2004

A String Player's Guide to Improvisation in Western Art Music

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A STRING PLAYER’S GUIDE
TO IMPROVISATION IN WESTERN ART MUSIC

By

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A treatise submitted to the
School of Music
in partial fulfillment of the
requirements for the degree of
Doctor of Music

Degree Awarded:
Fall Semester, 2004
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ABSTRACT

The purpose of this treatise is to assemble a performer’s guide to the subjects of baroque ornamentation and free improvisation, the cadenza in the classical concerto, and the aleatoric, indeterminate and improvisatory music of the late twentieth century, for players of bowed string instruments. The result is a handbook illustrating the basic techniques of improvisation in the above genres. Primary sources were drawn from treatises and from the repertoire, in addition to contemporary books, articles, and scholarly editions, and were selected in order to present a summary of the practice of improvisation with an emphasis on those concepts that can be most readily applied by performers.

The first chapter examines ornamentation and improvisation in the Baroque Era, roughly defined as the period extending from c.1600-1750. Following the introduction, the primary ornaments and their applications are discussed using examples derived from both didactic and performance sources. A brief survey of the freer techniques of improvisation encountered in the so-called “Italian Adagio” follows. The second chapter considers the cadenza and other improvised cadential embellishments that persisted in the Classical Era, c.1770-1830. The third chapter discusses free improvisation, indeterminacy and the role of the performer in the realization of unconventional scores in the avant-garde and experimental music of the late twentieth century.

The art of improvisation has played a vital role in the development of western art music, and this treatise is intended as both an introduction and a practical guide to the subject, in the hopes of encouraging further experimentation and investigation.
INTRODUCTION

The spontaneous invention and shaping of music while it is being performed is as old as music itself. The very beginnings of musical practice can scarcely be imagined in any form other than that of instantaneous musical expression—of improvisation.¹

It would be difficult to refute the assertion that music the world over has at its roots the spontaneous expression we call improvisation, and it has had a fundamental influence on the development of western art music as well. It is no coincidence that many of the most important composers and instrumentalists in the history of western music were also known in their own time as improvisers of supreme ingenuity. The influence of improvisation is pervasive in both vocal and instrumental genres, and string playing has been no exception.

The violin family rose to prominence at a time of unprecedented creative equality between performers and composers. String players of the Baroque Era could have been expected to be able to create an ensemble part or improvise melodic solos with only the shorthand of figured bass as a guide, improvise diminutions or counterpoint to a tune and vary any repetitions, know when to employ rhythmic alterations, and to have command of a rich vocabulary of ornaments. Soloists would also have been expected to improvise freely in a variety of contexts, from the skeletal adagios of the sonatas of Corelli and his contemporaries to the various cadential embellishments that foreshadowed the cadenzas of the Classical Era.

New developments in composition, such as the development of sonata form, led to a shift in the balance of responsibility between composers and performers in the late eighteenth century. Although the practice of ornamentation continued, the freedom once allowed performers was increasingly restricted as composers began including ornamentation in the score. The cadenza in the classical concerto was one of “the last

surviving bastions of the performer’s rights to participate in the creation of a musical composition,” and by the turn of the century, it too had fallen.

As the nineteenth century progressed, the roles of composer and performer became clearly delineated, and the performer’s role as an interpreter of a fixed musical work would remain unchanged until the latter half of the twentieth century, with few notable exceptions. However, the upheavals of the twentieth century would have a dramatic impact on all art forms. The supremacy of traditional western tonal music would face numerous challenges, including Serialism, Jazz, and music from other cultures. Composers and performers in the twentieth century have explored improvisation in a variety of contexts, from free to carefully circumscribed, and invented a wide variety of notational systems and extended techniques which make new demands on performers while expanding the tonal palette of instruments that had not substantially changed in 300 years.

While the art of improvisation has been neglected in music schools, recent trends indicate a reawakening of interest in the subject. As interest in historically informed performance has influenced the way in which music is performed by mainstream soloists and ensembles, the improvisatory aspects of baroque interpretation have come to be recognized as fundamental to the performance practice of this era. The classical concerto has also benefited from the introduction of new cadenzas for the standard repertoire, rescuing audiences from the endless repetition of stock material and restoring an element of surprise. The experimental and avant-garde music of the late twentieth century requires performers to participate in the realization of the final form of a composition, with or without carefully defined parameters, often obscuring the distinction between composer, performer and listener. A performer who understands the influence of improvisation on the history of western art music will be more stylistically aware, more versatile, and ultimately better equipped to survive in today’s diverse musical environment.

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CHAPTER 1
BAROQUE ORNAMENTATION AND IMPROVISATION

The urge to ornament is ancient and powerful, a manifestation of mankind’s impulse to improve life, with obvious parallels in the visual and decorative arts, fashion and architecture. Leopold Mozart recognized this fundamental nature, stating that “even a peasant closes his peasant-song with grace-notes . . . Nature herself forces him to do this. In the same way the simplest peasant often uses figures of speech and metaphors without knowing it.”

Ornaments are “in fact, indispensable. They connect and enliven tones and impart stress and accent; they make music pleasing and awaken our close attention. Expression is heightened by them; let a piece be sad, joyful, or otherwise, and they will lend a fitting assistance. Embellishments provide opportunities for fine performance as well as much of its subject matter. They improve mediocre compositions. Without them the best melody is empty and ineffective, the clearest content clouded.”

Ornamentation and improvisation were common to all genres of European Baroque music. The Italian violinists who introduced the concerto to the rest of Europe were consummate improvisers who viewed their methods as carefully guarded trade secrets, and rarely notated ornamentation in their written scores. The French, who by the end of the eighteenth century were to assume leadership in violin playing, teaching and construction, adopted what was useful to them and their highly disciplined style, resulting in a complex system of “little notes” and signs with which composers could indicate the placement and type of ornamentation to be used in performance. German ornamental practice can best be characterized as a quest for “das vermischte Geschmack” (“a tasteful

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blend"), concluding that “the style is best which combines the correctness and brilliance of French ornaments with the suavity of Italian singing.”

All that can be said with any degree of certainty about eighteenth century performance practice comes from contemporary descriptions, the music itself, and treatises, which began to appear in great numbers after the middle of the century. There are hundreds of works on various aspects of music, vocal and instrumental, and they range in content and quality, from the autodidactic types to monumental works like those by Johann Joachim Quantz, C.P.E. Bach, Leopold Mozart and Daniel Gottlob Türk, to name a few, which were both encyclopedic in scope and profound in their influence. In addition to technique, these treatises address subjects as varied as music theory, music history, teaching, how to practice, acoustics, performance etiquette, aesthetics and the personal qualities required of those who would make a profession in music. “These works go far beyond the boundaries of mere ‘Tutors’ of their instruments; they are guides to the style of their time.”

The types of improvisation discussed in this chapter are divided into two categories. The first includes those “essential” ornaments that can be expressed using signs or “little notes,” such as appoggiaturas, trills, turns and mordents. The second category consists of those ornaments of greater extent which, while implicit in the context of certain genres, are never written by the composer and are always improvised. Treatise writers call this type of ornamentation “extempore” or “arbitrary” embellishment. This chapter will concern itself first with the most common and basic forms of “essential” ornaments and their use before considering “extempore” embellishment.

Although the interpretation of written ornaments may at first glance seem incongruous within the context of a treatise on the subject of improvisation, they essentially represent a “bag of tricks,” and once learned they can be applied by performers, guided by the principles of proper voice leading and good taste, whether

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6 Bach, 85.
indicated by the composer or added in the moment. However, it is important to remember that, while much is known about certain specific performance traditions, caution must be taken in applying the same principles to music from other places and times.

