Rhythm

What It Is and How to Improve Your Sense of It

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First published in 2005 by Eighseigh Press
1050 North Point, Suite 1504
San Francisco, California 94109
Rhythmsource.com

Editor: Tad Lathrop
Design and Production: Nancy Carroll
Music Typesetting: Don Giller

Library of Congress Control Number: 2005901633

ISBN 0-9754667-0-4

Manufactured in the United States of America

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Improving Your Sense of Rhythm

Improving Your Sense of Rhythm

There are three realms to turn to for improving your rhythmic sense: the inner world of your own body and mind; the external world around you of sights, sounds, people, and teachers; and third, the realm of physical motion. This book's approach to improving sense of rhythm starts with resources in our hearts and minds, convenient and always available, including the inner world of imagination. Many find working with an external resource—a metronome, for example—to be the most tangible method, the one that seemingly leads most directly to "results." But all three areas lead to results; all contribute to the goal of strengthening pulse and improving rhythmic sense, and can be practiced concurrently.

If you work on these suggestions, your sense of rhythm will undoubtedly improve. With practice and attention, everyone's rhythm gets better.

IMPROVING PULSE AND RHYTHM USING INTERNAL SOURCES

Internal sources for improving rhythm include your imagination, inner pulse, breath, heartbeat, and muscles.

Imagination

Improving musical performance occurs in the imagination, and virtually all the suggestions in this book use imagination as part of the process. The first step is to imagine pulse.

Inner Pulse

Developing the inner pulse is essential for improving rhythm. Sense of pulse is what people usually mean by "sense of rhythm." Having a good sense of rhythm entails having the ability to produce a pulse inside oneself, without an external musical source and without relying on physical motion. The questions are, how do you do it, what does it feel like, and how do you improve it?

Metronome Exercise 3: Imagining Then Playing with the Metronome

Now play the clave pulse you were imagining, still with the metronome off. Play it for a little while. Stop and imagine it. Then play it again. Alternate back and forth between imagining and playing the pulse. When you play it, concentrate on making your performance as steady as the pulse sound you are imagining.

Check back with the metronome, turn it on and see if you are still at 80. Turn off the metronome, imagine the pulse again, and then see how long you can play the pulse steadily. Try it at mm=60, 100, 140, and 40. Alternate between listening to the metronome, turning it off, imagining the pulse, and playing the pulse. Stop whenever you have had enough.

Once your pulse feels pretty steady, move on to playing the pulse while the metronome is on.

When playing along with the metronome, the sound of the claves should be as close to the metronome as possible—so close, in fact, that you don't actually hear the metronome. You want the sound of the claves to cover, or hide, the metronome. This is called hiding or burying the metronome.

If you don't completely hide the metronome with your clave sound, a *flam*—two percussive sounds in very close proximity—will be produced. A flam indicates that you are not exactly in time with the metronome.

The goal is to avoid flams. Remember, though, that hiding the metronome is not easy to do. Don't get frustrated. No one hides the metronome all the time. Just keep working on getting the notes closer together.

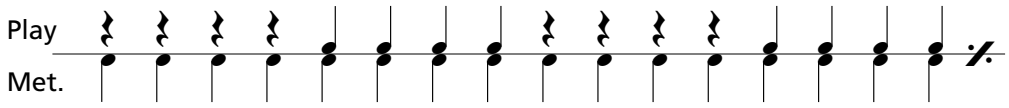
The reason these exercises should be done with a very short percussive sound is that longer sounds can carry over and hide the metronome even when you play slightly ahead, which can train you to play ahead of the beat. Be careful of that. That's why a pair of crisp claves works better than a drum or a cowbell.

Metronome Exercises 4 through 9 delve into hiding the metronome. The sound of the metronome is represented by notes below the line, and the notes to be played are written above the line.

Metronome Exercise 4: Fours

Set the metronome to a moderate tempo, mm=80 to 96. Turn it on and leave it on. Alternate between listening to the metronome for four beats and playing with the metronome for four beats, as follows:

EXAMPLE 2.1

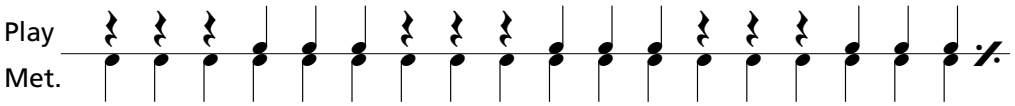


Listen for four beats, play four, listen four, play four, back and forth, on and on, until you feel that the four notes you play sound just like the four notes you are listening to. Take your time and sink into it.

