Survey of Double Bass Drumming

History, Technique, and Performance Practice

by

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ABSTRACT

Double bass drumming is a genre of drum set performance that utilizes a bass drum pedal for both the right and left feet. This allows the feet to function much like the hands, and provides the ability to play faster rhythmic passages on the bass drum that would otherwise be impossible in the classic single-pedal arrangement. The feet are then elevated to new levels of importance, which creates new challenges in four-limb coordination.

This double bass drumming tradition has been in use since the mid-20th century, and it has become extremely popular since that time. Today, virtually every drum set retailer offers the double bass pedal as part of their inventory. Many large drum solo competitions, such as the Guitar Center Drum-Off, also include a double bass pedal as part of the provided drum set.

However, even with this recent growth in popularity of double bass drumming, there remains a significant lack of scholarly research on the topic. This could be due to the popularity of double bass drumming remaining fairly new, and that the primary implementation of this drumming style remains outside of the art music tradition. This document will help further bring this complex drumming tradition to light by providing an in-depth analysis of the double-bass drumming style through historical overview, explanation of various technical approaches and considerations, and an analysis of common double bass drumming performance practice.

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CHAPTER 1

INTRODUCTION

Goals of the Research

Double bass drumming has undergone rapid evolutions since its inception. The style began as a simple accompaniment element in drum set performance, but has since progressed as a tool for advanced independence and a means of creating virtuosic composition on the drum set. The relative knowledge of this percussion style seems to be limited in the world of academia, as jazz drum set, world percussion, classical percussion, and contemporary percussion remain the primary forms of percussion study in many higher education institutions. The primary goals of this research are threefold: to illustrate the foundations and technical developments of double bass drumming, to reveal its various complexities and musical possibilities, and to stimulate new appreciation for this complex drumming style in academic drumming and percussion communities.

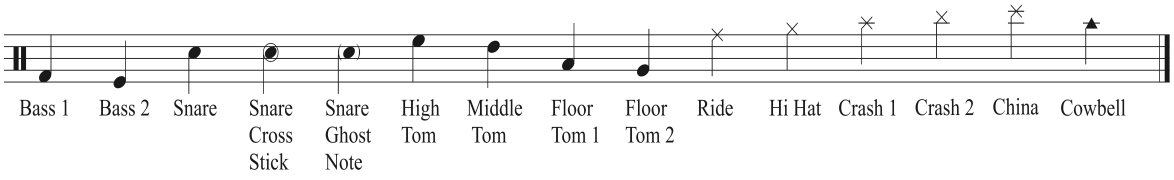
Prior Research

The existing scholarly research involving double bass drumming has focused on the construction of innovative pedal designs from an engineering perspective, but not on the technical approaches, history, or performance practice of this genre. There has not yet been any significant scholarly research on this topic from a musical perspective. The existing resources on double bass drumming exist outside of academic research, but there is a wealth of information on this topic including method books, instructional DVD's, interviews, clinic videos, transcriptions, and many recordings.

Research Methods

The research for this project will focus on these previously mentioned resources: instructional method books, instructional DVD's, interview videos, clinic videos, and transcriptions. The instructional method books provide an in-depth look at the common pedagogical approaches in double bass drumming. The instructional videos provide pedagogical information as well, but also provide visual examples of the various technical approaches. These videos also include performance examples that demonstrate practical applications for the described techniques. The video interviews provide greater insights into the execution of various double bass drumming compositions, which can be helpful in better understanding the transcriptions of these pieces. The transcriptions will provide examples of practical applications for the various performance practices.

Notation Key



Drum Set Introduction

The drum set developed as a means for a single player to perform the role of multiple percussionists through the use of both hands and feet. By organizing multiple instruments in close proximity, a single player can accurately execute percussion parts that would otherwise require multiple players. Though a simple idea, this concept of the drum set does require new forms of coordination, especially involving the player's feet.

Utilizing the hands, with striking implements or without, has been common from the inception of the percussion instrument family. However, the feet were not routinely utilized as a means of striking an instrument until the invention of the first spring operated bass drum pedal by William F. Ludwig in 1909.[1] The design and manufacture of this pedal was the start of one of the great drum production companies in percussion history, Ludwig Drums.

The use of pedals allowed early drum set players to apply all four limbs in their musical expression, rather than the two hands alone. However, the feet often remained stationary which limited the number of instruments that could be controlled with foot pedals. Even today, the standard drum set arrangement requires the two feet to perform on different instruments: the left foot commonly on the hi hat cymbals, and the right foot commonly on the bass drum. The advent of the double bass drum setup remedied this limitation by allowing performers to utilize both feet on the same instrument, or same sounding instrument, providing greater rhythmic flexibility. Players were no longer limited by the speed and dexterity of a single foot, but were able to perform more complex rhythms through the collaboration of both feet.

The Double Bass Setup

This early double bass setup involved two separate bass drums each played with a single pedal, which is still quite popular among players today (see Figure 1). The double bass pedal, or double pedal, was developed in the late 1960's, which would allow two

[1] Cook, *Teaching Percussion*, 294.

bass drum beaters to strike a single instrument.[2] Though there are a few different double pedal designs, such as the heel-operated double pedal and the offset pedal design, the standard double pedal features a second pedal that is attached to the primary pedal by a rod. This rod controls a second beater mechanism which operates alongside the primary beater (see Figure 2). This allows the two beaters to strike the drum in close proximity, which provides a more consistent sound between the two feet.

Figure 1. Two separate bass drums

Figure 2. Double pedal

[2] Sleishman, "Twin Pedal," accessed December 21, 2018, http://www.sleishman.com/sleishman-drum-company/twin-pedal/

There are a number of factors involved in the modern player's decision to use two bass drums or a double pedal. An obvious reason for the use of two bass drums is the element of visual appeal. Though double pedals are readily available, there are players that retain the two bass drum setup for the on-stage aesthetics of having two bass drums. The drum kit can appear significantly larger when a second bass drum is added, which can make the kit fill up more of the stage space. This is especially valuable when playing on large stages where much of the floor space can go unused.

Another advantage of this separate bass drum setup is that it allows each foot to control the striking of its own drum, which creates extra time for each drum to resonate without interference before it is struck again. However, the two drums must be tuned and dampened identically to achieve this same sound. Microphone placement, levels, and audio effects must also be identical in a recording or live sound setting to achieve this consistency. While there are players who utilize two separate bass drums for contrasting sound, the majority of double bass drummers are striving to achieve a consistent sound in the collaboration of both feet.

There are several advantages to utilizing the double bass pedal. First, the double pedal makes achieving a consistent sound simple, since the two pedals strike the same drum surface. A snare drummer would prefer to play with both hands on a single snare drum in order to achieve a consistent sound, and the same concept can be applied to the bass drum. Utilizing one bass drum also makes the recording and live sound process easy by eliminating the need for a second bass drum channel.

The double pedal also requires significantly less floor space and can be quickly added to any drum set in substitution for the standard single pedal. The small size of the double pedal also allows for additional pedals, controlling other instruments, to be utilized in tandem with the double bass. This makes the double pedal setup much easier to transport, which has made it extremely popular among double bass drummers today.

CHAPTER 2

HISTORY

Introduction

Though double bass drumming is a relatively new phenomenon in the world of percussion, it possesses quite a diverse history. The lineage includes jazz, fusion, rock, and heavy metal drummers that have adapted and revolutionized the double bass drumming tradition. An understanding of this tradition begins with an analysis of notable figures and their role in double bass development. This historical overview will shed light on the stylistic developments and key innovations that have become standard in double bass drumming.

Louie Bellson

The history of double bass drumming can be traced back to legendary jazz drummer Luigi Paulino Alfredo Francesco Antonio Balassoni, also known as Louie Bellson (1924-2009). Louie Bellson is held as one of the greatest jazz drummers of all time. He is known for his compositions (over 1,000 total), virtuosic solos, his time as a band leader, and his playing with jazz legends Benny Goodman, Tommy Dorsey, and Duke Ellington.[3] Though Bellson was not the first drummer to ponder the idea of using two bass drums, he was the first to develop the concept of double bass drumming into a serious element of his sound.

[3] Robinson, "Bellson, Louie," accessed January 3, 2019, https://doi.org/10.1093/gmo/9781561592630.article.J036200

Bellson was a very talented musician from his early years, and even won the Slingerland National Gene Krupa Drum Contest at the age of 16. A year earlier (1939), as a 15-year-old high school student, Bellson developed a sketch of a double bass drum set for an art class.[4] Though it is uncertain exactly when Bellson first thought about adding a second bass drum, this sketch forms the first record of Bellson's double bass drum set.

This idea of utilizing two bass drums was certainly extreme for the time. Early drum sets were quite modest in size and construction, so the idea of including two large bass drums might have appeared to be over the top. Several drum companies initially turned down Louie's idea to create a double bass setup. In fact, it wasn't until 1946 that the Gretsch drum company would bring Bellson's original 1939 vision to light. This original Gretsch set featured two 20" x 20" bass drums that fit Bellson's original double bass concept. The set also featured a unique arrangement of toms: two 13" x 9" mounted toms, two 11" x 7" mounted toms, 16" x 16" and 16" x 18" floor toms, and an 18" x 26" center tom that was situated directly in front of the snare drum.[5]

Bellson utilized this setup upon its creation in early 1946, but had to abandon the double bass kit when he began playing with Benny Goodman in May of 1946, as Goodman didn't care for the larger double bass setup.[6] It wasn't until joining the Tommy Dorsey band in 1947 that Bellson was able to create greater exposure for his double bass

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[4] Nyman, *Double Bass Legends: A Short Story*, accessed September 30, 2018, http://drummagazine.com/double-bass-legends-a-short-history/

[5] Gretsch, "Gretsch Salutes Louie Bellson and Gretsch Drums," accessed January 3, 2019, https://www.gretsch.com/2012/07/gretsch-remembers-louie-bellson/

[6] Nyman, *Double Bass Legends: A Short Story*, accessed September 30, 2018, http://drummagazine.com/double-bass-legends-a-short-history/

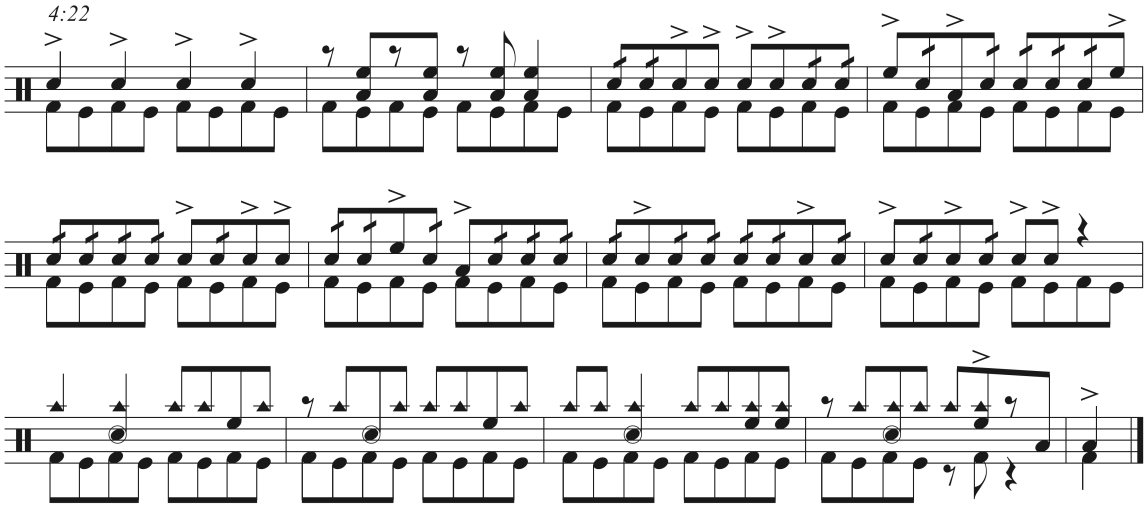
kit. His new band leader liked the double bass arrangement, which allowed Bellson the opportunity to further explore this concept and to cement the double bass setup as part of his drumming identity.[7]

Bellson was known for effectively utilizing the double bass drums in his solos, but did not regularly utilize two basses as an element of timekeeping. This could be due to the stylistic characteristics of the swing drumming style. The primary element of time in swing drumming is not established by the drums, but rather the cymbals. The ride and hi-hat cymbals are the primary instruments utilized in the swing groove. Drums are used as more of an accentuation tool rather than the primary source of the time. This is quite opposite from rock and other popular genres in which the drums function as the primary timekeeping device. For this reason, jazz is often thought to be "cymbal music," while rock is often thought to be "drum music." Louie Bellson seems to have acknowledged this groove concept by utilizing the double bass drums sparingly.