Finally, there are a vast number of ornament signs, and their names and interpretation show an extreme inconsistency. However, it is possible to trace enough fundamental principles to gain an understanding of the variations. “In certain styles an understanding of some of the more exotic ornaments is necessary. But in most baroque music it is the few plain and relatively straight-forward ornaments, not the many complicated variants, which are needed and will ordinarily suffice.”\textsuperscript{10} It is also important to remember that, then as now, theory usually followed practice, and treatises were attempts to codify diverse and ephemeral performance phenomena. Therefore, modern performers must be willing to supplement the principles found in treatises with their own good musical taste and common sense, and as P.F. Tosi advises in his \textit{Opinioni} of 1723, “always seek for what is easy and natural.”\textsuperscript{11}

\textbf{Essential Ornaments}

\textbf{Appoggiaturas}

The long appoggiatura is the most important and characteristic ornament of its time, and it had a profound impact, fully integrated into the written text, on the development of music in the nineteenth century, from Beethoven to Wagner to Mahler. It is also one of the best illustrations of the principle that today’s improvisation becomes tomorrow’s composition. The harmonic consequences of the appoggiatura have implications for the rhythmic placement of all ornaments. From the fact that the intensifying harmonic effect of this type of appoggiatura is entirely dissipated if the appoggiatura is placed before the beat, we can derive the basic principle that long appoggiaturas and other ornaments that behave like them, including the cadential and

\textsuperscript{10} Robert Donington, \textit{The Interpretation of Early Music} (London: Faber and Faber, 1989), 189.
\textsuperscript{11} Lawson and Stowell, 69.
most other trills, must fall on the beat. Mordents, turns, and the “slide” sometimes, but not always, adhere to the same principle.\textsuperscript{12}

An appoggiatura (\textit{vorschlag}, \textit{port-de-voix}, from the Italian \textit{appoggiare}, “to lean”) is typically written as a “little note” joined by step (or leap) and slurred to a normally sized note before which it is placed (Fig. 1).\textsuperscript{13} Appoggiaturas may be approached from above or below, by step or less commonly by leap, depending on the note preceding the appoggiatura.

![Fig. 1. Giuseppe Tartini, \textit{Traité des agréments de la musique}, Paris, 1771, appoggiaturas.](image)

The descending appoggiatura is the most common, since “if one reflects that the dissonance should not ascend but rather descend, one will clearly see that the ascending appoggiaturas are contrary to the nature of harmony.”\textsuperscript{14} Two other general rules apply. First, they are always slurred to their resolution. Second, Leopold Mozart also insisted that “no appoggiatura should begin on an open string; the fourth finger should always be used instead.”\textsuperscript{15} There are three basic categories of appoggiaturas: short (“invariable”), passing and long (“variable”).\textsuperscript{16}

Short appoggiaturas are always of short duration, regardless of the value of the following note, and are usually placed on weak beats or unaccented subdivisions (Fig. 2).\textsuperscript{17}

![Fig. 2. Daniel Gottlob Türk, \textit{Klavierschule}, Leipzig and Halle, 1789, short appoggiaturas.](image)

\begin{itemize}
\item\textsuperscript{12} Donington, 197.
\item\textsuperscript{13} Giuseppe Tartini, \textit{Traité des agréments de la musique} (1771), Sol Babitz, trans. and ed. (New York: Carl Fischer, 1958), 1.
\item\textsuperscript{14} Ibid., 6.
\item\textsuperscript{15} Mozart, 171.
\item\textsuperscript{16} Türk, 199.
\item\textsuperscript{17} Ibid., 200.
\end{itemize}
The short appoggiatura was generally paired with short note values, and “is played so rapidly that the following note loses scarcely any of its length.”\textsuperscript{18} Short appoggiaturas are most common in fast music, although they can appear in movements at slower tempos as well. They are often written before repeated notes, before notes of brief value followed by others of the same value, in passages of descending or ascending seconds, thirds or other intervallic skips, before staccato notes, on syncopated notes, before figures in successive eighth-notes or triplets, and in instances where a longer appoggiatura would confuse the voice leading. Many authors warn against the use of short appoggiaturas that conflict with the character of the music. “One must not put short and passing appoggiaturas in serious and sad pieces, but only in allegro or at most in andante cantabile.”\textsuperscript{19}

Passing appogiaturas appear in passages of descending or ascending thirds. The context in which the appoggiatura appears and the affect of the work in question distinguishes the passing appoggiatura from a normal, short appoggiatura placed on the beat, since both can be indicated by the same type of notation (Fig. 3).\textsuperscript{20}

![Fig. 3. Johann Joachim Quantz, On Playing the Flute, Berlin, 1752, passing appoggiaturas.](image)

Long, variable appoggiaturas create expressive dissonances (suspensions), and due to their harmonic function they usually occur on accented parts of the measure, although in slow tempos they may be found on any beat or subdivision. Some of the confusion regarding the execution of long appoggiaturas is attributable to the fact that until the publication of Emanuel Bach’s treatise, most appoggiaturas were notated as small eighth-notes, regardless of their intended length. Bach was perhaps the first to advocate the use of small notes that actually reflected their proportionate values (Fig. 18 Bach, 91. \textsuperscript{18} Tartini, 6. \textsuperscript{19} Quantz, 93. \textsuperscript{20}
4), an improvement in practice that unfortunately had little effect outside of his immediate sphere of influence.

![Fig. 4. Carl Philipp Emanuel Bach, Essay, Berlin, 1753, proportionally notated appoggiaturas.](image1)

Long variable appoggiaturas assume a portion of the rhythmic value of the note that they precede. If the value of the note upon which the appoggiatura is placed is divisible by two, then the appoggiatura takes half of the principal note value (Fig. 5).^{22}

![Fig. 5. Johann Joachim Quantz, appoggiaturas.](image2)

If the note to be ornamented is dotted (divisible by three), then the appoggiatura receives two-thirds of the value of the note and the written pitch receives the value of the dot (Fig. 6).^{23}

![Fig. 6. Johann Joachim Quantz, appoggiaturas.](image3)

In six-eight or six-four time signatures, when two dotted notes are tied together on the same pitch, long appoggiaturas are held for the value of the first dotted note, thereby essentially treating these meters as duple (Fig. 7).^{24}

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21 Bach, 90.
22 Quantz, 95.
23 Ibid., 95.
24 Ibid., 95.
When a note is followed by a rest, the long appoggiatura takes the time of the note and the note the time of the rest, unless the need to change bow strokes makes this impossible (Fig. 8).\textsuperscript{25}

When an ornament, such as a trill, turn, or mordent is indicated over the main note after an appoggiatura, the appoggiatura retains its value and the ornament occurs in the time left for the main note (Fig. 9a). If the ornament is written above the appoggiatura, then it takes place at the beginning of the appoggiatura, which is then held for the rest of the time remaining to it (Fig. 9b). Only when the ornament is written between the appoggiatura and the main note is it played after the appoggiatura, or shortly before the main note (Fig. 9c).\textsuperscript{26}

\textsuperscript{25} Ibid., 96.
\textsuperscript{26} Türk, 207.
Fig. 9. Daniel Gottlob Türk, ornamented appoggiaturas.

Other special types of ornamented appoggiaturas include the five “übersteigende and untersteigende Zwischen-Schläge” (“rising and falling intermediate grace-notes”) catalogued by Leopold Mozart, which, like other appoggiaturas with varied and obscure nomenclature, essentially constitute various compound ornaments. The most significant of these are the Nachschläge (Fig. 12). Nachschläge (literally “afterbeats”) consist of one (simple Nachschlag) or two (double Nachschläge) little notes which “one can hang on to the principal note.” They always fall “in the duration of the preceding note, or receive their value from this note.” Some confusion can arise in cases where terminations are indicated by little notes, as it can be difficult to determine whether the small notes apply to the preceding note or the one following. Terminations like the Nachschläge are used to “give the melody more continuity or to prepare a following tone. They must then be played when the duration of the main note is almost over, consequently very quickly, and slurred to the preceding note, whether a slur line is over them or not.”

The effect of appoggiaturas is discussed, along with “rules” for their use in eighteenth-century treatises. Tartini states that “the effect of short and passing appoggiaturas is to render the expression lively and brilliant. This is very different from the long appoggiaturas, which only render it more melodiaous.” According to Türk, they are used “in order to provide more continuity, charm, vitality and lyricism in the
composition, to give the harmony more variety by intermingling dissonances, and the like." C.P.E. Bach agrees that they are “among the most essential ornaments. They enhance harmony as well as melody.” The importance of the appoggiatura is further emphasized by the fact that it is the first ornament in order to be dealt with by most authors, and among the first to be integrated into the score. Leopold Mozart voiced some misgivings about this practice, given the fact that some performers might be tempted to add another appoggiatura to the written one, but most authors agreed that, in the end, it was far better to write them in large notation in order to guarantee consistency of interpretation.

There are two other subspecies of appoggiatura that consist of two or more little notes slurred to the main note. The first is the double appoggiatura, categorized by Donington as a “disjunct double appoggiatura” (*port-de-voix double*, *Anschlag*, *Doppelvorschlag*, Fig. 10).