Metronome Exercise 5: Threes

This is the same as the last exercise, but in a pattern of threes, as follows:

EXAMPLE 2.2

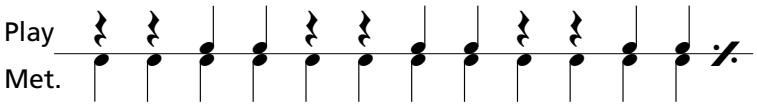


Listen to three, play three, listen, play, back and forth, sinking ever deeper.

Metronome Exercise 6: Twos

This time use a pattern of twos:

EXAMPLE 2.3

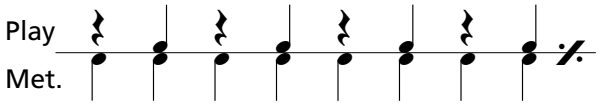


Make sure your two played beats sound rhythmically exactly like the metronome, and that you do not hear the metronome during the beats that you play. Eliminate flams.

Metronome Exercise 7: Ones, or Alternation

Play one beat, listen to one beat, play one, listen to one, back and forth.

EXAMPLE 2.4



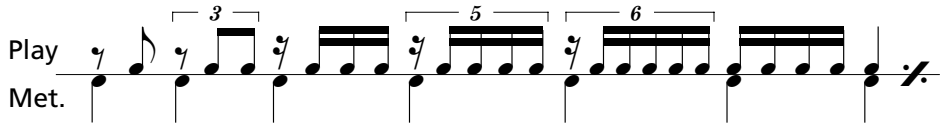
This one is great for sinking deeply into the pulse. Feel the rhythm created by the alternation. Keep hiding the metronome.

Metronome Exercise 8: Longer Phrases and Varied Groupings

Play the patterns outlined in the preceding four exercises, but with longer phrases. Try alternating between playing and listening for five beats, six beats, seven beats, and eight beats.

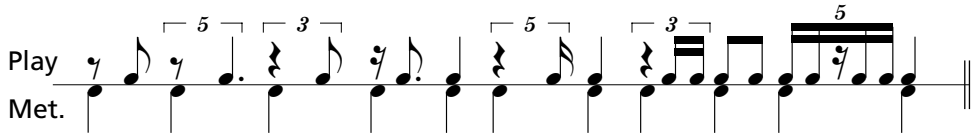
Use your imagination to vary the patterns, alternating ones for a while, then twos, then fours, then fives or more. Improvise.

EXAMPLE 2.59



EXAMPLE 2.60

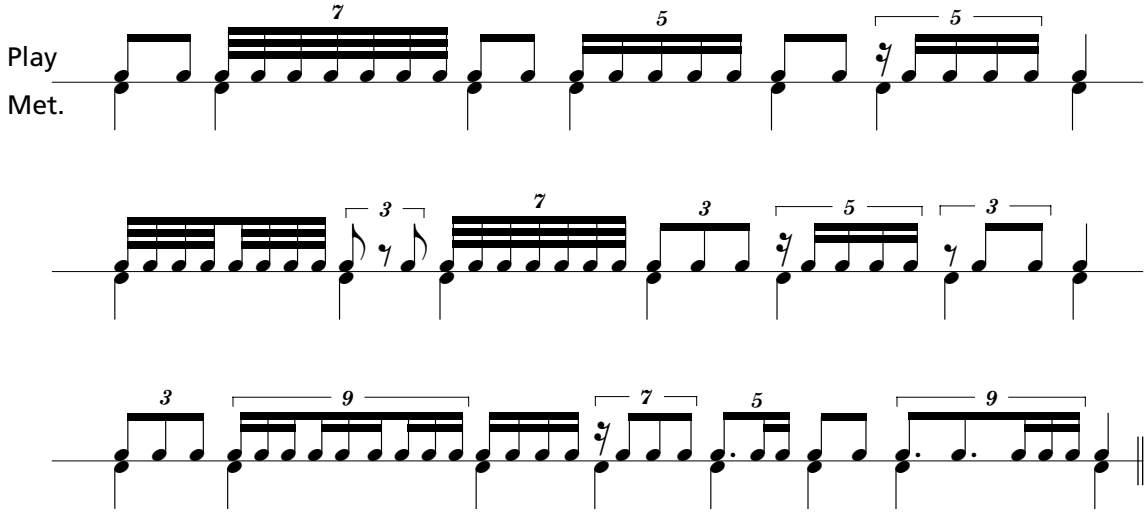
EXAMPLE 2.61



Metronome Exercise 21: Eighths, Triplets, 16ths, Quintuplets, Sextuplets, Septuplets, 32nds, and Nanuplets

It is better to practice just one pattern well than many more-or-less well. Keep your standards high. Practice just one, and do it well.