Bellson's use of double bass in solos provides a clearer picture of his double bass conceptualization. His solo on "Skin Deep," an original composition recorded with the Duke Ellington Orchestra in 1953, provides a perfect example of Bellson's double bass usage.

[7] Nyman, *Double Bass Legends: A Short Story*, accessed September 30, 2018, http://drummagazine.com/double-bass-legends-a-short-history/

Example 1. Louie Bellson “Skin Deep” (1953) solo transcription #1[8]



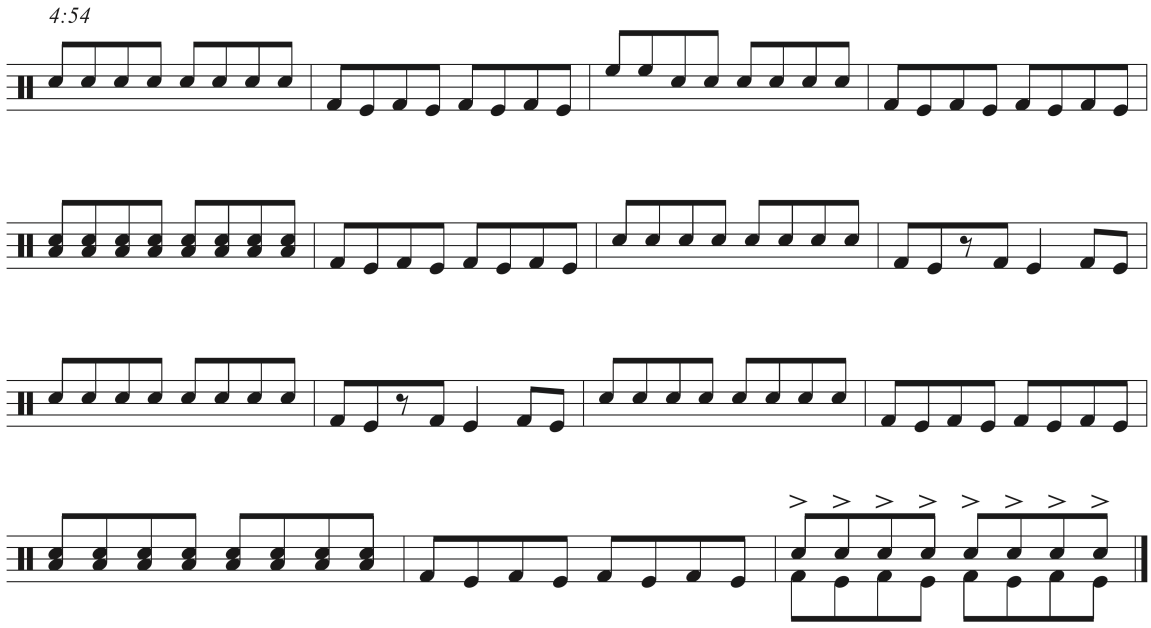
This solo transcription illustrates a common way Bellson utilized the double bass, through the role of accompaniment. The feet are accompanying the hands with alternating eighth notes to create a driving sense of energy throughout this excerpt. The hands then have the freedom to create various melodic phrases over the top of the driving accompaniment. With this freedom, Bellson employs a number of roll sequences in the first eight measures, while moving to a classic mambo groove on the cowbell for the next four measures. This excerpt provides a perfect example of the independence and coordination involved in utilizing the double bass as an accompaniment tool.

Louie Bellson also often utilized the double bass in a call-and-response fashion, in which a phrase is stated in the hands then imitated in the double bass. This imitation would prove to be a popular technique in the future of double bass drumming. The

[8] Ellington, “Skin Deep,” 4:22.

following excerpt, from the same "Skin Deep" solo, is an example of Louie Bellson's use this technique.

Example 2. Louie Bellson "Skin Deep" (1953) solo transcription #2[9]



The hands and feet trade one-measure phrases in this excerpt, with the hands occasionally moving to different parts of the drum set for melodic interest. The feet provide greater interest by deviating from the imitation in measures 8 and 10. Bellson plays eighth notes on the snare drum in the preceding measures (7 and 9), but choses to break the cycle of constant eighth notes in measures 8 and 10. Bellson concludes this phrase by bringing the hands and feet together to resolve the final eighth notes in unison. This solo, among many others, demonstrates Louie Bellson's early contributions to double bass drumming performance practice.

[9] Ellington, "Skin Deep," 4:54.

Other Jazz Influences

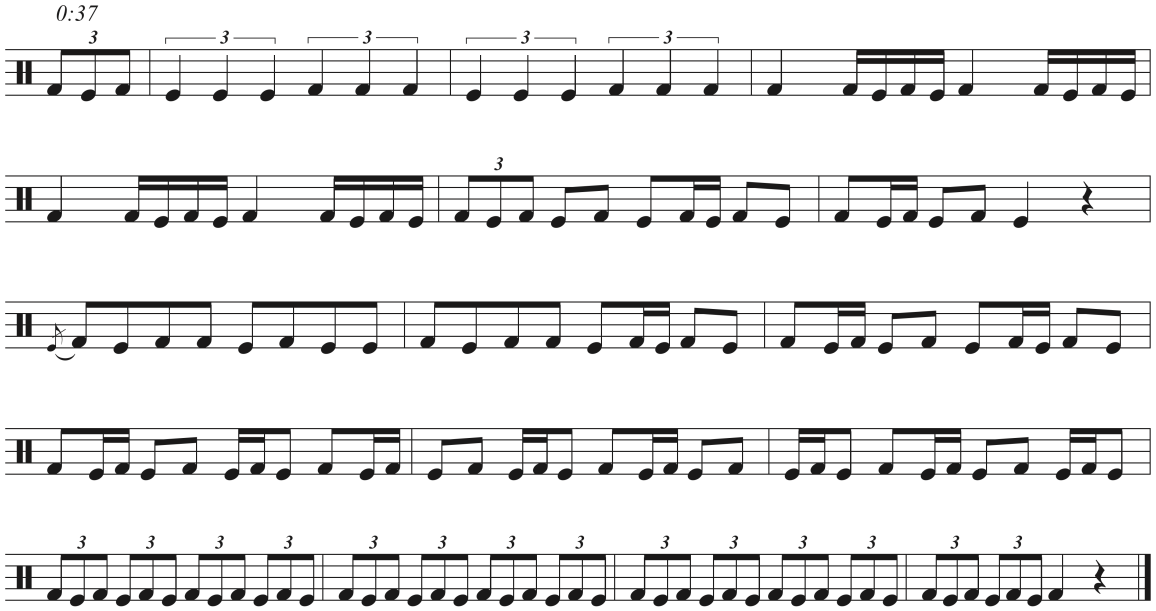
Though the idea of using two bass drums was still somewhat an oddity, there were other swinging jazz drummers that adopted Bellson's early idea of using two bass drums: Rufus Jones, Eric Delaney, Sam Woodyard, and Ed Shaughnessy, among others.[10] Even the great Buddy Rich has a single surviving recording of a double bass solo, though he was not known for using two bass drums in his standard setup. As an entertainer, Buddy Rich was also known as a talented tap dancer, which explains his natural foot technique and his ability to quickly assimilate to a double bass setup.

Buddy Rich's single surviving double bass recording is from a New York Paramount WEAF Radio broadcast from 1949. The performance features the Buddy Rich Band performing an arrangement of "Old Man River."[11] This 1949 performance includes a double bass solo from Buddy that features bass drums alone, without the rest of the kit. The solo contains a number of classic snare drum rudiments that Buddy incorporates with the feet. Here is a short example from this solo that illustrates Buddy's virtuosic foot technique (see Example 3).

[10] Nyman, *Double Bass Legends: A Short Story*, accessed September 30, 2018, http://drummagazine.com/double-bass-legends-a-short-history/

[11] *Buddy Rich Double Bass Drum Solo 1949 NY Paramount*, accessed September 30, 2018, http://doublepedaldrums.com/buddy-rich-double-bass-drum-solo-1949-ny-paramount

Example 3. Buddy Rich "Old Man River" (1949) solo transcription[12]



In addition to standard alternating figures, this solo contains a number of classic snare drum rudiments that Buddy incorporates with the feet. The third line begins with a right-foot Flam Paradiddle followed by a pair of Single Paradiddles (left-right-left-left right-left-right-right). Buddy then transitions to an alternating rhythmic figure that is identical to the Lesson 25, but without any double strokes. The fourth line includes a hybrid drum rudiment known as the Herta that repeats for the duration of the line. The excerpt then concludes with a string of alternating triplets that showcases Buddy's consistent sound and control.

Jazz legend Ed Shaughnessy was another particularly influential figure in the advancement of the double bass drumming idea. From 1963-1992, Shaughnessy was one

[12] Buddy Rich, "Old Man River," 0:37.

of the most visible drummers in America thanks to his regular engagement with The Tonight Show band.[13] Millions of Americans were able to see him driving the group from his double bass kit on a nightly basis, where he showcased his abilities with a terrific big band and a diverse assortment of guest artists.

Shaughnessy's use of two bass drums was influenced by his friendship with Louie Bellson. However, he utilized the double bass in a slightly different manner by having the left-side bass drum slightly smaller than the primary right-side bass drum. This would cause the two drums to be of differing pitch, which Shaughnessy utilized for contrast.

Today, there are a number of jazz fusion drummers who have continued the use of the double bass: Dave Weckl, Vinnie Colaiuta, Steve Smith, and Steve Gadd to name a few. However, the idea of two bass drums in jazz has largely ceased, as smaller drums and smaller drum arrangements have become increasingly popular. Though the tradition of double bass drumming has its roots in jazz, it would take other genres to propel its popularity to what it is today.