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![Fig. 10. Daniel Gottlob Türk, double appoggiaturas (upper stave) and their execution (lower stave).](image)

It consists of two little notes a third or more apart which frame the principal note between them, and behaves in most respects in a fashion similar to other appoggiaturas, although it is of more rhythmic than harmonic importance and “not much to be used outside the *galant* school.” Donington’s “conjunct double appoggiatura,” better known as the “slide” (*coulé*, *schleifer*) is more common and of use in much baroque and

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31 Türk, 218.  
32 Bach, 87.  
33 Mozart, 166.  
34 Donington, 215.  
35 Ibid.
classical music (Fig. 11).\textsuperscript{36} There are two principal types, dotted and without dots, and those slides with dots are considered to be more appropriate to movements of a tender character. The principal distinguishing feature differentiating double appoggiaturas and slides is the fact that double appoggiaturas always proceed by leap to their principal note, as opposed to slides, which proceed by step. A three-note slide is also called an ascending or inverted turn, due to its obvious resemblance to a type of turn.

![Fig. 11. Daniel Gottlob Türk, slides, with and without dots (upper stave) and their execution (lower stave).](image)

A slide most commonly consists of two little notes ascending to the main note from a third below, although they sometimes consist of three or more notes ascending in a similarly scalar fashion (\textit{tirata, coulade, Pfeil}). Both of these ornaments can occur before or on the beat, but, since an appoggiatura before the beat is a contradiction in terms, their relationship to the appoggiaturas mentioned above is tenuous at best.

\textbf{Trills}

The trill (\textit{shake, groppo, tremblement, triller}) is the second most common ornament, and like the appoggiatura was indicated in the score with increasing frequency as the eighteenth century progressed, although this did not preclude its addition in places where it was not. “Shakes (trills) add great luster to one’s playing, and, like appoggiaturas, are quite indispensable. If an instrumentalist or singer were to posses all the skill required by good taste in performance, and yet could not strike good shakes, his total art would be incomplete.”\textsuperscript{37} The trill has both a melodic and harmonic function, but by the latter half of the eighteenth century, its harmonic function, particularly in the case

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\textsuperscript{36} Türk, 239, 242.
\textsuperscript{37} Quantz, 101.
of the cadential trill, had assumed such prominence that it directly influenced its melodic behavior, as is illustrated by the rare consensus among treatise writers, ornament tables and other documentary evidence in favor of an upper-note start (i.e., with an appoggiatura). The cadential trill, like the long appoggiatura, is yet another distinct instance of improvised practice becoming compositional convention, and due to its intensifying harmonic function, it behaves in most instances like an appoggiatura and therefore begins on the beat.

A trill (Fig. 12) consists of the repeated alternation of two pitches at the intervals of a major or minor second. They are usually preceded by an appoggiatura and followed by either simple or double Nachschläge.

Fig. 12. Giuseppe Tartini, trills with simple and double Nachschläge.

Cadences of all types are particularly apt to be adorned by trills. Their speed is governed by the character of the music (affect), the length of the trill, their placement in the tessitura of the instrument, acoustical considerations, and the skill of the performer, and was often varied for expressive reasons in the case of long trills or trills that occur at particularly significant cadences. If only a plain note is found, “both the (preceding) appoggiatura and the Nachschläge are implied, since without them the shake would be neither complete nor sufficiently brilliant.” Above all other considerations, treatise authors urge restraint and consistency, particularly in the use of short, fast trills. Mozart admonishes “above all, do not overload the notes with trills.” Tartini compares the use of trills to salt in cooking. “Too much or too little salt spoils the taste, and it should not be put on everything one eats.”

39 Quantz, 103.
40 Mozart, 193.
41 Tartini, 7.
Mordents

The mordent (beat, battement, beiser, from the Italian mordere, “to bite”) is an ornament that often appears as a rhythmic or melodic accent in lively, fast music. The standard baroque mordent consists of one or more rapid alternations between the main note and the note a half or whole step below, although the inverted mordent, i.e. to a step above, is not uncommon (Fig. 13).42

Fig.13. François Couperin, Pièces de clavecin, 1st book, Paris, 1713, single and double mordents.

While popular amongst writers of keyboard treatises, violinists were mixed in their opinion of this ornament’s appropriateness to bowed string instruments, although they are one of the few ornaments that are frequently mentioned as appropriate to bass parts. There are three important guidelines to keep in mind when considering the addition of a mordent. First, as has already been mentioned, the nature of this ornament generally makes it more appropriate to lively music, although there are exceptions. Second, since the mordent descends from the principal note, it is often necessary to use the half-step below, even if this chromatic alteration is not indicated.

Turns

The turn (groppo, doublé, Doppelschlag), is defined as “an alteration of the main note with both an upper and a lower subsidiary.”43 It is “an easy embellishment which makes melodies more attractive and brilliant.”44 The turn is used “in compositions of a tender as well as of a lively character, on legato or detached notes. In itself, its execution is easy but rather varied, and only in this regard is it difficult.”45 The turn is typically seen

42 Francois Couperin, L’Art de toucher le clavecin (1716), Margery Halford, ed. (Sherman Oaks, CA: Alfred, 1975), xvii.
43 Donington, 272.
44 Bach, 112.
45 Türk, 271.
in one of three guises, and may be introduced after appoggiaturas or after the main (written) note (Fig.14). First it is commonly seen by itself, simply called a turn (sometimes inverted, i.e., starting from the note below). Second, it is sometimes encountered with a small note added on the same step as the principal note, in which case it is often referred to as a quick turn or a “snap” turn. Third, it can be preceded by two little notes, referred to as an “ascending” or “slurred” turn.

![Fig. 14. Turns, as indicated by sign; the simple turn, snap turn, and ascending/slurred turn.](image)

It may also be combined with a short trill, called a “trilled” turn. In cases where the turn is indicated over a tied note, the first note of the turn is not rearticulated. Chromatic alterations are not always indicated, and must be surmised from context.

**Vibrato**

The use of vibrato as an ornament is well documented in treatises dating much farther back in history than the scope of this treatise. Marin Mersenne describes its use in his treatise c.1636-7 stating that “it is not used so much now as it was in the past.” Vibrato was occasionally indicated by symbols, which suggests that it was generally viewed as a special effect rather than a necessary element of good tone production. Geminiani’s violin treatise (1777) was perhaps the first to advocate the continuous use of vibrato, although his instructions on holding the instrument need to be considered alongside these comments, since they helped to make continuous vibrato physically possible. Although vibrato has been a part of string technique since at least the seventeenth century, treatise authors emphasize that it must be expressively varied, and

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46 Ibid.
that it is closely linked to eloquent bowing inflection. The total exclusion of vibrato from the performance of baroque music would not be authentic, but its continuous use would likewise be uncharacteristic.

For contemporary performers who have been indoctrinated to respect the authority of the printed page, it can be difficult to conceive of a time when composers had at their disposal all of the notational resources to indicate their exact intentions, but intentionally left some freedom to the performer instead. However, an examination of treatises and primary sources gives a clear indication of the potential for variety and individuality in interpretation and of the gap between what was written and what was often performed, in fast or slow movements. In the vast majority of the concerti, solo and chamber works of the eighteenth century that feature a distinct solo voice, it is best to be guided by a conservative approach on the one hand, and an experimental spirit on the other. In most cases, the total omission of ornaments is as a great a sin as their overuse.

**Extempore or Arbitrary Embellishments**

The art of “extempore” ornamentation, embellishing figuration too varied to be defined by a vocabulary of signs and too individual and spontaneous to be expressed in notation, was primarily the responsibility of performers. This type of improvisation concerns string players as it relates to three primary contexts encountered in baroque music: in the slow movements of Corelli, his contemporaries, and those influenced by them, often referred to as the “Italian Adagio,” at fermatas, and at cadences. The complex elaboration of slow movements is peculiar to the Baroque era and is well documented in treatises and remaining written examples. The elaboration of fermatas and cadences will be left to the following chapter, as it relates to the development of the *Eingänge* and cadenzas of the Classical Era. It is important to note that this type of elaboration is most appropriate in repertoire with a clearly defined solo part, since only the very best improvisers could negotiate the difficulties of voice leading and imitation when two or more soloists were involved.
The “Italian Adagio”

Although French composers like François Couperin and Johann Sebastian Bach began including their desired ornamentation in their compositions early in the eighteenth century, for most of the Baroque era they were exceptions to the rule. For the majority of the century, composers left ornamentation up to the performer, and nowhere was this more common than in slow movements, collectively referred to by J.J. Quantz as the “Italian Adagio,” although this term was used to describe slow movements bearing expressive markings including Grave, Adagio spirituoso, Cantabile, Arioso, Andante, Andantino, Affetuoso, Largo and Larghetto.