EXAMPLE 2.62



Metronome exercises 22 to 25 entail imagining the metronome as other than the main beat—that is, displacing it. These exercises strengthen the rhythmic imagination and facilitate freedom, phrasing, and flexibility. There are three steps to each exercise: (1) imagine, (2) count, and (3) play.

Metronome Exercise 22: Displacing the Metronome by Eighths

Set the metronome to 60. Hear it, imagine it, as follows:

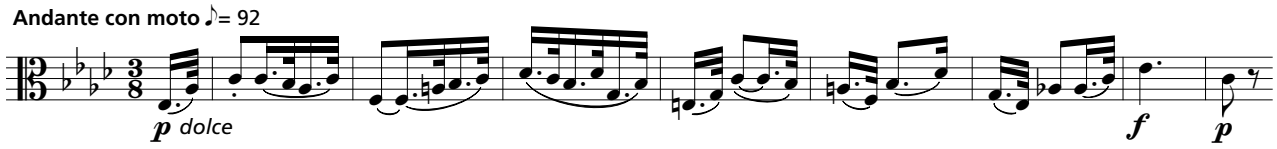
Metronome Exercises Part 2: Using the Metronome in Practice with Your Main Instrument

This section looks at some of the many ways a metronome can be used in daily instrument practice.

One important point: Don't let the metronome become a crutch. Spend as much time practicing without a metronome as with one. Bad habits result from relying on the metronome too much. You must ultimately rely on your inner pulse, not the metronome. To avoid this, practice also using the chest pulse instead of the metronome.

The ideas outlined in this section can apply to any excerpt. We will use a famous example, the opening theme for cello and viola in A♭ major, from the second movement of Beethoven's Fifth Symphony:

EXAMPLE 2.92



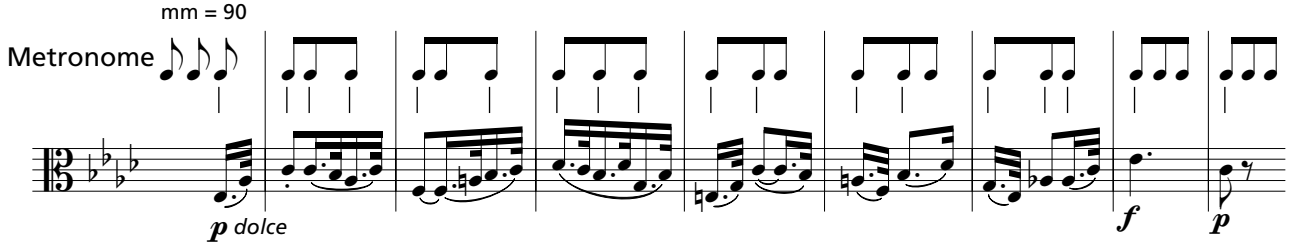
Metronome and Instrument Exercise 1

If you don't play cello or viola, transpose the excerpt to your instrument, play it on piano, or sing it with solfege.

The first instinct, and it is a good one, is to practice with the metronome marking every note that gets the beat, as indicated by the lower number in the time signature—in this case every eighth note, as follows.

Either use the indicated tempo, or pick a slower one. Slow practice often leads to quicker results. Also, it's wise to practice at various tempos, as you don't know what tempo the conductor or audition committee will ask for. We are going to use mm=90, as it is easily divisible by three.