1960s: Rock

Peter Edward "Ginger" Baker was one of the first rock drummers to bring the double bass drumming idea to the rock genre. Baker was known to be a jazz drummer as well as a rock drummer, so his awareness of jazz drummers like Louie Bellson may have been an influence on his decision to use two bass drums. Baker is best known for

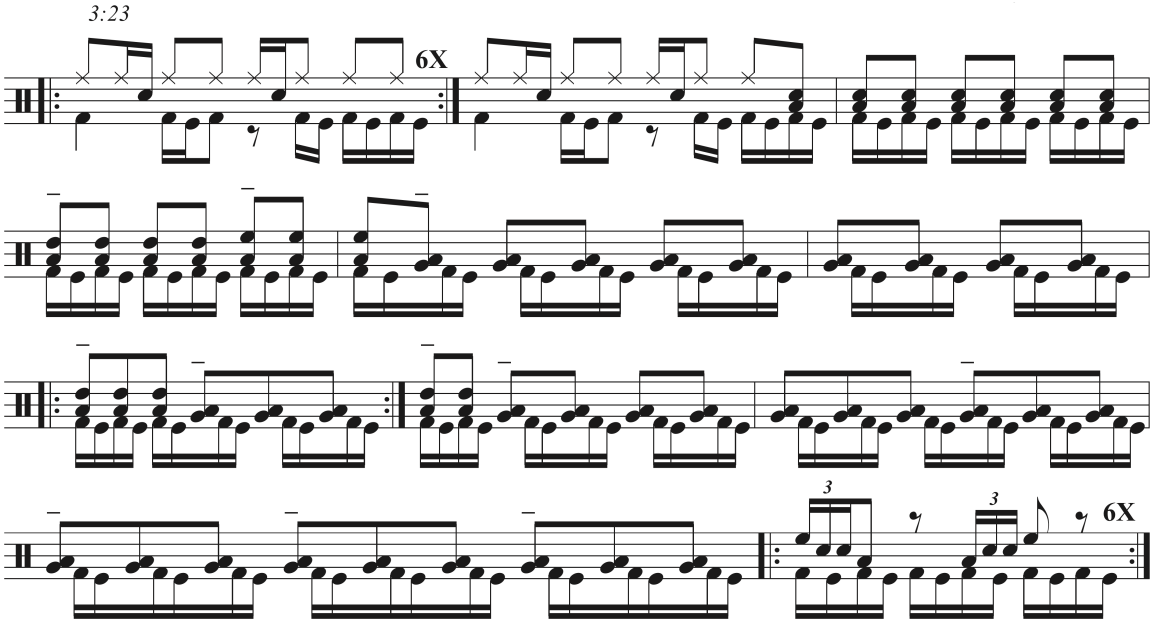
[13] Flans, "Ed Shaughnessy," http://www.pas.org/about/hall-of-fame/ed-shaughnessy.

founding and starring in the iconic rock band Cream (1966-1968), in which his double bass setup became a trademark.

In Cream, Baker capitalized on the drum-heavy nature of the rock genre by utilizing two bass drums in grooves as well as solos. Early double bass drummers in the jazz genre had to be cognizant of the lighter nature of jazz music and the capabilities of the double bass to overpower the ensemble. As stated previously, this was the primary reason for jazz drummers avoiding the use of double bass in a groove context. Rock drummers, on the other hand, were able to fully explore the capabilities of the double bass as a groove component through a more bass drum heavy genre. It is said that Ginger Baker even played both bass drums simultaneously at times to achieve an even more powerful bass drum sound.[14] Here is a brief solo example from the song "Toad" (1966) that demonstrates Baker's use of the double bass.

[14] Nyman, *Double Bass Legends: A Short Story*, accessed September 30, 2018, http://drummagazine.com/double-bass-legends-a-short-history/

Example 4. Ginger Baker "Toad" (1966) solo transcription[15]



The beginning of this excerpt illustrates Baker's use of the double bass in grooves. The ride cymbal features a driving line of eighth notes, while the snare drum anticipates each line of sixteenth notes in the double bass with a single note. By the end of the first line, the double bass moves to continuous sixteenth notes with the hands playing melodic material. The overall repetitive nature of this solo illustrates Ginger Baker's love for African drumming, which is often built on ostinato figures and is very circular in nature.

Ginger Baker's use of two bass drums led to a more diverse application of double bass by utilizing the idea outside of the solo context. He also had a profound influence on the shaping of many other double bass drummers in the classic rock genre. Some of the

[15] Cream, "Toad," 3:23.

most iconic drummers of this era have utilized the double bass at some point in their careers: Mitch Mitchell of the Jimi Hendrix Experience, John Bonham of Led Zeppelin, and The Who's Keith Moon, just to name a few.

Carmine Appice, of the band Vanilla Fudge, is another significant figure in the use of double bass in the early rock genre. Appice decided to use two bass drums before the Vanilla Fudge appearance on the Ed Sullivan Show. This 1969 performance of "Shotgun" was viewed by millions of Americans, which provided great exposure for the double bass idea.[16] Appice has persisted as an ambassador of the double bass drumming concept, and even authored one of the early pedagogical resources on double bass drumming, *Realistic Double Feet* (1983).

1970s-Present: Heavy Metal and Beyond

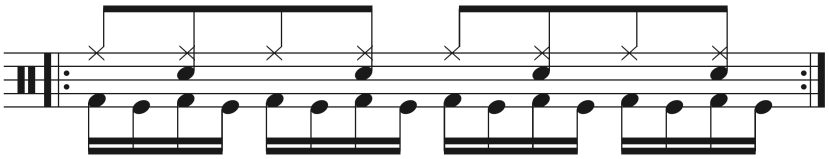
The 1970's gave rise to a new heavier form of rock music that would later be characterized as heavy metal. Though there were several "heavier" rock bands of the time, Black Sabbath is known by many to be the first metal band. The band's drummer, Billy Ward, was not known to use double bass in grooves, but rather treated the double bass as a tool to be utilized in drum solos, much like the early double bass innovators. The double bass wouldn't find a regular groove usage until later in the 1970's with drummer Phil Taylor of the band Motorhead.

Motorhead's 1979 album *Overkill* features extensive use of the double bass, particularly on the title track of the record. This track features a continuous sixteenth-note

[16] Nyman, *Double Bass Legends: A Short Story*, accessed September 30, 2018, http://drummagazine.com/double-bass-legends-a-short-history/

double bass groove from Taylor at around 120 beats-per-minute. The snare drum and cymbal play an off-beat pattern that creates a double-time feel, and the sixteenth notes in the double bass create a busy driving energy. This drum pattern would later become a staple of modern metal music. Example 5 demonstrates this common double-time groove concept.

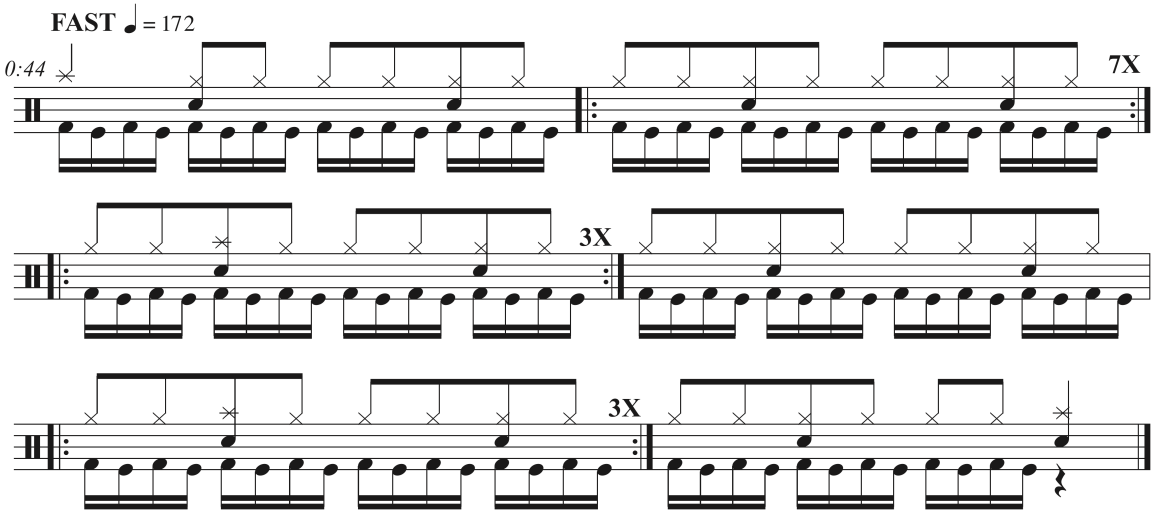
Example 5. Common double-time groove



This idea of a driving faster tempo, or a feeling of faster tempo, in metal music is directly correlated with the use of the double bass as a groove element. This is perhaps best exemplified in the early releases by the band Slayer, which featured double bass drumming legend Dave Lombardo. The band's 1986 release of *Reign in Blood* is continually listed as an influence and a favorite of many of today's notable double bass drummers.[17] The track "Raining Blood" from this album showcases Lombardo's speed, endurance, and extensive use of the double bass (see Example 6).

[17] Nyman, *Double Bass Legends: A Short Story*, accessed September 30, 2018, http://drummagazine.com/double-bass-legends-a-short-history/

Example 6. Dave Lombardo "Raining Blood" transcription[18]



Much like Phil Taylor in "Overkill," Lombardo plays continuous sixteenth notes in the double bass for this selection. However, the tempo of this example is a much faster 172 beats-per-minute, which was revolutionary for the time. This concept of "speed metal" would continue to progress, and today, some players are capable of playing continuous sixteenth notes at upwards of 300 beats-per-minute. Drummers such as George Kollias, Flo Mounier, and Derek Roddy have taken the speed metal idea to new heights in double bass drumming.

Another exciting new frontier is being established in double bass drumming by drummers that attempt to elevate their foot technique to be equal to their hand technique.[19] Drummers such as Marco Minnemann, Virgil Donati, and Thomas Lang

[18] Slayer, "Raining Blood," 0:44.

[19] Nyman, *Double Bass Legends: A Short Story*, accessed September 30, 2018, http://drummagazine.com/double-bass-legends-a-short-history/

have continued to push the boundaries of what can be achieved with the double bass. This includes double-stroke rolls and other drum rudiments, advanced rhythms, and difficult ostinato figures that have been applied to the feet. The double bass setup has allowed these drummers to fully explore the capabilities of the feet in musical creation on the drum set.

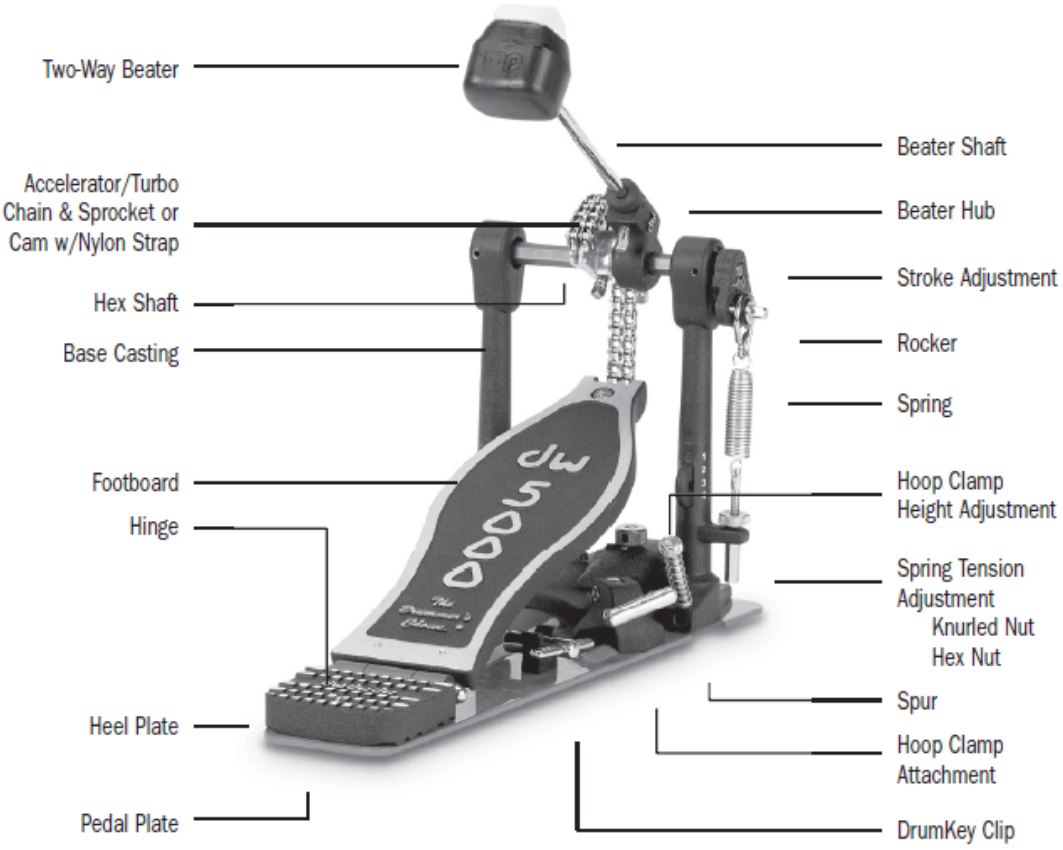
CHAPTER 3

TECHNICAL APPROACHES

Introduction

Double bass drumming emphasizes the use of the feet in drum set performance. Since the feet differ from the hands in design and function, there are a number of technical considerations that are unique to double bass drumming. An analysis of these technical considerations will create an understanding of the common methods for executing advanced double bass content. See Figure 3 for the pedal part locations described in this chapter.

