

Formal Devices of Trance and House Music:

Breakdowns, Buildups and Anthems

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Introduction

This thesis will focus on trance and house music, subgenres within electronic dance music (EDM), and particularly on the formal devices of breakdowns, buildups and anthems. Scholars and fans sometimes use different terms instead of breakdown, buildup and anthem. They will sometimes substitute breakdown with “break,” buildup with “build,” and often refer to the anthem as the “arrival” or “drop.” The term “arrival” shows in particular that EDM fans are aware that the essential feature of the music is the large scale control of tension and release points, and at a broad level, the focus of this thesis is on the management of tension and release (see the discussion on p. ix).¹ When the music is played live, it is often the “drop” that makes the fans cheer the most. Trance and house composers use compositional tools to create climactic points of tension and release within this breakdown/buildup/anthem format.

In his book *Unlocking the Groove*, Mark Butler presents a prototypical formal model of most EDM songs. He develops the model from two interviews with separate EDM composers, and one only needs to look at the interviews to see that tension and release are the main driving force of breakdown/buildup/anthem form.² These terms are so common that most fans of EDM readily utilize this language in conversation and even during performances.

The goal of this thesis is to examine the nature of tension and release within the structure of breakdown/buildup/anthem by demonstrating first how common techniques such as snare drum rolls, layering, sequencing, dynamics and texture are simply

¹ While I have not seen a discussion of where the terms actually originated, I suspect they come from the fans themselves, not from the scholars. The scholars probably came to the scene after the lingo developed and decided to stick with it instead of creating new terms.

² Mark Butler, *Unlocking the Groove*, Bloomington, IN: Indiana University Press, 2006, 221-6.

conventional procedures that produce a sense of tension and relaxation and help define the formal boundaries of the music. Then I will identify how different artists toy with the conventions to both stretch the limits of the breakdown/buildup/anthem form and create complex and drawn-out moments of tension and relaxation. I will analyze the various nuances and techniques (such as false bass drum arrivals or extended arrival points) involved in creating these places of tension and relaxation.

When I speak about tension and relaxation in this music, I am referring to a specific process within the breakdown/buildup/anthem form. Tension in trance and house is largely an additive process. Additions of elements like increasing dynamics, increasing rhythmic activity, increasing texture, and prolongation (of any musical element) help to build tension much in the way that resonates with the same processes seen throughout Western music traditions. Specifically, in trance and house music, devices such as snare drum rolls, bass hits, layering, rest measures, synth sweeps, spinning melodic riffs, and bass drum leads are all aspects of the music that build dynamics, texture, rhythm and provide prolongation. My analysis shows exactly how these techniques work together to build tension.

Release in this music is produced not by the absence or removal of the methods that build tension, but by the addition, or more precisely, the return to a basic groove. Essentially, the release is brought on by an expectation that the music will revert to a regular groove which is established earlier in the song.³ I will show that the partial return

³ Leonard Meyer (*Emotion and Meaning in Music*, Chicago: University of Chicago Press, 1956) theorizes on the idea of expectation in music. In chapter 1, he introduces the concept with an example of a phrase that ends with a cadential dominant. He says that the dominant sets up the expectation that the tonic will arrive. It doesn't necessarily need to come, it could possibly come too soon, or it could be delayed. These same things happen with the expectation of the return of this regular groove. Eugene Narmour (*Beyond Schenkerism: Toward and Alternative in Music Analysis*, Chicago: University of Chicago Press, 1977) elaborates (in chapter 10) the idea of expectation, calling for the term implication instead. He says that

to the elements of the release is one of the more nuanced ways composers shape tension and release in this music. For now, I will leave you with this somewhat broad outline of the process of tension and release in this music, and I will address it in detail throughout the rest of the paper.

I will conclude this inquiry by suggesting ways that these structures can bring a new light to how we view other music—both other genres of popular music *and* the standard canon of classical music. This music is important to study in a systematic way since it contains devices and procedures that scholars have yet to address in popular music studies; in fact, my investigation originates from a concern that scholarly research on EDM has largely ignored examining the musical processes involved.

Looking to previous research, one finds that a few of the publications approach EDM mainly addressing gender and sexuality (Bradby 1993, Fritz 1999, Amico 2001, Loza 2001).⁴ Many other studies (Langlois 1992, Hadley 1993, Gore 1997, Hutson 1999, McLeod 2001, Maira 2003, Tjora 2009) discuss EDM through an ethnomusicological lens that focuses on the other aspects associated with EDM culture and practice.⁵ Butler's, *Unlocking the Groove* (2006) is the main text that deals with EDM from a theorist's perspective.⁶

One of the primary goals of *Unlocking the Groove* is to provide a general theoretical outline for many concepts in EDM. Butler explains that he wishes for the ideas in his book to be the launch-point for further analytical study in the field. He says,

music sets up implications, and that the interest in music is how the implications either are or are not realized. Much of my analysis resonates with these two concepts.

⁴ Fritz, Amico and Loza taking an approach that looks at sexuality—often gay culture; Bradby looking to issues of gender.

⁵ Topics vary widely, but cover a range of issues such as: cultural, musical roles and interaction between the DJ and the audience; people and technology; comparisons to other music (often African); dance; place; ethnicity; spirituality and religion; drug usage; as well as many other possible avenues of study.

⁶ Mark Butler, *Unlocking the Groove*, Bloomington, IN: Indiana University Press, 2006.

“It is my hope that these factors *will* be dealt with in greater detail as the study of EDM as music develops and that the ideas put forth here will prove useful in this regard.”⁷

However when Butler begins to look at the form of EDM, and is confronted with straightforward boundaries of trance music, I think he sees a lack of sophistication; perhaps causing him to cease further thought on the subject. This is the entirety of Butler’s discussion of form in trance:

In “Communication,” the prototypical form is strikingly obvious. In fact, such dramatically articulated formal features are a hallmark of its genre, which is trance. Trance and related genres such as progressive house typically feature especially climactic builds, in which devices such as snare drum rolls (of which the diminution of snare drum in this track is a rather regimented example) and crescendo create dramatic increases in intensity. In fact, the obviousness of these characteristics is a major point of criticism for those who do not like the genre—a group that includes many techno fans.⁸

In the article titled “Accumulative Form in Pop-Rock Music,” Mark Spicer deals with the dilemma of obviousness; “if we examine pop-rock songs more closely, we can often find their composers employing techniques of considerable sophistication in order to create interesting and unique formal structures that transcend these predictable boundaries.”⁹

Where are the “techniques of considerable sophistication” in trance that Spicer finds in *his* music? I hope that Butler was not satisfied with trance music’s minimal coverage in his book and wished for more research. My issue with Butler’s trance analysis is that it seems to provide only a general overview of characteristics. He *does* point to one formal device (the snare drum roll) and correctly hints that snare drum rolls frequently have a “regimented diminution.” It does nothing to show *how* the snare drum

⁷ *Unlocking the Groove*, 21.

⁸ *Unlocking the Groove*, 226.