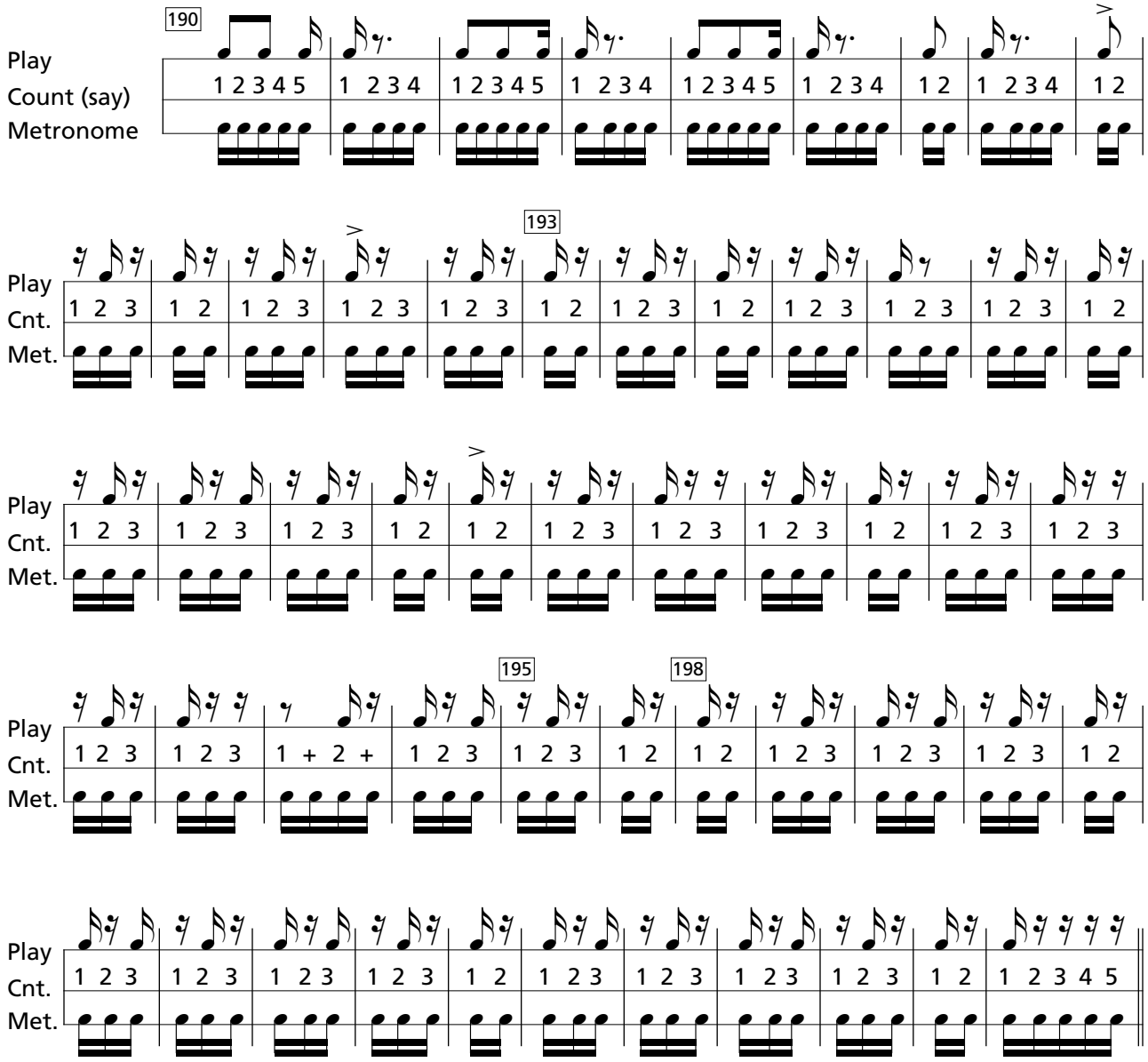
EXAMPLE 2.93



First, just imagine the excerpt while listening to the metronome at mm=90. Once you can hear it in your mind, practice, carefully lining up your notes with the metronome sound. The lines descending from the metronome pulse indicate where the music and the metronome sound exactly together.

Here is the routine for the bass part to the ending of *Rite of Spring*. The top line is to be played with claves; it is the abstract rhythm extracted from the bass part. The middle line is the count, the changing meter, and the bottom is the metronome pulse that goes evenly through the whole thing. Record them all.

EXAMPLE 2.114



Once you have created this Stravinsky pulse recording, practice along with your main instrument.

Going through this process serves two purposes: (1) by making the recording, you become intimate with the metric structure of this section, and (2) you then have a terrific "phrased pulse" of the excerpt to practice with. This gets you deep into the feel of the piece.

Position yourself, if possible, so that the drumhead is somewhere around the level of your navel, so your hands can rest comfortably on the drumhead, with a slight angle down from your elbows to your hands.

Drumming Step 2: Hand and Finger Positions

Rest both hands on the drumhead. Place your hands so that the palm just below the fingers is resting on the edge of the drum. The fingers rest on the drumhead. The thumbs are relaxed, resting on the drum edge or just outside the edge.

Stay in this position for a while without playing, just focusing your attention on your arms, shoulders, neck, and back. Make sure everything is relaxed. Feel the weight of your arms resting on the drum.