Figure 3. Pedal Diagram



Heel Down

According to many of today's leading double bass drummers (Derek Roddy, Thomas Lang, George Kollias, among others), there are two primary methods for playing double bass drums: heel up, or heel down.[20] The names of these approaches are defined by the proximity of the player's heel to the heel plate of the pedal. Though all techniques can fit within these two broad categories, many players have created their own unique approaches.

The heel-down approach involves the player's heels resting on the heel plate of the pedal (see Figure 4). By resting the heels on the heel plate, the weight of the legs can remain supported. This allows the player to save energy, while allowing a portion of the body's weight to remain supported by the feet. However, this approach then causes the feet to remain stationary, which doesn't allow movement on the footboard. This can hinder any advanced bass drum techniques that involve sliding the foot to different locations on the footboard.

Figure 4. Heel-down approach

[20] *Derek Roddy: Blast Beats Evolved*, DVD, 2009.

The player must also sit a considerable distance from the pedals to allow the ankles to comfortably accomplish a full range of motion while the heels remain stationary. Sitting too close can cause extreme fatigue and burning in the shins. To experience the issue of sitting too close, try placing the feet flat on the floor with the balls of the feet directly below the knees. Now raise the toes as high as possible while the heels remain flat on the floor. Do this consecutively at a quick pace for thirty seconds. This extreme fatigue, after only a short exercise, demonstrates the tension that can be created when the heel-down approach is applied incorrectly.

Another disadvantage of the heel-down approach is the volume limitation. Since the beater-moving force is created by the ankles with little help from the larger leg muscles, less force can be applied to the pedal, which limits the overall volume that can be produced. For example, it is clear that one can generate more force by stomping the foot (using the weight of the leg) than can be created by tapping the foot (using the ankle alone). The lesser force created by the ankle does however allow for greater dynamic sensitivity, which is why many single-pedal jazz drummers tend to play heel down.

While there are double bass drummers, such as Thomas Lang, that switch to the heel-down approach on occasion, there are very few professionals that choose to utilize this approach as a primary tool in double bass drumming. The musical genres that heavily utilize double bass are known to include the bass drum in a prominent role, so players are often trying to achieve more sound on the bass drum, which is a serious challenge when playing heel down.

Heel Up

The heel-up approach is by far the most common approach utilized in double bass drumming. In this approach, the heels remain separated from the heel plate, which allows the larger leg muscles to be applied in achieving a full sound (see Figure 5). There can be varying degrees of space between the player's heels and the heel plate, depending on the preference of the performer, but the lack of contact between the heels and pedals remains consistent.

Figure 5. Heel-up approach

Since the heels aren't connected to the pedal in this approach, the player has the ability to change contact locations on the footboard. This allows for sliding motions that are common when executing advanced techniques such as double strokes (see chapter 5). This also allows the performer to slide further back on the footboard, where less motion is required, when executing faster passages.

Though this method places a premium on utilizing the large leg muscles for weight and power, it does not abolish the use of the ankles, but rather allows the legs to work in tandem with the ankles. The ratio of leg to ankle can change according to the

speed of the musical passage. Many players only incorporate the ankles when achieving extremely fast speeds, so the legs remain the primary source of power for a majority of situations.

Drummer George Kollias breaks down the heel-up approach into three movement categories: full-leg motion with feet moving independent of one another, full-leg motion with feet moving opposite one another, and ankles alone.[21] The first involves utilizing the legs, while the ankles remain unused, with each foot completing its motion before the other begins. This method is used for slower passages in which the feet have enough time to stop between strikes. It is crucial in slower playing to allow the weight to be distributed to the feet, so the core of the upper body is not responsible for supporting the weight of the legs.

The second category involves a full-leg motion with the feet working opposite of one another, one moves up while the other moves down. This category is identical to the first in overall approach, except there are moments when both feet are moving simultaneously. This is utilized in medium to fast passages, sixteenth notes at roughly 90-180 beats per minute. Once again, the ankles remain unused in this category.

The final category described by Kollias involves the use of the ankles exclusively. This method is utilized in extremely fast passages, for which the legs alone are unable to execute. Bending at the ankles requires much less force, and can be accomplished much easier in rapid succession. However, the ankles cannot provide the same amount of weight to each stroke causing a decrease in overall volume.

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[21] *George Kollias: Intense Metal Drumming,* DVD, 2008.

The ankles are the sole source of power in this category, so the legs are required to remain stationary. This can cause some problems with weight distribution if the performer is not in correct proximity to the pedals. If seated slightly too far from the pedals, the player may struggle to keep the legs elevated.

Additional Considerations

A somewhat controversial topic in double bass drumming is the decision to leave the striking beater in contact with the bass drum head ("burying" the beater), or to allow the beater to rebound (see Figure 6). Advocates for the latter state that the beater must rebound for the drum to fully resonate following each strike. However, a majority of double bass drummers utilize some sort of dampening on the bass drum for clarity of articulation, so the beater remaining on the playing surface only minimally adds to the drum dampening.

Figure 6. "Burying" vs. rebounding

Also, for the majority of players that use the heel-up method, allowing the beaters to rebound requires the weight of the legs to be supported somewhere other than the balls of the feet. The balls of the feet remain the primary zone of contact on the pedals for most

players, so it can be challenging to shift the weight back to the heels following each strike. Many players that use the heel-up method along with the rebound approach utilize the arch of the foot, sometimes referred to as the palm of the foot, as the primary contact area. This is sometimes referred to as the "flat-footed" technique, in which the weight can remain supported by the back of the feet rather than the balls of the feet.

There are some major advantages to burying the bass drum beaters. As stated earlier, the genres that heavily feature double bass drumming utilize the bass drum as a prominent stylistic element, so many players are looking for the biggest sound possible for bass drum clarity. Burying the beater is a great method for maximizing the sound output, and allows the feet to remain positioned on the balls of the feet. This is a very powerful position that also allows the ankles to easily be applied. This burying method is also a great way to maintain control through equal weight distribution. The weight is allowed to remain in the balls of the feet, which allows the feet to remain in a comfortable striking position.

This idea of weight distribution is a major consideration for double bass drummers. Since both feet are utilized in a significant manner, the player must have a method for supporting the weight of the legs. Whatever method is selected, heel down with the weight in the heels, burying the beaters with the weight in the balls of the feet, or flat footed, the performer must keep the legs supported to avoid extreme tension in the abdominal muscles.

Placement of the striking point on the footboard is another important issue in double bass drumming. The striking point is simply where the foot applies primary force on the footboard to cause the beater to move. Though players agree that the feet should

never break contact with the footboard, the selected location for foot placement on the footboard can vary.

It is important to recognize that a bass drum pedal operates on the principles of a lever, in which force becomes easier the further you travel from the fulcrum. However, the further one travels from the fulcrum, the more distance it requires to complete a motion. There is considered to be a balance point between these two extremes on a bass drum pedal. This location is known as the "sweet spot," and is located 3.5-4 inches from the top of the footboard.[22] A majority of players apply pressure to the pedal at this location, because it allows for maximum force to be generated with limited effort.

However, some players, such as double-stroke virtuoso Virgil Donati, apply pressure further up the footboard when playing advanced techniques for the apparent weightlessness. Other players insist on playing further back on the pedals when executing fast passages to strive for a limited amount of motion. It is clear that the recurrence of beater strikes can be achieved more quickly if there is less distance for the feet to cover. Even with the apparent differences in striking position among players, the "sweet spot" seems to be the most common striking location until extreme speeds and advanced techniques are required.

[22] Bailey, *Bass Drum Control*, p. 3.

CHAPTER 4

RHYTHMIC COMBINATIONS

Introduction

The bass drum is part of the unpitched percussion instrument family, which means it creates sounds of indeterminate pitch. As stated previously, a vast majority of double bass drummers strive to achieve a consistent timbre between the two feet. Whether using two separate bass drums, or a double pedal on a single bass drum, this concept remains a staple of double bass drumming. Since this genre deals with an unpitched instrument with limited timbral alterations, rhythm provides a great deal of the musical interest in double bass drumming. The following rhythmic analysis will provide further understanding for double bass drumming's primary function of rhythmic enhancement.

Continuous Rhythms

The areas of rhythmic intrigue in double bass drumming can be divided into two broad categories, continuous rhythms and broken rhythms. Continuous rhythms are those that feature a rhythmic line that is free of any rests or breaks. These include rhythms that remain in a single rhythmic subdivision, as well as those that utilize multiple subdivisions (e.g. sixteenth notes and thirty-second notes). The crucial element for rhythms in this category is the continuous rhythmic motion without stops or breaks.

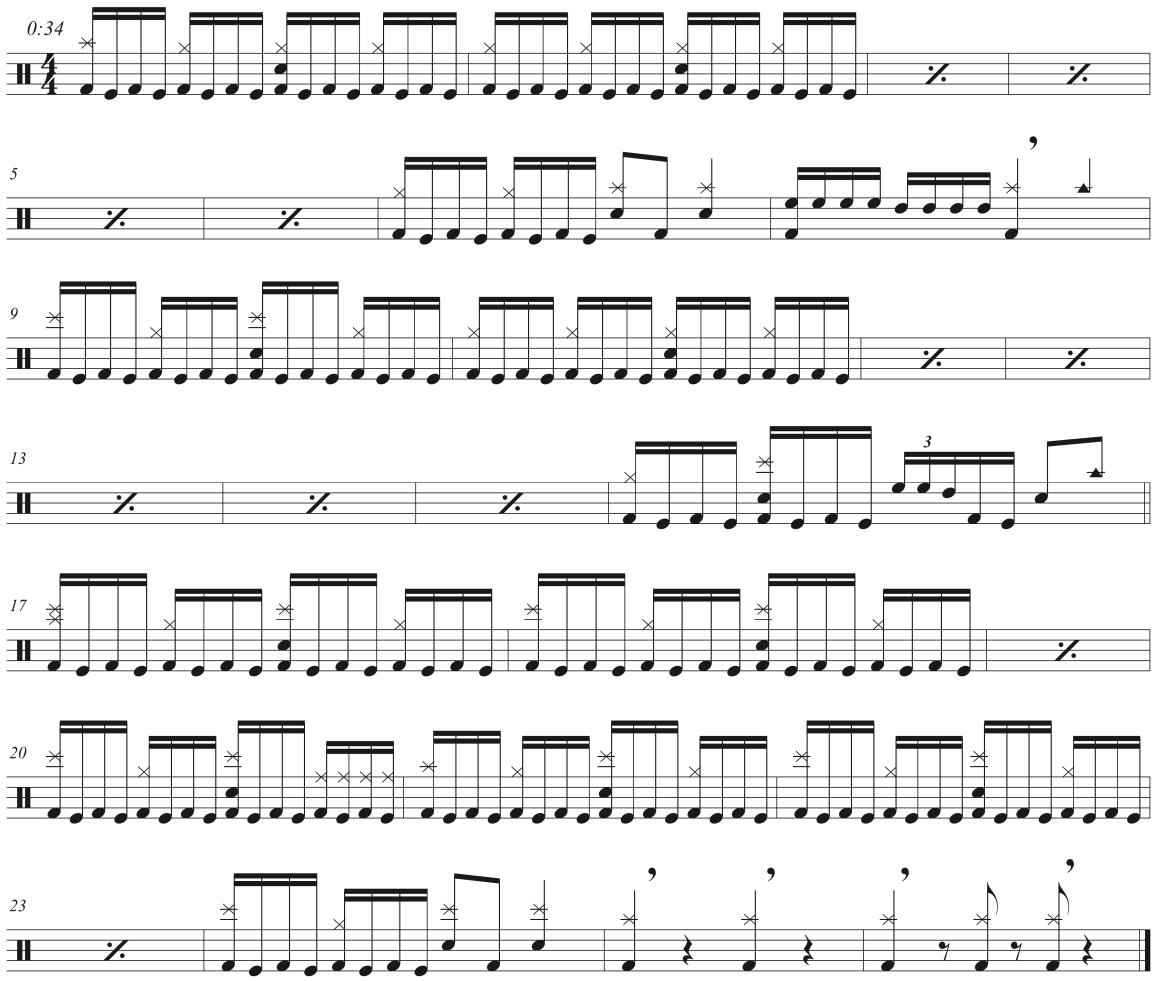
The use of continuous rhythms remains a staple in double bass drumming. As shown previously, there are many early double bass examples, by Louie Bellson, Ginger Baker, Dave Lombardo, etc., that feature the use of these continuous rhythms in a variety

of musical settings (see chapter 2). In this strategy, the drummer serves as her/his own accompanist, which liberates the hands to function freely in a variety of contexts: solos, fills, grooves, etc...