⁹ Mark Spicer, “Accumulative Form in Pop-Rock Music,” *Twentieth-Century Music* 1, no. 1 (2004): 30.

roll creates an “especially climactic build.” All he explains is that the roll is straightforward and often a point of critique for other (non-trance and house) EDM fans. What about the interaction of hypermeter and the length of the snare roll? What about any of the other myriad of techniques trance and house composers have developed to create intense buildups? Because Butler’s book has to tackle too many issues (being the first major theoretical work of EDM), he left trance and house inadequately covered.

With Butler having mentioned that some view trance music as one of the most straightforward and therefore least flexible genres in EDM in regards to form, I will diverge and show not only the flexibility of the trance genre, but also its capability of producing greatly climactic musical moments. The various aspects of snare drum rolls, layering, sequencing, dynamics, texture and many other features will all demonstrate the complex nuance and technique that goes into shaping tension and release in trance music.

In my examination I decided to draw upon a range of individual examples from key trance and house artists such as Tiësto, Armin van Buuren, Paul van Dyk, Robert Miles, Above & Beyond, Darren Tate, Ferry Corsten, Johan Gielen, ATB, Benassi Bros, DJ Sammy, and Paul Oakenfold. All of these artists have either held a spot in *DJ Magazine’s* top 10 trance artists—some since the magazine’s beginning to now—or are regularly cited in autobiographical notes by the DJs at the top for being a major influence on the development of trance and house as a genre.

Because there is no sheet music or score to the works this thesis will cover, I have notated everything by ear. Some of the notational style was drawn from Butler, who created several useful systems of notation for EDM. I will look at: how additions and subtractions in layering creates or removes tension, how various percussion riffs are

signals that either add or remove tension, how percussion strongly manages formal boundaries, how aspects of sequencing create predictable hypermeter that has a dramatic effect when changed or broken, how dynamics define formal boundaries and create tension, and how texture contributes to tension and a sense of arrival.

A Brief Historical Context

Some of trance music's compositional techniques are directly related to how EDM originated. Although Butler provides a more thorough background for the history of EDM in chapter one of his book, I will provide a general overview here.¹⁰

EDM primarily originated from two important trends. Butler identifies the first as the development of technologies used in the creation of EDM and the second as the development and widespread influence of disco. There were several key technological innovations that helped to create EDM. Around the 1970s and 1980s, a surplus of machines were invented and perfected: synthesizers, drum machines, sequencers, samplers, and mixing boards, as well as more tracks for studio production. Synthesizers were key for creating some of the new unique sounds and timbres that would soon be used in EDM, but the innovation of the other equipment had a greater effect. With drum machines, sequencers, samplers, mixing boards, and more tracks for studio production, composers suddenly had the ability to greatly increase the rhythmic complexity, the repetition, layering, and texture of the music involved.

The development of disco led to the other basis of EDM's development for several reasons. Disco introduced the habit of dancing, the art of DJing—especially in the EDM sense of the word, not just someone who selects tracks to play—and the idea of

¹⁰ Butler's *Unlocking the Groove* has a much more complete history of the following developments. See pp. 32-75 for complete documentation and context.

combining two or more tracks to create a set with beat matching. Butler mentions that before disco, it was not common to dance to popular music for the entire night, and DJs learned how to keep the beat going indefinitely to assist this need to dance without a break. House and trance music especially owe their creation to disco, as the “basic” drum rhythms include the same bass-snare-high hat combinations present in most disco.

Butler also follows a history of EDM that leads through some of disco’s key artists and clubs, and ultimately, the new genres that spring from their demise. Disco was a huge phenomenon in the 1970s, especially in New York where there were over 250 clubs. The decline in 1979 of disco’s popularity (with radio DJ Steve Dahl calling disco a disease) left room for the gradual development of EDM. In two main clubs, Paradise Garage in New York City and the Warehouse in Chicago, DJs started to turn disco into a purely electronically produced genre with the use of new technologies. This genre came to be known after the club itself, or “garage” music.

In the Warehouse in Chicago, DJ Frankie Knuckles started to take garage music and disco and combine elements of both with newly constructed bass lines and drum tracks. This style, which was called house music, eventually caught on and became incredibly popular. This early form of house music continued to develop primarily in Chicago and is the direct ancestor of what we describe as house today.

At the same time house was developing, Butler says that Detroit forged a new genre called techno, and when the United Kingdom got a hold of both house and techno, trance started to formulate into a genre. In the UK DJs such as Paul Oakenfold and Danny Rampling took the two genres and produced massive parties called raves at exclusive club resorts in Ibiza. From these raves the genre of trance eventually developed

and became popular around Europe in the 1990s. English and German artists like Tiësto, Armin van Buuren, Paul van Dyk, Robert Miles, Above & Beyond, Darren Tate, Ferry Corsten, Johan Gielen, ATB and Paul Oakenfold became the main figures that helped establish the standard techniques used in trance as it became popular. Because these are the figureheads of the genre, I will address their music in my analysis.

Chapter 1— Typical Buildup Features

In trance and house music, the breakdown/build/anthem form originated from early experiments in disco. DJs of disco music sought to string together music to create longer and longer sections of music for continuous dancing. But as trance and house music created ever greater extensions, the music developed a need to breathe. In order to let the music rest, the bass drum emerged as the director of form in trance and house.

Butler has provided a useful poetic example of how this works:

Sometimes [the DJ] cuts the bass drum out. The audience turns to him expectantly, awaiting its return. For one measure, and then another, he builds their anticipation, using the mixing board to distort the sounds that remain. As the energy level increases, he gauges their response. A third measure passes by, and a fourth, and then—with an instantaneous flick of the wrist—he brings the beat back in all its forceful glory. As one the crowd raises their fists into the air and screams with joy, dancing even more energetically than before....The most obvious rhythmic force is the bass-drum beat....When [the DJ] removes the beat, the audience's dancing changes dramatically. Some people stop dancing altogether, whereas others continue, albeit hesitantly, as if awaiting the beat's return. In some of these passages there is no reason why the crowd cannot continue to dance, as the sounds that remain continue a present and steady pulse. Yet without the emblematic beat the audience's dancing begins to dissipate. Because the beat commands such stature, removing it and bringing it back is one of the most powerful things a DJ can do.¹¹

As many scholars have noted, DJs created a formal structure called breakdown/build/anthem form.¹² Every source I have found describes this form as a means of creating sections of music without the bass drum in order to give the dancers a short break and then gradually brought the bass drum back in a climactic moment that DJs designed to produce enough excitement and impetus to start dancing again.

In order to talk about tension and release and how composers shape it, I will now define the form and its constituent parts so that there is a foundation from which to move.

¹¹ *Unlocking the Groove*, 1-2.

¹² Nearly any source that talks about the music brings up this form, and in this way. Butler (2006) and Horgan (2009) are the two main sources that describe it in any detail.

Breakdown/buildup/anthem form is not the structure of the entire song. Rather it is a section within a song designed to influence dancing and provide a means of creating intrigue in an otherwise highly repetitive song. In many ways it is best to think of the form as one gesture that energizes the arrival of a new section within the song.