BOOK

3

Advanced Rhythm Studies

Advanced Rhythm Studies

Advanced Rhythm Studies covers material that professional musicians can expect to encounter in their careers, especially if they're involved in contemporary concert performance. This book also has material specifically for drumset players, and for those who want to delve more deeply into rhythmic studies. It is a good idea to have a strong grasp of the material presented in Book Two before delving into this book.

After studying the concepts presented here, you will be ready to tackle even the gnarliest polyrhythmic problems encountered in the contemporary literature.

ODD TIME SIGNATURES AND MIXED METER

Odd time signatures are meters in 5, 7, 9, 10, 11, 13, 14, 15, 17, and any number above. They are also called mixed meter, as they can result from adding meters together. Odd times are nothing new. The traditions of India, Eastern Europe, and other regions of the world use odd time signatures often and with ease. Those of us trained in the Western tradition may not be so used to them.

Expose yourself as much as possible to music that uses odd times and mixed meters. Listen to and study the music of India and Eastern Europe. There's great music in jazz and rock that employs odd times—for example, "Take Five" by the Dave Brubeck Quartet, "The Grunge" and other Led Zeppelin tunes, and the music of the Mahavishnu Orchestra and other fusion bands. Also, so much contemporary orchestral and chamber music is in odd times. Study it and watch the score go by, tapping your foot at the bar lines. Get used to it.

Mixed meter is just that. 5/4 time is usually three plus two or two plus three. The second movement of Tchaikovsky's sixth symphony is a gentle 5/4, phrased two plus three all the way through. Seven is usually four plus three or three plus four. Similarly, meters in 10, 11, 13, and so forth are broken up into groups of two, three, and four. Nine is either a compound meter of three groups of three or a mixed meter, as in "Rondo á La Turk" by Dave Brubeck, which is two plus two plus two plus three. A piece in eight can be mixed meter if it is organized into three plus two plus three. Salsa music based on

RHYTHMS IN CONTEMPORARY MUSIC: ADVANCED POLYRHYTHMS AND COMPLEX POLYRHYTHMIC CHANGES

We turn now to interpreting more difficult polyrhythms: how to play five over four, seven over three, nine over five, and beyond, and how to go back and forth between them. It's important to move logically and methodically from easier to more advanced. Once you get the hang of how to play the rhythms encountered here, you'll find it less difficult to play polyrhythmic passages by Stravinsky, Bartók, John Cage, Edgar Varèse, Elliott Carter, Frank Zappa, and other more contemporary composers.

There's a logical system for figuring out and playing all polyrhythms. It involves a little math, subdividing, counting, and keeping a strong pulse.

Polyrhythms involve two numbers: one is the number that is going *over* the other, and the other is the number that is being *overed* (which is usually but not always the meter of the piece).

There are two mathematical approaches for solving polyrhythms, two ways of looking at the same thing.

The first approach: Subdivide each beat in the bar into the number of subdivisions that are going "over" them, and then group the subdivisions into units of the second number, the one that is being "overed."

The second approach: Multiply the two numbers to find the lowest common multiple. Divide the bar into that lowest common multiple, and then group those divisions into units of the two numbers.

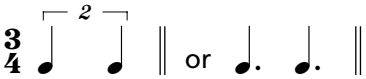
Clear as mud? It is not easy to explain verbally; it has to be done rhythmically. It will become clear by going through the process outlined below.

The starting point is the most fundamental polyrhythm, the hemiola—that is, three over two and two over three.

Two-over-Three Exercises

In 3/4 time, two over three can look like this:

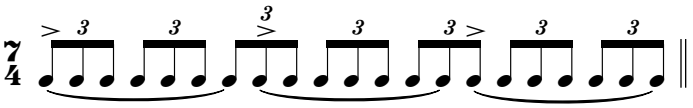
EXAMPLE 3.10



The bar is naturally divided into three quarter note pulses, by virtue of the time signature, but we are asked to perform two equal pulses in the same period. The polyrhythm is the two beats over the three quarters.

