbegriff der Konsonanz auch Grundlage und Entspannungssymbol wurde. Die Gravitation der Töne gegen die Naturklangform ist die psychische Parallelerscheinung zum physikalischen Phänomen, das die Naturtöne in besonderer Vereinung zeigt. So ist es auch leicht erklärlich, daß sich die Empfindungen von klanglicher und energetischer Ausgeglichenheit miteinander verbanden.
>
> [The sweeping significance of the Chord of Nature (major chord) rests in the fact that it became the epitome of consonance among chords as well as the foundation and symbol of tension release. The gravitation of tones towards the Chord of Nature is the psychic parallel phenomenon to the physical phenomenon that displays the tones of the Chord of Nature in a particular union. In this way, it is easily explained that the sensations of sounding and energetic balance are bonded to one another.][12]

Though the Chord of Nature takes the form of a major triad, not all triads engender the release of tension; apparent consonances, for instance, do quite the opposite. Rather, the Chord of Nature is an ideal form, a referential structure against which all other chords are measured and to which all other chords relate:

> Aber dies bedeutet eben noch nicht, daß jeder Durakkord Entspannungsakkord ist, es gibt unzählige Abweichungen davon; andrerseits beziehen sich diese alle wie überhaupt die gesamten Dissonanzen doch wieder ideell auf seine vorschwebende Grundform, und in diesem Sinne bleibt er Grundlage, mag er durch die Fülle der Erscheinungen noch so verschleiert sein.
>
> [This does not mean, however, that each major chord is a chord that releases tension; there is a myriad of deviations from this. On the other hand, all of these [deviations], just as generally all dissonances (however ideally), refer to the basic form of the chord of resolution [i.e., the Chord of Nature]. And in this sense [the Chord of Nature] remains fundamental, even though it may be disguised through the abundance of phenomena.][13]

[12] Kurth 1931, 174.

[13] Kurth 1931, 174–75.

As Kurth notes, writings on the Chord of Nature are so plentiful that they defy a simple summary. In general, Kurth sees two camps, however: authors who regard the Chord of Nature as a natural, universal phenomenon, and those who believe it is culturally conditioned and evolutionary. He demonstrates that the two views are in fact reconcilable. The overtones were gradually emphasized in compositional practice, particularly at cadences. First the unison and octave, then the fifth, and finally the major triad were used as final resting points, even in minor keys. So in this way, the "natural" basis for the Chord of Nature (through the overtone series) holds. He also acknowledges the role of habituation, as over time, the continual use of the major triad solidified its primary position:

> [D]iese jahrhundertelange, mit den Anfängen der Mehrstimmigkeit dann schon verwurzelte Gewöhnung habe die Oberklangsverhältnisse zur musikpsychologischen Grundlage umwandeln helfen. Es kann wohl ohne weiteres angenommen werden, daß naturgegebene Disposition und Gewöhnung zusammenwirken; in dem Sinne nämlich, daß erstere vorhanden ist, vielleicht ursprünglich andeutungshafter, nicht so zwingend, mit der eingeschlagenen Entwicklungsrichtung aber sich gefestigt habe.
>
> [This habituation, which is centuries old, [cultivated] since the beginning of polyphony and now rooted, has helped convert the overtone relationships into the music-psychological foundation. It can be readily accepted that natural disposition and habituation interact, namely in the sense that the first is available, perhaps originally hinted at [and] not absolutely necessary, but [it] consolidated itself with the continual direction of development.]

Thus, the two schools of thought regarding the Chord of Nature—natural vs. evolutionary—are inextricably linked.[14]

[14] Kurth 1931, 174n1.

"Heavy" and "light" dissonances

As Kurth notes, theorists have not always looked upon dissonances as an important driving force in music. In the twelfth and thirteenth centuries, he says, dissonances were *negatively* classified, that is, as notes that required "treatment" without affecting the rest of the chord.[15] Authors spilled a good deal of ink establishing rules for how and where dissonances could be incorporated. Even up to the twentieth century, dissonances were treated as intrusions in relation to the chord. Kurth notes that Riemann, for instance, regards a chordal dissonance as an "opposition to the unity of a chord," since unlike the remaining consonant members it cannot be a representative of the whole. For Kurth, this is "an inadequate explanation for the effect of dissonance."[16] He would much rather

[15] „Im 12. und 13. Jahrhundert wurden sie mehr negativ gewertet, d. h. man suchte mit ihnen fertig zu werden, ohne daß ihr spezifischer Klang mehr störte" (Kurth 1931, 78).

[16] Kurth writes (191n2),

> Nach Riemanns Theorie bestehe die Dissonanz überhaupt darin, daß sie „Widerspruch zur Klangeinheit" sei, d. h. sich nicht mit den übrigen Tönen als Vertretung des gleichen Klanges auffassen lasse. Dies ist ebenso treffend wie es für die Erklärung der Dissonanzwirkung unzulänglich ist; denn logische Auffassung erzeugt nicht die Dissonanz, sondern bestätigt sie nur. Letzeres ist zwar der Prüfstein für die Richtigkeit einer theoretischen Erklärung (auch außerhalb von Riemanns Klangsystem), aber indem Riemann auch hier die Erscheinung bloß logisch fundieren wollte, hat er es sich psychologisch zu leicht gemacht. Nicht Verstandeskonflikte, sondern energetische Vorgänge schaffen und charakterisieren die Dissonanzwirkung. So fehlt z. B. auch bei Riemann jegliche Erklärung für die abwärtsweisende Tendenz von Akkordsepten, Nonen usw. —Auch was Riemann als „stellvertretende" Töne oder Klänge bezeichnet, beruht nie in einer rein intellektuellen, sondern einer Strebungs-Beziehung.
>
> [**According to Riemann's theory, the dissonance is an "opposition to the unity of the chord,"** i.e., it cannot be understood along with the other tones as a representative of the same chord. This is as apposite as it is inadequate for the explanation of the dissonance effect. For logical conception does not create dissonance, but rather only confirms it. [Logic] is certainly the touchstone for the correctness of a theoretical explanation (even outside of Riemann's system of chords), **but because Riemann also wanted to establish this phenomenon merely logically, he treated it too lightly from a psychological perspective.** It is not

classify the dissonances *positively*, as constructive elements. And he notes that even in this positive conception, dissonances lie less in the chordal stimulus itself than in the listener's experience that they are "the carriers of dynamic intensity." That is, we sense that they set music in motion in a very intentional way and hardly as an afterthought:

> So entstand die konstruktive Dissonanz, deren Wesen darin beruht, daß sie in Spannungsbeziehung zur Konsonanz tritt und mit dieser Spannungsbeziehung weiter in den Dienst des ganzen Tonarts- und Formzusammenhangs. Der Gegensatz bleibt dann die „akzidentielle" Dissonanz.
>
> [Thus the constructive dissonance developed its essence based in the fact that it enter into a tension-relationship with the consonance, and, with this tension-relationship, [acts] further in the service of entire tonal and formal connections. **The contradiction, then, is the "accidental" dissonance**.][17]

Having clarified the nature of dissonance, Kurth proposes three categories of "tension forms": "chordal dissonances (7ths, 9ths), voice-leading dissonances (neighbor and passing tones, anticipations, suspensions, pedal tones), which are familiar under the contestable designations of 'incidental' or 'unessential' dissonance, and the alterations."[18] I will discuss the first two, which are familiar

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> conflicts of understanding but rather energetic processes that create and characterize the dissonance effect. Thus Riemann's theory is even lacking any explanation for the downward-directed tendency of chordal sevenths, ninths, etc. —Even what Riemann calls "substituted" tones or chords are never based on a purely intellectual relationship, but rather on a relationship of striving.]

See Wason 1985 (esp. 40, 156n13; and 123) for accounts of *Stellvertreter*, which stems from Rameau's idea of "implied" harmonies, in the theories of Sechter, Bruckner, and Louis and Thuille.

[17] Kurth 1931, 178.

[18] „Die charakteristischen Spannungsformen werden psychologisch deutlich, wenn man sich die Dissonanztypen vergegenwärtigt. . . . Für diese sind im wesentlichen drei Dissonanzgruppen zu scheiden: die Akkorddissonanzen (7, 9), die Stimmführungsdissonanzen (Neben- und Durchgangsnoten, Vorausnahmen, Vorhalte,

from traditional music theory, in this section, leaving the third, which originated with Kurth in *Voraussetzungen* and came to the fore in *Romantische Harmonik*, for the section that follows.

Issues pertaining to the first two categories are well known; theorists generally distinguish types of dissonances—otherwise known as non-harmonic tones or embellishing tones—in terms of metrical placement (does the dissonance fall on the strong or weak part of the beat?) and direction of motion (is it approached/resolved from above/below?). Rather than tread this well-worn ground, Kurth takes an experiential perspective, considering the extent to which we experience dissonances as having *weight* and *matter*. For instance, he notes that with acoustic dissonances, we have a "markedly downward-directed pressure sensation," which produces an impression of gravity (*Schwere*). This sensation is particularly strong with suspensions and chordal dissonances. He notes that chordal dissonances were originally treated as suspensions in recognition that there was a "boost"—an increase in the amount of "matter" the chord appears to carry at the moment of suspension:

> Gleich in besonders intensiver Form setzt sich bei einem Teil der akustischen Dissonanzen jene merkwürdige, ausgesprochen abwärtsgerichtete Druckempfindung fest, die den Scheineindruck der Schwere hervorruft. Sie kettet sich an die Vorhaltsbildungen und an die Akkorddissonanzen; die ersten sind die historish älteren, und noch lange erklärte man als Vorhalte auch die Akkordsepten und –nonen, bei denen die Schwere noch durch das akkordliche Aufbauempfinden eine Förderung erfährt, wovon später zu sprechen ist. Eine andere psychologische Ursache diese Schwere-Empfindens liegt vor allem darin, daß die gesteigerte Dynamik im Klangreiz auch einen sehr intensive Materie-Eindruck hervorruft.

Liegestimmen), die unter den anfechtbaren Bezeichnungen ‚zufälliger' oder ‚unwesentlicher' Dissonanzen geläufig sind, und die Alterationen" (Kurth 1931, 176).

> [With the particularly intensive form [of tension], that strange, markedly downward-directed pressure sensation fastens onto the acoustic dissonances, to an extent, causing the apparent impression of weight. It chains itself to the suspended forms and to the chordal dissonances; the first are historically older and for a long time one even explained the **chordal seventh and ninth as suspensions** in which the weight experiences a boost through the chordal sense of construction, about which will be spoken later. Another **psychological cause of this sensation of weight** lies generally in that the increased dynamic in the sound-stimulus also causes a very intensive impression of matter.][19]

Furthering the analogy to weight and mass, and in contrast to the *Schweredissonanzen* just discussed, Kurth proposes "lighter" dissonances, such as neighbor and passing tones. Unlike chordal 7ths and 9ths or suspensions, there is no accompanying sensation of weight or downward pull; quite the opposite, these more fleeting voice-leading dissonances "are easily carried through the directed motion of the voices."[20] Also unlike the weightier dissonances, lighter dissonances do not necessarily add additional acoustic tension, for as we know, neighbor and passing tones come in both acoustically dissonant and consonant forms. Yet, as Kurth notes, even consonant tones have an "unresolved effect," and to return to his previous point, a "drifting apart."[21]

Alteration dissonances

The third kind of dissonance is a hallmark of Kurth's analyses, particularly in his *Romantische Harmonik* (1920). There, as Rothfarb has closely

[19] Kurth 1931, 176.

[20] „Zunächst tritt er [d. h. Trugeindruck] in Gegensatz zu jenen ‚leichteren' Dissonanzen, die einfach durch den Bewegungszug der Stimmen getragen sind" (Kurth 1931, 177).

[21] „Die fließende Bewegung vermag die Dissonanzen zu tragen, weil sie unerfüllter Gegensatz zum Stillstand ist; es entstehen dabei gar nicht lauter Dissonanazen, indem es genug konsonante Durchgangs- und Wechselnoten gibt, aber auch diese konsonanten Töne wirken ungelöst, ‚distendent'" (Kurth 1931, 177).

documented,[22] Kurth lists three components of what he identifies as a Romantic "alteration style": harmonic alteration, which entails the chromatic modification of a chord tone "without the necessity of previous linear motion";[23] neighbor-note insertion, whereby we sense a foreign tone in the chord that strives outward, towards the following chord;[24] and chromatic chord progression, "the principle of stringing chords together based on pure chromatic progression of all or of individual tones, and no longer based on tonal relationships."[25] In *Musikpsychologie*, Kurth's scope is broader without a specific focus on an alteration *style*; instead, by keeping a diatonic framework ever present, he offers insight into how this style emerged from basic, psychologically motivated practices. There are two ways in which Kurth speaks about dissonant alterations in 1931: 1) a chromatic modification of a chord tone, which produces a "leading-tone effect"; and 2) an energetic alteration—our feeling that the direction of striving of a particular pitch changes when it resolves unexpectedly. The first way is a hybrid of the chordal alteration and neighbor-note insertion techniques; in fact, Kurth may have realized that his previous distinction between these two entailed a fair amount

[22] See especially Rothfarb 1988, 133, 167, 176ff.; Rothfarb 1991, 110–18, 130.

[23] Rothfarb 1991, 110.

[24] In the opening *Tristan* motive, the G♯ in the upper voice is a neighbor-note insertion that leads towards A; the F♮ in the bass voice is a harmonic alteration (of the chord-tone F♯). See Rothfarb 1991, 112.

[25] Rothfarb 1991, 111. Robert Wason notes that alteration-style techniques are trademarks of the "Munich School" of composers. Ludwig Thuille, a member of this school, and his collaborator Rudolf Louis discuss chromatic and enharmonic techniques in unparalleled detail in their widely successful *Harmonielehre* (1906). Regarding altered harmonies, they write: "Harmonies originating through chromatic alteration of a chord tone, which may not be found as *diatonic formations* in any key, are called *altered chords* in the authentic and narrow sense of the word" (Trans. Wason and Errante 2010, xv).

of hair splitting.[26] The second way is more commonly referred to as harmonic "reinterpretation"; indeed Kurth cites this term and notes that it belongs "to that which is psychologically most peculiar."[27] That Kurth discusses reinterpretation immediately after chromatic alteration suggests strongly that he regarded them as similar phenomena: both types of alteration create strong *Distendenz*, if not always acoustical dissonance. As we will see below, Kurth provides very basic examples—individual chords or intervals—to illustrate aspects of these two categories. Rather disappointingly for us, however, and perhaps ironically given his criticism of Stumpf, these examples never take place within a specific musical context. If Kurth had specific repertoire in mind—plausible given the pitch-specific nature of his examples—he withholds it from the reader. Thus we can only assume that he expected his readers to have an intimate familiarity with late-19th- and early-20th-century compositional practices.

In a chromatic alteration, a chord tone is "inflected" by chromatic half step, and this new chromatic tone is in turn a half step away from the closest diatonic note in the following chord. Thus the effect of the leading tone, that is the sense of directionality we feel as $\hat{7}$ "moves" to $\hat{1}$ emerges through this substitution. But it is more than the simple presence of a semitone that creates this leading-tone effect.

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[26] Indeed, already in *Romantic Harmony*, Kurth distinguishes between the two but also provides an immediate qualification: "Neighbor-note insertion is thus the interpolation of foreign tones that strive *into* the chord, just as the chromatically altered tones of the first variety strive *out of* the chord. The two phenomena are thus opposite in a certain respect. Nevertheless, they are not usually found strictly apart from one another, and both are generally termed alteration since the distortion of the harmonic image with tension tones is common to both" (Rothfarb 1991, 112).

[27] „Zum psychologisch Sonderbarsten gehört die sog. ‚Umdeutung' der Dissonanzen, d. h. die Möglichkeit, einen Klang anders aufzufassen als er eintrat" (Kurth 1931, 191).

The sense of direction must be countered by a subsequent sense of dissipation or resolution. It is this equal and opposite response that creates the "energetic moment":

> Zunächst rührt die Leittonwirkung vom letzten Schritt der Grundskala (z. B. h–c in der C-Dur-Skala) her, bei dem sehr deutlich das Gefühl der krisenhaften Zielannäherung, des Hinleitens, sich mit dem Septton (h), das der Ableitung, Auflösung, mit dem wiedererreichten Grundton c verbindet. Das Problem konzentriert sich also zunächst wieder ganz allgemein auf das Ansetzen eines energetischen Moments an einem klanglich gegebenen. Die Übertragung von Drangempfinden auf das Nähe-Empfinden ist hier die psychische Grundfunktion, die sich im lebendigen Hören herausgebildet hat. Aber damit ist das Wesentliche noch nicht erschöpft; denn es liegt zweierlei vor: im Leitton der Drang, im Leittonschritt aber schon dessen Lösung.
>
> [Initially, the leading-tone effect originates from the last step of the fundamental scale (e.g., B–C in the C major scale), whereby the sense of the critical approach to the goal, of direction, is bound with the seventh scale degree (B), and the sense of dissolution, resolution, is bound with the attainment of the fundamental tone, C, once more. The problem, initially in general terms, focuses on the entrance of an energetic moment that is given in a sounding [moment]. The transference from the sensation of drive to that of nearness is the psychologically basic function that has evolved in dynamic hearing. But with it, the essential is not exhausted; for it is available in two ways: in the drive in the leading tone, but also in its resolution, the leading tone step.][28]

The will of the listener/composer determines whether a melodic augmented unison intensifies and takes on a leading-tone effect, or whether it accepts a "lighter degree of tension," emphasizing instead the ease (relatively low effort) of nearness.[29] In this way, one is presented with a duality of dynamic content in the semitone.

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[28] Kurth 1931, 179.

[29] Kurth notes: „sie [d. h. die kleine Sekunde] kann als Ausdruck der Tonnähe einen leichteren Spannungsgrad annehmen, in welchem die leichtflüssige (schwächliche)

Though the leading-tone effect refers to the sense of melodic inclination, Kurth notes that one feels a similar tendency for harmonic intervals and chords. Regarding the former, he writes:

> Übrigens kann auch im Zusammenklang die kleine Sekunde (wie jede Dissonanz) zweierlei Wirkung hervorkehren: entweder das Auseinanderstreben der Töne gegen eine Auflösungskonsonanz zu, oder das Zusammenstreben zur Verschmelzung, zum spezifischen Intervallreiz, der eine gewisse Herbheit und Intensität gewinnt, wenn die Tonkomponenten dissonieren.
>
> [Incidentally, even as a simultaneity, the m2 (like every dissonance) presents a double effect: either the striving away of the tones towards a consonant resolution, or the striving together towards fusion, towards the specific intervallic sound that obtains a certain harshness and intensity when the tonal components are dissonant.][30]

That is, we can experience the components of the intervallic complex as restless, pursuing different targets (e.g., d5 resolving inwards in a viio7 chord). Or, we can experience them as a fused unit, albeit one that contains some acoustic tension (e.g., A4 resolving in similar motion). Context certainly plays a crucial role. Likewise we experience alteration dissonances within a chord as striving outwards towards resolution or as integral elements that lend chromaticism (in the sense of color) to the chord.

In both chordal cases the Chord of Nature is central. Kurth posits that with the alteration tones there is a "gravitation" (in a slightly different sense from the downward pull of the *Schweredissonanzen*) or tendency towards the triadic form: "The gravitation of the tones towards the naturally given triadic form generally

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Chromatik der Salon- und Kitschmusik wurzelt." ["They can accept, as expression of the tonal proximity, a lighter degree of tension, in which the mobile (feeble) chromatics of the salon- and kitsch music is rooted."] Kurth 1931, 180.