Quantz recognized and illustrated two divergent types of ornamented slow movements. The French style “requires a clean and sustained execution of the air and embellishment with the essential graces...but with no significant passage-work or significant addition of extempore embellishments.”49 In slow movements written in the Italian style of Corelli and his contemporaries however, “extensive artificial graces that accord with the harmony are introduced . . . in addition to the essential graces.”50 The greatest practitioners were Italian violinists and singers, although by the middle of the eighteenth century French and German musicians were making extensive contributions. For the Italians, contemporary historian Charles Burney remarked that “an adagio in a song or solo is generally little more than an outline left to the performer’s abilities to color.”51

Perhaps the most important documented examples of improvisation in Italian adagios are those found in Estienne Roger’s edition of Corelli’s 12 Sonatas for violin and continuo, op. 5, published in Amsterdam c.1710. The publisher prefaced his edition with the remarks that the adagios were graced by Corelli himself: “Composez par Mr. Corelli comme il le joue,”52 and although the authenticity of the ornamentation has been

49 Quantz, 162.
50 Ibid.
52 Arcangelo Corelli, Sonatas for violin and continuo op. 5 in Complete Works, Friedrich Chrysander and Joseph Joachim, eds. (London: Augener and Co., 1890), 1.
questioned, most scholars now accept it as genuine. These are perhaps the most significant of over fifty editions of these works containing written examples of this sort by Corelli, his pupils and their own pupils after them, including Geminiani, DuBourg, Veracini and Tartini. Other violinists published ornamented versions of their own works for didactic purposes as well, including Geminiani, Franz Benda, William Babell, and Antonio Vivaldi.

As a whole, this freer style of ornamentation does employ essential ornaments, albeit in greater profusion and in more complex combinations, along with florid passage work of the performer’s own devising. The substance of the passage work was closely related to the “divisions” of the seventeenth century viol treatises, as well as the “modes” discussed by Tartini in his treatise on ornamentation, and was incidentally related to the practice of varied reprises. The use of dynamics is mentioned extensively by treatise writers in relation to embellishing the adagio, perhaps one of the first instances of the acknowledged use of dynamics for expressive purposes. Treatise authors also emphasize that any elaboration should not affect the overall rhythm of the work in question except at clearly defined points.

This example of a Corelli adagio from Roger’s edition illustrates several important points (Fig. 15). The example shows clearly the thin line between essential and extempore ornamentation, since on the one hand the figuration resembles variations of standard ornaments, while its variations are too idiosyncratic to be reduced to signs. Note also the inclusion of the “+” sign, a symbol used to indicate a wide variety of possible ornaments throughout the century. While later examples, many by his own pupils, are far more extensive, complex and virtuosic, Corelli’s ornamentation preserves the melodic outline and its overall rhythmic integrity, both attributes of well-conceived “extempore” ornamentation according to treatise writers, and a further endorsement of these works as models to be studied and emulated.

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55 Tartini, 15.
56 Ibid., 26.
Fig. 15. Arcangelo Corelli, Sonata, op. 5, no. 3, Amsterdam, 1700, I.

With freedom comes responsibility however, and it is easy to see that the potential for abuse is great. Although these abuses would eventually force composers to fully notate their slow movements, the practice remains essential to the interpretation of the sonatas of Corelli and the contemporaneous works of those inspired by his example, where the omission of such embellishments would be a misrepresentation of the composer’s intent. Furthermore, it cannot be overemphasized that treatise authors, including Quantz, considered it an absolute necessity that the performer be able to beautifully execute the unadorned melody first, and then learn to tastefully ornament the line with the aforementioned essential graces, before attempting this type of extensive elaboration. “I certainly do not expect this style of variation from a raw beginner who does not yet know how to play the plain air correctly . . . Anyone who does not know either how to introduce the little graces at the correct places, or how to execute them well, will have little success with the large embellishments. And it is from a mixture of small and large embellishments that a universally pleasing, reasonable and good style of singing and playing arises.”

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57 Quantz, 163, 169.
 CHAPTER II
IMPROVISATION IN THE CLASSICAL ERA

The practice of embellishing cadences in western art music is as old as written music itself. From the *punctus organicus* of Franco of Cologne’s thirteenth century *Ars cantus mensurabilis* to the cadenzas and *Eingänge* of the classical concerto, cadenzas have served as a means of defining form, of heightening excitement, and as an opportunity for virtuosic display. However, the cadenza has undergone a significant evolution from its early beginnings, through its apex in the Classical Era, until, finally, composers were compelled to assume complete control over their compositions, including most of those elements that once would have been left to the ingenuity of performers.

The term “cadenza,” synonymous with the later “*cadentia*,” both of which are derived from the Latin “*cadere,*” meaning “to fall,” first came into use shortly before 1500 as a synonym for the Latin “*clausula,*” meaning “conclusion.” Both “cadenza” and “*cadentia*” were used to describe a descending melodic line before the final note of a phrase or section of chant. The etymology of the term is further clouded by the fact that no Romance language before modern English offers a phonetic differentiation between the word for “cadence” and that for “cadenza.” It was probably Jean-Jacques Rousseau (*Dictionaire de musique*, 1768) and his English translator William Waring who first used the Italian word “*cadenza*” for fermata embellishments and the French “*cadence*” for harmonic progressions at the ends of phrases. Rousseau’s terminology did not enter common usage except in English speaking countries.\(^{58}\)

For most of the Baroque Era the term “cadenza” referred to an accumulation of embellishments near any cadence, rather than merely at the conclusions of sections or whole pieces. As the popularity of virtuoso singing increased with that of opera and the

\(^{58}\) Eva Badura-Skoda, Andrew V. Jones, William Drabkin, 4:783.
da capo aria, so did the importance of improvised embellishment. Final cadenzas became more common toward the end of the seventeenth century, when they were indicated by words such as “solo,” “tenuto,” “ad arbitrario,” by a rest, a fermata, or even implied by long note values that would be uncharacteristically plain were they not ornamented. Although it is difficult to trace a direct line of ancestors to the classical cadenza, there are a few instances of cadential embellishment found in Italian violin music that begin to approach the definition as it would be understood in later contexts, and could be considered antecedents, albeit indirect, of the classical concerto cadenza.

Some of the earliest examples of pre-Classical cadenzas in instrumental music can be found in a number of cadential passages marked “Tasto solo” (an indication dictating that the accompanying instrument should play only the written bass part) in the op. 5 Sonatas of Corelli (Fig. 16).

These passages feature a cadential prolongation of dominant harmony over a pedal point, and contain passagework and arpeggiations. They resemble later cadenzas in the sense that they prolong and emphasize a structurally important cadence and use the type of idiomatic figuration that would become the substance of later cadenzas, where the

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59 Donington, 257-8.

60 Arcangelo Corelli, Sonata for violin and continuo op. 5, no. 3 in Complete Works, Joseph Joachim and Friedrich Chrysander, eds. (London: Augener and Co., 1890).
problem of sustaining interest over an unchanging harmonic background would be equally challenging.

Another example of cadential embellishment that resembles the later cadenza can be found in Franz Giegling’s thematic catalog of the complete works of Giuseppe Torelli, in three incepts marked “perfidia” by the author. In these three passages of 29, 28, and 13 bars respectively written for two violins and continuo, the bass sustains a pedal while the violins engage in brilliant triadic figurations and scales. Although similar in content, it would be difficult to draw a direct connection between the *tasto solo* or *perfidia* and the classical cadenza.

The term “capriccio” appears as the title of a series of long, unaccompanied, virtuosic passages for solo violin in Pietro Antonio Locatelli’s *L’arte del violino* op. 3 (Amsterdam, 1733). This publication consists of twelve solo violin concertos, each containing three movements in a slow-fast-slow relationship. Each of the twenty-four outer movements is supplied with a capriccio near its end. Since the capriccio always appears after what appears to be a concluding ritornello in the tonic, it appears to be optional, due to the fact that the movement could be concluded before the capriccio. Another brief tutti is supplied after the capriccio as an alternative ending. Four of these capriccios are preceded by dominant harmony and articulate a prolongation of the movement from dominant to tonic, as opposed to the other twenty, which end where they began, on a tonic 5-3.