To perform it, subdivide the seven quarters of the bar into triplets, thereby accomplishing the lowest common multiple of three and seven, which is 21. Group the triplets into units of seven, as follows:

EXAMPLE 3.60



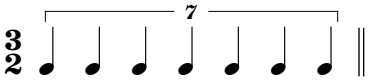
Counting it sounds like this:

1 2 3 2 2 3 3 **2** 3 4 2 3 5 2 **3** 6 2 3 7 2 3

Seven-over-Three Exercise

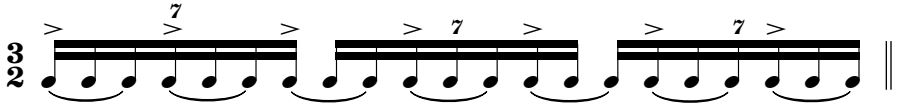
In 3/2 time, seven over three can look like this:

EXAMPLE 3.61



To perform it, subdivide the three half notes of the bar into septuplets, accomplishing the lowest common multiple of 21, and group these subdivisions into groups of three, as follows:

EXAMPLE 3.62



Counting it sounds like this:

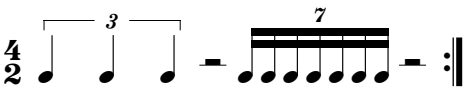
1 2 3 **4** 5 6 **7** 2 2 **3** 4 5 **6** 7 3 **2** 3 4 **5** 6 7

The accented numbers make the seven over the three.

Alternating Threes and Sevens

Practice alternating threes and sevens. For practice set the quarter note to equal 35–76.

EXAMPLE 3.63



Listen to the metronome for a while before going at this. Feel the large pulse strongly. Imagine the subdivisions, then perform, with then without the rests.

Changing Polyrhythms Exercise

Set the metronome to quarter note = 35–80. Listen to the pulse for a while and sink into it.

First get used to each subdivision. Perform two to each pulse a few times, then three to each pulse, then four, then five, and so on, up to nine, as in exercises 3.70 and 3.71.

Then mix it up. Perform all the relationships of subdivisions of the pulse, going back and forth from one to the other. Also practice leaving a pulse of silence between each subdivision, and imagine the next one before playing it.

In the following, 2/3 means two over three, so you alternate between playing two beats per pulse and three beats per pulse.

2/3 2/5 2/7 2/9

3/4 3/5 3/7 3/8

4/5 4/7 4/9

5/6 5/7 5/8 5/9

6/7 6/8 6/9

7/8 7/9

8/9

Practice each relationship, back and forth, until it feels comfortable.

Then go on to juxtaposing three polyrhythms next to each other, repeating each until internalized:

2/3/4 2/3/5 2/5/6 2/7/9

3/4/5 3/4/7 3/5/6 3/5/7 3/5/8 3/5/9

4/5/6 4/5/7 4/5/8 4/5/9 4/7/8 4/7/9

5/6/7 6/7/8 7/8/9

The possibilities are almost endless.

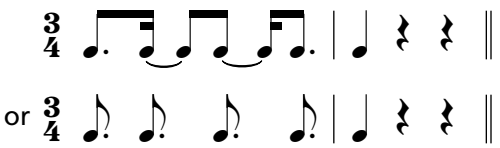
Now go on to juxtaposing four subdivisions next to each other. This is exactly what you have to do when playing music by Elliott Carter, Charles Wourinen, Frank Zappa, Edgar Varèse, and so many other composers. If you prepare yourself with the exercises outlined in this book, you will feel prepared for complex polymetric challenges encountered in your career.

A Note About Notation: There is some controversy about proper notation of subdivisions in modern music. A professional must learn to sometimes accept unusual or seemingly incorrect notation, extrapolate what is correct from the musical context, and just play it as well as possible.

You have two hemiolas hidden in example 3.80: (1) an implied four over three, between the downbeat, the fourth 16th of one, and the "and" of two; and (2) a bigger two over three between the downbeat, the "and" of two, and the downbeat of the next bar. Including the fundamental pulse provided by the meter, there are three separate superimposed pulses in that little figure.

If you extend the dotted eighth figure, the four over three pulse emerges:

EXAMPLE 3.81



Seeing the polyrhythms implied by accents and syncopations makes reading music easier and makes rhythmic performance smoother.

SOME NOTES FOR DRUMMERS AND PERCUSSIONISTS

Good rhythm is everybody's responsibility. But due to the nature of percussion and its role in music, rhythmic responsibility falls more on our shoulders than on others'. It's the drummer's or timpanist's job to be a source of rhythmic clarity and strength, so we have to perceive and measure time, to feel rhythm and pulse, quite deeply.

Our instruments have a particularly clear attack, and create relatively short notes, compared to most. Even our longest sustaining instruments, gongs, concert bass drums, and timpani, have an attack with decay. In contrast, winds and strings can sustain a tone without decay, and connect one note to the next. (With rolls we can accomplish this effect, but even rolls consist of successive single strokes.)

Drummers provide the rhythmic skeleton, the support system. It is therefore very important for drummers to consider what comes between the notes, to feel the part of the wave in between the beats, to sense what is occurring in the silences between the sounds, feeling time at all times, especially in the rests. Drummers need to pay particular attention to phrasing and feel.