[30] Kurth 1931, 179n2.

develops very strongly here; it [the triadic form] acts as a regulative principle on foreign tones, and either attracts or repels [them]."[31] With the continual development of tonality, the strength of the triad as a gravitational center—our sense that notes are inclined towards this regulative structure—has increased. Kurth writes that it is only through "intensive fusion" that the triadic structure is overcome.

> An der Kraft, mit der Fremdtöne (auch Vorhalte usw.) oft in das Klanggerüst hineingezogen werden, kann man sich die Stärke der Gravitationskraft vom Dreiklang vergegenwärtigen. Es ist auch gar keine Frage, daß ihre psychische Intensität mit der Herausbildung der Tonalität zunahm, wie andrerseits unsere Psyche ihr bis zu gewissem Grade entgegenwirken, sie z. B. durch intensivere Verschmelzung verdrängen kann, die freilich auch nie eine Abhängigkeit vom Dreiklang ganz aufhebt.
>
> [With the energy with which foreign tones (even suspensions, etc.) are drawn into the chord structure, one can envision the strength of the force of gravitation from the triad. **There is also no question that its psychic intensity increased with the development of tonality**, just as, in contrast, **our psyches counteract it to a certain extent**; it can be suppressed, for instance, through more intensive fusion, which never entirely removes a dependence on the triad.][32]

Melodically unfolded chords have an even greater pull towards the root-position triad. As a more extreme example, Kurth provides the acoustically consonant structure C–E–A (an A minor triad), in which one could sense "according to a free will," the A as "a strong compressive stress against the G (to produce a C major

[31] „Das Gravitieren der Töne zur naturgegebenen Dreiklangsform prägt sich hier überall sehr scharf aus; sie wirkt als eine ordnendes Prinzip auf klangfremde Töne, und zwar entweder anziehend oder abstoßend" (Kurth 1931, 181).

[32] Kurth 1931, 181.

triad)."[33] One could argue that surely the key in which this structure functions—A minor or C major, for instance—determines our hearing of its direction. Taken alone, however, this chord is more readily heard as an alteration of a major root-position triad, the Chord of Nature.

There are also several ways in which we experience an alteration within a chord even if the pitches themselves are unaltered. And indeed, the long history of preparing dissonances sets this into relief. Kurth notes that for a long time, composers treated "weighty dissonances," (chordal dissonances and suspensions) with extra care, making sure to "prepare" the dissonant note within the prior chord. That this occurs not only in vocal music but also in instrumental music, suggests that there is something more to preparation than simply a vocal aid. Indeed, we sense that the tone itself undergoes a transformation:

> Die Verwandlung des Tones in eine Dissonanz während seines Festliegens ist ein stark architektonischer Zug, was die Vokalmusik besonders seit dem vorschreitenden 16. Jahrhundert deutlich verspüren läßt, aber auch noch die Instrumentalmusik bis in die Zeit der Wiener Klassiker.
>
> [The transformation of the tone into a dissonance during its immobile state is a strong architectonic progression that is sensed markedly in vocal music, especially throughout the 16th century, as well as in instrumental music up into the Viennese classical period.][34]

Kurth further notes,

> Diese Dissonanzvorbereitung beweist auch, daß man den Dissonanzzustand weniger als Erscheinung an sich, sondern als Zustandswechsel im Ton aufnimmt; somit als etwas relatives, wie es im Begriff der dynamischen Empfindung liegt. Dieser Wechsel ist

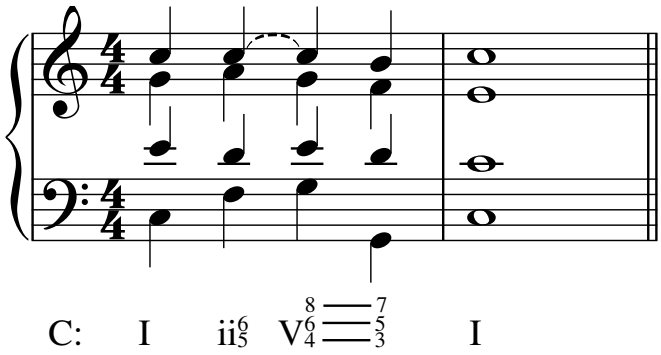
[33] „so kann im Gebilde *c–e–a* (a-Molldreiklang) jederzeit nach freiem Willen das *a* sogar als starke Druckspannung gegen das *g* hin (C-Durdreiklang) empfunden werden" (Kurth 1931, 181).

[34] Kurth 1931, 186.

> übrigens ein Prinzip, dem auch gleich im Phänomen der Akkordspannung und den höchst sonderbaren psychologischen Möglichkeiten der Dissonanz-„Umdeutungen“ zu begegnen sein wird. Ein Wechsel des Spannungszustandes im gleichen Ton findet auch reiche technische Ausnützung in den Fällen, wo eine Dissonanz liegen bleiben kann. . . . Eine Liegenbleiben (statt einer Weiterführung) ist nämlich dann möglich, wenn eine Dissonanz in einem neuen Akkord wieder Dissonanz ist (z. B. aus einer Sept zu einem Vorhalt wird oder dergleichen), um dann mit dieser erst nachträglich aufgelöst zu werden; hingegen braucht sie im neuen Akkord nicht Dissonanz gleicher Spannkraft zu sein.
>
> [**This preparation of dissonance also indicates that one accepts the dissonant condition less as a phenomenon in itself but rather as a changing state in the tone**—thus as something relative, as it lies in the concept of the dynamic sensation. **This change is incidentally a principle that is to be encountered equally in the phenomenon of the chordal tension and the most peculiar psychological possibilities of dissonant-“reinterpretations.”** A change in the tension state in the same tone is also found in rich technical application, in the case where a dissonance can remain stationary. . . . Remaining stationary (instead of being continued) is possible when a dissonance continues to be dissonant in a new chord (e.g., becoming a suspension from a seventh, or the like), only then to be resolved afterward; however, **it does not need to be a dissonance of the same force of tension in the new chord.**][35]

Thus Kurth relates dissonance preparation to other instances where one senses a change in the dynamic inclination of the tone. He mentions dissonant reinterpretations, which we will discuss further below, as well as cases where an already dissonant tone is retained in the following chord to become another type of dissonance. Kurth cites the example of a seventh that, rather than resolving immediately, becomes a suspension in a second chord that resolves in a third chord. The progression shown in **Example 5.1** may have been what he had in mind. Kurth stresses that we experience the repeated tone differently in the two cases; that is, we sense an alteration in its level of tension.

[35] Kurth 1931, 187.



Example 5.1. *Suspended dissonance experienced with different degrees of tension*

It is also possible to sense, retrospectively, a transformation in tension when tones in a dissonant chord connect to tones in the next chord in an unexpected way. This is the basis for what Kurth calls the "half-enharmonic reinterpretation" (*halbenharmonischer Umdeutung*) whereby a portion of the tones behaves unexpectedly, often as their enharmonic equivalents.[36] Chords that can be spelled such that they contain an augmented sixth or diminished third spring to mind as conducive to this effect. And indeed, Kurth provides examples of such chords with resolutions that would have been common in the repertoire of his time[37]:

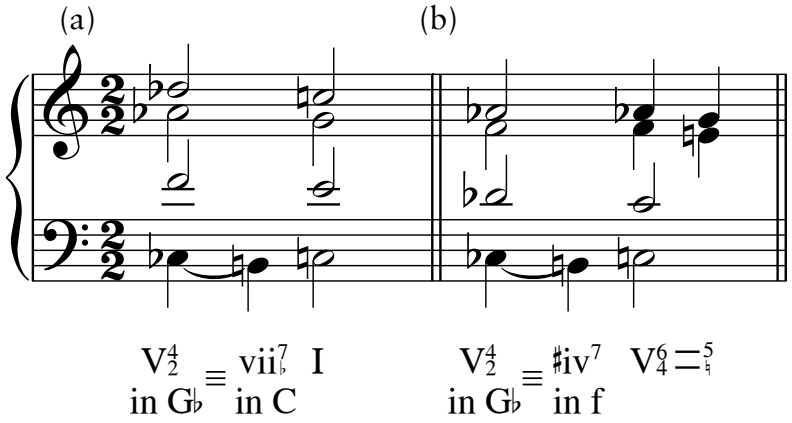
> Z. B. wenn man einen als *h–des–f–as*, also alterierten verm. Septakkord, eingeführten Klang als *ces–des–f–as* (Umkehrung des Dominantesptakkords [*sic*] *des–f–as–ces*) liest und dementsprechend harmonisch weiterleitet, oder wenn man *g–b–des–f* nach dem F-Durakkord auflöst, wobei der ursprüngliche Dissonanzton *f* zum festen Halteton *g*, *b* und *des* zu Spannungstönen umgedeutet werden.

[36] Kurth distinguishes "half-enharmonic reinterpretation" from "enharmonic reinterpretation," whereby every note in a chord is enharmonically altered and the chord assumes a new function. Kurth's provides the example (234n3) of a C♯ major triad respelled to become a D♭ major triad, such as when V in the key of F♯ becomes ♭VII in e♭ minor.

[37] Wason discusses several creative instances of augmented-sixth/diminished-third treatments in the repertoire of Munich School composers. See Wason and Errante 2010, xiv–xvii.

> [For example, if one [1.] reads an established chord C♭–D♭–F–A♭ (an inversion of the dominant seventh chord D♭–F–A♭–C♭) as altered seventh chord, B–D♭–F–A♭ and treats it harmonically according to this spelling, or [2.] when one resolves G–B–D♭–F towards the F major chord, where the original dissonant tone, F, is reinterpreted as the fixed, held tone and G, B, and D♭ are tension tones.] [38]

In Kurth's first example, realized in **Example 5.2**, a V4/2 chord in G♭ is enharmonically respelled to create an "altered seventh chord." Though Kurth is vague on the relationship of this chord to its surroundings (one simply "treats it harmonically according to this spelling"), Example 5.2 shows two possible contexts for the "half-enharmonically reinterpreted" chord: (a) as an altered vii^{o7} chord with lowered $\hat{2}$ in C; and (b) as an altered pre-dominant seventh chord built on $\sharp\hat{4}$[39]:

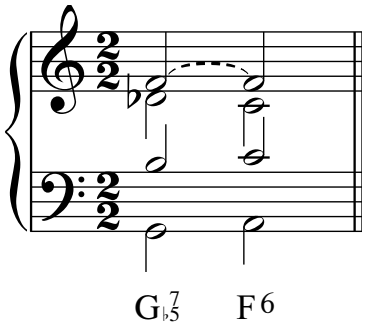


Example 5.2. *Two possible resolutions of Kurth's "altered seventh chord"*

[38] Kurth 1931, 191n1.

[39] In *Romantische Harmonik*, Kurth analyzes a passage from *Rheingold* (Act 4, m. 5) that contains this progression. There, he interprets the altered seventh chord as vii7/♭5 of V (secondary dominant) leading to V. See Rothfarb 1988, 168. In his article "Supplement to the Theory of Augmented Sixth Chords," Daniel Harrison points to this exact progression (spelling and all) in Liszt's Orpheus as an example containing a "rare" dominant-functioning augmented sixth chord. See Harrison 1995, 179 (Ex. 6).

In the second example, realized in **Example 5.3**, Kurth discusses the resolution of what could be a V7/♭5 in C or an inversion of a French augmented sixth in F (with D♭ as the lowest note)—among other interpretations. The "dissonant F" is sustained and becomes a consonant tone in the chord of resolution. This example bears a striking resemblance to Example 5.1 (ii7 to cadential 6/4), only here, with a more drastic change in tension state.[40]



Example 5.3. *Common-tone resolution of G7/♭5*

In all of these cases, Kurth stresses, we sense that the locus of tension within a chord shifts to another part of the chord as all voices move forward in time. He thus notes that as a reasoned construct, "reinterpretation" is first based in a transfer of energy.[41]

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[40] Note that as an inverted French augmented sixth, this chord resembles a textbook "common-tone augmented sixth" chord, whereby, in the words of Aldwell and Schachter, "the interval of the augmented 6th [in this case D♭ and B] resolves normally by expanding [here, contracting] into an octave." Taking Kurth's spelling, this chord also resembles what the authors call a "common-tone 'dominant seventh'" chord; mm. 30–37 from Schubert, "Gute Nacht!", *Winterreise*, D. 911 contains an example. See Edward Aldwell and Carl Schachter, *Harmony & Voice Leading*, 3rd edition (Belmont, CA: Thomson Learning, 2003), 557–58.

[41] „Das beruht auf der Möglichkeit, die Dissonanzspannung an anderer Stelle aus dem Klang abzuleiten als sie eingeführt war; und dies setzt eben wieder voraus, daß sich etwas von ihrer Spannung auch über den ganzen Akkord ergoß. Die ‚Umdeutung' als

One last dissonance deserves mention. Kurth finds the pedal point, a voice-leading dissonance, especially notable, for it alters the other tones above it. Unlike other voice-leading or figurative dissonances, it represents a paralysis of the voice, rather than stimulation. Because of this, Kurth claims, a stronger pressure builds and is stored in the pedal tone; a similar pressure accumulates in ostinato passages. The restrictions on pedal tones are somewhat different from those of passing, neighbor, or suspended tones. That is, though the first and last tones of a pedal effect must be consonant, we sense resolution not in the sustained voice (as in a suspension), but the other voice or voices in the resolution, which "in the end often appears to dissolve with suspense against [the pedal]."[42] Moreover, the pedal point highlights the mutual exclusivity between degree of acoustic dissonance and tension, for while a pedal can yield alternations of acoustically consonant and dissonant simultaneities, the tension (or musical dissonance) created by this pedal

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Verstandestätigkeit, als theoretisch entsprechende Leseweise, beruht erst auf Energien-Umschaltung" (Kurth 1931, 191).

[42] Kurth (1931, 184) writes,

> Während somit die Einführung an die sonstige Dissonanzvorbereitung erinnert, fehlt gerade das Weiterführungsgesetz nach der Dissonanz, was um so auffälliger ist, als oft eine den Schwerewirkungen ähnliche Spannkraft sich ansammelt; eine Folge ist dann, daß man eigentlich die Auflösung gar nicht in der Liegestimme empfindet, sondern eher in den andern, die sich zuletzt oft vorhaltsartig gegen sie aufzulösen schienen.
>
> [While the introduction of the other dissonance relationship [the suspension] is thus evoked, the further rule of progression for the dissonance is lacking; what is all the more striking is that often one of the effects of weight accumulates, similarly to tension. A consequence is thus that one actually does not sense the resolution in the sustained voice but rather more in the other voice, which is often suspended against it up to the end and appears to dissolve.]

continually increases, "even over the [acoustically] consonant moments."[43] Thus Kurth concludes, "[the pedal] is thus a dissonance that is not based on motion, [indeed] experiences no resolution through further motion, and yet draws its effect from the dynamics of movement: that is, as accumulation of the motion drive, as resistance."[44]

Dissonances, the RF/C principle, and elasticity

Throughout our discussions of dissonance (acoustic and musical; light, heavy, and altered), the RF/C principle has lurked in the background. Indeed, when Kurth posits that we sense an energy transfer during a reinterpretation, or

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[43] „Und da bleibt psychologisch das Bemerkenswerteste, daß dies kaum ein Wechselspiel von Spannung und Entspannung bewirkt, daß vielmehr auch über die konsonanten Augenblicke hinweg eine stetig gesteigerte Spannung den Orgelpunkt durchsetzt." ["And here the most psychologically noteworthy point remains: that this hardly causes an interplay of tension and relaxation, that in fact a constant increasing tension is also maintained in the pedal point, even over the consonant moments" (184).]

[44] „Es ist somit eine Dissonanz, die nicht in Bewegung beruht, auch keine Auflösung durch Weiterbewegung erfährt und doch aus der Bewegungsdynamik ihre Wirkung schöpft: nämlich als Anstauung des Bewegungsdranges, als Widerstand" (Kurth 1931, 84).

Compare Kurth's description of the pedal tone to that found in Schenker's *Harmonielehre*. Schenker defines the pedal tone in the following terms:

> Unter einem Orgelpunkt versteht man den ruhenden Ton einer Stufe, über oder unter dem mindestens zwei selbst wieder als Stufen fungierenden Harmonien in Bewegung sind, von denen aber wenigstens eine sich zum Orgelpunkt unharmonisch verhält.
>
> [A pedal point is understood as the resting tone of a Stufe [diatonic structural harmony], above or below which at least two harmonic tones (themselves part of Stufen) are in motion, where at least one of these is related non-harmonically to the pedal point] (Schenker 1906, 413).

Earlier, Schenker notes, "we sense the impression of rest and motion at the same time: the impression of rest in one of the Stufe and that of motion in two or more others." [. . . empfangen wir gleichzeitig den Eindruck von Ruhe und Bewegung: den Eindruck der Ruhe in einer bestimmten Stufe und den der Bewegung in zwei oder mehreren anderen."] Schenker 1906, 412. Where Kurth conceptualizes the relationship of pedal tone and surrounding tones as a conflict that engenders accumulating tension, Schenker sees the relationship as complementary, whereby unrelated Stufen coexist as movement and rest.

when we sense dissonances as "weighed down" towards the bass, we implicate not only the individual dissonant tone but also all remaining tones. Here, we shall bring the relationships among components within a dissonant complex more directly to the fore with three examples.

Let us first return to lighter dissonances (neighbor tones, passing tones). Kurth argues that the overall effect of incorporating lighter dissonances into a chordal complex is one of elasticity and expansion:

> [D]ie Figuration zeigt . . . die Elastizität, die Aufwellbarkeit des zugrundeliegenden Akkords in bewegte Form. Man empfindet die Fremdtöne nur als Abweichung von ihm; in diesem „nur" ist die psychologische Voraussetzung enthalten, daß das Akkordempfinden auch auf solche Umspielungen zu dehnen ist.
>
> [The figuration indicates . . . elasticity, the undulating quality of the underlying chord in moving form. **One senses the foreign tones only as a divergence from the chord**; the psychological premise is contained in this "only," in that **the sensation of the chord is also expanded from such encircling motions**.][45]

In this way, the chord provides context and "room" for the dissonant tones, and in turn, it is through the dissonant tones that the chord appears to expand. Elsewhere, Kurth posits an analogy between the elastic nature of the chord and surface tension:

> Jene Ausgießung der Spannungen, ihre Verstrahlung über den ganzen Klang, ist es hauptsächlich, die etwas wie eine Oberflächenspannung an ihm erzeugt. Diese merkwürdige Trugwirkung, die als Analogie mit der physikalischen Erscheinung am besten zu charakterisieren ist, aber ein heterogenes, rein psychisches Phänomen darstellt, ist ein unbestimmtes, schwer faßliches Gefühl, das sich schon mit den vielfältigen Spannungen zwischen den Einzeltönen einschleicht, schon mit der Distanzempfindung usw.
>
> [**It is primarily that outpouring of tensions [and] their radiation over the whole chord that creates something like a surface tension in the**

[45] Kurth 1931, 178.

> **chord.** This characteristic illusory effect, which is best seen as analogous to the physical phenomenon but presenting a heterogeneous, purely psychic phenomenon, is an indefinite sense that is difficult to comprehend [and] that creeps in with the multifarious tensions between the individual tones, with the sensation of distance, etc.][46]

In this analogy, the chord is akin to the surface of a liquid. When an object is gently placed on the surface of a liquid, the area of this liquid expands. The chord behaves analogously when a chord tone is altered chromatically. When one raises a single tone (for instance to create a leading-tone effect), one does not experience the remaining tones or the entire chord as necessarily "pushed" upwards.[47] Rather, there is an overall stretching of the chord and displacement of its remaining components.