To be clear, when talking about this form, the breakdown and buildup create a section or phrase (the energetic gesture) within the music, and the anthem is an arrival point. Frustratingly, the anthem is *also* the ensuing section of music that follows the breakdown and buildup. In my analysis, I will talk about the breakdown, the buildup and the arrival point (implying that I often will not mention anything about the anthem as a section, but rather the anthem as an arrival). Often I refer to the breakdown and buildup sections as a breakdown/buildup section in order to save time.

While I think the actual interaction of this form within the entire structure of a song deserves a much more in-depth study than I can provide here, to give us something of a general idea, Butler has outlined a common plan for many EDM songs. In this common plan, an intro and outro (coda) sandwich two consecutive breakdown/buildup/anthem sections. He states it as into-buildup-anthem-breakdown-buildup-anthem-outro.¹³ While this is common, I have found *many* other possible combinations. In one option, a song can move from a verse (standard song form) to a breakdown/buildup/anthem section where the chorus is either part of the anthem section or an ensuing section of its own. The process repeats as the chorus moves to a verse.

Previous research and internet discussion groups/Wikipedia have all described the breakdown as the point in the music where DJs remove the most powerful formal

¹³ *Unlocking the Groove*, 221-3. The second buildup/anthem is often more intense. Again, keep in mind that the breakdown and buildup are a section of music, and the anthem in this outline is also a section of music. See the chart on p. 222 for a visual representation.

defining force, the bass drum, from the texture. Along with the bass drum, the typical plan is for the rest of the percussion to fall silent as well. Often the breakdown is not a “section” of music, but rather a point from which the buildup begins immediately.

Strangely, no one, to my knowledge, has described, in any detail, the fact that the bass drum is almost always present (in some manner) and can often lay down steady quarter notes throughout the entire breakdown. I will address this apparent contradiction later.

The buildup, for most trance and house music is designed to create the expectation that the bass drum and, with it, the rest of the vocals, synthesizers, percussion and any other layers will return. This section is where the DJ creates powerful tension and sustains it through the use of gradual layering, increasing dynamics, faster rhythmic figures, changes of texture, and many other strategies. These devices dramatize the music and give the listener a clear and powerful sense that the music *must* move forward to a specific goal—towards a resolution. This is exactly the same thing as when classical composers prolong the dominant to create powerful yearning for the tonic, in fact you will see in some examples that the DJ prolongs the dominant during a buildup section! Thus the buildup is a transition of sorts; it almost never fails to *eventually* reach its goal. I will focus mainly on *how* the music builds and eventually arrives.

This point where the tension is resolved is called the anthem¹⁴ and is typically where the bass drum and the rest of the layers arrive. While many have described the anthem as a return of the bass drum, because composers first toy with the bass drum, my definition of the anthem is the point where the entire percussion section returns together with regular rhythms *and* the melodic layers.

¹⁴ This term sees the most variation within fans of the genre: sometimes called the arrival, drop, or recently, the 808—named after the Roland 808 drum machine, a popular drum sequencer.

Just as classical composers toy with the expectations of dominant sonorities, composers of trance and house play with the expectation of the buildup arriving at the anthem. In a sense, the anthem is a cadence. Composers toy with the arrival by delaying when it should arrive, masking its arrival, having it arrive too early, providing several false arrivals—the same sort of tricks that classical composers tend to do with dominant prolongations and cadences.

In the rest of this chapter I have provided a survey of the most typical and “normal” devices used in buildups and anthems, giving us a needed visual and foundation for how the form looks and sounds in a standard scenario. I will look at the usage of bass hits, snare rolls, snare and high hat leads, snare, high hat and bass leads, and also rest measures (to be defined below). With the basic devices of the form demonstrated, I will then be able to move to more complicated situations.

A good introduction to the material is DJ Sammy’s, “Heaven,” (2002) which utilizes many typical features involved in a trance breakdown, buildup, and anthem. “Heaven” has two major breakdown/buildup/anthem sections; the first of these begins at m. 1, which is a common situation in trance music. Keeping in mind that the standard definition of a breakdown calls for the DJ to remove the bass drum, this breakdown cannot fit the “standard” definition because the bass drum cannot actively be removed at m. 1. However, I define it as a breakdown since the percussion ensemble is tacet.¹⁵ See example 1.¹⁶

¹⁵ At its heart, the breakdown is simply the beginning of a new section within the song that removes most of the percussion layers (and often the bass drum), rhythmic activity, and some melodic layers.

¹⁶ I have used Finale 2005 to create my examples. These are not meant to be an exhaustive account of every last sound that occurs in the music. I always notate key milestones, such as starts of breakdowns, buildups

The image shows a musical score for a drum breakdown and an anthem section. The score is divided into two systems, each with seven staves.

System 1 (Measures 13-16):

- S. Dr. (Snare Drum):** Measure 13 has a single snare hit. Measure 14 is labeled "Snare Roll Starts" and features a continuous snare roll. Measure 15 continues the roll, and measure 16 ends with a double bar line. Dynamics range from *mp* (mezzo-piano) to *ff* (fortissimo).
- H. H. (Hi-Hat):** Measure 13 has a single hi-hat hit. Measure 14 has a hi-hat roll. Measures 15 and 16 are silent.
- B. Dr. (Bass Drum):** Measure 13 has a "Bass Hit". Measures 14, 15, and 16 are silent.
- Synth 1, 2, 3:** These staves show a melodic line in the treble clef and two bass lines in the bass clef, all in a key signature of two flats. The melody consists of eighth and quarter notes, while the bass lines feature eighth-note patterns.

System 2 (Measures 17-23):

- S. Dr. (Snare Drum):** Measure 17 is labeled "Anthem" and features a snare roll. Measures 18-23 continue the snare roll. Dynamics are marked *mf* (mezzo-forte).
- H. H. (Hi-Hat):** Measures 17-23 feature a consistent hi-hat pattern of eighth notes.
- B. Dr. (Bass Drum):** Measures 17-23 feature a consistent bass drum pattern of quarter notes, described as "Four on the floor groove".
- Synth 1, 2, 3:** These staves continue the melodic and bass lines from the previous system.

Starting with the basics of the form, you see the beginning of the breakdown starts at m. 1, and I have notated it in the score. I hear the buildup begin at m. 9, and when the bass drum enters into the texture with the entire percussion ensemble, a four-on-the-floor groove (four quarter notes in the bass, off-beats in the high hat, and usually snare on the downbeats of beats two and four), and all the melodic/ostinato layers at m. 17, the anthem

has arrived. Notice that after the anthem arrives, there are no more significant changes in the percussion or synthesizers. DJ Sammy has reached the goal of bringing the bass drum into the texture with a steady groove and releasing the tension. I have provided a hypermeter reduction¹⁷ which helps to visualize how the form looks and interacts in the percussion ensemble. See example 2.