The prolongation of the movement from dominant to tonic harmony and the clear articulation at the beginning and end of each capriccio make a stronger case for including these passages within a later definition of the cadenza than the previously cited examples by Corelli and Torelli. However, eighteen of these capriccios contain a blank bar at the end of each capriccio labeled “cadenza,” indicating another brief improvised section that leads into the concluding tutti. It is clear that Locatelli made a distinction between the two types of cadential elaboration, and although it might be tempting to include the four exceptional examples mentioned above among examples of the early classical cadenza, viewed within their context it is clear that they belong to a tradition of what was to

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62 Ibid.
become the archetypal independent display piece exemplified by Paganini’s *Caprices*, as opposed to true examples of eighteenth-century cadenzas.

**The Classical Cadenza**

A Classical cadenza usually occurs between the end of the final orchestral tutti of a concerto movement and a concluding theme or coda (Fig. 17).  

![Fig. 17. Karl Stamitz Concerto in D Major, op. 1, Paris, 1774, I, mm. 257-258.](image)

Cadenzas can and do appear in any repertoire with a clearly delineated solo part, including chamber music. The elaboration typically begins over a cadential 6-4 chord articulated by a fermata, thereby delaying the arrival of dominant-seventh and subsequent tonic harmony, often marked by a second fermata, and concludes with a trill on the second scale degree of the key over dominant-seventh harmony. According to Quantz, the function of cadenzas was to “surprise the listener once more at the end of the piece, and to leave behind a special impression in his heart . . . their greatest beauty lies in that, as something unexpected, they should astonish the listener in a fresh and striking manner and, at the same time, impel to the highest pitch the agitation of the passions that are sought after.”

The question of what to do between the fermata and the concluding trill was historically answered in one of two ways. The early cadenza often consisted of metrically free passagework unrelated to the principal theme of the work in question, culminating in

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63 Karl Stamitz, Concerto in D Major for viola and orchestra op. 1, Ulrich Druner, ed. (Winterthur, Switzerland: Amadeus, 1995), 14.
64 Quantz, 180, 186.
a high note equivalent to or exceeding the highest note in the piece, followed by the concluding trill (Fig. 18).  

Fig. 18. Luigi Borghi, Sixty-Four Cadences and Solos for the Violin, 1790.

This type of “interchangeable” cadenza was published in sets in the most common keys for the use of amateurs who might be unable or disinclined to improvise their own, a practice exemplified in the sets published by violinists like Ignaz Schweigl (Grundlage der Violine, 1786), Luigi Borghi (Sixty-Four Cadences or Solos, 1790) and Ferdinand Kauer (Scuola Pratica overa 40 Fantasia und 40 Fermaten, 1790).  

Interchangeable cadenzas exist alongside other types throughout the era, and every composer who wrote concertos and left examples used this variety to a greater or lesser extent.

Thematic cadenzas are derived from the works in which they appear, and are widely advocated due to the fact that they insured compositional unity and helped to avoid the “absurd mixtures of the gay and the melancholy” that occurred when gratuitous technical display overwhelmed good taste. According to Türk, “Cadenzas must stem from the principal sentiment of the piece, and include a short repetition or imitation of the most pleasing phrases contained in it.”  

This is of particular importance in the case of cadenzas in slow movements, which are shorter and more conservative. A typical

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67 Quantz, 181.

68 Türk, 298.
thematic cadenza usually consisted of three or four parts, beginning with a section clearly based on material from the movement, followed by virtuoso display (scales, double-stops, arpeggios, etc.) and concluding with a final technical section that is strongly cadential, concluding with the inevitable trill (Fig. 19).69

![Fig. 19. Karl Stamitz, Concerto in D Major, op. 1, Paris, 1774, I, cadenza, P. Rush.](image)

Other types of cadenzas include the duet or ensemble cadenza, exemplified by those Mozart left for his Sinfonia Concertante, K.364, and accompanied cadenzas, like those by the virtuoso violinist Giovanni Battista Viotti (Concerto in A Minor). Duet or ensemble cadenzas were evidently rarely improvised, due to the obvious difficulties of coordination and voice-leading. Accompanied cadenzas, by definition, were fully written out by the composer.

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69 Karl Stamitz, Concerto in D Major for viola and orchestra op. 1, Ulrich Drüner, ed. (Winterthur, Switzerland: Amadeus, 1995), 19, 21.
Cadenzas are discussed extensively by treatise writers. Although C.P.E. Bach writes about cadenzas mainly from the accompanist’s point of view, J.J. Quantz expresses a wide range of opinions that would prove prophetic for the cadenza later in the century. He decries the abuse of the privilege by performers, particularly in the case of singers.\footnote{Quantz, 180.} He also maintains that cadenzas should only be inserted in pieces in which they are suitable, and that they reflect the prevailing mood of the piece by using material drawn from the work in question.\footnote{Ibid., 182.} He insisted that the harmonic range of the cadenza be narrow, and must not roam into keys that are too remote.\footnote{Ibid., 184.} Quantz advocated that cadenzas be short, insisting that those for voice or wind instruments should be “so constituted that they can be performed in one breath,” although “a string player can make them as long as he likes, if he is rich enough in inventiveness.”\footnote{Ibid., 185.} Finally, he asserts that “to learn how to make good cadenzas, you must try to hear many able people. And if you have some prior knowledge of the characteristics of cadenzas, such that I am trying to impart here, you will be better qualified to test what you hear from others, so as to be able to turn what is good to your own profit, and to shun what is bad.”\footnote{Ibid.}

Perhaps the most detailed guidelines for the improvisation or composition of cadenzas can be found in D.G. Türk’s Klavierschule. In his chapter on cadenzas he supplies the reader with ten rules which are still pertinent to the subject today. Türk repeats many of Quantz’s principles, favoring short, metrically free thematic cadenzas with a narrow harmonic compass that should nevertheless contain an abundant variety of inventive figuration. He quotes Quantz literally in regards to the preferred length of cadenzas, and further reinforces Quantz’s assertion that they should at least have the feeling of an improvisation. By the time Türk published his treatise however, it had become commonplace to at least sketch the contents of the cadenza, as opposed to improvising one on the spot. Türk concludes by stating “I would rather choose the more certain way, which is to sketch the cadenza in advance. Whether the player is making up
the cadenza at the moment or has already sketched it beforehand is not going to be obvious to the listener anyway, assuming that the performance is as it should be.  

In addition to treatises and contemporary accounts of improvised cadenzas, there are a few examples remaining, perhaps most significantly those by Mozart for his own piano concertos. Although we have no cadenzas for any of his music for strings other than the previously mentioned *Sinfonia Concertante* K.364 and the *Musical Joke*, K.522, his keyboard cadenzas are sublime if not always typical examples of what could be accomplished in an extended cadential embellishment. Reproductions of collections of interchangeable cadenzas like those by Luigi Borghi have recently become available. Cadenzas by modern performers and scholars like Robert Levin, Paul and Eva Badura-Skoda, Marius Flothuis and Franz Beyer offer alternatives for further study.

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**Eingänge**

An *Eingang* is another cadential embellishment typical of the Classical Era and is closely related to the cadenza. *Eingänge* (“lead-ins”) are found before the reprise of the main theme in rondo movements in concertos, as seen here in the third movement Rondo of Karl Stamitz’ Concerto in D Major for viola and orchestra (Fig. 20). They are also encountered in chamber music and solo sonatas of the period.

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75 Türk, 301.  
80 Stamitz, 19, 21.
If a cadenza is a summation of all that has come before it, then an *Eingang* points forward to what is to come. They are generally short and consist of generic figuration within a very narrow harmonic compass, as in these *Eingänge* suitable for use in the previously mentioned measures of the Stamitz concerto (Figs. 21-23).

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**Fig. 20.** Karl Stamitz, Concerto in D Major, op. 1, Paris, 1774, III, *Eingang*, mm. 163-166.

**Fig. 21.** Karl Stamitz Concerto in D Major, op. 1, Paris, 1774, III, *Eingang*, mm. 165, Philip Rush.

**Fig. 22.** Karl Stamitz Concerto in D Major, op. 1, Paris, 1774, III, *Eingang*, mm. 165, Robert Levin.  

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81 Karl Stamitz, Concerto in D Major for viola and orchestra, Robert Levin, ed. (München: G. Henle Verlag, 2003), 16.
Eingänge are usually called for when a fermata occurs on the (prevailing) dominant resulting in what may seem like an unreasonably long gap before a new phrase or section in the tonic key. However, caution must be taken not to ornament in places where the shocking effect of an unprepared entrance is perhaps desired. Only careful consideration, musical intelligence and good taste can decide in controversial instances.