With chromatic alterations, however, the analogy breaks down. The main difference between the physical surface and musical chord is this: while the liquid molecules exert an equivalent force onto the external object, as the meniscus that forms on the surface indicates, the introduction of a chromatic tone in a chord adds energy into the system. Kurth writes,

> Insbesondere die Alteration weist auch auf die „Elastizität" der ganzen Klangfläche, die sie zerdehnt und verschiebt, stets von der Vorstellung der ursprünglichen, zugrundeliegenden Normalform aus. Indessen gibt es bei der Alteration eine Erscheinung, welche die Analogie zur Physik in eigenartiger Weise durchbricht. Wenn man einen Akkordton chromatisch verändert, so strebt er nicht in den Akkord zurück, sondern aus ihm hinaus; es herrscht also bei Störung der „Oberflächenspannung" nicht Rückdruck, sondern der Drang,

[46] Kurth 1931, 189.

[47] „Wenn also z. B. ein Ton aufwärts alteriert ist, so spürt man zwar auch das heraus, aber es strebt darum noch nicht der ganze Klang aufwärts, sondern ihn durchgießt ein gewisser, nicht näher beschreibbarer Charakter, der zwar etwas mit jener Tonstrebung verwandtes enthält, aber zu einer Wirkung für sich und akkordlicher Art umgewandelt erscheint" (Kurth 1931, 188).

> den veränderten Ton noch weiter aus der normalen Stellung zu entfernen. . . . Psychologisch erklärt sich jener Widerspruch zur Elastizität daraus, daß gerade in der Alteration eine sehr intensive potentielle Energie liegt, und der Bewegungsdrang in der Musik weitaus stärker ist als die Materie-Empfindung; denn er stellt die ursprüngliche Grundkraft, die Materie-Empfindung aber einen durch ihn selbst ausgelösten Begleiteindruck dar, der von vornherein schwächer bleibt.
>
> [The alteration technique in particular demonstrates the "elasticity" of the entire chord-surface, which it extends and shifts, always from the image of the original, fundamental normal form. Meanwhile, there is a phenomenon with the alteration that breaks through the analogy to physics in a peculiar way. If one chromatically alters a chord tone, it does not strive back into the chord but rather strives out of it. There prevails in the disturbance of "surface tension" not the pressure to return but rather the drive to remove the transformed tone even further from the normal place. . . . That contradiction to elasticity is explained psychologically in that a very intensive **potential energy lies in the alteration** and the urge to move in music is far stronger than the sensation of matter. The urge to move presents the original fundamental force, while the sensation of matter is an accompanying impression released by it that from the outset remains weaker].[48]

Thus while the chord is elastic in the sense that like a liquid surface it expands in the presence of an altered tone, unlike a liquid, it does not contract in an attempt to return to a state of equilibrium (as it would with a "lighter dissonance," e.g., a neighbor tone). Rather, the act of altering a tone gives it potential energy; once altered, the tone has a propulsive urge to move, to dissipate this energy. And once more, we see *Bewegungsenergie* emerge as the keystone of Kurth's thinking.

In all, then, Kurth notes, "the concept 'dissonance' encompasses a wealth of sound-sensory idioms" that themselves lead to sensations of weight, pressure, striving for resolution, and so on. And contained within these broad ideas is "each individual, unique effect, which, in the hands of the great composers can be

[48] Kurth 1931, 190.

inherent in the countless brilliant structures of dissonance."[49] In listening musically, however, we sense something more immediate than individual effects. Indeed, we feel the force of *Bewegungsenergie* propelling the dissonant tones outwards, and the sense of fusion, dispersing the tension effect over all components of the chord:

> Im Akkord aber verfangen, erscheint die Bewegungskraft als eine Strebung, die nicht nur in der betreffenden Stimme wieder aus ihm heraus, sondern in sein Ganzes hineinwirkt, seinen unmittelbaren Eindruck gestaltet, von Ton zu Ton ein vielfaches Netz von Kraftbeziehungen hervorruft. Jeder Akkord ist eine neue Verteilung von Kräften. Denn das ist psychologisch das Wesentliche, daß sich ein Spannungszustand aus einem Einzelton über den ganzen Klang ausgießt, dem er angehört, analog wie sich der Verschmelzungsreiz über den ganzen Klang verteilt. Dieser wirkt nicht nur als Einheit einer Verschmelzung, sondern auch eines Spannungszustandes; d. h. als energetischer Gesamteindruck, nicht als Kombination von Kräften, trotzdem einzelne hervorgekehrt werden können.
>
> [Entangled in the chord, **the force of motion** appears as a striving that not only comes out of the voices in the chord but also takes effect in its entirety, forming the chord's immediate impression, and causing a multiplicative network of force relationships from tone to tone. **Every chord is a new distribution of forces.** For this is psychologically the most important point: from a single tone, a state of tension pours itself out over the whole chord to which it belongs; this is analogous to the impulse of fusion distributing itself over the whole chord. This [impulse] acts not only as the unity of fusion but also as the unity of a state of tension, i.e., as the energetic whole impression and not as a combination of forces, though singular forces may nevertheless be brought out.][50]

Kurth's dynamic and positive view of dissonance is a response and complement to older compositionally minded theories that focused on rules for dissonance

[49] „Wie mithin der Begriff ‚Dissonanz' einen Reichtum klangsinnlicher Idiome umfaßt, so differenziert er sich auch dem energetischen Empfinden nach zu einer Vielfalt von Spannungsformen, die auch mit den Begriffen von Schwere, Druck, Alterationsstrebung usw. nur summarisch gekennzeichnet sind; sie lassen Raum für jede individuelle, einmalige Wirkung, die bei großen Harmonikern den zahllosen genialen Dissonanzbildungen innewohnen kann" (Kurth 1931, 185).

[50] Kurth 1931, 188.

preparation and treatment. It also reflects his Romantic perspective under the spell of Wagner and Bruckner.

"The basis and fundamental as psychological phenomena"

Just as we experience striving through the various sources of dissonance (acoustic or musical), we also experience chords as grounded, "weighty," and creating depth. Kurth's descriptions of this experience can be expressed in metaphorical terms: the chord is a body with mass that is susceptible to the force of gravity. Kurth notes that the particular sensation of the chordal root (*Grundton*) and the sensation of gravity are closely connected. At the same time, however, we may experience more than one "gravitational effect," especially when the lowest note is something other than the chordal root. And moreover, we sense that all chords within a tonal system gravitate towards the center of that system: the tonic. These competing gravitational effects collectively produce a sense of dynamism in the chord.

> Im Akkord hängen Grundton- und Schwere-Empfindung engstens zusammen. Indessen existiert in einem Akkord, wie jedem Musiker wohlbekannt ist, stets eine besondere Schwerewirkung gegenüber dem Baßton, der (als äußerlich tiefster Ton) keineswegs immer mit dem Grundton, dem inneren Schwerpunkt, identisch ist. Schon das weist auf eine Diskrepanz, eine gegenseitige Störung von Gravitationsverhältnissen, die auch in der Geschichte der Musik wie ihrer Theorie Spuren hinterließ. Es gibt ferner Schwerpunkte im einzelnen Akkord und einen Schwerpunkt, zu dem alle Akkorde eines musikalischen Zusammenhanges hingraviteren. Struktur- und Tonalitätsproblem, die Grundsäulen der Harmonik, sind unmittelbar damit verknüpft, und sie weisen auf viel verborgenere psychologische Vorgänge als es vielleicht gerade dem praktischen Musiker scheinen mag.
>
> [In the chord, the sensations of chordal root and gravity are closely related. There exists in a chord, however, as every musician knows well, **a particular gravitational effect vis-à-vis the bass tone, which**

> (as the lowest tone from an external perspective) **is by no means always identical to the root, the inner gravitational point.** This points out a discrepancy, a mutual disturbance of gravitational relationships that left its mark in the history of music as well as its theory. **There are further gravitational points in the individual chord and a point towards which all chords in a musical association gravitate back.** Structural and tonal problems, the basic pillars of harmony, are directly linked with this, and they suggest many more concealed psychological processes than may appear to the practical musician.][51]

As Kurth remarks, we are largely unaware of the psychological processes that undergird competing points of gravity. In the physical world, likewise, all objects have their own gravitational pull, but we are only aware of some attractions, principally that of the attraction of our bodies to the earth's core (see 193n1).

Quite unlike the physical world, however, "bodies" (tones, chords) in the musical world do not rest on something concrete and immutable like the earth's core. Logically speaking, if all higher tones weigh down upon the lowest tone, the lowest tone must itself rest on some invisible subsurface, otherwise it would sink indefinitely. Yet, the lowest tone, rather than succumbing to the force of gravity acting on the cumulative mass of the higher tones, bolsters the higher tones:

> Ein merkwürdiger Vorgang enthüllt sich hier: in einem Ton (als tiefstem) ist Schwergewicht und Abstützung gegen die Schwere (der übrigen) vereinigt. An sich, d. h. nach physikalisch-rationalen Gesetzmäßigkeiten, wäre das ein Widerspruch: der „schwerste" Ton bedürfte selbst erst eines Untergrundes, auf dem er läge; da dieser in der musikalischen Raumwelt fehlt, verwandelt sich die Gewichtsempfindung eines Tones selbst in dieses Untergrundempfinden, so daß man nicht mehr das Gefühl hat, als ob dieser Ton noch schwebte. Somit wirken hier Masse- und Raumeindrücke eigenartig zusammen. Die Schwere, aus dem Masse-Eindruck hervorgehend, kann nicht für sich wirken, ohne auf einem Untergrund bezogen zu werden. Dieser ist nun für den Baßton selbst, der zudem als der meist belastete erscheint, nicht da, und hier setzt eine versteckte psychische Funktion ein: sie verwandelt die Schwere ins Gegenteil: ins Gefühl jener Basis, welche die Schwere der übrigen

[51] Kurth 1931, 193.

> Töne trägt. Der Tiefenton wird zum „Basis"-Ton, er unterliegt nicht mehr dem Zug zur Tiefe, als wollte er etwa samt den darüber gelagerten Klängen immer weiter abwärts sinken.
>
> [**A notable process reveals itself here: in a tone (as the lowest), a strong sense of weight and support of the weight (of the remaining tones) unite.** In itself, i.e., according to physical-rational laws, this would be a contradiction: the "heaviest" tone itself would require a subsurface on which it lies; since this is lacking in the musical spatial world, the sensation of weight in the tone transforms itself into this sense of subsurface, so that one no longer has the feeling that this tone is floating. In this case, mass and spatial impressions interact peculiarly with one another. [Normally,] the weight that arises from the impression of mass cannot operate separately without resting on some subsurface. This subsurface does not exist for the bass tone itself, which moreover appears as the most encumbered. **And here rests a hidden psychic function: it changes the weight into its opposite: in the sense of a substratum that bears the weight of the remaining tones.** The lower tone becomes the "basis" tone, and it is no longer subject to the progression towards the depths, as it would sink even further, perhaps together with the upwardly stacked chords.][52]

Thus it is through a psychological process that the collective weight of the upper tones transfers to the lowest tone, which in turn acts as a counterweight—and forms the basis for all remaining tones.[53]

From here, Kurth considers the significance of having the root, the "inner gravitational point," in the bass. He notes that no matter where it lies, the root will always predominate. That is, we sense its generating power as the producer of the

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[52] Kurth 1931, 194.

[53] This line of thinking appears in germinal form in *Voraussetzungen* (1913). In that context, Kurth critiques Riemann's generation of the minor chord from the highest note (what Kurth would call the fifth). Notably absent in his earlier explanation, below, is the transfer of weight from the upper to the lowest tones:

> [W]hen the conception of 'increasing mass' is referred to, it is also coupled with an increasing *sensation of weight*, and this sensation always evokes the impression of the lowest tone as a basis upon which the other tones weigh. **In our perception we recognize only weight pressing upon a base and not pendulous weight, and even the most comprehensible, systematic presentation is incapable of changing in the psychology of our musical perception.**

Trans. Rothfarb 1979, 127; emphasis added in bold.

fifth and the third in the Chord of Nature. It is omnipresent, because rather than striving outwards like the other chord tones, it remains energetically at rest, providing their foundation. By extension, the forces of attraction among chordal roots determine the forces of attraction among chords as a whole. And there is thus something *fundamental* when a chord is in root position:

> Daß es nun gewissermaßen die Grundlagerung eines Akkords bedeutet, wenn man seinen Hauptton, den sog. Grundton, in den Baß setzt, liegt auf der Hand; daß man es von jeher als den natürlichsten Ausgleich in der Klanglagerung empfand, spiegelt auch seine Bezeichnung als „Fundamentton". Er ist, äußerlich gekennzeichnet, aus jedem Akkord herauszufinden, indem man den tiefsten Ton bei Terzlagerung der übrigen Töne sucht; sein inneres Übergewicht ist schon akustisch im Naturklang begründet, indem hier die andern Töne aus ihm hervorgehen, und bereits sein Herausklingen fördert das Beziehen der andern auf ihn. Aber dies Übergewicht erfährt durch psychische Vorgänge Verstärkungen und wieder erst seine entscheidende Bedeutung. Er ruht stärker als alle andern Töne in sich, diese bilden Ausstrebungen, jeder nach andrer Weise gegen den Grundton hin gespannt. Er wird im Akkord zum Haltepunkt, vor allem auch gegenüber den Dissonanzen. Infolgedessen sind auch die Gravitationen zwischen verschiedenen Klängen im wesentlichen auf die Gravitationen zwischen ihren Grundtönen reduzierbar und so auch musiktheoretisch bestimmt: die Beziehung der Klänge wird hier stets auf die Beziehung der Grundtöne zurückgeführt.
>
> [That it signifies a certain basic arrangement of a chord when one places its primary tone, the so-called root, in the bass, is now obvious; **that one sensed it always as the natural equilibrium in the chordal arrangement also reflects its designation as the "fundamental tone."** Outwardly characterized, the root is identified in each chord as one seeks the lowest tone, while stacking the remaining tones in thirds. **The inner predominance of the lowest tone is acoustically established in the Chord of Nature** as the other tones emerge from it [the chord], and its ringing forth promotes the attraction of others to it. But this predominance undergoes reinforcements through psychic processes and only then [achieves] its decisive significance. **In itself, the root is more at rest than all other tones**; these others form outward strivings, each straining in a different way against the root. **It becomes the stopping point in the chord, primarily against the dissonances.** As a result, **the gravitations between different chords are reducible to the gravitations between their roots**, and in this way,

> music-theoretically determined: the relationship of chords is here always led back to the relationship of roots.][54]

In inverted chords, by comparison, we no longer feel a downward gravitational pull towards the root, but we continue to sense its influence. Kurth likens our awareness of the root to an awareness of the self: "The root continues to remain the primary tonal relationship; if a psychological comparison is permitted, it takes a central place in the chord, similar to one like the sense of self in the complex of consciousness."[55] He posits that "inversion" (*Umkehrung*) is in fact misleading, since it is not merely a question of changing the relative positions of notes. Indeed, when a tone other than the root appears in the bass, two dynamic relationships interact with one another: we sense a pull towards the root as well as a downward pull towards the bass note.[56]

Finally, we experience a special bond or network among the roots of the chords as they gravitate towards the root of the tonic triad. Kurth suggests that the tonic scale degree within the tonic triad is a "tone of concentration," that is, where the goal of energetic striving is felt most strongly. He also suggests that the propensity for doubling the root is an outward manifestation (or reinforcement) of a psychologically experienced predominance within the chord:

> Da aber die Tonalität (Tonartseinheit) darin beruht, daß alle gegen den Grundton des Hauptklanges gravitieren, sammelt sich in dem

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[54] Kurth 1931, 194–95.

[55] „Der Fundamentton bliebt weiter der hauptsächliche Beziehungston, er nimmt, wenn ein psychologischer Vergleich erlaubt ist, im Akkord eine ähnlich zentrierte Stellung ein wie das Ichgefühl im Bewußtseinskomplex" (Kurth 1931, 195).

[56] „[D]as Wort verkleidet einen Widerspruch, der in den Akkord selbst eindringt; denn wenn nun ein andrer Ton im Baß liegt, so spielen zweierlei dynamische Beziehungen ineinander: die zum Grundton und die Tiefenanziehung" (Kurth 1931, 196).

> einen Grundton eine besondere Intensitätsempfindung. Er ist Zentralton der Tonart, wie man ihn auch nannte, oder Konzentrationston, wie man ihn besser nennen sollte. Es ist somit auch weit über akustische Gesichtspunkte hinaus Ausdruck eines psychisch hineinempfundenen Übergewichts, wenn man bei allen Akkorden die Grundtöne fast immer auch am stärksten instrumentiert oder in Oktaven verdoppelt findet. Denn sie bilden ein Netz von Hauptpunkten der Gravitation, also einer Erscheinung psychischer Art.
>
> [But since tonality (tonal unity) is based in the fact that all roots gravitate towards the root of the principal chord [tonic], it gathers itself in a root with a special sensation of intensity. It is the central tone of the key, as one also calls it, or the tone of concentration, as one should better term it. Beyond the viewpoint of acoustics, it is thus an expression of a psychically experienced excess of weight when, with all chords, one almost always finds the roots as most strongly orchestrated or doubled in octaves. For they form a network of primary centers of gravity—a phenomenon of a psychic type.][57]

On cadences and the "imaginary" 6/4 chord

It is a particularly intense moment, then, when all three gravitational forces coincide: when a chord has as its bass note not only the root but also the tonic of the key. And hence composers reserve this moment for the end of a passage. Kurth notes, however, that shortly before the end of a phrase, one often finds a chord that, from an external, acoustic perspective, appears to be tonic but that lacks the sense of closure that accompanies a root-position tonic chord.

> Fanden sich Umkehrungen des Hauptakkords sonst und insbesondere kurz vor Schlüssen, so war sogar oft eine wohlberechnete Wirkung darin gelegen, daß zwar klanglich das Tonikagefühl vorlag, klangdynamisch aber sein voller Ruhezustand vorenthalten wurde; um so deutlicher kam dann mit dem Schlußakkord ein Ausgleich.
>
> [If inversions of the primary chords were found elsewhere, and especially shortly before cadences, often **a well-calculated effect was actually found that, although sonically presented as the sense of**

[57] Kurth 1931, 195.

> **tonic, was deprived of its full state of rest dynamically**; [this was sensed] even more clearly when **reconciliation was reached with the cadential chord**.][58]

As Kurth remarks in an accompanying footnote, "The strongest, but not exclusive, expression of this technique is the cadential formula with the 6/4 chord."[59] We shall return to Kurth's parenthetical statement momentarily.

First, it is worth remarking on the subtle dialectical flavor of Kurth's reading of the cadence. In particular, Kurth's suggestion that the final root-position tonic represents the moment of reconciliation suggests further, and with a nod to Hegelian thinking, some kind of *synthesis*. That is, in the "well-calculated effect"—for instance, a 6/4 chord—tension lies between the attraction towards the root (Î) and the downward pull of the bass (*not* Î). Said otherwise, the fundamental form of the chord is contradicted through the process of establishing a non-tonic pitch as the basis for the chord, giving rise to an initial relationship of energetic thesis and antithesis.[60]

It is more than likely that Kurth is responding to Riemann's own well-known dialectical account of the cadential formula, illustrated in **Example 5.4**.[61]

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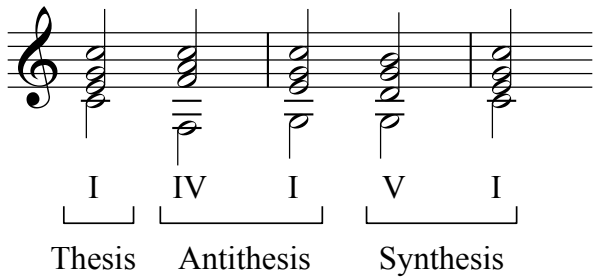
[58] Kurth 1931, 196.