Example 2

DJ Sammy, “Heaven” Hypermeter Reduction of Percussion, mm. 1-17

The image shows a musical score for three percussion instruments: S.Dr. (Snare Drum), H.H. (Hi-Hat), and B. Dr. (Bass Drum) across measures 1 to 17. The score is divided into sections: Breakdown (measures 1-4), 5-8, Buildup (measures 9-12), 13, 14, 15, 16, and Anthem (measure 17). The S.Dr. part shows a steady groove with a bass hit on the downbeat starting at measure 9. The H.H. part shows a steady groove with a bass hit on the downbeat starting at measure 9. The B. Dr. part shows a steady groove with a bass hit on the downbeat starting at measure 9. Dynamics range from *mp* (mezzo-piano) to *ff* (fortissimo). The Anthem section (measure 17) features a steady groove with a bass hit on the downbeat.

A simplified guide to the breakdown is that it ends and the buildup begins when the music picks up from its least active point. I hear a marked delineation between the breakdown and buildup at m. 9 when DJ Sammy has the bass, snare, and high hat articulate the downbeat. I will refer to this articulation on the downbeat as a bass hit from now on. DJs use the bass hit as a common device which will turn into one of the main techniques of nuance in later pieces.

¹⁷ Butler spends an entire chapter discussing various aspects of how to conceive of hypermeter within EDM (pp. 179-201). He draws on the work of theorists such as Krebs, Lerdahl and Jackendorf, Lester, Rothstein, and Schacter to contrast views of hypermeter as a strict, inflexible phenomena with the idea that hypermeter can bend in order to support phrasing or grouping of measures. He stresses that in EDM, the music almost always reinforces a feeling of duple, and very often enforces quadruple tendencies. I rely on 4-bar hypermeasures and frequently show the duple and quadruple interactions of the hypermeasures while leaving flexibility for phrasing and grouping concerns. Within a 4-bar hypermeasure I hear and analyze the emphasis as strong-weak-strong-weak.

Even though others say that the anthem arrives when the bass drum comes back into the texture, this hit of the bass drum is *not* the arrival of the bass drum, i.e. the anthem, because the bass drum does not stay present in the texture. Just one bass hit is often enough of an addition (remember tension is built through addition of the trance devices) to provide the articulation that signals the beginning of the buildup.

The change of rhythm in the synthesizers signals another addition of tension that demarcates this change to the buildup. On the downbeat of m. 9, the synthesizers move from a sustained whole note/half note texture to a syncopated, more rhythmically-active line.¹⁸ The bass hit further supports the switch to buildup because it occurs on a downbeat of hypermeter—dividing the breakdown/buildup section into 2 + 2. Often bass hits emphasize the downbeat of a four-measure bar in hypermeter. At measure 13, there is another bass hit from the percussion which continues to define the four-measure hypermeter.

DJ Sammy utilizes more rhythmic acceleration by bringing in the quintessential technique of the snare drum roll to dramatically increase tension. Mm. 14-16 starts with a crescendoing line of sixteenth-notes which moves to thirty-second notes in m. 16. This diminution produces a rapid rise in tension—a strong feeling of drive towards the next downbeat of hypermeter (m. 17) with the increase of rhythmic activity and crescendo.

After this snare drum roll, DJ Sammy provides exactly what the audience expects of a typical trance breakdown/buildup/anthem section: the anthem. At m. 17, the

¹⁸ The separation between a breakdown section and a buildup section can often be nebulous. Factors like bass hits, addition of a more active rhythmic layer (whether it's faster note values or faster repetition of a loop), or addition of a new line all signal an increase in tension, and therefore the buildup. If these factors are added with support of hypermeter (entering on a downbeat of hypermeter), it only helps to clearly define sections. In absence of these clues, I hear the breakdown section elide into the buildup section. The breakdown section becomes a single moment and turns directly into the buildup section. In effect they merge together as one. I notate this as breakdown/buildup in scores; this process occurs in the next song.

percussion ensemble settles into the typical groove of four-on-the-floor bass drum and the alternating downbeat/offbeat of snare and high hat. The return of this groove has the effect of releasing tension. Because of the rhythmic drive to the cadence, in comparison, when the percussion ensemble settles into a groove, the activity has evened out, slowed down and provides stability (even though it looks like the percussion is more active). The restrained steadiness therefore has the effect of a release of tension even though this very act impels many listeners to start dancing again. In many ways I think this apparent contradiction is what makes these techniques effective.

The next song, “Love You More” (2006) by Armin van Buuren, will provide an example of how the breakdown section and buildup sections often merge together. At 3:28 into the track Armin uses bass hit, which demarcates both the breakdown¹⁹ (with the ensuing absence of bass drum) and the buildup simultaneously.²⁰ However unlike the last example, one of the percussion instruments stays in the texture—the high hat. The high hat essentially does not change throughout the breakdown/buildup section and anthem section, which means there cannot be a return of the high hat portion of the groove at the anthem. This creates less of a release of tension, and I feel provides a little more continuity by downplaying the intensity of the breakdown/buildup section as a whole.

See example 3.

¹⁹ It is beyond the scope of this thesis to fully address the transition into breakdown/buildup sections, or notate them for that matter. One needs only to listen to the songs to confirm the beginning of the breakdown. It is often accompanied by a slight reduction of texture and sudden lack of percussion, and it is generally signaled by a bass hit, suspended cymbal strike, or both.

²⁰ This breakdown/buildup section has no bass hits, no increasing rhythmic activity and no additional layers. One could argue that perhaps the synth 2 line at m. 13 cues a separate buildup, but the hypermeter does not support it (no division into duple), and the synth 2 line starts piano and crescendos—giving it a role similar to a snare drum roll. These factors lead me to hear this as a breakdown/buildup section with no delineation between breakdown and buildup.

Example 3

Armin van Buuren, "Love You More," (2006) 3:28 into the track²¹, mm. 1-17

$\text{♩} = c. 132$
Breakdown/Buildup

Snare Drum

High Hat

Bass Drum

Voice

Synthesizer 1

Synthesizer 2

Synthesizer 3

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

I've been a - way too long.

and ev - ery day I missed you more. You look

²¹ 3:28 into the track denotes that this section of music starts at 3 minutes, 28 seconds into the full track.

The image shows a musical score for a song, likely "Love You More" by DJ Sammy. It is divided into two systems of staves. The first system covers measures 10 through 13. The second system covers measures 14 through 17. The instruments and parts are as follows:

- Drum Parts:** S.Dr. (Snare Drum), H.H. (Hi-Hat), and B. Dr. (Bass Drum).
- Vocal Line:** Located in the first system, with lyrics: "like you did be - fore, on - ly pret - ti - er. Ev - ery".
- Synth Parts:** Synth 1, Synth 2, and Synth 3.
- Measure 14:** Features a "Snare roll" starting on the second half of the measure.
- Measure 15:** Continues the "Snare roll".
- Measure 16:** Continues the "Snare roll".
- Measure 17:** Features an "Anthem" section.
- Lyrics:** "day I love you more." is located in the first system of the second system.
- Dynamics:** *p* (piano) is marked in the Synth 2 part of the first system. *mf* (mezzo-forte) is marked in the Synth 2 part of the second system.