The decline of the cadenza as a vehicle for performers is tied to several historic trends. One was the rise of the so-called virtuoso concerto. Conceived as display pieces, the spectacular virtuosity of the solo sections distributed throughout these concertos made it unnecessary to articulate a dramatic moment of particular virtuosity towards the end of the movement. Since in order to have a proportionately dramatic impact the cadenza would have to be conceived on an enormous scale, it was often omitted altogether. Second, the articulation of the cadenza at its beginning and end allowed it to increase in scale, and thematic integration tied it to its parent movement. As this trend toward integration continued, the next logical step, as seen in the violin concertos of Viotti, was to incorporate accompaniment, thereby emulating the scale and drama of the keyboard concerto while integrating the cadenza with the composition still further. As the character of the cadenza as a dramatic insertion was lost, it became impossible to leave such matters to the discretion of performers. Finally, as composers began to include their own integrated cadenzas, the cadential function of the cadenza was lost, and the cadenza was eventually only used by composers as a deliberate historical gesture.

The modern performer is in the unique position of being able to choose between several potential answers to the dilemma posed by the cadenza in classical concertos. The romantically conceived yet stylistically incongruous cadenzas of the nineteenth century are increasingly perceived as incompatible with a more historically conscious age, [82] Franz Beyer, *Kadenzen zu Viola-Konzerten von Stamitz, Hoffmeister, und Zelter* (Zurich: Kunzelmann, 1971), 7.
although they do offer valuable insight into the way this music was perceived by nineteenth-century interpreters. We are left to decide whether we should honor the style of the work by attempting to create a cadenza as we think it might have been, or to honor the spirit of the cadenza by devising one that reflects our own modern or personal idioms. Whatever the decision, the rediscovery of the potential for self-expression inherent in the classical concerto cadenza by modern performers can only help to restore the element of surprise and heightened drama that the cadenza was intended to create in the first place, and help to further insure the longevity of the classical concerto for years to come.
CHAPTER III
IMPROVISATION IN THE TWENTIETH CENTURY

The rapid decline in improvisation in the nineteenth century can be traced to several important trends in composition and performance in addition to those detailed in the previous chapter. As composers began to exert more control over previously improvised elements of their compositions, many of the conventions of improvisation began to invade composition. The popularity of works that pushed the boundaries of form and structure, for example those works entitled Prelude, Fantasy, or Impromptu, as well as the introduction of recitative-like passages and cadenzas in solo instrumental music, clouded the distinction between composition and improvisation still further. As these stretched conventions became compositional norms, it was inevitable that the status of improvised music as something special and unique would be undermined. Finally, the imposition of a requirement for greater unity in improvisation, including the use of various formulaic models, further hastened its demise by inhibiting its essential creative freedom.

However, the practice of improvisation persisted in the nineteenth century in several influential genres. The “lions of the keyboard,”\textsuperscript{82} beginning with Beethoven and continuing through his pupils and later virtuosi including Liszt, Chopin and Hummel, often included at least one improvisation on a popular tune or operatic aria as a finale or encore. Some even based their improvisations on themes provided by the audience. Although dominated by pianists and later by organists, nineteenth-century improvisation was also practiced by violin-piano duos, (Brahms and Reményi, Clement and Hummel), and by the virtuoso violinist Nicolo Paganini.\textsuperscript{83} Several pianists wrote treatises on the subject, of which the most important example was Carl Czerny’s \textit{A Systematic}

\textsuperscript{82} Ibid., 119.
\textsuperscript{83} Ibid., 121.
Introduction to Improvisation on the Pianoforte: op. 200. Czerny emphasized the use of compositional formulae such as theme-and-variations, sonata-rondo, or “a mixed form, one idea following another as in a potpourri,” as plans for unifying solo improvisations. Improvisation also persisted in organ playing, often in the “strict, fugal” style described by Czerny and his contemporaries. Although this type of organ improvisation was chiefly academic, many organists continued to thrill audiences in this way, as exemplified by the acclaim generated by Anton Bruckner’s improvisations at concerts in Paris (1869) and London (1871). Improvisation continued to be an important element of opera as well, and although nineteenth-century treatises tend to focus more on technical matters than performance practice, the increase in the publication of vocal scores and the invention of recording technology provide a rich source of annotated performance material, not only by many of the leading singers of the time but also by composers, including Rossini, Donizetti and Verdi.

As musical culture began to lose those elements of common practice on which improvisation was based, the division between composition and performance was further reinforced. However, as the century progressed, those composers who abandoned traditional musical culture to explore radically new artistic means returned to improvisation, and for a time extended the opportunity to performers as well. Although the use of indeterminacy and improvisation experienced a peak during the 1950s and 1960s, a revolutionary period in culture in general, its influence has extended to the present day.

In this chapter, we will examine several works which either were not written specifically for strings, or which were in fact written specifically for other instruments. While this might seem at odds with the title of this treatise, it is necessary for two primary reasons. First, sometimes the most influential works in a genre were not written for string instruments. In order to understand the aims and intents behind some aleatory compositions it is necessary not only to examine the most important examples, regardless

86 Ibid.
87 Ibid.
of instrumentation, but also to understand why these works were originally written for a solo instrument, in this case the piano. Second, many works of aleatory music, particularly those which are entirely graphic or which are based on prose, are indeterminate in regards to both content and instrumentation. Thus, the problems of interpreting a work such as Earl Brown’s *Folio* or Christian Wolff’s *Prose Collection* are common to any instrumentalist who performs the work, including string players.

**Free Improvisation**

The twentieth-century phenomena of free improvisation is in many ways a perfect illustration of the fact of that no music takes place in a vacuum. Even so-called “free improvisation” is subject to the constraints of context. Free improvisation in the twentieth century was in large part a response to the philosophical, socio-political and musical changes that occurred after the Second World War. It was also a result of the rejection of the legacy of music history by composers and performers attempting to make a statement based on political ideology through their compositional means.

Free improvisation often reflected the revolutionary nature of the times, carrying with it connotations of socialism and collective creative enterprise. Frederic Rzewski, an American composer (b. 1938) who studied at Harvard before moving to Europe, explored collective improvisations in settings as varied as works for chorus, such as his *Work Songs* and other text compositions from 1967-69, to the group improvisations of his live electronic ensemble Musica Elettronica Viva. Lukas Foss (b. 1922), gifted American composer, conductor and pianist briefly explored free improvisation in his Improvisation Chamber Ensemble (cello, clarinet, piano and percussion) a group he formed at the University of California at Los Angeles in 1956. Foss’ *Time Cycle* for soprano and orchestra, although written out completely, was premiered with interludes improvised by the Improvisation Chamber Ensemble. Cornelius Cardew’s Scratch Orchestra, Vinko Globokar’s New Phonic Arts Ensemble, Gavin Bryar’s Portsmouth Sinfonia and Alvin Lucier and Robert Ashley’s Sonic Arts Union all practiced group improvisation, as did Pauline Oliveros and the other composers of the San Francisco Tape Center and Larry Davis’ New Music Ensemble, among many others.
For many composers and performers of the 1950s and 60s, free improvisation resulted from “a search for a new aesthetic, a provocation, a political or social engagement, the wish to belong to an elite capable of improvising, a way of evaluating themselves, a way of expressing themselves, a need to create contact with the audience, and a need to give free reign to his imagination.” However, it did not take long to realize that many of these points can be easily challenged. Many musicians feel freer when faced with a score than when confronted by the demand to be themselves. Collaboration is as prominent in traditional ensembles (orchestras, choirs, chamber ensembles, etc.) as it is a feature of an improvising ensemble. Evaluation is easier against the standard of a written part, and audiences can be brought into closer contact when there is some shared framework of discourse.

**Aleatory Music**

The term “aleatory,” literally “according to the dice,” applies to all music to some extent, since even modern notational systems are incapable of expressing every aspect of the realization of a composition. The possible exception would be music written in the language of the computer, although even this type of music is subject to technical and acoustical considerations. In the late twentieth century the term, interchangeable with “indeterminate,” has been applied specifically to music in which the composer has intentionally withdrawn some degree of control. Most indeterminate compositions fall within three general categories: the use of chance operations in the genesis of fixed compositions; the allowance of certain choices to be made by the performer among several options supplied by the composer, and the use of methods of notation which lessen the composer’s control over the sounds produced by the performer. Indeterminate compositions may embrace one or all of the above, and the choices may extend from two possible dynamic indications to almost free improvisation.