[59] Kurth 1931, 196n1.

[60] One could argue that the designations thesis and antithesis are rather tenuous given the lack of temporal *progression* within the process of chordal inversion. In this way, my reading has commonalities with Hauptmann's pseudo-"dialectical" representations of major and minor. See Klupenhouwer 2002, 459–61.

[61] A dialectical reading of the cadence was not unique to Riemann. For instance, Wason has noted that August Halm's explanation of the cadence in his *Harmonielehre* is suggestive of Hauptmann's dialectical explanation. Halm divides the cadence into two parts: I–IV // V–I; a "question," in which the tonic is dominant of the subdominant, and



Example 5.4. *Riemann's cadential formula*

As Riemann explains in his 1872 article "Musikalische Logik" and subsequent dissertation, "Über das musikalischen Hören," "Thesis is the first tonic, antithesis the subdominant with the six-four chord of the tonic, synthesis the dominant with the closing tonic chord in root position."[62] Rehding explains this dialectical interpretation as follows: "a chord has to be given and denied its central position in the tonality in order then to arrive at the synthetic position of a fully fledged tonic."[63] Thus the conflict centers on the status of the tonic chord as it relates to the surrounding chords at different points in time. Though Kurth does not directly address this passage from Riemann, he speaks elsewhere about the flaws in Riemann's system of tonality, for which the cadential formula serves as a model:

> Riemanns „Funktionslehre" (seit 1873) nahm dann ausschließlich Bezug auf den Tonartsgrundton, unter Leugnung der Schwerkraft und der akkordlichen Aufbaugesetze in Terzenlagerung, womit eine Einseitigkeit entstand, die der des Generalbasses genau entgegengesetzt war, und naturgemäß (trotz logisch bewundernswert

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an "answer," in which the true tonality is revealed through the V–I motion. Between the two moments is a "gap" (*Kluft*). See Wason 1985, 121–22, 181n7.

[62] Cited and translated in Rehding 2003, 69. Original in Hugo Riemann, "Musikalische Logik" in *Präludien und Studien* (reprint Hildesheim: Georg Olms, 1967), vol. 3, 3: „These ist die erste Tonika, Antithese die Unterdominante mit dem Quartsetzakkord der Tonika, Synthese die Oberdominante mit dem schließenden Grundakkord der Tonika."

[63] Rehding 2003, 70.

> geschlossenen Systems) eine Reihe von Widersprüchen. Riemann setzte sich sogar über die eigentliche Fundament-Bedeutung hinweg, indem er diese nur den Haupttönen der Tonika, Dominante und Subdominante zuerkannte. . . . Der psychologische, auf den es hier allein ankommt, kann kurz auf den Konflikt zurückführt werden, der in den Klängen selbst durch beiderlei Gravitationen vorliegt.
>
> [Riemann's "theory of function" (since 1873) **referred exclusively to the root of the key, denying the force of gravity and the chordal laws of construction in thirds.** Thus despite a logically admirable, closed system, a series of contradictions arose, as did, naturally, a one-sidedness, which was exactly the opposite of that one-sidedness of thoroughbass theory. **Riemann ignores the actual significance of the fundamental** in that he recognizes only the fundamentals of the tonic, dominant, and subdominant. . . . The psychological point of view, which is the only one here, can be reduced in short to the conflict that exists in the chords themselves through both types of gravitation.][64]

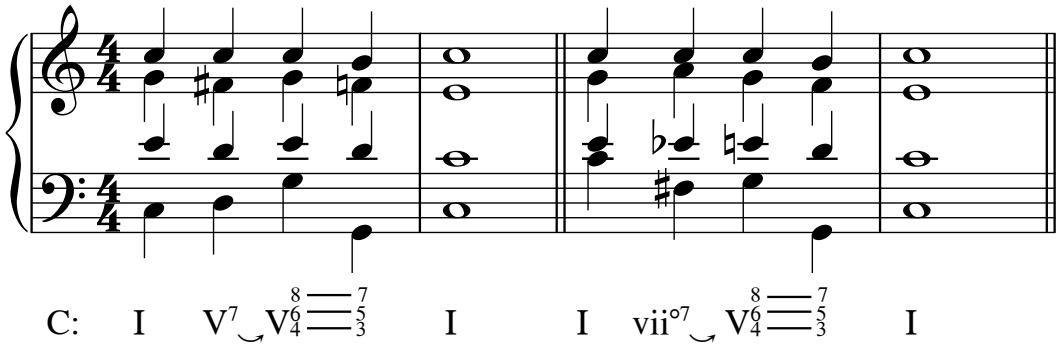
In concentrating solely on chordal roots, Kurth argues, Riemann ignores what is "fundamental" about a chord in root position: that it presents the synthesis of the tension between the force of gravity (attraction to the bass) and the pull of the root. And moreover, by reducing all chords to only three distinct roots, Riemann, to paraphrase Kurth, denies independence to the remaining chords.[65] Kurth also departs from Riemann in his labeling of the "well-calculated effect." We see this in two examples, one that incorporates chromatic harmony into the cadential formula, and later on, in a cadential component of "special psychological interest": the "imaginary 6/4."

Example 5.5 below shows what Kurth refers to as a "traditional extension" (*althergebrachte Erweiterung*) of a cadential formula: a secondary dominant or diminished seventh chord precedes the 6/4 chord. Indeed, he notes, we feel these

[64] Kurth 1931, 196n2.

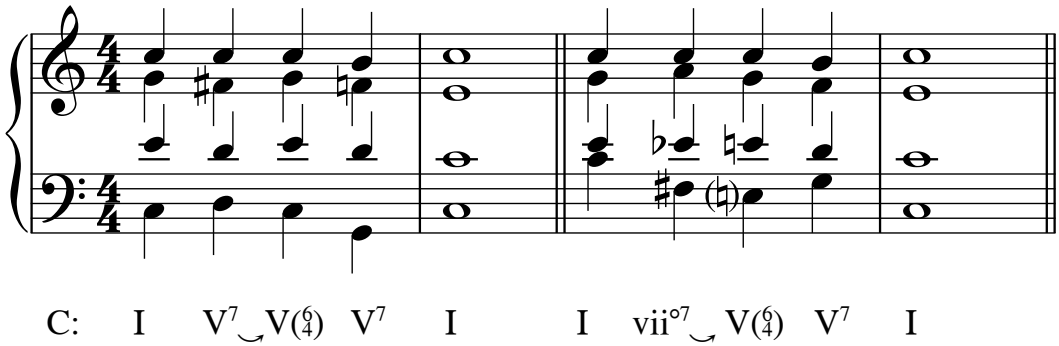
[65] Kurth 1931, 196n2. As I discuss in the next chapter, Kurth follows in the *Stufentheorie* tradition by recognizing seven unique triads above each diatonic scale step.

"tension chords" (secondary dominants) directed towards the *bass* tone of the 6/4 chord, $\hat{5}$, which speaks to the appropriateness of the label "V6/4."



Example 5.5. *Kurth's cadential formulae*

One also finds on occasion, however, progressions like those shown in **Example 5.6.**



Example 5.6. *Secondary dominant chords resolving to "imaginary 6/4" chords*

Here, what follows the secondary dominant looks like a root-position tonic chord:

> Dabei nun findet sich zuweilen noch die weitere Besonderheit, daß diese Klangfolge auch erscheint, ohne daß wirklich 6/4-Form vorliegt; in Formeln also wie C (V7)–V6/4–V–I oder (VII)–V6/4–V–I erscheint der drittletzte Akkord nicht mit g im Baß (6/4-Form), sondern mit c oder e.

> [At the same time, one finds on occasion the further characteristic that this chord progression also appears without there being a true 6/4-form. In formulae like C (V7)–V6/4–V–I or (VII)–V6/4–V–I, the antepenultimate chord does not appear with G in the bass (6/4 form), but with C or E].[66]

Kurth emphasizes, however, that the 6/4 form and the broader cadential formula are referential, for otherwise the secondary dominant would "hang in the air."[67] We attribute the effect of the 6/4 chord—as a partial goal containing $\hat{5}$ that delays the ultimate arrival of V—to the root-position structure that appears in its place. Our acceptance of what Kurth calls an "imaginary 6/4" is further evidence for the power of the human will, through dynamic hearing, to look beyond external appearances. Kurth writes,

> Diese Erscheinung beweist nichts geringeres, als daß man mit bloßem Willen 6/4-Akkordwirkung in einen Akkord hineinhört, der gar nicht 6/4-Akkordlagerung enthält. Nicht etwa ein „Gehörsfehler" ist bei den Meistern anzunehmen, sondern eine außerordentliche Macht des dynamischen Hörens; es ist ein extremer oder, wenn man so sagen darf, krasser Beleg für die Bedeutsamkeit und die imaginäre Kraft der Strukturempfindung: sie kann sich sogar im bloßen Willen, gegen die wirklich vorhandenen Klangverhältnisse durchsetzen. Ich bezeichne derlei als „imaginären" 6/4-Akkord und schlage die folgende Schreibweise vor: V(6/4); die Klammer soll andeuten, daß im Hinblick auf die vorhergehende (V) die 6/4-Auffasung zwar verborgen liegt, aber nicht in der wirklichen Klanglagerung zum Ausdruck kommt.
>
> [This phenomenon indicates nothing less than that one, by mere will, attributes the effect of the 6/4-chord to a chord that in no way contains the 6/4-chord construction. It is not that the master composers accept a "mistake in hearing," but [that there is] an extraordinary power of the dynamic hearing. It is extreme or (if one may say) crass evidence for the significance and imaginary force of the sensation of structure: it can prevail even in the simple will,

[66] Kurth 1931, 202n1.

[67] „die Zwischendominante beweist aber, daß die Quartsext-Form und –Formel vorschwebt, gewissermaßen als Untergrund gehört ist, sonst hinge die Zwischendominante in der Luft" (Kurth 1931, 202n1).

> against the actual available chordal relationships. **I designate this phenomenon as the "imaginary" 6/4 chord and propose the following notation: V(6/4).** The parentheses should imply that the 6/4-conception lies hidden with regard to the preceding (V), but does not find expression in the actual chordal structure.][68]

In recent times, William Rothstein has discussed Schenker's treatment of inverted cadential 6/4 chords and their appearance within a cadential model Rothstein terms "the Schrock cadence."[69] Rothstein points to a passage that appears in the unpublished early version of *Der freie Satz* where Schenker writes, "The following examples will prove that free composition has sufficient means to compel us to imagine a six-four suspension without needing to present it to us literally; this, as we will see, leads us to many advantages for the voice leading (in the service of the thematic aspect, etc.)."[70] Schenker proceeds to discuss an example from Handel's G-major Chaconne, HWV 435 (Variation 11, mm. 5–8), that contains the progression II6/5–"I6/3"–V–I, with $\hat{1}$ suspended in the highest voice at the foreground level. Schenker argues

> [T]he fact that the passing seventh within the II harmony [$\hat{1}$ in the soprano] has not yet resolved, indicates that the six-three chord on the downbeat [of bar 7] does not represent a true inversion . . . because the dissonant seventh cannot possibly continue as a consonant interval. If, in spite of the six-three chord, we think at this

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[68] Kurth 1931, 202n1.

[69] See Rothstein 1999 and Rothstein 1991, where he first mentions this model. Rothstein named his model after a former graduate student, Karl Schrock, who noticed such cadences in the music of Bach and Mozart.

[70] „Die nachstehenden Beispiele werden den Beweis dafür erbringen, dass der freie Satz eben über genügende Mittel verfügt, mit denen er die Vorstellung eines 6/4-Vorhaltes in uns erzwingen kann, [auch] ohne dass er diesen Vorhalt wirklich zu leisten brauchte, was, wie man sehen wird, zu mannigfachen Vorteilen der Stimmführung, (im Dienste des Thematischen usw.) führt." From §17 („Von 4–3 bezw. 6/5–5/3") in a chapter entitled „Von den Vorhälten, Synkopen und Rückungen," Oster Collection, file 51, items 1325–27. Trans. Rothstein 1999, 269–70; original appears in 270n49.

> point of the root of the V harmony, to which the preceding II also points, we will better understand the correctness of the voice leading.[71]

Schenker's directive to "think . . . of the root of the V harmony" in order to explain an otherwise-errant progression is outwardly similar to Kurth's explanation of how the "imaginary 6/4" arises. Yet while the former appeals to paradigmatic voice-leading rules (a chordal seventh must resolve downward by step), the latter appeals to our "sensation of structure," that is, our unconscious understanding of the cadential 6/4 as a Gestalt occurring at predictable times. Moreover, while Schenker limits his examples to the common practice,[72] Kurth notes that imaginary 6/4 chords are found "not unusually in Schubert, in isolated cases in Bruckner, and then frequently (in connection with alteration) in Scriabin."[73] Such willingness to expand the boundaries of similarity across the centuries—to understand highly chromatic music in diatonic terms—is a hallmark of Kurth's harmonic theory.

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[71] „. . . dass die Sept [Durchgang bei] der II. Stufe, g^2 des Soprans, ihre Lösung noch nicht gefunden hat, darauf hin, dass bei dem Sextaccord des Niederstreiches die Sext [ ] nicht eben eine wirkliche Umkehrung, hier einer I. Stufe, vorstellt, da sich in dieser Konsonanz unmöglich die Dissonanz der Sept fortsetzen könnte. Denken wir uns aber dagegen, trotz Sextaccord, den Grundton der V. Stufe an dieser Stelle, worauf ja auch die vorausgegangene II. hinweist, so begreifen wir umso besser die Richtigkeit der Stimmführung." From §17 („Von 4–3 bezw. 6/5–5/3") in a chapter entitled „Von den Vorhälten, Synkopen und Rückungen," Oster Collection, file 51, items 1325–27. Trans. Rothstein 1999, 70; original appears in 270n49.

[72] In the same passage of the unpublished *Freie Satz*, Schenker cites an example from the first movement of Beethoven's Piano Concerto in G, op. 58, which Rothstein presents as Example 20. Schenker also provides an example from Brahms's Piano Quintet in f, op. 34, first movement, which Rothstein presents as Example 21. See Rothstein 1999, 272–73.

[73] „Dies findet sich nicht selten bei Schubert, vereinzelt bei Bruckner, recht häufig dann in Verbindung mit Alteration) bei Skrjabin" (Kurth 1931, 202n1).

CHAPTER SIX

"Chordal Motion"

In Chapters Four and Five, we explored Kurth's ideas about chordal construction in several ways. We saw that he views the chord as a complex comprised of interacting components and that the whole and its parts affect one another through what I term the principle of resultant-formation/components (RF/C). The RF/C principle plays a central role as Kurth extends and modifies Stumpf's theory of fusion in significant ways. In the second part of the chapter, we discussed the sensation of dynamism and tension in the chord, namely through the use of dissonance. We also examined the sense of competing gravitational centers in the consonant triad, particularly as they operate within cadential progressions. In Chapter Six we take a close look at Kurth's views on chord progressions, for as he notes, "In general, it is not the theory of individual chords but rather only the theory of chordal motions that constitutes harmony."[1] We consider how root motion is determined, differences between major and minor progressions, and how the diatonic system expands to incorporate secondary dominants and more remote harmonies.

Fundamental motion and scales

In his Third Section, Chapter 3 (III. Abschnitt, 3. Kapitel "Die Klangbewegung"), Kurth sets forth a theory of chordal motions. He notes from the outset, no doubt with the music of Wagner and Bruckner in mind, the large variety of possible chordal motions; in order to comprehend them, one must first consider

[1] „Überhaupt macht noch nicht die Lehre von den einzelnen Klängen die Harmonik aus, sondern erst die von den Klangbewegungen" (Kurth 1931, 204).

the "simplest basic motion" (*die einfachste Grundbewegung*): that governed by the intervallic structure of the diatonic scale. Kurth considers both major and minor.

From an outward, analytical perspective, the major scale has an appealing symmetrical structure: two identical t–t–s tetrachords. And from a generative perspective, it neatly comprises the tones in the Chord of Nature together with its upper and lower chordal dominants. For Kurth, however, it is the *dynamic* aspect of this structure that is of greatest significance. Taking C major as the scale of reference, he writes,

> „Naturskala" ist sie vor allem für das Bewegungsempfinden. Die Folge zweier Ganztöne und eines Halbtones (c–d–e–f) wiederholt sich genau (g–a–h–c), und damit die einfache Dynamik einer Leittonzuspitzung gegen Zieltöne der Bewegung.
>
> [It is generally a "natural scale" because of the sensation of motion. The progression of two whole tones and a semitone (C–D–E–F) repeats itself (G–A–B–C), and with it, the simple dynamic of leading-tone intensification towards goal tones of motion.][2]

Indeed, from a dynamic perspective, the two tetrachords have unique roles: the lower tetrachord anticipates and initiates movement to a goal tone (upper tonic), while the upper tetrachord intensifies this trajectory toward the goal.[3] Likewise, the

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[2] Kurth 1931, 205.

[3] Kurth (1931) traces the historical development of this goal-directedness, noting that in the church keys, the "final" was more of a regulating boundary tone, which only later developed into a "root" in the classical sense. He explains (206),

> [B]esonders ein gewisses Ruheempfinden entstand mehr und mehr mit der Einkehr in die finalis; dann bildete sich durch die Beziehung der übrigen Töne auf sie eine harmonische Einheitsbeziehung heraus, die den späteren Tonalitätsbegriff vorbereitete, und durch die Beziehung der Bewegung auf ihn ein Zieltonempfinden.
>
> [In particular, a certain sense of rest formed more and more with the termination in the final tone. Then, a harmonic relationship of unity evolved through the relationship of the remaining tones from [the final tone], which paved the way for the later concept of tonality, and a sense of goal tone evolved through the relationship of motion in it.]

dominant and subdominant frame the tonic on equal and opposing sides, but they are effectively and affectively different: "According to the dynamic motion, the fourth appears as the intermediary goal tone, and the fifth as a new initiating tone of motion; the effects of subdominant and dominant are rooted therein." He notes, too, that the dominant chord contains the leading tone (B), which is "the 'derivation' of the "first 'intermediate leading tone (E).'" In this way, the fourth and fifth scale degrees are not merely representatives of the fifth relationships among chords, but in their connection to these leading tones, present "pivotal points of fundamental motion."[4]

There are other ways to experience the scale, too. With emphasis on the major chord, one could hear the scale as an arpeggiation of chord tones (for instance, C–E–G–C) that the remaining tones "fill out." Kurth notes that in this way, the major chord acts as a "gravitational field" (*Gravitationsfeld*); attending to this, one senses "'harmonic' striving" in the scale. In the aforementioned division of the scale into tetrachords, by contrast, Kurth views the fundamental chord (*Grundakkord*) as a starting point. He notes that the motion first towards the lower dominant, then towards the upper dominant, and back to the tonic (what he terms, in quotation marks, "cadential motion"), is melodically primordial, since "it is affected by the dynamic of motion in itself and not by the

[4] „Nach der Bewegungsdynamik erscheint somit die Quarte (f) als Zwischenzielton, die Quinte als neuer Ansatzton der Bewegung; darin wurzeln die Wirkungen der Subdominante und Dominante. Diese enthält zudem den Leitton (*h*), jene (im Ton *f*) die ‚Ableitung' des ersten ‚Zwischenleittones' (*e*). Die beiden Dominanten stellen also nicht bloß Verwandtschaften aus der ruhenden Quintbeziehung der Klänge dar. Quart- und Quintton sind somit von vornherein Angelpunkte der Grundbewegung" (Kurth 1931, 205).

major chord."[5] Kurth's distinction between harmonic and melodic understandings of the scale is somewhat counterintuitive, since we might be tempted to liken the notion of a governing arpeggiated chord as a *melodic* or linear composing out (à la Schenker) of the tonic triad, and conversely, Kurth's suggestion that "effects of subdominant and dominant are rooted" within $\hat{4}$ and $\hat{5}$, respectively, smacks of a latent harmonic reading.[6]

Regardless of the labels one applies, both ways of understanding the scale are available to us, and as in all matters musical, it is the psyche and the will that determines which understanding prevails. In context—in the "moving tonal course"—every tone has a relationship both to the two tetrachords (melodic approach) and to the tones of the major tonic chord (harmonic approach). We can experience the tone F as the goal tone in the first tetrachord—for instance, as a *Stufe* when it is in the bass—or behaving as an upper neighbor tone to E—especially when it is in an upper voice. That the two ways of hearing complement

[5] „Die Gewichtigkeit des Dreiklangs schafft somit ein anderes Gravitationsfeld. Neigt man im Hören mehr zu diesem, so ist auch die ‚harmonische' Strebung in der Skala eine ganz andere; sie ruht stärker in sich, während die vorgenannte Verteilung mehr aus dem Grundakkord herausweist, und zwar in die ‚Kadenzbewegung': erst gegen die Unterdominante, dann zur Dominante und in die Tonika zurück. Diese Hörweise der Skala ist die melodisch ursprünglichere, indem sie von der Bewegungsdynamik an sich und noch nicht von Dreiklängen beeinflußt ist; die Bewegungsdynamik bestimmt vielmehr selbst erst die Wirkung der drei Hauptdreiklänge" (Kurth 1931, 207).