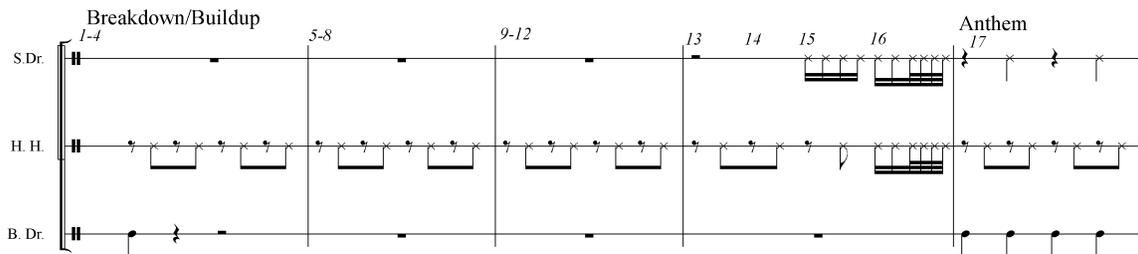
Notice that the snare drum roll behaves differently than example 1. In “Heaven,” DJ Sammy starts the snare at m. 14, but in “Love You More” the snare roll starts a measure later and also moves to the 32nd notes at the second half of m. 16 instead of on the downbeat of m. 16. I hear that this makes the buildup feel slightly rushed and therefore gives it little less time to build tension and increase the energy going into the

arrival of the anthem. The high hat provides a smoother link into the anthem, and the snare drum has less time to produce a swell of tension, which downplays the arrival of the anthem ever so slightly. This is an example of the careful nuance that Butler seemed to miss in this music. I will come back to this song in Chapter 3, and you will see how this understated buildup provides the grounds for a more dramatic buildup later in the song.

The hypermeter reduction shows how Armin compresses the buildup closer towards the anthem. See example 4.

Example 4

Armin, “Love You More” Hypermeter Reduction of Percussion, 3:28 mm. 1-17



The hypermeter reduction also shows another way the anthem arrival is downplayed. In example 2 there was a strong bass hit on the downbeat of the fourth measure of hypermeter followed by diminutions that changed on the beats. Example 4 shows how the snare drum enters on beat three of the fourth measure and the diminution only occurs on the off-beat of beat four—the weakest beat. This weak beat emphasis helps to weaken the strength of the push to the downbeat of fifth measure of the

hypermeter.²² Until the snare roll starts, there is no audience expectation of *when* it should actually occur, only that the composer should add *something* at some point to bring in tension and drive to the anthem. The only thing they expect is that the anthem will bring back a return of the basic groove. The downbeat of the hypermeasure might “feel” like a good place for the snare roll to start, but the roll could just as easily begin two hypermeasures after that. In fact, the off-balance nature of the snare roll only reinforces that this is a weaker buildup; the rhythmic push comes in late, unexpectedly, and goes out fast.

Armin’s, “Blue Fear” (1997) demonstrates how a longer snare roll creates a stronger drive to the anthem. When the snare drum roll is slightly longer and reaches a faster diminution more quickly, the buildup produces more tension and has a greater push to the anthem. I hear that this stronger and slightly longer buildup balances the fact that this is the only breakdown/buildup/anthem section of the track, which perhaps meant this section needed to be somewhat longer and more emphasized. See example 5.

Note that with examples 3 and 5 the high hat mimics the snare drum roll. This is similar to the process of octave doubling and serves to intensify the lead to the anthem with the greater emphasis.

Looking at the hypermeter we discover a few more things with this piece. See example 6.

Unlike the previous examples, example 6 shows that there are six bars of hypermeter contained within the breakdown/buildup section instead of the usual four.

²² To be sure, there is not a contradiction between the *withholding* of the snare roll and the withholding of the bass drum. Neither action is actually responsible for *creating* tension. One could imagine a disappointed audience if the music were to go on for four minutes without the bass drum or a snare roll. In this music, the only thing that adds to the tension is an addition of some device, not the withholding of it.

Example 5

Armin van Buuren, "Blue Fear," 5:02 into the track, mm. 1-25

Breakdown

9 **Buildup**

14 **Snare Roll**

17 **Snare Roll**
p *cres.*

19 20 21 22

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

23 24 25 Anthem

f

Example 6

Armin, "Blue Fear" Hypermeter Reduction of Percussion, 5:02 mm. 1-25

Breakdown Buildup Anthem

1-4 5-8 9-12 13-16 17-20 21 22 23 24 25

S.Dr.

H. H.

B. Dr.

p *f*

Quite simply, I hear two bars of hypermeter used for the breakdown and then the next four (initiated by the addition of the high hat) are the buildup. Comparing this to example 2, you can see that the snare enters more than a full bar of hypermeter early on the downbeat of the third bar of the buildup, and it moves to 32nd notes on beat three of the fourth bar. Both of these entrances are earlier than they were in example 2 and both are on strong beats. The greater emphasis on strong beat entrances further helps to intensify the only breakdown/buildup/anthem section of this song.

Breakdown/buildup sections do not have to follow such a short path, and looking at Armin van Buuren's, "Sail," (2005) you can see how these sections begin to be greatly expanded. This song demonstrates how DJs begin to manage increasingly lengthy breakdown/buildup sections—"Sail" having a buildup that lasts 1 minute, 27 seconds. See example 7.

Example 7 has an exceedingly sparse percussion ensemble. In fact, besides the snare drum roll, the only things one can hear are two bass hits with cymbal lead-ins. In this example, the process called *layering* builds the tension in absence of percussion. Every 8 measures except for m. 41, something is added. This procedure of the steady addition of texture and changing figuration called layering generates a gradual increase of dynamics and tension. Example 8 demonstrates this with hypermeter. See example 8.

While the hypermeter shows the snare roll is the last thing that brings in the anthem, the bass hits and layering perhaps have a greater role in building tension by clearly defining the downbeats of hypermeter and contributing to the arrival at the anthem.²³

²³ This concept of layering is clearly explained in the chapter on hypermeter by Butler (179-201).

Example 7

Armin van Buuren, "Sail," (2005) 1:53 into the track,²⁴ mm. 1-49

The musical score is divided into two sections: "Breakdown" (measures 1-10) and "Buildup" (measures 11-17). The breakdown section is marked "(piano)" and features a simple drum pattern with Snare, High Hat, and Bass Drum. The synth parts are minimal, with Synthesizer 1 playing a six-note phrase. The buildup section features a more complex drum pattern, including a "Bass hit" in measure 17, and a more active synth line.

²⁴ Piano marked in synth 1 at the beginning simply denotes that the phrase is played by a piano. I did not add a separate staff only for six notes. This occurs in a few other songs.