If we practice with too much focus on being perfectly in time with the metronome, thinking, "This beat, this beat, this beat," we can sound stiff, unmusical. Thinking more like "This goes to this, then to this, then to this," creates a flow, a phrase. This is where feel comes into play: in the phrasing of the music.

So, when practicing the drumset, always think about the big phrase: Where is the beat going?

BOOK

4

Rhythm in Performance

Rhythm in Performance

A wide variety of factors affect the quality of rhythmic performance. They range from states of mind and mental attitudes to specific actions and performance practices. Some of these are common knowledge, some rarely discussed. Identifying and considering these issues can help everyone achieve a stronger, more fluid, and deeper rhythmic performance throughout an entire career.

Many of these factors apply not just to rhythm but to musical performance in general. Musicians of all kinds benefit from being aware of them.

Attitude

Attitude is your outlook, the feeling you exude, the manner in which you approach your work. Your attitude affects everything; from one performance to your entire career.

A good rhythmic attitude is confidence without arrogance, an attitude that your inner pulse is right, but with humility that others may be right too. Maintain strength with flexibility. Be ready to adjust rhythmically with the conductor or the musicians around you.

At times you need to hold your ground, to not budge if those around you are rushing or dragging. It takes experience to know when to hold fast or how much to adjust. With a good attitude this will come, without irritating those around you.

This attitude applies to pitch as well. Some players are sure they have the "right" pitch, and won't budge. This can lead to out-of-tune performances and an unpleasant atmosphere.

Good attitude leads to good performance. Be a team player. Support others rhythmically.

Relaxation

Relax. Relaxation leads to good rhythmic performance. It opens your senses, opens your ears to what is going on around you, allows you to feel and express

You can perform this exercise with a recording device instead of a second player. Record yourself playing a pulse that is speeding up and slowing down. Then play a pulse unison, or a displaced pulse unison, along with the recording.

Find a metronome with which you can change the pulse without turning it off. Record a metronome pulse that is gently speeding up and slowing down, creating a click track that doesn't keep steady time. Play along with it.

While doing these exercises pay attention to your muscles; stay loose and relaxed. It's hard to be flexible if you're holding tension.

Other ways to practice flexibility: Practice in a position to which you're unaccustomed. Change the position of your body or the music stand. Put your leg up on the chair, move in new ways, find strange positions (perhaps on your back). Use instruments that you're uncomfortable with. Practice in strange places, perhaps with distractions. Play foreign, strange, or uncomfortable instruments. Try talking while practicing.

Use the recordings of shifting pulse you made to practice flexibility. Besides playing pulse unison or displaced pulse unison, play the metronome exercises with subdivisions, and play them over a subtly shifting pulse.

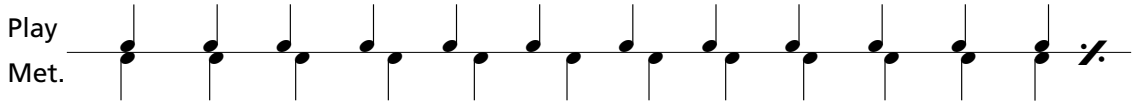
Rubato

Rubato is related to flexibility. In the strict sense, it means to be able to stretch time without losing touch with the underlying pulse.

Rubato Exercise 1

Play a pulse unison with a metronome at about mm=48–60. As you are doing so, start to push your notes slightly ahead of the metronome till you can hear the metronome pulses clicking after your own. Gently pull forward, and then pull back together with the metronome, as follows:

EXAMPLE 4.5



Be aware of the space between the metronome clicks and your own clicks. Get that space as long as you can, and then pull back rhythmically, gently closing the gap until you pull again into pulse unison.

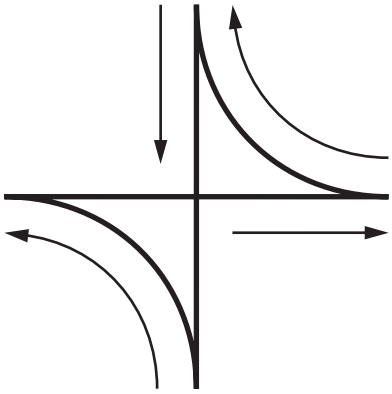
Rubato Exercise 2

Try pulling rhythmically *behind* the pulse, and then push back again, as follows:

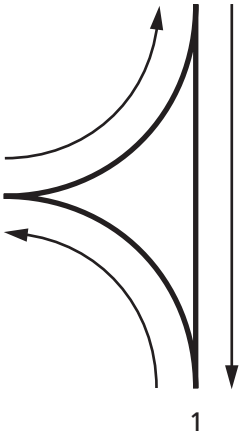
There's always a balance between what the conductor is doing and what the orchestra is performing. No individual can know exactly what the conductor is thinking all the time, and no conductor can make a performer do anything exactly as desired. There is always a gap between the conductor's motions and the performance of the group. The actual performance is a consensus between individuals and the group.