[6] It notable that Kurth's reading of the scale resembles Halm's reading of the cadence, discussed in Chapter Five.

one another is evinced in the stationary C major chord, where, Kurth notes, "the (even if weak) tendency towards the subdominant remains."[7]

One encounters conflicting scalar tendencies in the minor scale as well. The "gravitational field of the triad in motion" governs the first half of the scale, "the triad develops in the lower portion (C–E♭–G), which provides a stop for the intermediate tones d and f." Yet two different dynamic courses govern the second half: "upwardly striving with the leading-tone tetrachord G–A–B–C, downwards in its exact [intervallic] reversal C–B♭–A♭–G."[8] Kurth notes that this change in the dynamic of motion in the middle of the minor scale is the fundamental difference between it and the major scale. Conversely, the uniform dynamic of the major scale—that is, the suggestion of complete resolution in the first tetrachord and the fulfillment of resolution in the second tetrachord, as well as the dialectical striving away from and back to the tonic—is what makes it nothing short of "miraculous."[9] For this reason, the major scale determines the entire tonal system.

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[7] „Der beste Beweis, daß diese zwei Hörweisen ineinanderwirken, liegt darin, daß selbst im ruhenden C-Dur-Dreiklang die (noch so schwache) Tendenz zur Subdominante übrigbleibt" (Kurth 1931, 207).

[8] „[S]o wäre z. B. die Mollskala nicht entstanden, ohne daß . . . Gravtiationsfeld des Dreiklangs in die Bewegung eingriffe; denn auch hier prägt sich im unteren Teile der Grunddreiklang aus (c–e♭–g), der den Zwischentönen d und f den Halt gibt, während der obere Teil dynamisch um so freiere Gestaltung fand; aufwärtsstrebend mit dem Leitton-Tetrachord g–a–h–c, abwärts in dessen genauer Umkehrung . . . c–b–as–g" (Kurth 1931, 208–9).

[9] Kurth notes that some might regard the minor scale as more beautiful than the major, but the latter is more uniform: „Die Mollskala ist vielleicht für manchen schöner, sicherlich reicher als die Durskala, aber bereits weniger einheitlich; das ist das Wunderbare an der Durskala, daß sie in ihrer melodisch ursprünglichsten Verlaufsdynamik . . . gerade den Grundtönen der nächstverwandten Klänge . . . zugleich jene dynamischen Spannungsmöglichkeiten verleiht, die als Ausstrebung und Rückstrebung der Tonika gegenüber zu kennzeichnen waren" (Kurth 1931, 209).

"Dynamic" dualism and the major-minor opposition

As the "melodic" reading of the major scale suggests, Kurth's view of the tonal system, like many others in his day, is a dualist one. Indeed, the subsection entitled "The dynamic dualism and its three levels of development" was sure to have piqued the interests of contemporary readers of *Musikpsychologie*, for the dualist perspective had been rampant in theoretical writings since the turn of the twentieth century. Kurth's perspective, however, with its emphasis on the "dynamic," takes aim directly (though not explicitly) at Riemann's. The three layers of dualism to which the title refers are: 1) the opposition of (melodically) striving leading tones upwards and downwards, 2) the opposition of and tension between major and minor chords, and 3) the opposition of tonal motion in dominant (sharp-wise) and subdominant (flat-wise) directions. I begin with the third of these, but we shall see that the three are interrelated.

Since the appearance of Heinichen's "Musicalischer Circul" in 1711, the "circle of fifths" has been a permanent fixture in harmony treatises.[10] The fifth relationship determines the ordering of all keys, producing two chains of dominants or subdominants; as Kurth describes, "from C major, the keys C–G–D–A . . . , the lower-fifth-related keys C–F–B♭–E♭ . . . , under the steady admission of new ♯s or ♭s as indicators of key."[11] Yet while the circle of fifths presents a tidy

[10] See Barnett 2002, 444–45.

[11] „Alle seine [d. h. das System der Dur- und Molltonarten] farbenreichen Ausweitungen gehen von den Quintenentfaltungen aus, den beiden Tonartenanordnungen, die sich in weiteren Dominanten und Unterdominanten ketten; z. B. von C-Dur aus in den Tonarten C–G–D–A . . . , den Unterquint-Tonarten C–F–B–Es . . . , unter stetigem Zutritt von neuen ♯ oder ♭ als Tonartsvorzeichen" (Kurth 1931, 210).

representation of all possible major and minor keys, past authors have largely ignored a more dynamic aspect of this arrangement. That is, Kurth argues that the "the circle of keys is generally not only a play with roots but also with leading tones."[12] He describes the process of moving in the sharp and flat directions as one of "activation and deactivation of leading tones," respectively, that "causes a change of intensity units."[13] A single move in the sharp direction on the circle of fifths, towards a key with a more "dominant-like" quality,[14] entails raising a scale step in the starting key to "activate" a new leading tone; for instance, C to C♯ in the move from G major to D major. Conversely, a move in the flat direction involves "deactivating" a leading tone; for instance, lowering B to B♭ in the move from C major to F major. Further, leading-tone strivings are cumulative: traveling in the sharp or dominant direction increases the overall number of upward-striving leading tones, while traveling in the flat or subdominant direction decreases the number of leading tones—relative to the starting point of C major. Comparing the roles of the roots and leading tones within the relationship of keys, Kurth suggests, "The leading tone is the initiating point where the psychological-dynamic processes interpenetrate most intensely, while the roots represent the pivotal points of the

[12] „Denn vor allem ist der Tonartskreis nicht nur ein Spiel mit Grundtönen, sondern mit Leittönen" (Kurth 1931, 210).

[13] „Dies Einschalten und Ausschalten von Leittönen bewirkt einen Wechsel von Intensitätseinheiten, weit also bereits auf eine psychologisch-dynamische Wirkung, welche die Klanglagerung der Quintreihen durchdringt" (Kurth 1931, 210).

[14] Kurth 1931, 213.

physically given relationships."[15] Thus leading-tone strivings that originate in the scale—not only as $\hat{7}$ moves to $\hat{1}$, but also as $\hat{3}$ goes to $\hat{4}$ in major and $\hat{6}$ moves to $\hat{5}$ in the descending form of minor—undergo "two psychologically radical conversions" in order to form the basis of first, chordal tension—as we saw in relation to alteration dissonances—and now, large-scale tonal motions.[16]

Though the notated music might display a proliferation of accidentals as music attains a stronger dominant- or subdominant-like quality, the qualitative difference between keys is only experienced aurally. And though the listener will be unable to perceive exactly which leading tones accumulate (unless one has absolute pitch), he or she will experience a difference in the character of the chords within each key:

> Die Klangbewegung, welche die Relationswirkung zwischen den einzelnen Klängen im Quintenkreis schafft, verarbeitet jene ursprünglich in Leittonveränderung beruhenden Intensitätsunterschiede wieder in neuer Weise: über die einzelnen Akkordspannungen hinausgehend, läßt sie ein strömendes Spannungs- und Farbenspiel ins Empfinden treten, das zwar durch Leitton- (Vorzeichen-)Einheiten geregelt ist, aber als eine harmonische Erscheinung für sich verspürt wird; so ließe sie sich auch nie durch bloße Erklärung der verborgenen Leittonunterschiede oder auch der Entfernungsgrade der Fundamente für jemand ins Bewußtsein rufen, dem etwa diese Wirkungen zu zeigen wären; denn auch sie stellen Wirkungen eigenen Grades und Charakters dar, die nur durch ihr Ertönen selbst darstellbar sind.
>
> [Chordal motion, which creates the effect of relation between individual chords in the circle of fifths, further processes in new ways that difference in intensity that originates in the leading-tone

[15] „Der Leitton ist der Ansatzpunkt, wo die psychologisch-dynamischen Vorgänge am intensivsten eindringen, während die Grundtöne Angelpunkte der physikalisch gegeben Verwandtschaften darstellen" (Kurth 1931, 211).

[16] „dann erfährt [die Leittonwirkung] zwei psychologisch durgreifende Umsetzungen: mit der Klangspannung und weiter mit dem klanglichen Fortschreitungsreflex" (Kurth 1931, 212).

> transformation: going beyond the individual chordal tensions, it allows a streaming play of tension and color to enter that, although regulated through leading-tone units (accidentals), is felt as a harmonic phenomenon in itself. **This phenomenon also would never allow someone, to whom perhaps these effects were to be shown, to notice them through mere explanation of the concealed differences in leading tone or even the degree of distance from the fundamental; for they also represent effects of an idiosyncratic degree and character, which are only representable through their sounding.**][17]

Indeed, Kurth posits that each key has an *absolute* character that "arises from the relative relationship of its fundamental chord to that of C major."[18] Reading this, the modern-day reader of *Musikpsychologie* might question what kind of temperament Kurth had in his ear. As Wason and others have examined,[19] the belief that each diatonic key had its own absolute character was common before equal temperament was assumed, which according to one authority, did not occur until 1917.[20] Thus circulating non-equal temperaments or "well-temperaments" that result in differences in tuning among various keys persisted into the early 20th

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[17] Kurth 1931, 211–12.

[18] „Der absolute Charakter der einzelnen Tonarten festigte sich aus dem relativen Verhältnis ihres Grundklanges zu dem von C-Dur, schon indem dieses vom ersten Lernen an den Ausgang bildet" (Kurth 1931, 213n1).

[19] For instance, in 1898, Joseph Schalk, a student of Bruckner, proposes "color-equivalents" along with other expressive adjectives for each major and minor key. In his system, C major is the color*less* starting point, and indeed the *only* diatonic scale; all other pitches that alter the "Stammtöne" of the C major scale are "chromatic." Schalk refuses to accept equal temperament (though he simply calls it "temperament") for it removes the vitality of music: "It is precisely the countless fine gradations of pitch level that enliven the dead tonal material—that produce the living character of a tonal progression." See Wason 1997, 122–39 (esp. 129ff.). See also Stephani 1923 and Steblin 1983.

[20] Owen Jorgensen writes, "By 1917, most tuners acknowledged that it was possible to hear and control the progressive beatings of thirds and sixths. This technical fact establishes that tuning according to present requirements became common around 1917" (Jorgenson 1991, 5).

century.[21] Yet there is plenty of evidence in Kurth's writing to suggest that equal temperament *was* his norm. For though he acknowledges the historical origins of key characteristics, he argues that they are a psychological phenomenon independent of actual acoustical differences in pitch. Moreover, temperaments and enharmonicism arose because listeners' collective sense of "*inner circulation of tensions*" became stronger over time, ultimately eliminating the need for outer differentiation between dominant (sharp) and subdominant (flat) keys.[22] Kurth writes,

> In technischer Hinsicht war die historische Voraussetzung, daß man die ‚gleichschwebende Temperatur' einführte, die durchgängig Töne wie fis und ges, cis und des usw. gleich stimmte. Aber gerade in historischer Hinsicht ist die Enharmonik nicht einseitig als Errungenschaft des akustischen Zusammenstimmens zu werten, sondern als Symptom und Krönung dynamischen Hörens, das sich in der Harmonik entwickelt hatte und nunmehr auch solcher Verfeinerung fähig war.
>
> [From a technical standpoint, the historical requirement was that one introduced "equal temperament," which tunes tones like F♯ and G♭, C♯ and D♭, etc. equally. But **it is precisely from a historical standpoint that the enharmonic should not be valued one-sidedly as an achievement of acoustical agreement ["tuning together"], but rather as a symptom and culmination of dynamic listening** that had developed in harmony and was now capable of such refinement.][23]

[21] See Wason 1997, 137.

[22] „Aus dem oben Angeführten ergibt sich, daß ein enharmonischer Wechsel keinen bloßen geänderten Lesemechanismus, sondern einen musikpsychologischen Vorgang von hoher Komplikation und Aktivität darstellt, da sich gerade die inneren Wirkungsintensitäten völlig verändern" (Kurth 1931, 210n2).

[23] Kurth 1931, 210n2.

Thus even in the absence of older tuning systems, listeners will experience modulations as a change of tension and color.[24] And the development of equal temperament signaled the ultimate liberation—indeed a "culmination"—of our *innate* sense of aesthetic difference, of increasing and decreasing tension, among the keys of the tonal system.

As we have already seen with respect to scales, the opposition of major and minor presents a second source of dualism in Kurth's tonal system. In *Voraussetzungen*, Kurth argues that while both are acoustically consonant, the major and minor forms of the triad contain equal-but-opposite energetic tensions:

> Minor harmony represents an adjustment of the tension of major harmony; however, this adjustment leads to a similar tension, but in the opposite direction. Thus, we may not view minor harmony as a 'darkening' of the perfect example of chordal consonance or of chordal repose—as has often been the case—but rather, both chords, major as well as minor, represent opposingly directed deviations from the case of absolute repose, and they are the weakest deviations which are conceivable in harmony involving more than two voices. . . . Both triads are disturbances of absolute chordal repose which is to be found in the imaginary realm (and certainly not in a triad with a neutral third).[25]

In *Musikpsychologie*, Kurth sharpens his explanation. Minor and major are closely related: they possess the same intervals, derived from the Chord of Nature, and through the fusion of these intervals, are equally consonant. They differ, then, in the leading-tone strivings of their chordal thirds, both of which prevent absolute chordal repose. Compare the following passages:

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[24] Kurth discusses the phenomenon of "coloristic" impressions at the end of Section 3 (238–49). He identifies three intermingled sources of color in music: instrumental color, color within a fused simultaneity, and the movement of color (*Farbenbewegtheit*) through the movement of chords.

[25] Rothfarb 1979, 180; Kurth 1913.

> Im Durakkord liegt die aus der Skalendynamik verfestigte Leittontendenz im Terzton verborgen; nur verborgen, denn sie ist in den vollen Konsonanzklang aufgenomme, so daß sie nicht die Stärke eines Auflösungsbedürfnisses, sondern bloß einer angedeuteten Strebung trägt.
>
> [In the major chord, the leading-tone tendency that is strengthened from the scalar dynamic lies concealed in the chordal third. Only concealed, because it is absorbed in the fully consonant chord so that it does not carry the intensity of a required resolution but rather merely an implied striving.][26]

And later:

> Gegenform ist der Molldreiklang gleichen Grundtons (nicht, wie Riemann wollte, eines um eine Quint entfernten Grundtones); denn dem C-Dur-Dreiklang gegenüber bedeutet der c-Moll-Dreiklang eine Veränderung im charakteristischen Terzton, der bei Beziehung auf Naturklangsform die Andeutung einer Tiefenstrebung (Veränderung des *e* zu *es*) enthält, wieder nur die Andeutung, da die Klangkonsonanz auch eine vollständige ist: sie besteht nur aus Intervallen, die im Naturklang enthalten sind und stellt die einzige noch konsonante Dreiklangsform neben dem Durakkord dar, durch Verschmelzung der gleichen Teilintervalle bedingt.
>
> [The minor chord with the same root is the opposing form (not, as Riemann would like, one whose root is a fifth removed). For the C-major triad in comparison to the c minor triad means a transformation in the characteristic third tone, which contains the suggestion of a downward striving (transformation of the e to e♭) in relation to the form of the Chord of Nature; [and] further, only the suggestion, because the consonance is also complete: [the consonance] consists only of intervals that are contained in the Chord of Nature and represents the sole consonant triadic form besides the major chord, determined through the fusion of equivalent constituent intervals.][27]

[26] Kurth 1931, 214.

[27] Kurth 1931, 214–15.

The third of the minor chord is thus a "transformation" of the naturally occurring third in the Chord of Nature, such that this third now has an implied downward striving.[28]

As Kurth emphasizes, his conception of the relationship between major and minor is far removed from Riemann's. In fact, one could argue that it is closer to that of an older theorist, one whom Riemann mistook for a dualist: Zarlino.[29] Both Kurth and Zarlino note the similar internal proportions of the major and minor chords, and both identify the significant difference between the two chords as one of affect or feeling. Indeed, Kurth notes that from the perspective of chordal

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[28] Kurth is quick to clarify, however, that the major chord is only primary from a physical point of view; in energetic terms, they are equivalent:

> Die vorliegende Auffassung schiebt dem Dur gleichwohl kein eigentliches Primat in der Musik zu. Nur nach physikalischem Gesichtspunkt läge für den Durklang (Naturklang) eines vor, psychologisch nicht, da für die Musik der Konsonanzgrad der gleiche und die Strebungen gleichen Wesens, nur polar einander entgegengesetzt sind.
>
> [Nevertheless, the present view maintains that the major mode has no actual primacy in music. Only according to the physical point of view, and not psychological, does there exist something primary for the major chord (Chord of Nature), since the degree of consonance is the same and the strivings are of the same nature, only polar opposites of one another]. Kurth 1931, 215n3.

[29] In *Le istituioni harmoniche*, Zarlino writes,

> But since the extremes of the fifth are invariable and always placed subject to the same proportion . . . the extremes of the thirds are given different positions. I do not say different in proportion; I say different in position. I say different in position for when . . . the major third is placed below, the harmony is made joyful and when it is placed above, the harmony is made mournful. Thus from the different positions of the thirds which are placed in counterpoint between the extremes of the fifth or above the octave, the variety of harmony arises.