18 19 20 21

S. Dr. H. H. B. Dr.

Synth 1 Synth 2 Synth 3

22 23 24 25

S. Dr. H. H. B. Dr.

Synth 1 Synth 2 Synth 3

26 27 28 29

S. Dr. H. H. B. Dr.

Synth 1 Synth 2 Synth 3

30 31 32 33 34 35

S. Dr. H. H. B. Dr.

Bass hit

Synth 1 Synth 2 Synth 3

36 37 38 39 40 41 42

S. Dr. H. H. B. Dr.

Synth 1 Synth 2 Synth 3

43 44 45 46 47 Snare Roll 48 49 Anthem

S. Dr. H. H. B. Dr.

Synth 1 Synth 2 Synth 3

Example 8

Armin, "Sail" Hypermeter Reduction of Percussion, 1:53 mm. 1-49

The image shows a musical score for three percussion instruments: Snare Drum (S. Dr.), High Hat (H. H.), and Bass Drum (B. Dr.). The score is divided into measures 1-49. The first section is labeled 'Breakdown' (measures 1-4) and the second is 'Buildup' (measures 5-48). The 'Anthem' section begins at measure 49. Annotations include 'Offbeat Synth 2 enters' at measure 13, '16th Synth 1 enters' at measure 17, 'Bass enters' at measure 25, and 'Synth 1 to long notes' at measure 33. The S. Dr. and H. H. parts show a rhythmic pattern of eighth notes and rests, while the B. Dr. part shows a pattern of eighth notes and rests, with some notes marked with a 'z' symbol.

Bass + snare + high hat leads and rest measures

DJs typically use the *bass/snare/high hat lead* as another essential device in buildups. You saw in examples 3 and 5 that the high hat can mimic the snare in order to create a stronger drive much in the way octave doubling emphasizes a line. What happens when you reinforce those two instruments with the bass drum as well? The addition of the bass drum to the snare/high hat roll creates a problem for the typical definition of anthem where bringing the bass drum back signals the anthem, but it presents no problem for the definition I use. Example 9 shows an example of a bass/snare/high hat lead with a breakdown/buildup that lasts almost 2 minutes this time. See example 9.

As you can see, this example uses some of the common techniques described already: bass hits on m. 13 and m. 29 which fall on hypermeter downbeats and layering to produce a steady dynamic increase. The new feature is that the bass drum enters and begins following the snare drum at m. 57 and leads right into m. 61 at the anthem. According to my definition, this entrance on m. 57 is not the anthem arrival because the percussion has not settled into its basic groove yet. This does not occur until m. 61. Instead the bass drum adds a substantial doubling influence to the snare drum and makes

Example 9

Armin van Buuren, "Communication Part 3," (1998) 2:04 into the track, mm. 1-61

Breakdown

This musical score covers measures 1 through 8. It features a drum kit with Snare Drum, High Hat, and Bass Drum. The Snare Drum has a single hit at the beginning of measure 1. The High Hat has a sustained sound starting at measure 1 and continuing through measure 8. The Bass Drum has a single hit at the beginning of measure 1. There are three Synthesizer parts: Synthesizer 1 and 2 are silent, while Synthesizer 3 plays a continuous eighth-note bass line. The Piano part has a few notes in measure 8.

Snare Drum

High Hat

Bass Drum

Synthesizer 1

Synthesizer 2

Synthesizer 3

Piano

Buildup

This musical score covers measures 9 through 16. The drum kit includes Snare Drum (S. Dr.), High Hat (H. H.), and Bass Drum (B. Dr.). The Snare Drum has hits at the beginning of measures 9, 10, 11, and 12. The High Hat has a sustained sound starting at measure 12. The Bass Drum has a single hit at the beginning of measure 13. There are three Synthesizer parts: Synths 1 and 2 are silent, while Synth 3 plays a continuous eighth-note bass line that becomes more complex in measures 15 and 16. The Piano part has a few notes in measures 9, 13, and 15.

S. Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

Pno.

17 18 19 20 21 22 23 24

S. Dr. H. H. B. Dr.

Synth 1

Synth 2

Synth 3

Pno.

25 26 27 28 29

S. Dr. H. H. B. Dr.

Synth 1

Synth 2

Synth 3

Pno.

Bass hit

30 31 32 33 34 35

S. Dr. H. H. B. Dr. Synth 1 Synth 2 Synth 3

36 37 38 39 40

S. Dr. H. H. B. Dr. Synth 1 Synth 2 Synth 3

41 42 43 44 45

S. Dr. H. H. B. Dr. Synth 1 Synth 2 Synth 3

46 47 48 49 50

S. Dr. H. H. B. Dr. Synth 1 Synth 2 Synth 3

51 52 53 54 55 Snare roll

S. Dr. H. H. B. Dr. Synth 1 Synth 2 Synth 3

56 57 58 59 60 61 Anthem

S. Dr. H. H. B. Dr. Synth 1 Synth 2 Synth 3

Bass joins roll

the roll seem to have much more momentum leading to the anthem. Looking at the hypermeter will guide us to a few more observations. See example 10.

Example 10

Armin, “Communication Part 3” Hypermeter Reduction of Percussion, 2:04 mm. 1-61

Armin divides the breakdown/buildup section into three bars of hypermeter for the breakdown, while the buildup gets roughly split into three 4-bar sections (16 measures each) with the help of the two bass hits (mm. 13 and 29) and the sustained cymbal hit (m. 45). The addition of the bass in the last bar of hypermeter helps produce a steady, unfaltering drive to the anthem. In chapter 3 I will demonstrate how during the next breakdown/buildup/anthem section of the same song, Armin contrasts the straightforward drive of this example with several advanced techniques.

The straight bass/snare/high hat lead without a rest measure of “Communication Part 3” is more uncommon than the combination of the lead with a rest measure. Another examination of “Sail” will demonstrate what I mean by *rest measure*. See example 11.

This example starts out with a bass hit on m. 17, the start of a snare roll with high hat backup on m. 28, and diminution to 32nd notes at m. 31. But perhaps unexpectedly, Armin cuts off the percussion and lets the single synth 2 line carry the music into the

Example 11

Armin van Buuren, "Sail," 4:49 into the track, mm. 1-33

Breakdown/Buildup

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

9

10

11

12

13

14

15

16

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

17

18

19

20

21

22

23

24

Bass hit

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

The musical score consists of two systems. The first system includes measures 25 through 29. It features three drum parts: S.Dr., H.H., and B.Dr. Measures 25-27 show a consistent rhythmic pattern. At measure 28, a 'Snare roll' is introduced, represented by a dense series of 'x' marks on the S.Dr. staff. The second system includes measures 30 through 33. Measures 30-31 continue the drum pattern. At measure 32, a 'Rest measure' occurs, where the drum parts are silent. At measure 33, an 'Anthem' begins, marked by a change in the drum pattern and the entry of Synths 1, 2, and 3.

arrival of the anthem at m. 33. This sudden drop of all momentum in the percussion has the opposite effect of what you might expect. Instead of the forward drive dissipating, the empty measure has the effect of suspending the built up tension, and in turn, prolongs it and focuses it into a single line to create a more powerful release once the anthem arrives.