The key to this accompaniment strategy is developing the coordination and limb independence to perform these consistent rhythms without mental strain. If the player has not developed the required independence for the given rhythm, or if the rhythm still requires significant mental investment, the hands will not be able to fully function in a free fashion. These continuous alternating rhythms feature a continuous motion, which allows for the required independence to be developed in a timelier manner. Rhythms that require the muscles to stop and reactivate tend to require more practice time in developing independent control. This idea of independence is a crucial consideration in drum set performance, as the drum set is an instrument that requires the use of all four limbs.

The use of continuous double bass rhythms as a foundation for drum grooves remains a popular double bass usage today. Several double bass method books, such as Joe Franco's *Double Bass Drumming* and Bob Burgett's *Progressive Double Bass Drumming*, begin with this as an early foundation in double bass development. By Playing simple groove patterns with the hands, the player is able to invest their primary focus on foot technique. This groove enhancement role of continuous double bass rhythms is exemplified by drummer Jason Bittner's drum part to the Shadow's Fall track entitled "The Light That Blinds."

Example 7. Jason Bittner “The Light That Blinds” transcription[23]



This example features continuous sixteenth notes in the double bass at 180 beats per minute. Jason Bittner uses these sixteenth notes to match the sixteenth-note tremolo melody in the guitar part. Since the bass drum is the lowest sounding drum on the drum set, continuous rhythms on this instrument can create a heavy driving energy that many heavy metal drummers emphasize.

[23] Shadows Fall, “The Light That Blinds,” 0:34.

The fast continuous sixteenth notes in this example form the foundation for the groove above, which includes quarter notes on the cymbals, and the snare drum on the third beat of each measure. Bittner uses the cymbals to create timbral contrast in this example by occasionally moving the quarter notes to different cymbals, and by including sixteenth notes on the ride cymbal in measure 20. By playing sixteenth notes on the ride cymbal, Bittner allows the hands to briefly join the continuous rhythm of the feet.

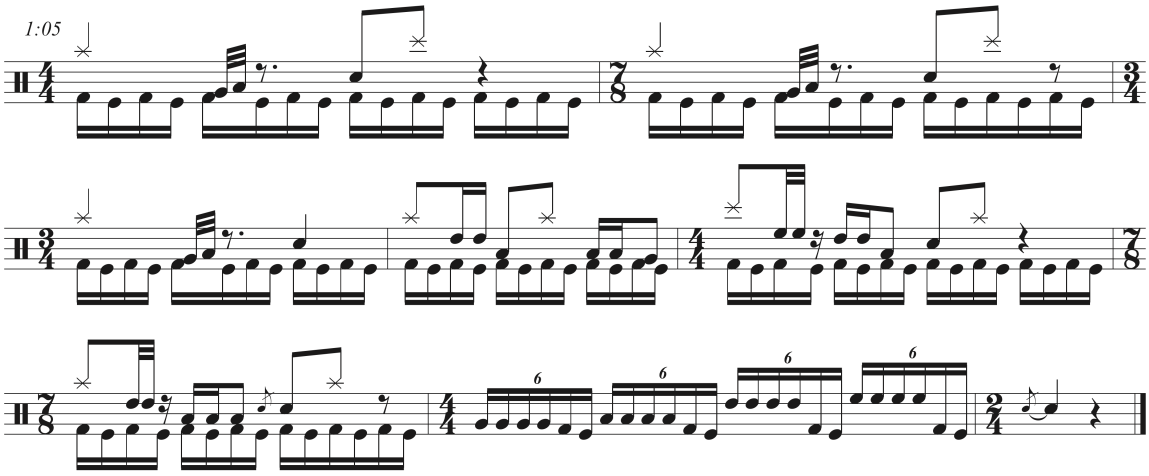
Bittner performs the continuous sixteenth notes in this example with an alternating footing (right, left, right, left, etc). The term "footing" is used to describe the combination of right and left foot strokes, similar to the term "sticking" when applied to hand technique.[24] Alternating is by far the most common footing for continuous double bass rhythms, but some players choose to use double strokes when executing continuous rhythms at extreme speeds (see Chapter 5).

This example does contain a few moments of rest from the continuous double bass sixteenth notes. However, these rests only occur when transitionary drum fills are played at the ends of phrases (see measures 7-8, 16, and 24). Some drummers choose to preserve the continuous sixteenth notes during these drum fills to maintain the driving energy derived from the continuous double bass rhythm. Others claim that the continuous rhythm can take over the drum fill, limiting the overall effect of breaking the groove pattern. There doesn't seem to be a consensus on a preferred method, and some performers even choose to use both methods depending on the situation.

[24] *George Kollias: Intense Metal Drumming,* DVD, 2008.

As stated previously, accompaniment is a common application for continuous double bass rhythms. Since time keeping and groove remain critical elements of drum set performance, these rhythms are often used to provide the metric accompany for more melodic drum set phrases. This concept is demonstrated by drummer Mike Portnoy's drum part for the Dream Theater track entitled "The Dance of Eternity."

Example 8. Mike Portnoy "The Dance of Eternity" transcription[25]



In this example, Mike Portnoy plays continuous sixteenth notes on the double bass in alternating fashion, as in the previous Jason Bittner example. However, the hands perform a more active line that navigates the various phrasing and meter changes. Portnoy uses the cymbals to articulate the rhythmic figures of the guitar, the snare drum to provide rhythmic setups for the guitar rhythms, and the toms to provide melodic enhancement. The continuous double bass sixteenth notes provide a steady

[25] Dream Theater, "The Dance of Eternity," 1:05.

accompaniment that stretches across the barlines, which allows Portnoy to invest most of his concentration on the shifting meters and slightly more difficult hand patterns. The example concludes with a break in the continuous rhythm before a very common "4+2" drum fill (see Chapter 5).

Blast Beats

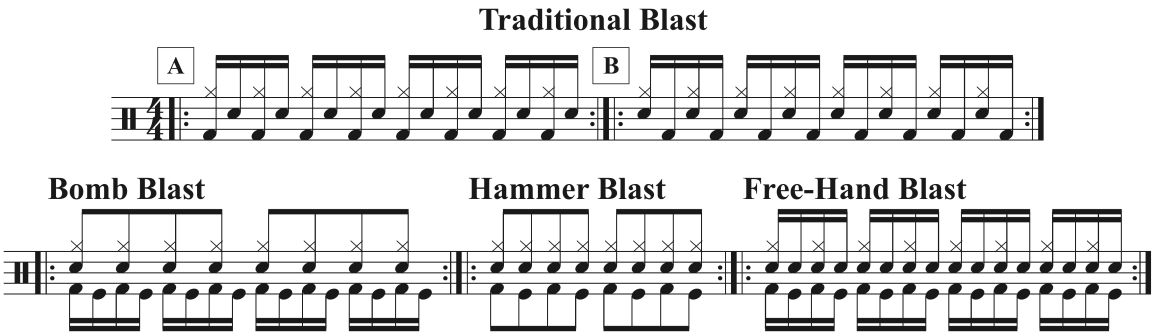
Another common continuous rhythm application is the use of "blast beats" in double bass drumming. Blast beats appear in a variety of forms, but are typically continuous grooves that feature fast alternating combinations between the snare drum and bass drum. Early blast beats were unmetered and designed to create a chaotic white-noise effect in heavy metal music.[26] These beats have since become structured patterns that can be metered in any subdivision and performed at a variety of speeds.

There are many variations of the blast beat, but four common patterns have become standard: the traditional blast, bomb blast, hammer blast, and free-hand blast.[27] Each of these blast beats has its own unique character, so players often implement a number of different blast beats to provide contrast in a variety of musical situations. Example 9 features notated examples of the four primary blasts.

[26] *Derek Roddy: Blast Beats Evolved*, DVD, 2009.

[27] *Derek Roddy: Blast Beats Evolved*, DVD, 2009.

Example 9. Blast Beats



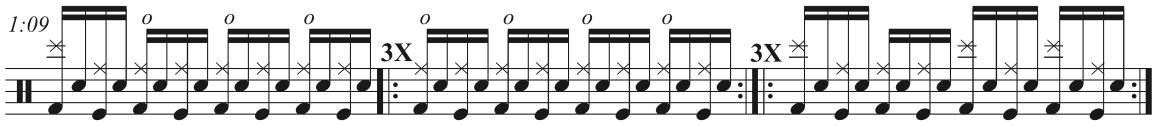
The traditional blast features the fast alternation between the bass drum and snare drum, while the cymbal is played in unison with the drum that begins on each downbeat. The bomb blast features unison cymbal and snare drum in the hands, while the feet play double-time alternating sixteenth notes on the double bass. All of these blast beats can reach extreme speeds of up to 300 beats per minute, so the double bass line in the bomb blast requires significant technique and endurance.

The hammer blast features unison cymbal, snare drum, and bass drum. However, the bass drum is played alternating, which provides the performer with a comparatively slower, and less taxing, bass drum part. The free-hand blast is named after a single-handed roll technique that utilizes the rim of the drum as a separate pivot point, or fulcrum, to execute drum rolls with one hand. The player is then able to execute fast continuous rhythms in one hand, to match the bass drum rhythm, while the cymbal remains at half speed.

The traditional blast is the only blast beat that does not include the double bass in its standard form. However, some players will use both feet alternating to accomplish a

more present bass drum sound. It can be challenging to maintain a powerful sound when executing extreme speeds with a single foot, so utilizing the double bass in this capacity can be a useful strategy. Drummer Matt Greiner demonstrates this approach often in his playing with heavy metal band August Burns Red. Here is an example that illustrates this two-footed approach to the traditional blast.

Example 10. Matt Greiner "The Eleventh Hour" transcription #1[28]



This traditional blast beat can also provide a unique perspective to the musical time. Since the snare drum is played on the off beats ("e" and "a"), it is easy for the listener to perceive the beat as occurring a sixteenth note late. This phenomenon is primarily due to the sound characteristics of the snare drum as the highest sounding and most articulate drum on the drum set, so the listener naturally hears the snare drum as being a reliable source for time interpretation. This shift in time perspective contributes to the overall chaotic effect that blast beats are intended to deliver.

Broken Rhythms

Broken rhythms are those that contain rests or moments of broken subdivision. Broken rhythms can be of any subdivision or combination of subdivisions, but rhythms of

[28] August Burns Red, "The Eleventh Hour," 1:09.

this category must feature a stop in at least one of the feet to break the continuous rhythmic motion. For example, the feet may occasionally leave out the off-beat in a line of alternating eighth notes, which would cause the continuous eighth-note motion to break. The feet can function as the focus material or as accompaniment to the rest of the drum set in each of these rhythmic categories.