Translated in *Source Readings in Music History*, ed. Oliver Strunk; rev. edn, ed. Leo Treitler (New York: Norton, 1998): 449. Quoted in Klumpenhouwer 2002, 462.

construction, there is little opposition between major and minor chords. Instead, the opposition lies in an energetic dualism.[30]

Kurth's defense of the *Stufentheorie*

> Innerhalb jeder Tonart nun gibt es einen Bestand von Akkorden, die sich auf jeder Skalenstufe als ihrem Grundton herausbilden, Dreiklänge, in weiterem Terzaufbau Sept- und Nonenakkorde usw. Aber die Klänge sind nicht alle dem Grundakkord gleich, sondern nur aus Tönen der Tonleiter gebildet, daher ‚leitereigene' Akkorde genannt. Diese Erscheinung ist primitiv und merkwürdig zugleich; primitiv durch die Äußerlichkeit der Analogiebildung, merkwürdig aber gleichfalls dadurch, daß die Klänge nicht kongruent, sondern bloß analog sind. Schon das führt auf die psychologischen Grundzüge.
>
> [Within every key an inventory of chords (triads and with further third stacking, seventh- and ninth-chords, etc.) is developed by taking each scale step as a root. **The chords, however, are not all the same as the fundamental chord, but formed rather from the tones of the scale, [and] are thus called "diatonic" chords.** This phenomenon is primitive and remarkable at the same time; primitive through the superficiality of the analogical structure, but also remarkable in that the chords are not congruent, but merely analogous. This leads to **psychological ramifications**.][31]

Having examined the major and minor scales, the sources of tension and opposition within these scales, and the two main forms of the triads, Kurth turns to other chord types and the tonal system more broadly. In the above, he clearly demonstrates his allegiance to the *Stufentheorie* tradition, as he generates unique

[30] „Der Dualismus ist also gar nicht ein klanglicher, schon indem die Gegensätze vom klanglichen Gesichtspunkt gering wären, der nie ihre zentrale Kontrastwirkung rechtfertigen könnte; es ist ein energetischer Dualismus" (Kurth 1931, 215). In an accompanying footnote, Kurth argues for greater specificity in applying the term "dualism": „Der ganze Gegensatz zwischen ‚monistischer' und ‚dualistischer' Theorie wird damit hinfällig; ‚monistisch' wäre die vorliegende Erklärung im klanglichen, ‚dualistisch' im energetischen Sinn." ["The entire opposition between 'monistic' and 'dualistic' theory is thus invalid. The present explanation would be 'monistic' in the sounding sense while 'dualistic' in the energetic sense."] Kurth 1931, 215n2.

[31] Kurth 1931, 217.

chords—and chords that in turn form the scale—on each scale degree. It is the dynamic inner tension among these chords—rather than an intellectualized, rigid schematic—that forms the "diatonic" chordal system.

Kurth goes on to say that two principles govern the formation of analogous chords on each scale step: fusion, which combines the intervals found in the Chord of Nature in different ways, and the "sense of construction" (the interaction of bass and root), which the psyche disrupts with the impression of chordal mixture. But since it is the scale that determines which thirds go into each chord, Kurth argues that the "tonal gravitation" of the scale is stronger than the "rigid model of the chord of nature."[32] The features of the major scale reflect themselves in the chords: "Their ordering sweeps outwards such that each one achieves its constructive meaning, also allowing the chords of the IV and V *Stufen* to dominate, just as they acted in the basic scale as a close relationship at the same time with the balance of movement."[33] Just as the fourth and fifth scale degrees play an important role in the diatonic scale, so too are the chords built on these degrees important.[34] Recall that not only the bass of each chord but also its root exerts a force of gravity in each chord; and in turn, each root relates back to the

[32] „Die Nachbildung läßt vor allem folgende Prinzipe in Erscheinung treten: **die Verschmelzung**, da sich Teilintervalle des Naturklanges zum andern Bilde fugen; dann aber sofort **das Aufbauempfinden**, mit dem die Psyche wieder den bloßen Eindruck der Klangmischung durchsetzt. Daß aber für die Größe der Terzen, in denen beides beruht, nur die Töne der Grundskala maßgebend sind, beweist, daß die tonartliche Gravitation stärker ist als das starre Naturklangvorbild" (Kurth 1931, 217).

[33] „Deren Ordnung fächert sich so aus, daß jeder seine konstruktive Bedeutung gewinnt, mögen auch die Klänge der IV. und V. Stufe dominieren, wie sie schon in die Grundskala als engste Verwandtschaften zugleich mit dem Bewegungsausgleich einwirken" (Kurth 1931, 218).

[34] In 218n2, Kurth discusses the uniqueness of the "dynamically stronger cadences" V–I and IV–I.

basic chord (tonic). Thus the effect of any progression is threefold, resting in "the sensory effect of contrast of both chordal forms [major-minor] in themselves, then concealed in the distance of the fundamental, and above all, in the distance of individual chordal fundamentals from that of the first scale step."[35]

Kurth's generation of chords from each scale step in the diatonic scale resonates with the theories of Sechter. And indeed, Kurth comes to the defense of Sechter's much-maligned system against accusations that it is schematic and simply a registry of chords. Riemann was the principal critic of Sechter's system, and now Kurth takes umbrage with Riemann's *Funktiontheorie*. As he did in *Voraussetzungen*,[36] he accuses Riemann of ignoring the audibility of relationships for the sake of symmetry and logic. Indeed, he characterizes this purely rational approach as overly simplistic:

> Von diesem Gesichtspunkt kann man es gewiß nur als schade bezeichnen, daß Riemanns Klangsystem, eine imposante Denkleistung und volle Geometrisierung der Harmonik, der Hörweise widerspricht; denn wie einfach wären—trotz der etwas größeren Denkanstrengung—die Probleme der Musiktheorie, wenn sich alles solch verstandesmäßigem Symmetrieaufbau fügte, der zudem lediglich an den Klang zu knüpfen hätte!. . . . Die leitereigenen Klänge werden nämlich durch einen System ersetzt, worin der (in C-Dur z. B. von *c* aufwärts, in f-Moll von *c* abwärts zu lesende) Grundklang von den beiden Dominanten umlagert ist und alle übrigen Akkorde nur Abweichungen (Umbildungen) dieser Hauptklänge darstellen.
>
> [From this standpoint, one can only consider it unfortunate that Riemann's chordal system, **an impressive conceptualization and complete axiomatic system of harmony, contradicts hearing.** For

[35] „Die einzelnen Fortschreitungseffekte beruhen somit in dreierlei: im sinnlichen Gegensatzeffekt der beiden Klangformen an sich, dann verborgener im Abstande der Fundamente und vor allem auch im Abstand des einzelnen Klangfundaments von dem der I. Stufe" (Kurth 1931, 218).

[36] See discussion at the end of Chapter Two.

> how simple would the problems of music theory be —despite the somewhat larger exertion of thinking—if they all submitted to such rational symmetrical construction, which furthermore, would merely have to be tied to the chord! . . . In particular, **the diatonic chords are replaced through a system wherein the basic chord** (read in C major, for instance, from C upwards, and in F minor, from C downwards) **is surrounded by both dominants, and all remaining chords present only deviations (transformations) of these primary chords.**][37]

As examples of such deviations from the primary chords, Kurth cites the transformation of III (E–G–B) to V (G–B–D) in C, what Riemann calls a dominant *Terzwechsel* and II (D–F–A) to IV (F–A–C), a subdominant *Terzwechsel*.[38] In both cases, only one note needs to slide—specifically the roots of the original chords, E and D.[39] Kurth cannot accept this interpretation, however, because it "disables" (*ausgeschaltet*) the primacy of the roots that, as we discussed above, are always psychologically active even if not the lowest note. More than anything, this highlights the importance Kurth places on the diatonic scale, and moreover, each step *qua* root in the scale.

Kurth also dislikes the absolutist nature of Riemann's thinking, that is, that the system works regardless of what musical repertoire is at hand. Indeed, in *Voraussetzungen*, he disputed Riemann's system along historical lines. Musical practice, he argues hardly reflects three chords alone:

> On the contrary, in works dating from the earliest times, **the relative minor chord and the diatonic minor chord upon the third scale**

[37] Kurth 1931, 219n1.

[38] These are both commonly called "relative" relationships. See Klumpenhouwer 2002, 467–68.

[39] Of course, for Riemann, the root of the III chord is B rather than E. The case of III highlights major differences between Schenker and Riemann as well, which amounts to a confusion of structural levels on the part of the latter. See Wason 1985, 126.

> **degree** (**in major**) show such a marked independent harmonic power that the stated dependence of these chords upon one of the primary chords, as a result of the 'incorporation of neighbor tones', also exemplifies basic ideas carried to extremes in the dual system.[40]

In *Musikpsychologie*, Kurth allows that in individual cases, an effect like the *Terzwechsel* may be a contributing factor, but "to generalize [it] would mean not only an impoverishment of chordal hearing but also its forced insertion."[41] By "forced insertion," Kurth refers once more to Riemann's derivation of "secondary chords" from primary chords through the use of neighbor-note insertions, or dissonant embellishments. Moreover, Kurth argues that Riemann ignores the appearance of secondary dominants, which themselves strongly imply a subsequent root of resolution. Indeed, by Riemann's logic, any applied chord in a minor key should in fact be a secondary *subdominant*, which he says Riemann "does not at all embrace."[42] And finally, he argues that Riemann's "symmetrical rearrangement of a central tone brings in a false spatial imagining in music,"[43] bringing us back to the problems with visual and spatial representations that we discussed in Chapter Three.

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[40] Trans. Rothfarb 1979, 158; emphasis added in bold.

[41] „[D]erlei Wirkung kann gewiß in einzelnen Fällen vorliegen oder auch nur mit hereinspielen, aber es zu generalisieren, bedeutete nicht nur eine Verarmung des klanglichen Hörens, sondern dessen Zwangsentstellung" (Kurth 1931, 219n1).

[42] „Die Unhaltbarkeit ginge allein schon daraus hervor, daß bei allen Meistern vor jede Klangstufe sog. Zwischendominanten treten, die sich also in den angeführten Fällen klipp und klar auf *e* bzw. *d* als Grundtöne beziehen. (Dabei ergäbe sich noch als weiterer Wiederspruch, daß vor Mollklängen (auch in Dur) gar nicht Zwischendominanten, sondern nur Zwischen-Subdominanten eintreten müßten, was aber Riemann gar nicht annimmt, obwohl es seinem System logisch entspräche" (Kurth 1931, 219n1).

[43] „Zudem bringt jene symmetrische Umlagerung eines Zentraltones eine falsche Raumvorstellung in die Musik herein, und was als systematische Ordnung erscheint, wirft vielfach alle Ordnung um, weil es wesensfremde Symmetrie mitschleppen muß" (Kurth 1931, 219).

Extensions of the diatonic system

Unlike Riemann, Kurth considers secondary dominants and further extensions of the diatonic system in great detail. Even further, he takes a historical approach to explain how over time, the same process that yields secondary dominants generates, in a recursive fashion, modulations (temporary and otherwise) to more remote areas of the tonal system.[44] Kurth explains the mechanics of the secondary dominant in a straightforward way:

> Die einfachste, auch historisch älteste Weitung, (die etwa seit 1500 gut, vorher in Spuren verfolgbar ist), beruht in den sog. ‚Zwischendominanten'. Sie bedeuten nichts anderes, als daß man die in der Klangfolge V–I liegende Wirkung für sich heraushob und noch an andern Stellen, unter Aufsprengung des leitereigenen Zusammenhalts, einsetzte.
>
> [The easiest, as well as historically oldest expansion (which is valid from approximately 1500, and previously discernable in traces), is based in the so-called "secondary dominants." They mean nothing else than that one lifted out, on its own, the effect underlying the chordal progression V–I, and inserted [it] in other positions, thus circumventing diatonic unity.][45]

He emphasizes that the original key still reigns; indeed, it "extends its reach" towards the chromatic chords, drawing them into its field of influence.[46] Returning

[44] In 228n1, Kurth notes that the advent of equal temperament was a significant contribution to this development. He also characterizes the trajectory of tonality, up to his own time as „allmählicher Zerdehnung, Lockerung bis zum Zerfall" ["a gradual stretching . . . a loosening to the point of disintegration"].

[45] Kurth 1931, 228–29.

[46] „Damit streckte die Tonart ihre Fänge nach fremden (großenteils nicht leitereigenen) Klängen aus, bezog sie aber doch dadurch in ihr Bereich, daß sich diese Klänge unmittelbar auf einen der leitereigenen Stufenakkorde bezogen und durch diesen ihre einfache Beziehung zur Haupttonika erfuhren" (Kurth 1931, 229).

to the idea of tonal gravitation, Kurth incorporates secondary dominants into a "system of primary connections and closely related connections."[47]

Kurth presents himself as a truly monotonal theorist in his concern for cohesion. Indeed, he emphasizes the psychological sustainability of the global tonic:

> Man vermag die Tonika im Unterbewußtsein solange festzuhalten, und damit wächst zwar ihre Intensität, aber auch nicht die akustisch-gehörsmäßige, sondern die dynamische; sie sammelt sich um so mehr an, je stärker man sich in Gegenwirkung zu den Ausweichungen auf den Tonartshauptton konzentriert.
>
> [One can hold the tonic in the unconscious, and for this reason, it grows in its intensity—not the acoustic-aural standpoint, but the dynamic. It accumulates all the more, the stronger one concentrates on the root of the home key as a counteraction to the modulations.][48]

Not only is the global tonic omnipresent, but it also becomes psychologically stronger the further the music strays from the home key. He posits that tension increases as root distance from tonic grows and as leading tones accumulate. In turn, we sense that the tonic, as an anchor for the entire chordal system, strengthens and transforms itself against these competing forces. Finally, Kurth explains that our retention of tonic may be an unconscious one; indeed, so much so, that the tonic itself appears "magical":

> Es gibt eben auch ein Tongedächtnis, das über Gehörsgedächtnis hinausgeht; es erfaßt nicht die Realität des Tones, sondern gewisse Energiezustände, als deren Zentrum er vorschwebt. Er wirkt hier als Sammelpunkt der Gravitationen, und nur sehr geschulte Musiker sind imstande, jeden Augenblick auch während der Ausweichungen den Grundton der Haupttonart wirklich mitten in die Fremdklänge

[47] „Damit zeigt sich die tonartliche Gravitation nicht allein über größere Strecken dehnungsfähig, sie ist einem System von Haupt- und Nebenzusammenhängen zugänglich" (Kurth 1931, 229).

[48] Kurth 1931, 232.

> hineinzusingen. Dennoch kann er halbbewußt, sogar auch unbewußt, so fest vorschweben, daß der ganze Charakter der Ausweichungen durch ihn bestimmt ist. Die Doppelnatur des musikalischen Tones als eines gehörsmäßigen und dynamischen Phänomens wird nirgends so sinnfällig wie bei Tonartsweitungen; sie kann hier bis nahe an eine Spaltung führen: der Ton wird imaginär und doch ein Beziehungspunkt von magischer Kraft.
>
> [There is also a tonal memory that goes beyond the aural memory; it does not capture the reality of the tone, but rather certain energetic conditions, which it [tonal memory] retains as its center. It acts here as the assembly point of the gravitations, and only very skilled musicians are able to sing the root of the primary key in the middle of the foreign chords, at every moment during the modulations. Nevertheless, the [global tonic]—semi-conscious [or] even unconscious—can be so firmly in mind that the entire character of the modulation is determined through it. The dual nature of the musical tone as an aural and dynamic phenomenon is nowhere as palpable as with key expansions. Here, it can come close to a split: the tone becomes imaginary and yet a point of relation of magical power.][49]

With this, our discussion of chordal motion has come full circle. We have witnessed Kurth transition fluidly from the experienced dynamics of the scale, to diatonic motion these dynamics govern, and further, to chromatic extensions of the diatonic system. Throughout, Kurth wishes to account for the psychological foundations for the tonal system, and moreover, its ever-expanding boundaries. In the final chapter, we shall see how expansion and fluidity inform his notions of form and rhythm.

[49] Kurth 1931, 232.

CHAPTER SEVEN

Analysis of the Whole: Form, Rhythm, and Ways Forward

In the final section of *Musikpsychologie*, Kurth tackles issues of form, rhythm, and meter. His dissatisfaction with current theories of these topics is in evidence, but unlike his ideas on harmony, his ideas on form only suggest preliminary steps towards alternatives. This chapter then, discusses what Kurth may have viewed as directions for future study, which we may, too, take up in this way.

Phenomenal forms of movement

In his review of *Ernst Kurth as Theorist and Analyst,* Stephen Parkany laments what he sees as Rothfarb's cursory handling of Kurth's "dynamic syntax of large-scale form."[1] Parkany's own dissertation and articles stemming from this consider Kurth's "well-developed vocabulary of dynamic formal analysis" and its application to analyses of Bruckner[2]—as outlined in Kurth's two-volume, 1300-page monolithic project. While Parkany's work is admirably detailed, Rothfarb notes justifiably that summarizing Kurth's formal principles succinctly is a distinct challenge:

> When commenting on form, Kurth does not assemble all of his observations into a practical analytic method. He introduces various approaches, applies them selectively, and then suggests further applications, variations, and avenues of investigation. **He himself does not always fully develop his ideas theoretically or analytically.**[3]

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[1] Parkany 1991, 247.

[2] Parkany 1989, 9. Subsequent articles include "Kurth's Bruckner and the Adagio of the Seventh Symphony" in *Nineteenth-Century Music* 11 (1988): 262–81, and "The *kecke Beserl* and Bruckner's Symphonic Tradition" (on his First Symphony) in *Proceedings of the XIV Congress of the IMS/Bologna 1987* (Turin, 1990): 811–17.

[3] Rothfarb 1988, 211; emphasis added in bold.

Neither a fully developed theoretical framework nor analytical machinery appears between the covers of *Musikpsychologie*. Those familiar with his prior analytical treatises may, however, note familiar metaphorical concepts that transcend style-specific analyses. Others may be pleased to discover that Kurth addresses traditional *Formenlehren* and rhythmic theories head on, thereby strengthening his own ideas on form and rhythm. In this chapter, I present a few such ideas, which, like his theory of harmony, are psychologically and experientially grounded.

It is apparent from the outset of Section 4 that under the purview of "form" falls more than what we might now regard as "formal." Kurth focuses here on the "phenomenal forms of movement" that accompany musical listening—experiences that "theory," he remarks, usually partitions into melodic, rhythmic, and formal categories. Yet "no phenomenon is separable from even one of these concepts," he argues, even if "one of these elements, as a result of weaker development, may appear suppressed." Ultimately, we experience phenomenal forms of movement as "inseparable from one another, just as they are also inseparable from harmony, from external dynamics (shades of intensity or *chiaroscuro*), and are also not to be detached from the more comprehensive features of style and aesthetic effects."[4] Considering melody, for instance, implicates other categories—"it encompasses rhythm in the broadest sense, in that it also comprises the image of all relationships

[4] „Die Theorie sondert diese fließenden Erscheinungsformen in die melodischen, rhythmischen und formalen. . . . Keine Verlaufserscheinung ist nur von einem dieser Begriffe trennbar: es gibt keine Ton- oder Klangbewegung ohne Melodie, Rhythmus und Form, mag auch eines dieser Elemente infolge schwächerer Herausbildung verdrängt erscheinen. Aber sie sind auch untereinander nicht trennbar, wie sie auch von der Harmonik, von der äußeren Dynamik (Stärkeschattierung) und auch von den umfassenderen Merkmallen der Stilistik und ästhetischen Wirkungen nicht zu lösen sind" (Kurth 1931, 250).

of emphasis and duration; further, it encompasses the concept of form, since it also contains in itself developmental structures."[5] And Kurth notes that in everyday parlance, "Großrhythmus" is commonly used to describe the three phenomenal forms in combination, that is, in Hanns Eisler and Theodor Adorno's words, "the proportion between the parts and their dynamic relationship, the progression or the stopping of the whole, the breath pattern, so to speak, of the total form."[6]

With "proportion" and "progression," Eisler and Adorno's description of *Großrhythmus* calls up issues of space and time. Kurth brings the time-space duality to the fore, appealing to both antiquated and more recent philosophies. Thus he cites the Eleatics, who believed that measuring time by spatial units was a conceptual aid,[7] and Henri Bergson, who distinguishes between the "real, experienced 'duration' (*durée*)" and the transferal of this internal sense of time into an externally representable space.[8] Kurth wishes to underscore "the psychological

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[5] „So umfaßt der Begriff Melodie im allgemeinsten Sinn zugleich die Rhythmik, indem er auch das Bild aller Betonungs- und Längenverhältnisse in sich schließt; ferner umfaßt er den Formbegriff, da er auch an sich die Ablaufsformen mitenthält" (Kurth 1931, 250).