The first significant use of aleatory procedures can be found in the music of Charles Ives, which include “exhortations to freedom, alternatives of an unprecedentedly important character, and unrealizable notations which silently invite the performer to find

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Henry Cowell, in his String Quartet No. 3, (“Mosaic,” 1934), allows the performers to decide on the final form of the piece from the fragments provided. His pupil John Cage began to use chance in his compositions beginning with his *Music of Changes* for piano (1951), a work in which he used coin tosses to generate pitches, durations and other aspects of sound, deriving his chance procedures from the *I Ching*, the ancient Chinese “book of changes.” His influence was originally restricted to his closest acquaintances, including Morton Feldman, whose *Intersection* and *Projection* series of works used graphic notation to indicate relative pitch, and Earl Brown, who, in his *Folio* series and the seminal *December 1952*, used “different notations of a highly ambiguous nature, subject to numerous but inherently valid interpretations”\(^91\) (Fig. 24).

\(^90\) Ibid., 341.
Aleatory composition, or the use of random procedures to determine the content of a work, was most fully exploited by Cage in works such as *Music of Changes*, *Williams Mix* (1952) and *Imaginary Landscape no. 4* for twelve radio receivers. Cage employed other random techniques, such as the use of the imperfections in music paper in *Music for Piano* (1952-6) and templates drawn from star maps (*Atlas Eclipticalis*, 1961-2). He also combined indeterminate compositions with other aleatory techniques, as in *Winter Music*, in which from one to twenty pianists may use all or any of the chance composed score. Iannis Xenakis also briefly considered indeterminate composition, but in
a slightly different way, in works such as ST/4 (1956-62) for string quartet. The “stochastic process” adopted by Xenakis used a computer to model the shape of the whole while events on a small scale were determined randomly. Thus, randomness becomes an intentional part of the product, while Xenakis retained the right to modify the final result.⁹²

After its peak in the 1960s, aleatory music once again became a dormant issue. Indeterminacy survives in the form of ad libitum repetitions, indeterminate notations within otherwise conventionally notated scores, and other controlled improvisatory techniques, but it has for the most part receded as a motivating aesthetic. However, the effects of experiments with indeterminacy have had important implications for modern music. The variety of sounds available to composers has expanded exponentially to include tape and computer manipulations, a wide variety of new instruments, as well as unconventional techniques for traditional instruments, and in turn has led to the development of new notational systems. Although performers and composers had combined music with other art forms since the inception of opera, the experimental works of the 1950s and 1960s fused genres and styles in ways that would have important future implications for everything from opera to rock concerts.

Mobile Form

Mobile form allows a composer to remain in control of the content of a composition while allowing the performer some flexibility by providing for alternative orderings of written material, whether on the spur of the moment or after some prior consideration. Furthermore, while some composers merely invite the performer to order the parts of a work as desired, others allow the inclusion or exclusion of parts of the work, or of the instrumentation.

Most works in mobile form incorporate detailed rules for the execution of the piece, thereby restricting the range of options that the performer may exercise in terms of the way that decisions are made and the timing of those decisions. Henry Cowell’s aforementioned String Quartet no. 3 (“Mosaic”) is a work consisting of five short movements. In the performance note, Cowell states that “the five movements of the

⁹² Griffiths, 343.
Mosaic Quartet may be played in any desired order. One suggested way of performance is to alternate movements as follows:

\[ I-II-I-III-IV-III-V-IV-V-I-II-III-IV-V \]

but any other succession of movements is equally valid. Each movement must be understood as being a unit within the total mosaic pattern of the form. While it can be inferred from this statement that all five movements should be played, it is left to the performers to determine the order and the number of repetitions, if any, and therefore the length of the composition.

Karlheinz Stockhausen, Pierre Boulez and Luciano Berio all experimented with mobile form, although with contrasting motivations. Stockhausen’s *Klavierstück XI*, composed in 1956, presents the player with nineteen groups arranged on a single sheet of paper. Figure 25 depicts two of the nineteen groups.


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The performer “begins with whatever group he sees first . . . casts another random glance to find another of the groups,” and continues the process until each of the groups has been played three times. Stockhausen indicates at the end of each group the tempo and dynamic range of the next group to be played, regardless of which one that happens to be. According to Stockhausen, “Klavierstück XI is nothing but a sound in which certain partials, components, are behaving statistically . . . As soon as I compose a noise . . . then the wave structure of this sound is aleatoric. If I make a whole piece similar to the ways in which the sound is organized, then naturally the individual components of this piece could also be exchanged, permutated, without changing its basic quality.”95

Pierre Boulez explored the possibilities of mobile form in his Third Piano Sonata (1956-7), written partially as a response to the previously discussed work by Stockhausen. Boulez asks the performer to prepare a way through the options provided ahead of time, but his approach also differs from that of Stockhausen in the sense that, although still concerned with the nature of musical sound, it is based on a literary model, and its two published parts, Trope and Constellation-Mirroir contain numerous references to the structure of literary criticism. Trope consists of a ring-bound sheaf of four items to be played in various possible orders: A Texte which is the subject of a Parenthése, Commentaire and Glose. Constellation-Mirroir sprinkles fragments over several large pages in the manner of Mallarmé’s Un coup de des. Boulez’ Third Piano Sonata is unified still further by the use of serial techniques, thus allowing the secondary Parenthése and Glose to directly reference the primary Texte.96 Boulez explored the poetic implications of musical sound still further in his next major work, also based on the mutable poems of Mallarmé, Pli Selon Pli, for soprano and orchestra (1957-62).

While Stockhausen experimented with an indeterminacy of sound and Boulez investigated an indeterminacy of form, Luciano Berio concerned himself more with an indeterminacy of meaning “brought about by a use of languages (musical and verbal) of high ambiguity, by an avoidance of finality in any statement, and by rich networks of cross-referencing operating both within the work and across to other works of the

96 Ibid., 106.
composer’s own or by other composers.” His works written for the voice of his wife Cathy Berberian, including *Circles* (1960) for soprano, harp and percussion, explores text, in this instance the poetry of e.e.cummings, as both sound and information, and unabashedly responds instrumentally to the phonetic sounds and meanings of the text.

While European experiments with mobile form were mostly concerned with the nature of form as opposed to content, Cage and his contemporaries were interested in an indeterminacy of sound, in a more general and open sense. “When Cage used formal variability, as in *Winter Music* or the *Concert for Piano and Orchestra* (1957-8), he left options as open as possible: any part of the solo part of the *Concert* may be omitted, as may any or all of the orchestral parts, and the piece may be performed simultaneously with other works by the composer.”

Earl Brown’s open-form compositions reflect the influence of the visual artists Jackson Pollack and Alexander Calder in two important aspects: spontaneity and mobile form. His early, fully notated works, such as *for violin, cello and piano* (1950-2), are constructed of small rhythmic groups, which, when assembled in performance, constitute one possible version of compositionally mobile elements. Brown was also interested in the flexibility of time within the composition itself, and his “time notation” allowed him to indicate pitch, grouping and dynamics, while allowing durations to remain in a flexible visual relationship, as exemplified by works such as *Available Forms* (1961) for eighteen musicians, including strings. In compositions like this one, Brown combines the composed-material, open-form characteristics of his early works with the graphic and improvisational qualities of his most open works, such as “December 1952” from *Folio* (1952-3), which is completely graphic, consisting of 31 horizontal and rectangular blocks of various sizes on a single sheet of paper. The result is “an intensification of the ambiguity inherent in any graphic representation, and possible composer, performer and audience response to it.”

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97 Ibid., 110.
98 Griffiths, 111.
101 Nyman, 57.
Graphics

The staff notation employed in western art music is the most fully hybridized system in existence. It employs letters of the alphabet (clefs, accidentals, dynamics), syllables (markings such as Ped., pizz., rinforz., etc.), verbal indications (tempo and character markings, i.e., Presto, energico, etc.) and numbers (fingerings, time signatures, metronome markings, octave transpositions, rhythmic groupings, etc.). However, the vast majority of the information supplied in a western score is derived from the use of graphic elements, including staves, bar lines, braces and brackets, rests, the notes themselves, phrase marks and slurs, pauses and fermatas, pedal releases, harmonic indications and left hand pizzicato in string playing, wavy lines for trills and (vertically) for rolled chords, crescendo and decrescendo markings and a vast array of articulations. Many of these graphic symbols are in fact aleatory, although not deliberately so.