Groove support and rhythmic enhancement are primary uses of broken rhythms in double bass drumming. While the feet play broken rhythms, many players choose to utilize the hands in a time-keeping manner, playing traditional groove patterns with occasional fill-ins. This allows a higher degree of mental energy to be dedicated to these often-complex broken rhythms in the double bass.

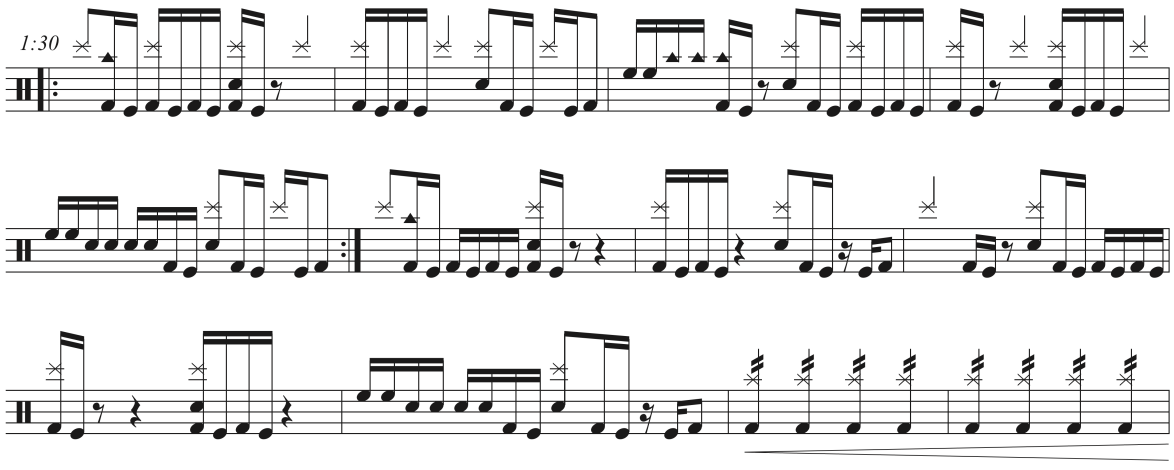
A perfect example for the use of broken rhythms in double bass drumming can be heard in the rhythmic breakdown sections of rock and heavy metal music. Breakdowns are sections of music that focus on rhythmic figures with limited melodic or harmonic content. These breakdowns often feature a unison rhythm played by the guitars and bass, while the drums accentuate the rhythms on the double bass. The player then uses the hands to act as the groove foundation by playing traditional backbeat patterns. This allows even the most complex rhythmic structures to be rooted in a solid groove foundation.

These rhythms utilized in breakdowns are often complex and feature advanced syncopation figures. This requires the drummer to consider the previously described element of "footing" (combinations of rights and lefts) in maintaining accurate rhythmic control. The same considerations are made when playing hand patterns, so many drummers apply the hand concept of "natural sticking" to double bass foot patterns,

bringing about the idea of "natural footing." This approach involves each foot consistently landing on the same beat partials.[29] For example, in sixteenth notes, the right foot always lands on the first and third partials (the "beat" and the "and"), while the left always lands on the second and fourth partials (the "e" and the "a").

This natural footing allows the right foot (lead foot) to always fall on the beat, which permits easy alignment with the right-hand groove patterns above. The same natural footing concept applies to any rhythmic subdivision. Each foot simply occupies the beat partials that would be played in a line of continuous alternating notes. Having this systematic method for footing consideration allows the player to focus more on accurate rhythmic delivery, and less about foot alignment with the above groove patterns. Example 11 constitutes a breakdown example from the previously mentioned August Burns Red track entitled "The Eleventh Hour."

Example 11. Matt Greiner "The Eleventh Hour" transcription #2[30]



[29] *Bobby Jarzombek: Performance and Technique,* DVD, 2004.

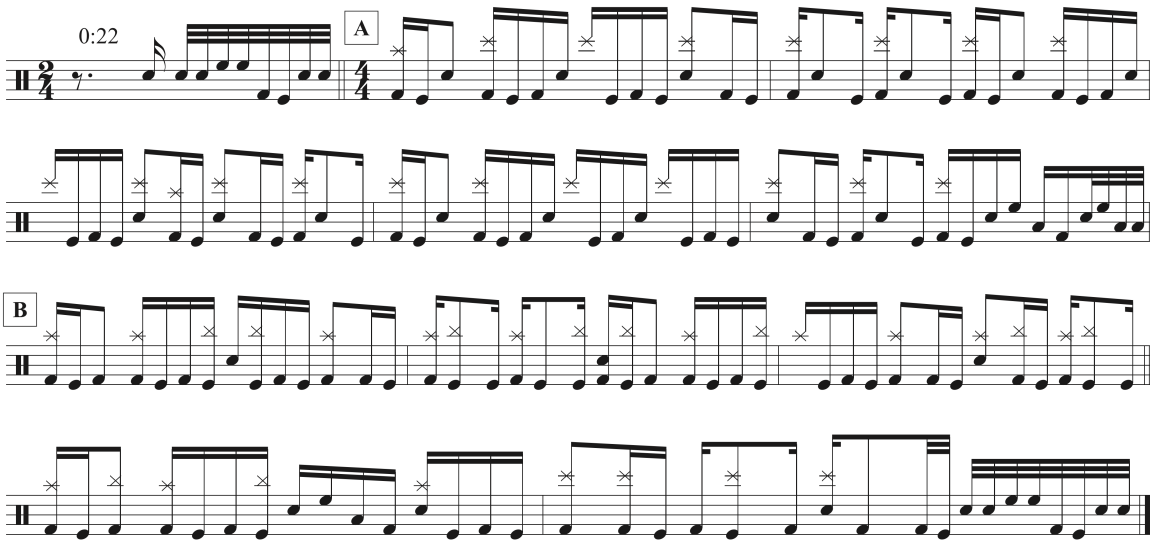
[30] August Burns Red, "The Eleventh Hour," 1:30.

In this example, Matt Greiner plays a standard backbeat groove with quarter notes on the china cymbal and snare drum hits on beat three of each measure. Greiner then uses the double bass to play the five-measure breakdown phrase in unison with the guitars and bass. The simple backbeat groove then allows the hands to fill up a few sparse moments with additional lines on the toms, snare, and cymbals.

A significant element of this breakdown's musical effect is in the shifting of the cymbal part from quarter notes to half notes in the second line. This provides the music with a half-time feel, in which the breakdown rhythm remains the same, but the groove context is shifted. This shifting of temporal perception is a common principle in heavy metal breakdowns.

Another great example of these advanced breakdown rhythms can be heard in the Animals as Leaders song "Tempting Time." Animals as Leaders is an instrumental progressive metal trio, comprised of two guitars and drums, that is particularly known for their advanced rhythmic conceptions. The original drum track for "Tempting Time" was programmed by producer Misha Mansoor, so the recording features high quality digital drum samples instead of live recorded drums. Drum sampling has become a prevalent drum recording practice in many popular genres, especially with the rise in overall quality of drum samples and drum replacement software. Example 12 features a brief breakdown example from "Tempting Time."

Example 12. Animals as Leaders "Tempting Time" transcription[31]



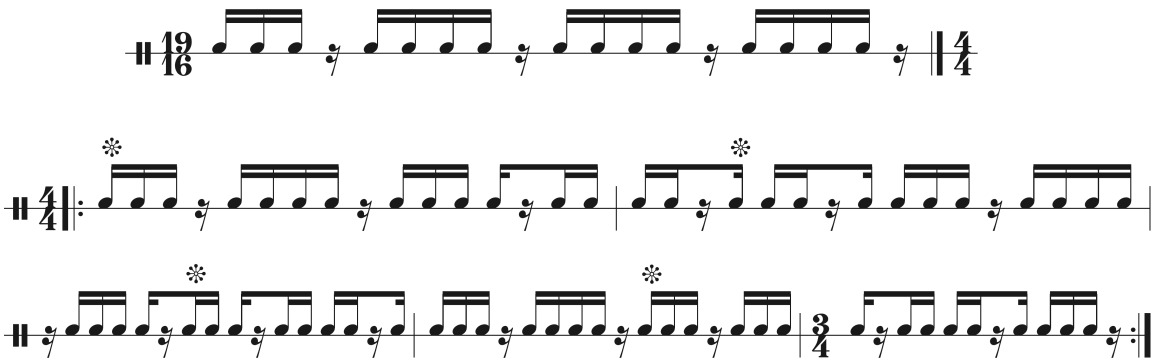
The five-measure breakdown phrase happens twice in this example (letters "A" and "B"), with two different interpretations in the drum part. Letter "A" features quarter notes in the cymbal with more interaction between the snare drum and bass drum. The bass drum leaves out the last note of each rhythmic grouping to allow the snare drum to occupy those locations. In letter "B," the snare drum assumes a more traditional backbeat pattern, which leaves the breakdown rhythm to the bass drum alone. The left hand is then free to provide additional colors on the cymbals.

This breakdown example features a unique rhythmic conception involving a repetitive syncopation phrase of sixteenth-note groupings in the number sequence 3-4-4-4. Each of these groupings is separated by a sixteenth rest, which makes the actual

[31] Animals as Leaders, "Tempting Time," 0:22.

number sequence 4-5-5-5, for a total length of nineteen sixteenth notes. Example 13 provides a notated rhythmic isolation for further clarification.

Example 13. “Tempting Time” rhythmic sequence



The first measure isolates the rhythmic sequence outside of the original context for a clear picture of the repeated pattern. The following measures display this complex phrase applied to the original meter with stars indicating the beginnings of each phrase. The pattern requires a cycle of nineteen beats to return to its original starting position. However, the rhythmic cycle in the original “Tempting Time” track is twenty beats long with a drum fill transition on the final beat of each cycle. This allows the described section of “Tempting Time” to maintain a 4/4 meter with a total of five measures in each phrase.

Advanced broken rhythm sequences, like this example, have become common in double bass drumming, and players are responsible for maintaining the groove element of drumming while articulating these complex rhythms. As stated previously, early double bass drummers primarily utilized the bass drum as continuous rhythmic support (see

chapter 2), since double bass technique and independence was early in its development. Today, drummers are integrating advanced rhythmic conceptions in the double bass while integrating the hands in a musical fashion. Whether used in grooves, fills, or solos, broken rhythms provide drastic rhythmic contrast that was rare in early double bass drumming.

CHAPTER 5

PERFORMANCE PRACTICE

Introduction

As illustrated in chapter two, double bass drumming is a relatively new drumming application, so many of the common performance practices are less than thirty years old. For this reason, there has yet to become a consistent method for teaching many of the performance practices that have become standard. There have been a number of instructional books on the subject, but a limited amount of detailed discussion on double bass performance practice such as: double stroke execution, approaches to speed and endurance, and the conceptualization of fast hand-foot combinations. Many method books focus primarily on groove and drum fill applications for the double bass, with less emphasis on the execution of these detailed performance techniques.

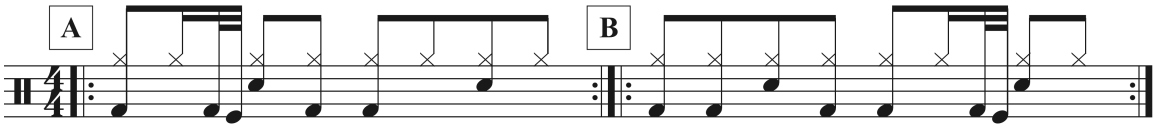
A number of common double bass drumming performance practices have been described in previous sections, but this chapter will focus on some of the popular tricks that have become staples in modern double bass drumming. This includes a journey away from the groove element of double bass drumming toward the linear and melodic role of the double bass in drum fills and solos. Some of these practices are extremely common, due to their relative simplicity, but this chapter also highlights several advanced practices in establishing a better understanding of the genre.