[6] In their book *Composing for the Films*, which was published in the same year as the reprint of *Musikpsychologie*, Eisler and Adorno (1947/1971, 68) write: "In music movement primarily signifies the underlying constant time unit. . . . Or 'movement' is used in a higher sense, that of the so-called *Großrhythmus*, the proportion between the parts and their dynamic relationship, the progression or the stopping of the whole, the breath pattern, so to speak, of the total form."

At the turn of the century, the term "Rhythmus" was often interchanged with "Form," and "Rhythmus im Grossen" was a common expression. Rhythmus was also used to refer to movement that, because of its speed, escaped the senses. Hans Heinrich Eggebrecht, ed., *Handwörterbuch der Musikalischen Terminologie* (Wiesbaden, F. Steiner, 1972), s.v. "Rhythmus/numerus" by Wilhelm Seidel.

[7] Kurth 1931, 251n1. The Eleatics were a pre-Socratic school of philosophy. Founded by Xenophanes of Colophon, the school included Parmenides of Elea, Zeno of Elea, and Melissus of Samos. See Kirk and Raven, 1957.

[8] Kurth 1931, 252n1.

peculiarity of hearing," that causes us to perceive not only time but also space—and both at once: "one absorbs both the succession of concomitant impressions as well as their unification in an overall picture, i.e., one always combines motion with its image." We have neither a purely temporal nor a purely spatial impression, for "the temporal impression is disturbed as that unification is fundamentally a negation of the temporal unfolding; [and] the spatial impression is only an illusory one and occurs much less consciously."[9] Returning to the term "form" then, Kurth understands it in the "broadest sense" as "the interaction of energy and its spatial-temporal appearance."[10] Let us take a closer look at the nature of this sense of space.

Arch forms, curvilinear development, and waves

Recall that in Chapter Three we discussed how listeners continue to experience past musical events—how we "capture" the felt motion of these events—in an "afterimage." There, we discussed Kurth's criticisms of Riemann's suggestion that we on the one hand, imagine "each tone first before bringing it forth" from memory, and on the other hand, "hasten forward with the imagination, ahead of the actual sounding notes"—in an attempt "to grasp the

[9] „Aber wie bei den kleinsten Ausmaßen liegt wieder die psychologische Eigentümlichkeit des Hörens darin, daß man sowohl das Nacheinander der Teileindrücke als auch ihre Vereinung zu einem Gesamtbild aufnimmt, d. h. stets Bewegung und Bewegungsbild vereint. Kein rein zeitlicher und kein rein räumlicher Eindruck liegt vor, der zeitliche ist gestört, indem jene Einheitsverbindung im Grunde eine Negation des zeitlichen Verlaufs ist, der räumliche ist nur ein scheinbarer und wird viel weniger bewußt" (Kurth 1931, 252).

[10] „Im allgemeinsten Sinn ist daher der musikalische Formbegriff aus der Wechselwirkung von Energie und ihrer raum-zeitlichen Erscheinungsform zu erklären" (254). Kurth recalls that in *Bruckner*, he defines form as "the control of force through space and time" (Kurth 1931, 254). See *Bruckner* I, 239, and Rothfarb 1991, 191n4.

entire course of the work through apperception of the individual sounding tones."[11] Recall that Kurth instead suggests that we "capture" felt motion of past events and imagine a course of motion that encompasses future events. For Riemann, reading ahead and imagining the notated score prior to its sounding is a skill of trained musicians; for Kurth, imagining a course of motion is a universal experience. Kurth brings this discussion into renewed focus, noting that to experience music in time and simultaneously beyond—that is, not only "vorwärts"—the present moment is to perform "multi-track listening":

> [M]an hört, oder genauer: man strebt in der Tonvorstellung nicht nur voraus, sondern zugleich über andere Kurventeile hinweg; indem sich also derartige Krisenpunkte verbinden, entsteht der doppelspurige Hörverlauf, auf die augenblickliche Teilkurve und auf die übergreifende Kettung gerichtet. Das eigentliche psychologische Merkmal ist daher nebst einem Voraushören zugleich ein Nebenher-Hören, und zwar nicht allein im Sinne einer gehörsmäßigen Tonvorstellung, sondern vor allem einer energetischen Wirkung, die jene gehörsmäßige Doppelfunktion erst hervorruft und fördert.
>
> [In the tonal imagination, one hears, or more accurately, one strives [to hear] not only in advance but at the same time beyond other curvilinear parts. As climax points combine, the double-track course of hearing arises, directed at the momentary parts of the curve and at the overriding chaining. Thus the actual psychological trait is in addition to hearing in advance, a parallel hearing at the same time. This certainly occurs not solely in the sense of an aural tone-imagining but particularly in one of an energetic effect, which that aural dual function first causes and encourages.][12]

When we listen to music we not only have the experience of forward direction at the natural pace of the music, but also of hearing in advance and reflecting

[11] Wason and Marvin 1992, 84.

[12] Kurth 1931, 258.

backwards.[13] In this way, the experience of even a single monophonic line occurs in multiple temporal states—the immediate present, pasts distant and near, and future by way of anticipation. Recalling his holistic view of the chord, all of these temporal states appear to us consolidated into an impression of a "complex."[14]

For Kurth, the "**immediate phenomenal image** in which the energetic course displays itself" is that of a curve.[15] He suggests that there are fundamental differences in melodic trajectories over the ages, but generally in all styles we experience music as a curvilinear development consisting of smaller "arches" within a larger "arch unit." His description of how arches progress recalls the course of a wave. First, there is an ascent that seeks to "extend its effects beyond itself." At the top of that ascent, the apex of the arch, the energy from the beginning is stored [as potential] and is conserved through the following descent. The physical metaphor breaks down, however, in the accumulation of energy over the course of a musical work. Notably, "the psychological process is such that the

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[13] The reinterpretation of a dissonant tone amidst changing contexts (see Chapter Four) is an example of this backwards hearing.

[14] Kurth (1931, 259) writes,

> Zudem ist aber hier zu beachten, daß dies „Zurückhören" gleichzeitig mit dem augenblicklich Erklingenden erfolgt, also ebenfalls ein „Neben-Hören" darstellt. Überall zeigt sich—selbst innerhalb einstimmiger Linie—in psychischer Hinsicht eine außerordentliche Komplikation in einen „Komplex"-Eindruck aufgenommen, daher vereinfacht.
>
> [Furthermore, it should be noted here that this "listening backward" takes place at the same time with sounding at this instant, thus also presenting a "hearing-alongside-of." Throughout—even within a monophonic line—extreme complication appears to be absorbed, in the psychic sense, into a "complex" impression [and] thus simplified.]

Recall from Chapter Four that Kurth refers to sounding simultaneities as "complexes"—that is, wholes comprising of integrated parts that, in turn, affect each other as well as the whole.

[15] „die Kurven sind das unmittelbare Erscheinungsbild, in das sich der Energieverlauf auslegt" (Kurth 1931, 255).

tension content can cleave and reproduce in a highpoint itself, as it presents retroactively a fulfillment and thus leads to a partial relaxation, and at the same time, initiates new overreaching ascents in [its] forward-directed entry."[16] Thus there is a "continued effect" of individual high points that is unique to *musical* forms of motion—a result of the conscious or unconscious will. In this way, we may sense not only the continual transformation of potential to kinetic energy over a series of arches but also an accumulation of energy that reaches a global highpoint. Kurth also notes that along with such energetic high points, there are primary tones that emerge by way of motivic structure and harmonic organization.[17]

Because of not only the variance in individual musical experiences but also the wide array of musical styles, it would be misguided to generalize or categorize all of the arch forms we can perceive. Instead, Kurth suggests a perspective that considers trends in wave behavior as measures of compositional style. For him, the highpoints of curves are particularly telling in this regard: "it is also psychologically given that characteristic style criteria always express themselves in the formation of the climax points (high and low points). During their existence, peaks exhibit primarily a transformation of their tonal dynamic."[18] For a given

[16] „Der psychologische Vorgang ist also der, daß sich in einem Höhepunkt selbst der Spannungsinhalt spalten und vervielfältigen kann, indem er rückwirkend eine Erfüllung darstellt und somit zu einem Entspannungsteil leitet, und gleichzeitig in vorwärtswirkendem Ansatzzustand neue übergreifende Steigerungen einleitet" (Kurth 1931, 256–57).

[17] Kurth 1931, 257n1.

[18] „So ist es auch psychologisch gegeben, daß sich charakteristische Stilkriterien stets in der Gestaltung der Krisenpunkte (Höhe- und Tiefepunkte) äußern. Gipfelungen weisen

work, we can consider the manner in which we feel tension abating or regenerating after a peak in energy—whether there is a true sense of relaxation or only a temporary nadir in the course of returning waves—and whether this experience holds true for other works by the same composer or groups of composers. Here, we may investigate "technical characteristics that withheld the last waning character of a partial tension." These include "harmonic preventions from cadencing (from the typical deceptive cadence to the individually refined type)," as well as "varied but also purely melodic-dynamic processes that prevent the last equalization."[19] Likewise, a "psychological point of view" would also consider whether we feel a gradual build up towards the highpoint or a quickened intensification towards a climax. But, Kurth notes, these are only a few of the criteria by which we can measure the energetic content of a work and a style. Suggesting a course for future investigation, he states:

> [H]ier genügt die Erkenntnis, daß alle hierauf gerichtete Stilpsychologie vom Ineinanderwirken der dynamischen Einzelpunkte ausgehen muß, während es eine starre Schematik wäre, die Gestaltung einzeln herausgegriffener zu beschreiben; denn diese werden an sich innerhalb jedes Werks in vielfacher Art anzutreffen sein. Schon daraus wird aber auch klar, wie wenig das visuelle Kurvenbild die innere Durchgestaltung des Steigerungsverlaufs entschleiern kann.
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> [Here, it is enough to recognize that all style psychology directed to this end must proceed from the interaction of the dynamic individual points, whereas it would be a rigid schematicism to describe the

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vorwiegend während ihrer Dauer eine Veränderung ihrer Tondynamik auf" (Kurth 1931, 260).

[19] „Hierbei ist es von besonderem Interesse, die rein technischen Merkmale zu verfolgen, die einer Teilentspannung den letzten Abstillungscharakter vorenthalten; sehr oft sind es harmonische Schlußunterbindungen (vom typsichen Trugschluß bis zu individuell verfeinerter Art), ebenso vielfach aber auch rein melodisch-dynamische Vorgänge, die den letzten Ausgleich hintanhalten" (Kurth 1931, 261–62).

> formation of individual singled-out points; for these are to be found within every work in manifold ways. It is clear from that how little the visual graph can unveil the inner details of the process of heightening.][20]

Finally, Kurth considers the Gestalt quality of large spans of music. That is, according to which essential features do arches synthesize such that we sense "a more balanced, 'formal' [shapely] stabilized unity"? He offers two possibilities: the dynamic principle, which is inclined towards forms of approach and release, and the principle of symmetry, which operates according to equal proportions.[21] Of the two, the dynamic principle is primordial. But symmetry plays an important role as well, often in opposition to the dynamic principle.[22] Indeed, Kurth makes an analogy to the relationship of the bass and root of a chord, as discussed in Chapter Five: "The interaction of both principles, which would thereby be possible, reminds us of the dual gravitation that determines the harmonic equilibrium."[23] If one concentrates only on regular accentual symmetry, for instance, one ignores the interplay between these principles, an interplay that goes beyond the "secret of

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[20] Kurth 1931, 260.

[21] „Für die Bogensynthese ergibt sich daher noch die Frage, nach welchen psychologischen Grundzügen sich ein Gesamtverlauf zu ausgeglichener, ‚formal' stabilisierter Einheit schließt. Auch da kommen die zwei Prinzipe in Betracht, die schon aus dem Bisherigen heraussprangen: das dynamische, das nach der Entwicklungsform von Ansatz und Auslösung tendiert, und ein Symmetrieprinzip, das nach gleichen Ausmaßen hinwirkt" (Kurth 1931, 265–66).

[22] As an example, Kurth cites text-settings of poetry from the sixteenth and seventeenth centuries that contain symmetrical, four-line verses, but that are set in groups of odd-numbered (5, 7) measures based on an inner dynamic. See Kurth 1931, 267.

[23] „Das Zusammenwirken der beiden Prinzipe, das dabei möglich wird, gemahnt etwa an die doppelte Gravitation, die das harmonische Gleichgewicht bestimmt" (Kurth 1931, 267).

form" (*Formgeheimnis*) that nineteenth-century music theory "wants to show deductively from rhythmic rules"[24]

Kurth then distinguishes between 1) the "fundamental" notions of form "in the wider sense", that is, within the phenomenon of the course of motion; and 2) the "theory of form in a narrower sense." Within the first category, he includes "concepts of development, transition, intensification, waves (curvilinear development), relationship of tension (like preparation and resolution, ascending and returning lines, etc. up to repeatedly linked relationships of tension), and finally balance of motion and goal directedness."[25] For Kurth, motives and their grouping serve to narrow the formal focus, from dynamic relationships to music-theoretical concepts. Motives, the smallest kernel of unified motion ("self-contained motion progression"), lead to concepts that are familiar from traditional music theory: "repetition and the phenomenon of similarity, consequently also simple, similar repetition (variants in all of their degrees and forms); further, the concepts of sequence and contrast; motives, themes, grouping forms, etc., up to the special terms of formal analysis that are always narrow."[26] Kurth argues, however,

[24] „sie ist noch lange nicht das Formgeheimnis, das die Musiklehre des 19. Jahrhunderts hier enthüllt und aus rhythmischen Gesetzen abgeleitet wissen wollte" (Kurth 1931, 267).

[25] „Als allgemeinste Grundbegriffe der Form ergeben sich daher: zunächst die schon in den Phänomenen des Bewegungsablaufs, der Form im weiteren Sinne, gegebenen Begriffe von Entwicklung, Übergang, Steigerung, Welle (Kurvenbildung), Spannungsbeziehung (wie Vorbereitung und Auslösung, Steigerung und Rückleitung usw. bis in die mehrfach geketteten Spannungsbeziehungen), ferner Bewegungsausgleich und Zielstrebigkeit" (Kurth 1931, 285).

[26] „Mit der motivischen Festigung greifen weiter die Grundbegriffe ein, die zur Formenlehre im engeren Sinne Führen: Wiederholung und das Ähnlichkeitsphänomen, mithin auch die bloß ähnliche Wiederholung (Variante in allen ihren Graden und Formen); ferner die Begriffe von Reihung und Kontrast; Motivik, Thematik, Gruppierungsformen usw. bis in die immer engeren Sonderbegriffe der Formanalyse" (Kurth 1931, 285–86).

that no matter how contrasting motives and themes may be, "a dynamic cohesion must take hold that brings the outer separable parts into inner cohesion." In other words, the psychological mechanism that allows us to hear disparate ideas as belonging to a unified whole is "historically as well as psychologically the primordial."[27] Kurth emphasizes, "All of these concepts of the second category are already based on those of the first; they do not displace the first category but rather continually contain it as a prerequisite. The fundamental concepts of the first type appear as the undercurrent of the apparent, striking form concepts related to the second type."[28]

Two theories of the "narrow" type stand out in Kurth's wide-ranging evaluation of *Bewegungsformen*: the formal archetypes of Alfred Lorenz and Riemann's metrical interpretations.[29] Kurth notes that though structures like *Bogenform* (arch form) and *Barform* appear clear and unambiguous, these are only "outer arrangements" that have infinite internal manifestations. For instance, the B section of an arch form (A–B–A) can correspond to the energetic highpoint or conversely, initiate a nadir that then strives towards a new high point, which is

[27] „Aber einerlei, ob bloße Verschiedenheit oder Kontrast vorliegt, in beiden Fällen muß ein dynamischer Zusammenhalt übergreifen, der die äußerlich trennbaren Teile in inneren Zusammenhalt . . . diese übergreifende einheitliche Entwicklung ist historisch wie psychologisch das Ursprungliche" (Kurth 1931, 285).

[28] „Alle diese Begriffe der zweiten Kategorie beruhen also bereits auf denen der ersten, verdrängen sie auch nicht, sondern enthalten sie stets als Voraussetzung; die Grundbegriffe der ersten Art erscheinen wie die Unterströmung der sichtbaren, auffälligeren, der zweiten Art angehörigen Formbegriffe" (Kurth 1931, 286).

[29] Kurth cites the first two volumes of "Das Geheimnis der Form bei R. Wagner" (1924, 1926) and his "Al. Scarlattis Jugendoper" (1927).

"clarified through a re-entry of A."[30] Or further, "one considers an arrangement like A–B–A–B–A (Rondo) or A–B–C–B–A (designated by Lorenz as retrograde, as well as 'complete' arch form): both can present a large variety of inner intensification constructions despite outwardly clear, symmetrical-looking stabilization. (Moreover, we must add that the layout of the intensification can in actual fact intersect with the change of themes.)"[31] The inner energetic profile is distinctly different from the outward profile that results from contrasting thematic content or key areas. Said differently, we can accept both an outwardly directed, static, symmetrical form and an inwardly directed, dynamic, asymmetrical form:

> Gruppierung mit Themenwechsel wirkt, wie aus den angeführten schematischen Anordnungsbildern hervorgeht, auf äußere Anlage-Symmetrien hin, also auf ein statisches, der Steigerungsverlauf hingegen auf ein dynamisches Formprinzip (das auch die Schwerpunkte zu dynamischen Zielpunkten umwertet und über die Mitte, oft stark gegen das Ende hinausrückt, also symmetriestörend wirkt); keines dieser Prinzipe besteht in reiner Form, sondern beide durchkreuzen einander und bilden eine Menge von Ausgleichsformen.
>
> [Grouping according to thematic change, as it emerges from the stated schematic images of arrangement introduced, works on **external structural symmetries** and thus towards a **static principle of form**, [while] the **intensification** contributes to a **dynamic principle of form** (which also transforms the centers of gravity into dynamic goal points, postponing them from the middle, often right until the end [point], [and] thus **effecting a disruption of symmetry**). Neither of

[30] Kurth 1931, 288.

[31] „Oder man betrachte ein Schema wie A–B–A–B–A (Rondo) oder A–B–C–B–A (von Lorenz als rückläufige, auch ‚vollkommene' Bogenform gekennzeichnet): beides kann trotz äußerlich eindeutiger, symmetrisch anmutender Stablisierung eine große Vielfalt innerer Steigerungsanlagen darstellen (wozu überdies kommt, das die wirkliche Steigerungsanlage den Themenwechsel überhaupt überkreuzen kann)." For a detailed account of Lorenz's theory and ideology, see McClatchie 1998.

> these principles rests in pure form; rather, the two crisscross one another and generate a host of forms of balance.][32]

Kurth turns next to the "psychic functions that are involved in the phenomena of rhythm," concentrating on the rhythmic accent (*Betonungsrhythmik*) particularly in the classical style.[33] He connects the tendency towards the regular differentiation of beats through accent to the body—not a direct physical response, however, but an *unconscious memory* of an analogous physical experience:

> Bei aller körperlichen Gebundenheit bleibt doch auch die Betonungsrhythmik ein psychisches Phänomen, denn selbst die hereinspielende körperliche Bewegungsempfindung bedeutet nur hereingefühlte Körperlichkeit, die den motorischen Zug der Musik durchdringt, ihn mit dem Charakter von Schrittempfindung und ähnlichem durchsetzt; nicht wirklich physische Stoß- oder Trittempfindung, sondern ein geistiges Nachbild von ihr verschmilzt mit dem musikalischen Akzent; dieser ist auch keine physiologische Erscheinung, sondern ein Nachwirken davon in rein psychischer Form.
>
> [With all bodily connection, the rhythmic accent also remains a psychic phenomenon, for even the internally active bodily sensation of motion suggests only an internally felt corporeality, which penetrates the motorized progression of music, permeating it with the character of the sensation of steps and related [sensations]; [it is] not an actual physical sense of impact or footsteps, but a mental afterimage of these [that] coalesces with the musical accent. This [accent] is also not a physiological phenomenon but rather an after-effect thereof in purely psychic form.]