Composers invented graphic notations for a variety of reasons. Some devised graphic notations to portray musical sounds or sound production techniques that would have been difficult or impossible to portray with traditional notation, as in the case of composers like Penderecki, in his Threnody: to the Victims of Hiroshima, for fifty two stringed instruments (Fig. 26).
In this example, the composer uses invented graphic notation to indicate a variety of extended techniques (playing behind the bridge, percussive effects, ½ tone vibrato, etc.) as well as the pitch direction of indeterminate gestures, such as glissandi spanning a designated interval which ascend or descend in pitch, intensity or intervallic compass.

However, the majority of the composers who used graphic notation did so in an attempt to contravene what many saw as the coercive nature of the relationship between composer and performer in the 1950s, a general feeling heightened by the impact of
experiments by many post-war composers with total serialism. Many composers, particularly Cage, Feldman, Brown, Wolff, and their contemporaries, sought to escape the “play this loud, play this short” mentality of serialism and traditional notations by devising means of scoring works that tell how to play, not what to play (Fig. 27). In this example, one of the first works notated by Feldman on graph paper, the small diamond indicates a harmonic, the letter P pizzicato and A arco. High, middle and low registers are represented by the relative position of the squares within each box. Pitch is to be determined by the performer. Each box contains four icti; a single ictus being M.M.=72. Duration is notated by the space assumed by the square or the rectangle within the box.  

![Diagram of Morton Feldman's Projection I](image)


These composers extended this pluralistic social metaphor to the actual sounds themselves, experimenting with the concept that silence and sound should be freed from the incarceration of total serialism and left to “be themselves, rather than vehicles for man-made sounds or expressions.” Many of these same composers also were interested in the connection between the visual and musical worlds represented by the score itself, in many cases elevating the score to the level of visual art, if sometimes beyond the level of musical intelligibility (Fig. 28).

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Although the notation of graphic works may seem daunting, most composers, unlike Logothetis, generally compensate by offering exact instructions for the ways in which these pieces are to be interpreted, in terms of what sounds are to be used and how they should be assembled.

While completely graphic scores have largely become a thing of the past, these experiments have had consequences for contemporary music. In a practical sense, experiments with extended techniques and the addition of a wide variety of new instruments and found objects has led to the creation of numerous new graphic symbols for these musical events or instruments. Many composers continue to use graphic elements alongside more traditional forms. Musically however, graphic works have raised a number of questions that have yet to be fully answered, particularly in regard to the graphic score and its discernible relationship to any given performance.
Texts

Many composers of aleatory music, in addition to the above mentioned techniques, also use verbal texts as the basis of compositions. Like graphic scores, texts can be used to give the performer a high degree of autonomy in determining both form and content. Texts usually comprise simple instructions for musical actions, either directly, as in the text compositions of Cornelius Cardew and Christian Wolff (reproduced as printed in the manuscript in Figure 29), or in more inscrutable ways, as in the works of LaMonte Young, whose Composition 1960 #5 begins by instructing the performer to “Turn a butterfly (or any number of butterflys [sic]) loose in the performance area . . . ,” or George Brecht, whose Concert for Orchestra consists of the single word “exchanging.”

![Textual Instructions](image)


Most commonly, however, texts have been used to “give a more or less clearly stated basis for ensemble improvisations,” as in the case of Stockhausen’s Aus den Sieben Tagen (1968), Rzewski’s Love Songs (1968) or the example above by Christian Wolff.

Performing Aleatory Music

Perhaps the simplest type of aleatory music for the interpreter is found in works of mobile form, since the material can be fully composed. It is not insignificant, however, that the first European efforts in this genre, such as the above mentioned works by
Stockhausen and Boulez, are for soloists, thereby simplifying the decision-making process. In cases where ensembles are involved (as in Brown’s *Available Forms I*) and the composer does not want an anarchic result, it becomes necessary to make many decisions in advance, or else the composer must supply a system of cues and signals. In cases where the notation, or a lack thereof, makes the music still more indeterminate, the performer’s responsibilities increase exponentially. Since it is often difficult for the composer to clarify his intentions without restricting the performer more than he wishes, many aleatory scores must be approached from a background of understanding based on the composer’s more determinate work, or, failing that, from an understanding of the cultural environment in which the composer was working at the time.

The most common solution to these problems in the 1960s was the creation by composers of performing traditions within their own ensembles, such as the aforementioned Sonic Arts Union or the Stockhausen Ensemble. These groups were able to create collective qualities of interpretation previously rare outside the tradition of the string quartet, and as a result, when working with their own ensembles it was sometimes possible for the composer to specify the bare minimum in terms of performance instructions within the score itself. Other composers welcomed the extreme variability inherent in indeterminate scores, and, as in the case of composers like Christian Wolff, were more interested in inspiring an awareness of the interpretive musician’s creative potential. Thus, while the problems encountered in the performance of aleatory music are often unique to the individual work or to the individual composer, the interpretive responsibilities of the performer remain in many ways the same as those necessary for a cohesive interpretation of traditional music. An understanding of the cultural and historical context of the work, its place within the individual composer’s life and artistic career, and of the performance tradition of the work in question remain essential to the interpretive process.\(^{104}\)

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\(^{104}\) Griffiths, 1:346.
CONCLUSION

The art of improvisation is, and has always been, a fundamental element of the performance practice of western art music. Modern research in performance practice has shown that the omission of ornaments and improvised embellishments in most baroque music is as grievous an error as the performance of incorrect notes or rhythms. The same can be said for much of the music of the Classical Era, particularly in the case of the concerto, where in the specific instances of the *Eingang* and the cadenza, composers traditionally left room for the performer to demonstrate his or her compositional and interpretive abilities at particular moments within the composed structure of the work. Although composers retracted this freedom for a time in the music of the later nineteenth and early twentieth centuries, the experimental composers of the latter half of the twentieth century once again attempted to extend a collaborative hand to performers.

The art of improvisation requires far more of performers than technical finesse. It necessitates a thorough knowledge of the style of the work in question. It demands a firm grasp of the common practice harmony that most of the western canon is based on. Most importantly, however, it requires that performers once again take full responsibility for interpreting a work anew, in a way that is not only appropriate stylistically, but that also treats the work not as a monument from another time, but as a living work of art. It is only this process of constant reexamination and reinterpretation that elevates the musical performance above the act of a respectful disentombment.

The study of performance practice has shown us that improvisation is not optional in baroque and classical music; it is essential. Similarly, while the experimental music of the 1950s and 1960s was largely just that, it did serve to highlight the creative potential that can be unleashed when musicians begin to transcend the barriers between the traditional roles of composer and performer. In many ways the future promises to bring even more opportunities for performers who are willing to take a chance. As “alternative styles” becomes the catch phrase of the future among music educators attempting to find
new ways of exposing students to the joys of music making outside traditional genres, improvisation is likely to become an ever more familiar part of the landscape of music education. Similarly, as traditional composition becomes more open to music from popular or non-western cultures, opportunities for those with the interest and ability to improvise will likely increase. Given the uncertain future of many of the traditional institutions of western art music, the ability to improvise will likely become ever more important to musicians attempting to find a place in the profession.
BIBLIOGRAPHY


BIOGRAPHICAL SKETCH

Philip Rush was born in Bellingham, Washington, the son of a music-loving mathematician and a public school teacher. Growing up in Riverside, California, he performed as an electric violist, keyboardist, and vocalist in several rock bands with his brother, Justin, while also performing as a member of the Riverside and Redlands Symphony Orchestras. After a long flirtation with the popular music world, he returned to music academia, earning a Bachelor of Arts *cum laude* at the University of California at Riverside in 1996, where he studied viola with Lucille Taylor, and a Master of Fine Arts degree at the California Institute of the Arts in 1998, where he studied with Laura Kuennen-Poper, before attending Florida State University as a teaching assistant and student of Dr. Pamela Ryan.

As a symphonic violist, Mr. Rush has served, in addition to the above mentioned ensembles, as a member of the Tallahassee, Pensacola and Columbus (GA) Symphony Orchestras. An active chamber musician, he has performed with ensembles as varied as the contemporary New Century Players, as part of the Los Angeles Philharmonic “Green Umbrella” series of new music concerts, and the Florida State University Baroque Ensemble. He has been a participant in chamber music festivals throughout the United States, including Taos, Yellow Barn, Musicorda, Bowdoin and the Lydian String Quartet Chamber Music Seminar at Brandeis University. Mr. Rush is also an active teacher, both privately and as a faculty member at the Florida State University Summer Music Camps.

Mr. Rush also enjoys cooking and performing with his wife Michelle, who is also a violist.