This process of suddenly halting the rhythmic motion is what I call a rest measure (you will see that it is not always a “measure” long) and is very similar to a sudden prolongation of a dominant harmony before the return to tonic. The motion of the

harmonic rhythm may be suspended while the harmony is prolonged; however, this only intensifies the feeling of release once the resolution is heard.

Example 12

Armin, “Sail” Hypermeter Reduction of Percussion, 4:49 mm. 1-33

The hypermeter shows that while the anthem arrives on the downbeat of a hypermeter bar, the start of the snare roll and the rest measure itself fall on beat four—the weakest beat—of their respective hypermeter bars. It is almost as if the addition of the rest measure pushed the introduction of the snare roll a beat back, from the downbeat, to beat four of the previous hypermeter measure.²⁵ A look at the next few examples will provide some amount of perspective on whether or not this treatment of the rest measure is typical or atypical. To start off, turn your attention to example 13.

Looking at mm. 9-12, how do you explain the regular bass drum and snare groove as something other than an anthem? Because the percussion ensemble has not yet settled into a repetitive groove, the music cannot be at the anthem. While the bass drum and

²⁵ An alternate reading of this phenomenon would be that mm. 25-27 form a hypermeasure that has had one beat excised off in order to make way for a shifted downbeat at m. 28. In turn, mm. 28-32 would then form a hypermeasure that is five beats long; the fifth beat could be considered an added beat. In chapters 2 and 3 we will see more concrete examples of irregular metrical phrasing. Either reading shows that there is some rearrangement of strong-weak emphasis which I hear as slightly weakening the anthem. I prefer the reading in the main text, because I do not think it sounds as jarring as rearranging the hypermeter from a weak beat to new downbeat. If a bass hit accompanied it, I might possibly see enough support to switch my viewpoint.

Example 13

ATB, "I Don't Wanna Stop," (2003) 2:14 into the track, mm. 1-17

Breakdown/Buildup

Snare Drum

High Hat

Bass Drum

Voice

Synthesizer 1

Synthesizer 2

Piano

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Pno.

1 don't wan - na stop...

The image shows a musical score for measures 14 through 17. The instruments are S.Dr. (Snare Drum), H. H. (High Hat), B. Dr. (Bass Drum), Synth 1, Synth 2, and Pno. (Piano). The lyrics are "I don't wanna stop." The score shows a snare roll starting in measure 14, a high hat roll starting in measure 14, and a bass drum roll starting in measure 15. Measure 17 is marked "Anthem" and contains a "Rest measure" for the high hat.

snare sit in the regular groove, the high hat is not; in fact, it is doing something of the snare roll technique by steadily moving to different diminutions. The snare joins in with its roll at m. 13 and the bass drum joins the snare at m. 15, however instead of a rest measure that lasts a whole measure, ATB gives the listener one that lasts for only a beat. Even though it lasts for one beat, it produces the same overall effect; it merely does not sustain the tension for as long as example 11. This difference is clarified in Example 14.

Example 14 shows that in contrast to example 12, the rest measure duration is smaller, but also—instead of the rolls starting on weak beats—the start of the snare roll and the high hat “roll” technique start on the downbeats of hypermeter measures (mm. 13 and 9 respectively) and the bass drum joins the snare on a strong beat as well (beat 3).

The rest measure does not seem to push the start of the snare roll back a beat in hypermeter in this case, but there are still more examples to compare. The next example will also illustrate a rest measure similar to “Sail.” See example 15.

Example 14

ATB, "I Don't Wanna Stop" Hypermeter Reduction of Percussion, 2:14 mm. 1-17

Musical score for Example 14, showing three percussion parts: S.Dr. (Snare Drum), H. H. (High Hat), and B. Dr. (Bass Drum). The score is divided into two sections: "Breakdown/Buildup" (measures 1-12) and "Anthem" (measures 13-17). The S.Dr. part features a complex rhythmic pattern with various note values and rests. The H. H. part consists of a series of eighth notes and rests. The B. Dr. part features a steady bass line with occasional eighth notes and rests.

Example 15

ATB, "9pm ("Till I Come)," (1998) 0:30 into the track, mm. 1-25

Musical score for Example 15, showing four parts: Snare Drum, High Hat, Bass Drum, and three Synthesizer parts. The score is divided into a section labeled "Breakdown/Buildup" (measures 1-8). The Snare Drum part features a steady pattern of eighth notes and rests. The High Hat part consists of a series of eighth notes and rests. The Bass Drum part features a "Bass hit" (a single eighth note) followed by rests. The Synthesizer 1 part features a melodic line with eighth notes and rests. The Synthesizer 2 part features a bass line with eighth notes and rests. The Synthesizer 3 part features a bass line with eighth notes and rests.

9 10 11 12 13 14 15 16

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

Bass drum starts roll

17 Snare joins roll 18 19 20

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

Snare joins roll

21 22 23 24 25 Anthem

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

Rest measure

Anthem

In this example ATB has a rest measure that lasts nearly a whole measure; m. 24 has a hit on the downbeat, but it is still heard primarily as a rest through the entire measure. Aside from that, ATB uses the normal techniques of layering, and a snare/high hat/bass lead. The addition of the bass drum to the lead-in of the anthem creates such a high swing of momentum that the rest measure almost seems needed to provide a little break from the full texture before bringing everything back in at once. Example 16 will show how the hypermeter interacts with the rest measure and snare/high hat/bass lead.

Example 16

ATB, “9pm (‘Till I Come)” Hypermeter Reduction of Percussion, 0:30 mm. 1-25

The musical score for Example 16 is presented in three staves: S.Dr. (Snare Drum), H.H. (High Hat), and B.Dr. (Bass Drum). The score is divided into sections: Breakdown/Buildup (measures 1-4, 5-8, 9-12, 13-16), Anthem (measures 17-20, 21-24), and Anthem (measure 25). The S.Dr. staff shows a pattern of rests and hits, with a long rest in measure 24. The H.H. staff shows a pattern of hits and rests, with a long rest in measure 24. The B.Dr. staff shows a pattern of hits and rests, with a long rest in measure 24. The Anthem section (measures 17-20, 21-24) features a dense texture of hits, while the final Anthem measure (25) shows a return to a simpler pattern.

Here you can see that the bass starts the lead first and the snare joins (both on hypermeter downbeats), while the high hat does another hybrid type of snare roll. In this regard the reduction resembles example 14, but unlike example 14, there is clearly a longer rest measure which more closely resembles example 12. The last example of a snare/high hat/bass lead plus rest measure buildup will show that at least among the songs I have chosen there is no consensus on the unit of time for the rest measure. See example 17.