Kurth alludes to several older theories of rhythm in his discussion. For instance, he adheres to an older *Akzenttheorie* when he notes that measures themselves are

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[32] Kurth 1931, 288. This recalls not only Kurth's parallel-track hearing but also the multiple ways he proposes for dividing a scale (see Chapter Four).

[33] That is, he does not present a traditional theory of rhythm per se: „Da hier keine Rhythmuslehre auszuführen, sondern die Frage nach den psychischen Funktionen zu stellen ist, die am Phänomen des Rhythmus beteiligt sind, so ist vor allem noch die Betonungsrhythmik an sich zu beleuchten, nachdem die übrigen, dem weitern Rhythmusbegriff angehörigen Erscheinungen bereits mit den energetischen Verlaufsformen darzustellen waren" (Kurth 1931, 301).

experienced as groups within higher-level phrases: "an entire accentual system of an overriding type thus emerges, dividing the melody further into eight measures (consisting of two symmetrical four-measure groups), [and] analogously, into periods of 16- and 32-measures and even larger divisions. This is the foundation."[34] Kurth also refers to this grouping of measures as the "synthetic rhythmic construction" and notes its energetic potential:

> Jedenfalls strebt die Stoßbetonung aus bloßer Taktrhythmik hinaus zu einem synthetischen rhythmischen Aufbau, der wieder die einzelnen Takte selbst al Einheiten gruppiert. Das Gefühl von Spannung und Entspannung konzentriert sich stark (aber nie ausschließlich!) auf die Wechselwirkung von einer ansetzenden und einer gleichlangen „abrundenden" Taktgruppe. Daher die gerundete Symmetrie kleinerer klassischer Gebilde, die annähernde Symmetrie größerer und wenigstens die Auseinandersetzung symmetrischer und asymmetrischer Tendenzen bei großen Durchführungen.
>
> [In all cases, the accentuation of the impact strives beyond the simple rhythm of the measure towards a **synthetic rhythmic construction that groups further the individual measures themselves further as a unit.** The sense of tension and relaxation concentrates itself strongly (but never exclusively!) in the interaction of an entering group of measures and a "rounded-off" group of measures of similar length: that is, the rounded symmetry of smaller classical structures, the approximate symmetries of larger structures, and at least the conflict [*Auseinandersetzung*] between symmetrical and asymmetrical tendencies in larger developments.][35]

When deviations occur, they are sensed directly from the basic framework within the accentual rhythm. So, for instance, an eight-measure period can be shortened through the use of elision, or lengthened through the repetition of a few measures:

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[34] „So entstand ein ganzes Akzentsystem übergeordneter Art, gliederte die Melodie weiter zu Achttaktern (bestehend aus zwei symmetrischen Viertaktern), analog zu 16- und 32-taktigen und noch höherzähligen Perioden. Dies ist die Grundlage" (Kurth 1931, 303). The term was first used by Riemann to describe Kirnberger's theory of grouping according to accentuation. See Caplin 2002, 666–83, for an overview of the eighteenth-century emergence and nineteenth-century consolidation and expansions of *Akzenttheorie*.

[35] Kurth 1931, 304.

"that some deviations occur does not change the fact that they are sensed directly from the basic framework within the accentual rhythm and can attain appealing effects. The simplest is based for instance in so-called elisions (*Verschränkungen*) (whereby the closing measure, e.g., of a four-bar group, is at the same time the beginning of a new group, thus appearing to skip over a measure); or in elongations (e.g., through an interpolated [*eingeschobene*] repetition of a phrase [*Taktphrase*]), and more of the same."[36]

The only theory Kurth criticizes directly, in the body of his text, is, unsurprisingly, that of Riemann. For Kurth, this type of approach is endemic to theories of the late nineteenth and early twentieth centuries in general:

> Im übrigen war der erwähnte theoretische Grundfehler des nachklassischen Jahrhunderts, die Betonungssymmetrie der gesamten Melodik aufzuzwängen, schon für jenen Kreis klassischer Werke zu eng, die sich dem System rein äußerlich ohne geringste Differenzierung, ohne einzige Taktabweichung einfügen lassen. Das innere Leben der Melodien durchstößt überall diese Starrheit und spottet des Schemas, wo es sein Gefangener zu sein scheint.
>
> [Furthermore, the basic theoretical error of the post-Classical century, mentioned previously, was to impose accentual symmetry on the whole [phenomenon of] melody; this was already too narrow for that sphere of classical works that are only superficially able to fit into the system without the least differentiation and without a single alteration of [a] measure. The inner life of the melody breaks through this rigidity everywhere and defies the scheme wherever it appears to be a prisoner of of it.][37]

Riemann's theory, while allowing that notated phrases may vary in number of measures—the melody need not "break through" as it were—is nevertheless dogmatic in its adherence to a conceptual scheme. As William Caplin has

[36] Kurth 1931, 303.

[37] Kurth 1931, 309.

documented, Riemann's theory is inherently goal directed, "whereby an initial musical ideas is presented as a kind of *question*, which demands, and thus leads to, a concluding *answer*."[38] This results in a two-part metrical unit of weak-strong accentuation that is recursive at higher levels of what Kurth calls the synthetic rhythm. In Riemann's 1916 article, for instance, the first four measures of an eight-measure period are conceived hypermetrically as the upbeat to the last four measures (the downbeat); see **Figure 7.1.**

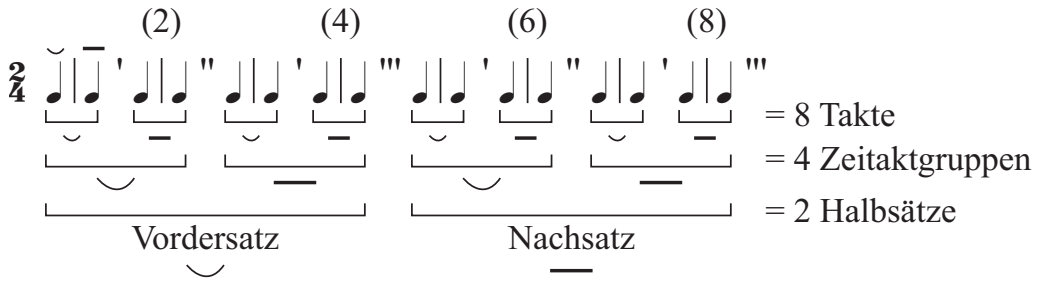

Figure 7.1. *Metrical interpretation of an eight-measure period from Riemann 1916*

Riemann's adherence to end-accented groups is represented in this abstract period scheme by the pickup to m.1. Indeed, as Caplin notes, Riemann follows through with this scheme obsessively in his analyses of Beethoven sonatas, such that even when a passage clearly begins on an accented element, he groups it back to an imaginary prior event. At the same time, however, Riemann's analyses are harmonically sensitive; though he inflexibly fits every phrase into an eight-measure

[38] Caplin 2002, 687.

framework, a single measure may expand to occupy two or even three notated measures.[39]

In Kurth's estimation then "Riemann's theory that all motives only arise with upbeats can be considered outdated today."[40] That is, this scheme can be applied to some styles where we actually see and feel upbeats, but it is hardly an ahistorical paradigm.[41] And moreover, Kurth balks at the additive quality of Riemann's template (the requirement of eight measures), as shown in Figure 6.1, and the emphasis it places on differentiating parts of the measure (or hypermeasure), rather than the measure as a whole. In contrast, Kurth stresses:

> Auch die rhythmischen Betonungen bilden keine Summe, sondern ein Ganzes, das sich im Taktsystem darstellt; es beruht nicht im Ablauf der Betonungen und unbetonten Taktteile, sondern in der Spannung, welche diese in Beziehung hält.
>
> Even the rhythmic emphases do not form a sum but rather a whole that is represented in the metrical system [*Taktsystem*]. It is not

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[39] See Caplin 2002, 688–91, for a discussion of the analytical sketch of Beethoven, "Waldstein" Sonata, second movement, that appears in Riemann's *L. van Beethovens sämtliche Klavier-Solosonaten* (1918–19).

[40] „Auch Riemanns Lehre, daß alle Motivik nur mit Auftakten anhebe, kann heute als überwunden gelten" (Kurth 1931, 309).

[41] Kurth writes (1931, 309n1):

> Die von Momigny („Cours complet d'harmonie et de composition musicale d'après une théorie neuve", Paris 1806) und Riemann aufgestellte Urform des Taktmotivs, wonach es stets mit Auftakt beginne und schwertaktig ende, entspricht der seit der italienischen Musik des 17. Jahrhunderts immer häufiger gewordenen auftaktigen Thematik. So lebendig sie ist, am falschen Ort angewandt führt sie zu unhaltbarer Erstarrung.
>
> [That established prototype of metrical structure by Momigny ("Cours complet d'harmonie et de composition musicale d'après une théorie neuve," Paris 1806) and Riemann, which always begins with an upbeat and ends with a strong beat, complies with the upbeat themes that became more and more common since the Italian music of the 17th century. As lively as [this prototype] is, it leads to untenable solidification when applied in the wrong place.]

> based in the sequence of accents and unaccented portions of the measure but rather in the tension that keeps these in relationship.[42]

Yet Kurth concedes that for all of its weaknesses, Riemann's theory has one major strength: its recognition of the synthetic rhythm.[43] Indeed, though there is no evidence that Kurth was familiar with Riemann's Beethoven analyses, he shares a similar concern with expansion at the hyper-metrical level. Even, as noted in the quotation below, positing an analogy between agogic accents at the level of the measure with elongated "hyper-beats" at the hyper-metrical level. Kurth writes,

> Merkwürdig ist ferner, daß sich in der Betonungsrhythmik auch das Phänomen einer Elastizität zeigt; sie läßt die Taktgesetze doch nicht so ‚ehern' erscheinen, vielmehr geschmeidig wie den bewegten Körper. Sowohl im Kleinen innerhalb des Taktes, zeigt sich das wie in der großen Taktsynthese; dort durch die Möglichkeit sog. „agogischer" Veränderungen, die einzelne Hauptpunkte, besonders melodische Höhepunktstöne, etwas dehnen können. In der großen Taktsynthese hingegen zeigt sich die Elastizität des Betonungsgefüges auch in viel größeren Veränderungsmöglichkeiten, indem, wie erwähnt, die Tonperioden erhebliche Dehnungen (Einschiebungen ganzer Takte) oder Zusammenziehungen von Takteinheiten erfahren können; das sind Modifikationen, die selbst schon vom durchgreifenden Betonungsgefüge eine „Gefügigkeit" erfordern.
>
> [It is further notable that in the accentual rhythm even the phenomenon of an elastic quality appears. It allows the metrical laws to appear not as "immutable" and much more lithe, like the animated body. This appears at both the lower level within the measure as well as in the larger hyper-measure; [it appears] within the measure, through the possibility of the so-called "agogic" transformations that can somewhat stretch the individual strong beats, especially melodic climax tones. In the larger hypermeter, however, the elasticity of the accentual structure also arises in much larger possibilities of transformation, since, as mentioned, the tonal periods can experience considerable expansions (interpolations of

[42] Kurth 1931, 311.

[43] Kurth (1931, 309) writes, "but all of this does not prevent us from acknowledging the structure of a synthetic rhythm as one of Riemann's great feats." [. . . alles das darf aber nicht hindern, den Aufbau einer synthetischen Rhythmik als eine von Riemanns großen Taten anzuerkennen."]

> whole measures) or contractions of measure-units. These are modifications that call for a "submissiveness," even of the sweeping accentual structure.][44]

It follows that the true "Formgeheimnis" is not the external thematic or accentual symmetry of music. Rather, it lies in how we experience music as a series of dynamic arches that stabilize into a Gestalt. Because even rigid structures like Lorenz's arch and bar forms or Riemann's eight-measure periods can develop in a multitude of ways, the exact cause of dynamic equilibrium is difficult to pinpoint: "the very familiar concept of 'equilibrium,' which is actually most crucial among the concepts of form, evades a strict definition and already belongs to those borderline phenomena that ultimately lead towards sensual comprehension." Indeed, when we sense that a composition is balanced and the process by which it achieves that is satisfying, this is due to an "intuitive sense of form."[45] And Kurth notes, elucidating this sense of form and comparing it to static principles is central to a psychological approach to form:

> Das sind Grenzen, die die Psychologie stets suchen und sich genau vergegenwärtigen muß; um so mehr muß diesem Begriff eine solche Formbetrachtung dienen, die eingehend alle formbildenden Moment aufweist und von da beschreibend auf ihr Zusammenwirken zum Phänomen des Formgleichgewichts gerichtet ist, um seien Wesensart von immer neuer Seite zu beleuchten.
>
> [These are the borders that psychology must always seek and realize precisely; such a [psychological] consideration of form—which demonstrates all form-generating moments thoroughly and from there descriptively focuses on its interaction with the phenomenon of

[44] Kurth 1931, 313.

[45] „. . . daß der wohlvertraute Begriff des ‚Gleichgewichts', der eigentlich entscheidende unter allen Formbegriffen, sich einer strengen Festlegung entzieht und bereits jene Grenzphänomenon angehört, die letzten Endes zu gefühlsmäßiger Erfassung hinausleiten; die Ausgleichsvorgänge werden von intuitivem Formsinn bestimmt" (Kurth 1931, 289).

> the balanced form—must serve this concept [of balance] all the more in order to illuminate its disposition from ever-newer sides.][46]

With this, Kurth suggests the next enterprise for his *Musikpsychologie*.

* * *

Conclusions

> For the specialist psychologist [and we may add, the specialist music theorist], reading the book is a difficult struggle with a strange terminology and indeed an entire approach that is for [the specialist] too much of a purely humanistic one. However, even where Kurth is mistaken, **we must remember that one can learn even more from the errors of a great mind than from the truths of a mediocre one.** However a system of music psychology develops in the future, the work of Kurth will remain its foundation and unrivaled stimulus.[47]

Kurth positions his *Musikpsychologie* at the center of *Musikwissenschaft*, appealing not to the natural sciences but to Gestalt principles. He sets his sights on two ambitious yet flawed programs of research that gave deliberate consideration to the role of the mind in the perception of music: tone psychology defined broadly (but led in particular by its most prominent proponent, Stumpf and before that, Helmholtz) and Riemann's theory of *Tonvorstellung*. Against these, Kurth promotes an experiential focus, calling attention to our innate conceptions of music as exhibited through our empathetic responses with what we hear and the words we use to convey our perceptions. There is also a deep-seated concern for

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[46] Kurth 1931, 289.

[47] „Für den Fachpsychologen ist die Lektüre des Buches ein schwieriger Kampf mit einer fremden Terminologie und eben einer Gesamthaltung, die für ihn viel zu sehr ein rein geisteswissenschaftliche ist. Aber selbst dort, wo Kurth irrt, gilt, daß man noch aus den Irrtümern eines bedeutenden Kopfs mehr lernen kann als aus den Wahrheiten eines mittelmäßigen. Wie immer ein System der Musikpsychologie sich in Zukunft gestalten wird: das Werk Kurths wird ihm Grundlage und unvergleichliche Anregung“ (Wellek 1933, 80).

historical development and the emergence of style, though this is often masked by a concern for defining universalisms.

The problem, if we choose to view it as such, is how to "apply" Kurth's theories today. He eschewed symbols and schematization, and indeed any reliance on visual aids, mainstays of analytical practice today. But there is hardly a lack of prescriptive methodology. If uncovering how an artwork "coheres" is the theoretical imperative, then the starting point must be our response to that artwork. As he has demonstrated himself not only in *Musikpsychologie* but in his three prior analytical studies, Kurth urges us to look inward, to reflect on particular moments in time or the entire course of time and notice variations in suspense and dénouement, to be sure, but moreover the general sense of motion and resistance—then only to examine what in the music may have contributed to this sense.

As others have previously noted, the writings of Schenker bear some similarity to those of Kurth, due in no small part to their shared cultural environment.[48] A few ready points of comparison include their emphasis on motion, a concern with stylistic differences, and a "holistic" or "organic" approach to analysis that integrates all analytical categories and appeals to "inner life." Schenker's student Victor Zuckerkandl shares more than some of these outlooks as well, and Justin London has suggested that Zuckerkandl is the theorist "who most directly engaged Kurth's ideas of motion and the wave-metaphor to

[48] See Rothfarb 1988, 220–22, for instance, or McCreless, 1983, 57.

describe motion."[49] Indeed statements in Zuckerkandl's writings like "the experience of tonal motion has its origin not in differences of pitch but in differences of dynamic quality,"[50] sound very much like Kurth. Yet others suggest a deliberate dissociation from his predecessor, for instance, "music is *not* a phenomenon of the inner world, nor is it something projected from the inner to the outer world; it is a phenomenon of the outer world."[51] Comparisons of these three figures—focusing in particular on the role of an active, feeling listener in their theories—would prove significant for future study. And research has only just begun on the intellectual intersections between Kurth and Riemann; there are, after all, good reasons why the former paid such close attention to the latter, and the latter felt compelled to engage.

Finally, the relationship of Kurth's music psychology to the modern field of music cognition remains an open question. Despite Wellek's claim in the epigraph above, he was not overly optimistic 30 years later:

> In the *music*-psychological body of his work, Kurth examines three musical fundamental phenomena, "force, space, matter," then under the title "Manifestations of the sounding matter," the world of harmony, and under "Manifestations of the course of motion," melody, rhythm, and form. It is already apparent through this succinct synopsis that Kurth executes [his work] with a distinct and idiosyncratic terminology that is thus unfamiliar to "official" psychology and even unclassifiable.[52]

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[49] London 2002, 697.

[50] Zuckerkandl 1956/1973, 93.

[51] Zuckerkandl 1956/1973, 144.

[52] „In den *musik*psychologischen Hauptteilen des Werkes behandelt Kurth drei musikalische Grundphänomene: ‚Kraft, Raum, Materie', dann unter dem Titel, ‚Erscheinungsformen der Klangmaterie' die Welt der Harmonik, und unter ‚Erscheinungsformen des Bewegungsablaufes' Melodik, Rhythmik und Form. Schon diese

Certainly, as Nicholas Cook points out, Kurth's models were designed "to represent the qualities of musical experience rather than to be amenable to experimental verification."[53] Yet music cognition today is an ever-expanding field encompassing disparate methodologies and research goals, and it may very well be up to the challenge. I have shown ways in which Kurth's writing in *Musikpsychologie* is suggestive of ideas in cognitive linguistics; the emergence in the past decade of publications examining music and metaphor is notable. How metaphor theory can clarify experiences of particular musical works or idioms would be an ambitious yet fruitful venture. Can tension be calculated? Can the feeling of *Bewegungsenergie*? Undoubtedly—at least to some extent.[54] But if we have learned one thing from Kurth, it is this: we would do well to place our trust not in any "objective" method but rather in our own intuitions.

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knappe Übersicht macht ersichtlich, daß Kurth mit einer eigenen und eigenwilligen, der ‚offiziellen' Psychologie so nicht geläufigen und auch nicht einzuordnenden Terminologie zuwerke geht" (Wellek 1961, 123).

[53] Cook 2002, 93.

[54] Empirical studies testing perceived tension are numerous. Some oft-cited examples are Bigand and Parncutt 1999 and Lerdahl and Krumhansl 2007. Research into expectancy in music perception arguably relates to tension. Notable studies in this area include Margulis 2005 and Huron 2006.

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