Grace Notes

One of the most common grace note examples is the use of two double bass notes in close proximity, one on the right foot and one on the left, right before a note played by

the hands. Drummer Bobby Jarzombek calls this technique the "double drop," because the technique is not perceived as two separate motions, but rather a single motion in which one of the feet lands slightly before the other.[32] The double drop is commonly utilized in drum grooves and fills, and can be played in any rhythmic subdivision. It is perhaps most commonly seen as a grace-note figure that appears right before a snare drum note in groove patterns. Here are a couple example grooves that feature the double drop in this metered grace-note function.

Example 14. "Double Drop" Grooves



This double drop technique is extremely common, and is not thought to be a difficult technique to grasp or implement. *The Encyclopedia of Double Bass Drumming,* a double bass method book by Bobby Rondinelli and Michael Lauren, uses double drop grooves ("Two Consecutive Notes") as a starting point in double bass drumming pedagogy.[33] The book also implements these metered grace notes in three and four-note groupings.

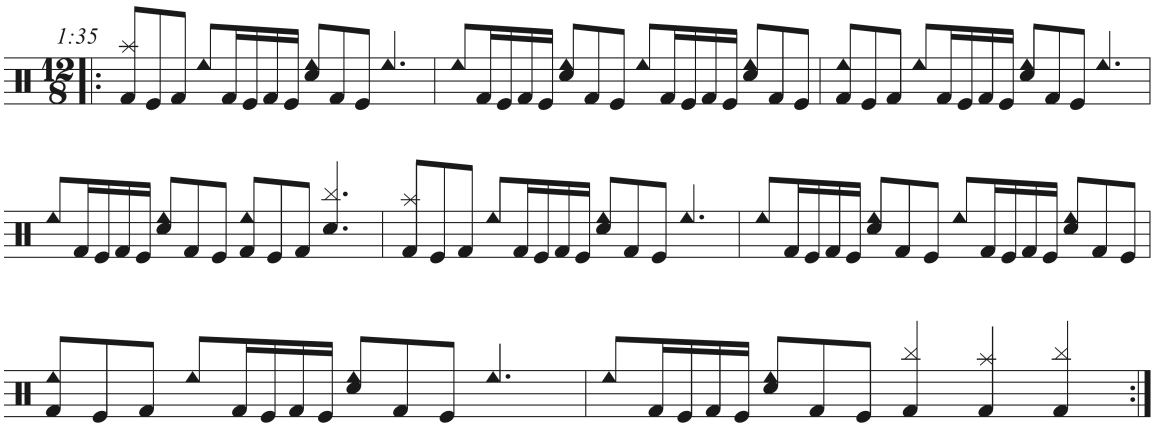
These multiple grace-note figures are common in double bass drumming and can appear in a variety of number groupings, sets of three, four, and six being some of the

[32] *Bobby Jarzombek: Performance and Technique,* DVD, 2004.

[33] Rondinelli and Lauren, *The Encyclopedia of Double Bass Drumming*, p. 8.

most common. Of course, any number higher than two requires one or both of the feet to play more than one note. This can bring about technical issues in the execution of fast double bass passages. Below is an example of a groove that involves four-note figures played by heavy metal drummer Chris Adler.

Example 15. Chris Adler "Blood of the Scribe" transcription[34]



Adler uses four quick sixteenth notes in the double bass to act as leading decorations to each snare strike in this example. From video analysis, it is clear that Adler executes each four-note figure with a sliding motion in each foot for smoothness and agility (see the following section on double strokes).[35] By using a sliding double-stroke technique in each foot, Adler is able to play four quick notes with only a single motion from each leg.

[34] Lamb of God, "Blood of the Scribe," 1:35.

[35] *Live at Modern Drummer Festival 2005: Chris Adler and Jason Bittner*, DVD, 2005.

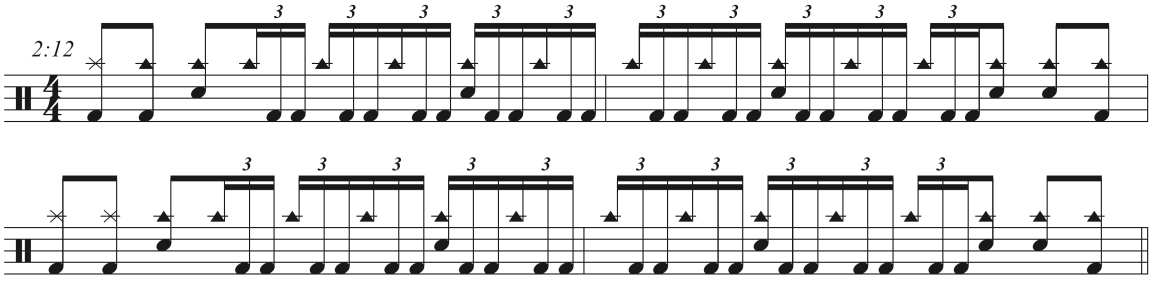
The snare note found on beat four of the fourth measure in this example is the only snare note that is not accompanied by the double bass grace notes. Adler chooses to enhance the eighth-note guitar line with eighth notes in the feet leading to this big hit on beat four, which forces the grace note concept to be briefly abandoned. The following measures resume the decorating fashion of the double bass grace notes. These four-note figures implemented by Adler in the "Blood of the Scribe" drum part are executed as metered sixteenth notes, but can be utilized as unmetered grace notes in other musical situations.

Drummers commonly implement grace-note figures of a variety of numbers depending on the desired sound and situation. Along with the previously shown four-note figures, Adler uses two and three-note figures in the "Blood of the Scribe" drum part alone. Utilizing these quick decorations has become standard practice in double bass drumming.

Double Strokes

Double strokes in percussion can simply be defined as two consecutive notes played by the same hand. This terminology is generally reserved for fast consecutive notes that utilize a single motion, as in a double-stroke roll. This concept of double strokes has been applied to foot technique, and remains a staple of advanced bass drum control. One of the most iconic examples of the bass drum double stroke can be heard in John Bonham's drum part for the Led Zeppelin track entitled "Good Times Bad Times." Bonham uses only a single pedal in this example, demonstrating the possibilities of one-footed double strokes.

Example 16. John Bonham “Good Times Bad Times” transcription[36]



In this section of “Good Times Bad Times,” Bonham uses the bass drum double to create sixteenth-note triplets with the eighth-note cowbell pattern. This requires a quick rebound after each double stroke in preparation for the next, which can sometimes create issues in double-stroke clarity. Many modern players implement this fast consecutive use of bass drum doubles, but typically use the double bass to execute such passages through the double-drop technique. This makes Bonham’s single-pedal execution that much more impressive.

One of the difficulties facing the bass drum double-stroke technique is the nature of pedal design. Since the drum rests horizontally (on its side) on the floor, the pedal is designed to strike the drum from the side eliminating the allied use of gravity. When playing double strokes on a snare drum, the player is able to utilize the rebound of the head in tandem with the downward pull of gravity. Gravity naturally pulls the stick downward toward the playing surface, and the head naturally bounces the stick upward. This allows multiple rebounds to be easily created with a single drop of the stick.

[36] Led Zeppelin, “Good Times Bad Times,” 2:12.

In bass drum technique, the beater's natural motion is to move away from the head, due to spring tension. This requires each bass drum stroke to be intentionally initiated, which has led to a number of techniques and strategies for bass drum double-stroke control. The most common double-stroke techniques are the heel-toe technique, the toe-heel technique, and the sliding technique. Each of these techniques is designed to utilize multiple striking areas and different muscle groups in a single fluid motion.

The heel-toe technique involves the rolling of the foot from heel to toe. The heel portion of the motion requires a drop of the leg, while the toe strike is established by the ankle. This double-stroke technique has become very popular in extreme metal drumming where blistering speeds are common. Many players utilize the longboard pedal design in making this technique more approachable, since the lack of heel plate on longboard pedals allows for sound to be created with a simple drop of the heel (see Figure 7). Otherwise, the player's heel would strike the heel plate on a standard design pedal, where the beater is not activated. Players who implement this technique with the standard pedal design generally use a slightly altered palm-foot approach, which moves the first note's striking position further toward the middle of the foot, rather than directly on the heel.

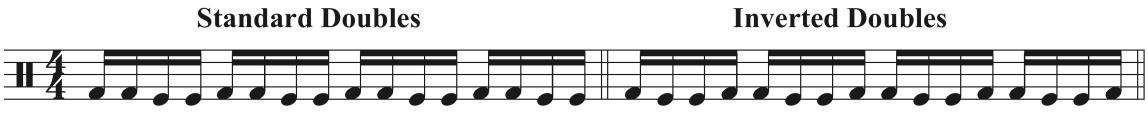
Figure 7. Longboard pedals

The toe-heel technique is a backward version of the heel-toe technique, in which the toe strikes the footboard first and the heel provides the second note. The toe stroke is still initiated by the ankle, and the heel is still initiated by a drop of the leg. On standard pedals, a similar toe-palm approach is utilized to ensure contact with the footboard and not the heel plate alone.

The final common technique, the sliding technique, is very similar to the heel-toe technique. The ankle still controls the first note, and a drop of the leg controls the second. However, the toe and ball of the foot provide the primary striking locations rather than the toe and heel. This movement from the toe to the ball of the foot creates a small sliding motion on the footboard that provides this technique with its name.

Both the toe-heel and sliding techniques are known to put emphasis on the second note of each double, since the drop of the leg naturally applies more pressure to the pedal than the tap from the ankle. For this reason, implementers of these approaches often play inverted doubles, in which the second note of the double falls on the beat, for proper phrase emphasis. Here are notated examples of both the standard double stroke and inverted double stroke patterns for clarification.

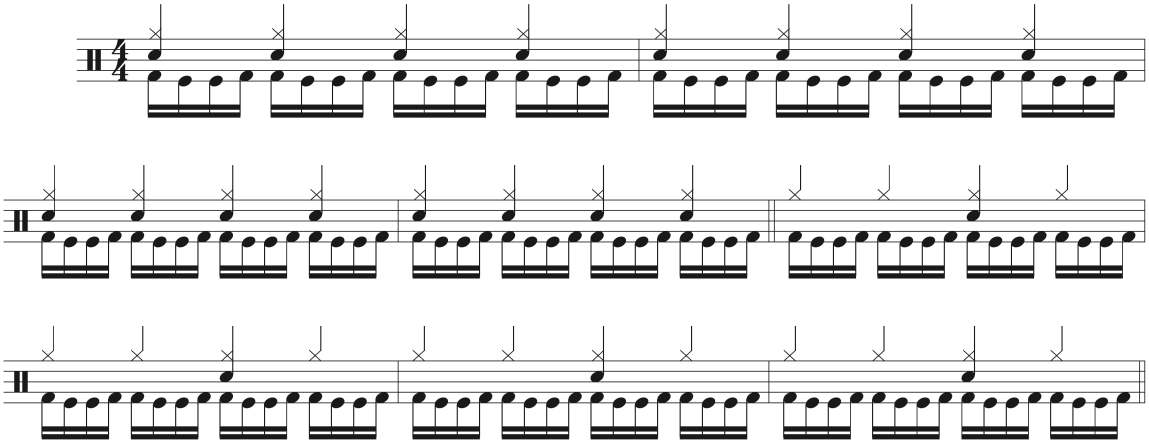
Example 17. Double Strokes



Drummer Virgil Donati is perhaps the most notable drummer to utilize this sliding motion with the inverted double-stroke approach. Donati is one of the early double bass

masters to utilize double strokes in the feet, and he certainly sparked an interest for this previously impossible approach to foot speed. His characteristic sliding technique is incredibly smooth, which allows him to quickly prepare for subsequent double strokes in executing fast passages. The song "Dog Boots," from Donati's progressive rock band Planet X, demonstrates Donati's smoothness and endurance in fast double-stroke execution (see Example 18).