Take the downbeat, for example. When the conductor begins the piece, how do you know exactly when to come in? Conductors may expect you to play exactly at the bottom of their stroke, but that rarely happens. How do you know exactly where the bottom of the stroke is? At belt level? Belly button level? Chest level? And the level can change depending on the tempo or dynamic or technique. The orchestra plays somewhere after the bottom of the stroke, as the baton is traveling up.

The ictus of the conductor's beating pattern is the point where the conductor's beat changes direction. In 4/4 time, there are four ictuses:



In 3/4 time, there are three:



The *downbeat* is always the one of the bar.

The point in time after the ictus when it is the right time to play depends on the style of the conductor, the tradition of the orchestra, the tempo of the piece, the style of the piece, and where you are in the piece. Any orchestra member that performs precisely when the stick comes down soon learns that he is coming in early.

The delay at the beginning of the piece, the first downbeat, is in general much more than the delay once the piece gets going. The slower the piece, the more time between the ictus and the sound. The faster the piece, the closer the musicians play with the conductor's motions, especially once things get going. In general, the larger the orchestra, the longer it takes to get going.

It's easier to adjust time by moving forward a bit than pulling back a bit. The same with pitch: it generally feels easier to tune up into a pitch than to tune down. We are more sensitive to flatness than to sharpness, in general. Just so with pulse: it's easier to adjust slightly faster than to pull the tempo back. Therefore, be particularly careful not to take the conductor's tempo too fast, as you'll then have the difficult job of pulling back.

Once the piece gets going, be vigilant about not rushing. It is a human tendency to get faster.

What do you do when the conductor makes a mistake? In a sense, you can't depend on the conductor. If she loses her place, you must still come in correctly. If the conductor gives you a cue that you *know* is wrong, do not come in. You'd better be absolutely sure, though. If the conductor is lost, she may need help from the orchestra. Know your part well enough that if the conductor gets lost, you don't. At the same time, if everybody is lost, the conductor has to save it, and you go with her.

The orchestra can have a mind of its own. The individual performer must balance between the reality of the performance and the wishes of the conductor. If the orchestra starts rushing or dragging, pushing or pulling, and the conductor is making faces and conducting slower or faster than the sound you are hearing, do you go with the band, or go with the conductor? While you can try to help the conductor, you must go with the band. No matter how right you are with the conductor, if you come in early or late or in a different tempo than the band, *you* are out of time. If the conductor is wrong and you follow him, *you* make the mistake that everyone hears. Remember: *la batuta no suene*—the baton makes no sound.

Mathematics

There are so many relationships between music and math that it's no mystery students of one often have a proclivity for the other.

The word *arithmetic,* for example, has its roots in *art* and *measure,* two very musical terms. The art of measurement and the grouping of numbers are

Rhythm

What It Is
and
How to Improve Your Sense of It

Good musicianship requires deep mastery of rhythm—feeling it, playing it, and understanding it. In this one-of-a-kind guide, veteran percussionist Andrew Lewis offers time-tested techniques for entering the world of rhythm and inhabiting it comfortably, whether playing the basics or meeting the most advanced challenges.

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- Insightful explanations of core concepts, from pulse and pattern to polyrhythm and phrasing
- Exercises to help you improve your feel, your sense of time, and your overall accuracy
- Advanced exercises and tools for handling the most complex and difficult rhythms
- Guidance on the habits, attitudes, and practices that contribute to excellent performance

Andrew Lewis, percussionist, timpanist, and drummer, has worked with the San Francisco Symphony, Leonard Bernstein, John Adams, Elliott Carter, Frank Zappa, Pierre Boulez, Steve Reich, and many others, in styles ranging from contemporary chamber music to rock and jazz. A graduate of the San Francisco Conservatory of Music, the Juilliard School, and Mannes College of Music, Lewis has taught rhythm and percussion for 30 years. He recently developed an innovative new line of metronomes.

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1050 Northpoint, #1504
San Francisco
California 94109
www.rhythmsource.com

U.S. $23.95

ISBN 0-9754667-0-4
52000
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