Example 18. Virgil Donati "Dog Boots" transcription[37]



This drum part for "Dog Boots" features relentless bass drum doubles at around 200 beats per minute. The double strokes act as a continuous rhythmic foundation on which all other rhythmic material falls. Example 17 shows Donati's use of the inverted double strokes in relation to a traditional backbeat hand pattern with quarter notes on the hi hat and the snare drum on beat three of each measure. His hand patterns certainly change throughout the piece, but the double strokes persist as the rhythmic foundation.

[37] Planet X, "Dog Boots," 0:00.

There is a brief pause at about the 1:40 mark before the barrage of fast sixteenth notes resumes.

These double strokes on double bass can appear in both broken and continuous rhythmic groupings of any subdivision. Similar to snare drum double strokes, the player can also integrate multiple rhythmic layers (e.g. sixteenths and thirty-seconds) by simply double-stroking the established rhythmic value. This phenomenon, along with the ease of speed development, contributes to the bass drum double stroke's growing popularity among drummers today.

Multi-Drum Phrases

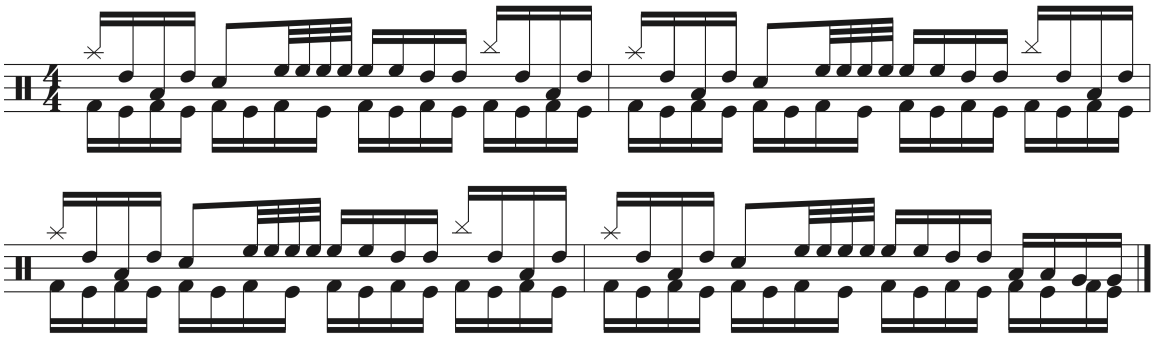
Double bass drums have commonly been utilized in a melodic function through the creation of multi-drum melodies. These melodies are commonly utilized in drum fills and solos that move to different parts of the drum set. Melodic phrases are common in this capacity even without using a double bass setup, but this section will focus on the unique melodic use of the double bass.

By having both feet on drums, the player is able to create interactive figures with the hands that would otherwise be impossible. These interactive figures can fall into two broad categories: unison figures, or linear figures. Unison figures are those that feature the hands and feet in unison rhythmically. These rhythms may be broken or continuous, but the important element is the unbinding accord between the hands and feet. Linear figures are those that feature a horizontal construction, in which the hands and feet occupy their own rhythmic area in the creation of melodic phrases. These linear phrases

that incorporate the double bass are often fast, since slower phrases can be executed with only a single pedal.

As illustrated in the earlier Louie Bellson solo transcription (see Example 1), unison rhythms have been common since the beginning of double bass drumming. Sometimes these unison figures are a biproduct of continuous rhythms in the double bass, as maintaining the continuous rhythm ensures that the momentum created by the continuous line is not lost during drum fills. Other times, players will add the bass drum to figures played by the hands for additional support. Using the hands and feet in unison can provide an emphatic impact to the selected rhythm. Example 19 demonstrates this phenomenon clearly in the opening drum solo of rock band Trivium's song "Pull Harder on the Strings of Your Martyr."

Example 19. Travis Smith "Pull Harder on the Strings of Your Martyr" transcription[38]



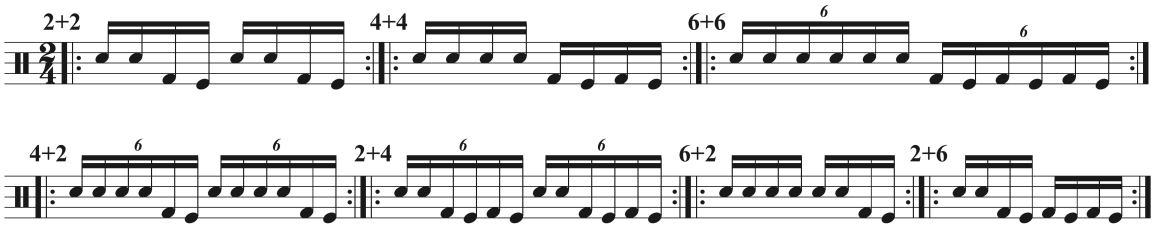
[38] Trivium, "Pull Harder on the Strings of Your Martyr," 0:00.

Drummer Travis Smith plays a continuous sixteenth-note melodic pattern in this brief solo example. The pattern is repeated in the second and third measure, before modifying slightly in the final measure of the phrase. The hand pattern played by Smith is empty on the "e" of beat two in each measure, likely due to the difficult transition of motion from the lower toms to the higher toms. This space also allows Smith to prepare for the fast thirty-second note decoration that follows. By having the hands and feet play unison sixteenth notes, Smith is also able to occasionally move the hands to cymbals while maintaining a drum articulation to enhance the metallic cymbal timbre.

The melodic drum pattern in this example is created by the movement of the hands to different locations on the drum set. Since the feet remain stationary, the continuous sixteenth notes act as more of a powerful rhythmic enhancement, rather than a direct source of melodic content. The energy of the drum pattern is greatly enhanced by these unison figures, even though the phrasing is often controlled by the hands.

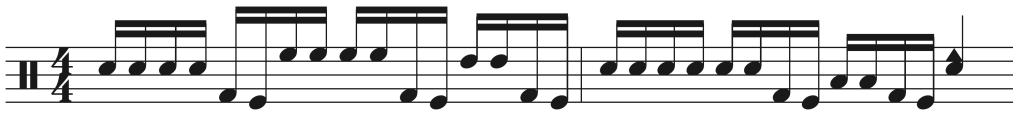
In linear figures, the double bass acts as an active part of the melodic shape, since the bass drum occupies its own rhythmic area within the phrase. This requires the player to balance the line dynamically between the hands and feet for smooth melodic phrasing. These linear figures are commonly heard in even-numbered groupings of hand and foot combinations, groupings of two, four, and six being extremely common. This is due to the ease of time interpretation with these even numbers, since phrases always begin on the beat or the offbeat. Example 20 illustrates a few of these popular combinations.

Example 20. Common Hand-Foot Combinations



All of the above patterns begin with the hands, but it is common for these patterns to be played starting with the feet as well. The above example also illustrates these common groupings with the hands remaining stationary on the snare drum, but it is common for these patterns to be moved around the drum set in the creation of more melodic phrases. The opening drum fill for the previously mentioned August Burns Red track "The Eleventh Hour," shown in Example 21, is a perfect example of mixing together these number sequences in a melodic phrase around the drums.

Example 21. Matt Greiner "The Eleventh Hour" transcription #3[39]



As you can see, Greiner uses groupings of two, four, and six in this short two-measure example. The number sequence can be analyzed as: 4+2, 4+2, 2+2, 6+2, 2+2, followed by the final quarter note on snare drum and cymbal. Greiner also commonly

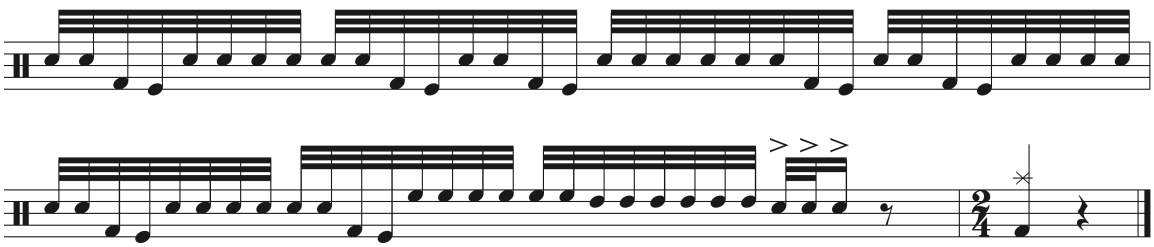
[39] August Burns Red, "The Eleventh Hour," 0:00.

plays on a standard five-piece drum set that includes: bass drum, snare drum, high tom, middle tom, and floor tom, so this linear melodic phrase incorporates every drum in his setup.

Every bass drum occurrence in this example is in a set of two, so Greiner is able to use a simple double drop technique, avoiding the need for advanced multi-stroke execution. This is a common approach at extremely fast speeds, since executing these fast groupings is easier with the hands. In this method, the player is able to simply fill-in the space between fast hand combinations with a simple bass drum double drop. Drummer Joey Jordison of the metal band Slipknot is particularly known for integrating this approach in his open drum solos, which uniquely feature a moving drum riser that elevates above the stage and turns Jordison upside down while playing. The lack of gravity assistance would make these combinations much more difficult.

The previously mentioned drummer Mike Portnoy is also known for using this double drop technique in the creation of linear drum phrases. The use of these phrases allows Portnoy to play melodic drum patterns unison with guitar and keyboard melodies. The introduction to the Liquid Tension Experiment track entitled “Paradigm Shift” is a great example of Portnoy’s linear double bass execution (see Example 22).

Example 22. Mike Portnoy “Paradigm Shift” transcription[40]



The majority of this example remains on the snare drum, with Portnoy moving to the toms toward the end of the phrase. Portnoy matches the overall contour and phrasing of guitarist John Petrucci’s guitar line, which features a melodic phrase with the same numbered groupings. The hand-foot combinations can be analyzed as: 2+2, 6+2, 2+2, 6+2, 2+2, 6+2, 6+2, before the final transfer to the toms.

The double bass setup allows drummers to significantly incorporate the bass drum in the creation of fast melodic phrases. This elevates the feet to new levels of importance by adding to the bass drum’s traditional responsibilities of accentuation and groove enhancement. This use of all four limbs allows for creative phrasing opportunities at even the most extreme speeds, and provides today’s players with new realms of possibilities.

[40] Liquid Tension Experiment, “Paradigm Shift,” 0:00.

CHAPTER 6

CONCLUSION

This fairly new tradition of double bass drumming maximizes the use of all four limbs in the creation of music for the drum set. The double bass setup certainly provides a wealth of new possibilities in drum set performance, and the repertoire continues to grow. Drummers from a broad range of musical backgrounds have discovered this wonderful addition to the traditional drum set, and have implemented it as part of their tool kit.

In addition to drum set performance, the multi-percussion genre has established a need for pedal technique through the perpetual addition of multi-percussion solo and ensemble music that requires the use of pedals on diverse instruments. The double bass setup has proven to be a useful tool in the development of foot technique for other drumming applications. Phoenix Symphony percussionist Steve Fitch utilizes the double bass as a training and pedagogical tool for developing technique, coordination, and sound consistency with the feet. His *Fantastic Feet* books contain useful applications for double bass drummers, as well as those wishing to advance their foot dexterity without the intent of utilizing the double bass in a musical setting.

The tradition of double bass drumming has grown quickly, and drummers continue to elevate the craft through the blazing of new frontiers for bass drum technique. These advanced techniques, from sources such as rudimental snare drumming, have been applied to the feet in ways that were recently viewed as impossible. Innovators in double

bass drumming are striving to achieve equal fluency with both hands and feet, which continues to innovate and inspire double bass drummers worldwide.

Still, double bass drumming remains relatively obscure in the areas of music scholarship and drum set education in academia. Further study on the minute details of double bass technique, and detailed explanation of these techniques, could greatly help this advanced artform appear more approachable to the average percussionist. The tradition of double bass drumming is indeed a complex artform that deserves further attention in both drum set study and the realm of music scholarship.

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