Example 17

ATB, "In Love with the DJ," (2003) 1:53 into the track, mm. 1-25

The musical score is divided into three systems of measures, each with a specific section label:

- System 1 (Measures 1-12):** Labeled "Breakdown" (measures 1-8) and "Buildup" (measures 9-12). It features a Snare Drum, High Hat, and Bass Drum. A "Bass hit" is marked in measure 9. The voice part begins with the lyrics "I'm in love with the D-J 'till you know". Synthesizer 1 and Synthesizer 2 provide accompaniment.
- System 2 (Measures 13-20):** Labeled "Snare and bass start roll" (measures 17-20). The Snare Drum (S. Dr.) and Bass Drum (B. Dr.) parts feature a rhythmic roll starting in measure 17. The voice part continues with the lyrics "Play my song mis-ter D - J" and "I'm in love with the D - J 'till you know". Synthesizer 1 and Synthesizer 2 continue their accompaniment.
- System 3 (Measures 21-25):** Labeled "Anthem" (measures 23-25). The Snare Drum (S. Dr.) and Bass Drum (B. Dr.) parts feature a rhythmic roll starting in measure 23. A "Rest measure" is indicated in measure 24. The voice part continues with the lyrics "'till you know" repeated. Synthesizer 1 and Synthesizer 2 continue their accompaniment.

Why does this example have a rest measure of only two beats? Similar to example 15, the snare/high hat/bass all hit on beat 3 of m. 24 and then drop out of the texture, leaving us with what sounds like a two-beat rest measure. I will provide the hypermeter reduction next, and then explain the nuance behind the rest measure. See example 18.

Example 18

ATB, “In Love with the DJ” Hypermeter Reduction of Percussion, 1:53 mm. 1-25

The image shows a hypermeter reduction of percussion for three instruments: Snare Drum (S. Dr.), High Hat (H. H.), and Bass Drum (B. Dr.). The score is organized into measures, with some measures grouped into sections: Breakdown (measures 1-4), 5-8, Buildup (measures 9-12), 13-16, 17-20, 21, 22, 23, 24, and Anthem (measure 25). The notation includes vertical lines for rests and various rhythmic symbols (stems, flags, beams) for active notes. The S. Dr. staff shows a pattern of notes in measures 17-20 and 21-24, with a rest in measure 25. The H. H. staff shows a similar pattern of notes in measures 17-20 and 21-24, with a rest in measure 25. The B. Dr. staff shows a pattern of notes in measures 17-20 and 21-24, with a rest in measure 25.

This example brings some amount of perspective as to the starting point of the snare/high hat/bass lead followed by a rest measure. This example and examples 14 and 16 have snare and bass leads that start on downbeats or strong beats of hypermeter, while example 12 is the only one that starts on a weak beat. You will also notice that the length of the rest measures is not consistent.

For an explanation of the length of the rest measure, you have to look into the fine details of the music itself and specifically at what is still playing while there is a rest measure. Each example with a rest measure has exactly one line that continues through the rest measure: example 11 has synth 2, example 13 has piano, example 15 has synth 1, and example 17 has synth 1 continue through the rest measure. These lines each contain a motive or tail end of a phrase.

The length of each of these motives is the key to the length of the rest measure. If you look back to each example you will see that I have bracketed these bits of melodic material, which I will call a hook from now on. Example 11's synth 2 hook, which consists of the change from one pitch to the next, takes exactly one measure to happen, and therefore the length of the rest measure is one measure. Example 13 uses the piano hook which is the figure of the anacrusis a^1 which rises up a minor sixth to f^2 ; the figure only lasts for one beat—hence the rest measure of one beat. Example 15 uses the last measure of the 4-bar repeated synth line which starts on the off-beat of beat 1. This off-beat provides room for the rest measure to have the hit on the downbeat while still giving the illusion of a one measure rest. And lastly, example 17 uses the last two notes of the syncopated line in synth 1 which take approximately two beats—giving rise to the two beat rest measure. As I continue on to the next chapter, keep in mind this trend of the hook determining the length for the rest measure, because many of the examples from here on use rest measures.

The next chapter will look at other techniques that stray from the typical snare roll usage. While these techniques do not use the standard snare roll technique, they are still quite common and utilized in many songs.

Chapter 2— Buildups without Typical Features

This chapter will explore the devices used in songs that do not use the typical snare drum roll. I will demonstrate how even though composers have found a fair amount of ways to make the snare roll unique, they have continued to introduce other useful devices. I will illustrate the ways composers use the technique of synth sweeps, spinning melodic riffs and bass drum leads. And finally, I will show how composers frequently employ combinations of these techniques.

The first method is the *synth sweep*. This approach developed from composers' desire to create a smoother transition into the anthem. The snare rolls typically construct a very steady and direct motion to the anthem, and so the synth sweep is a device that can be used in absence of the entire percussion section.

The first example of a synth sweep is Markus Schulz's, "Fly to Colors." In this song, Schulz does not have any percussion during the entire breakdown/buildup section. In order to build the needed tension to drive towards an arrival at the anthem, he relies solely on the use of an atmospheric, synthesizer breeze-sound. This synth sound is unpitched and simply provides a crescendoing wash of sound that gradually drives to the anthem. See example 19.

As you can see with this example, Schulz uses a 4-bar, repeating synthesizer texture that repeats two and a half times—breaking off at mm. 15-17 in order to sustain the D in synth 1.²⁶ This suspended D helps with the gesture of the sustained synth breeze crescendo as well. In many ways the synth sweep can feel more like an anacrusis to the anthem. To me, it has the feel of taking a breath and releasing it once the percussion enters. The hypermeter supports this idea of anacrusis. See example 20.

²⁶ The change in the bracket from solid to dashed lines denotes this change in the 4-bar, repeating line.

Example 19

Markus Schulz, “Fly to Colors,” (2007) 2:53 into the track, mm. 1-17

The score for Example 19 consists of five staves. The top three staves are percussion: Snare Drum, High Hat, and Bass Drum. The bottom two staves are Synthesizer 1 (treble clef) and Synthesizer 2 (bass clef). The piece is in 4/4 time. The first 16 measures are labeled 'Breakdown/Buildup' and the 17th measure is labeled 'Anthem'. The 'Synth breeze sound' is introduced in measure 13, starting at a mezzo-forte (*mf*) dynamic and increasing to a forte (*f*) dynamic by measure 16. The 'Anthem' section in measure 17 features a change in the drum pattern and the 'Synth breeze sound'.

Example 20

Markus Schulz, “Fly to Colors” Hypermeter Reduction of Percussion, 2:53 mm. 1-17

The hypermeter reduction for Example 20 shows the percussion parts (S.Dr., H.H., B.Dr.) grouped into hypermeter units. The units are: Breakdown/Buildup (1-4, 5-8, 9-12, 13-16) and Anthem (17). The 'Synth breeze sound' is indicated by a trapezoidal shape that begins in the fourth bar of the 13-16 hypermeter unit and continues through the Anthem unit (measure 17).

The synth breeze sound only enters on the fourth bar of hypermeter, which is the weakest bar of hypermeter in a group of four. This makes the treatment something like an anacrusis before the next big downbeat of hypermeter. Mark Butler has already mentioned something similar with what he sees as:

EDM’s tendency toward anacrusic orientation: variation almost always occur just before a metrical or hypermetrical downbeat, and they tend to articulate hypermeter and formal divisions much more effectively than gradual changes in instrumentation.²⁷

²⁷ *Unlocking the Groove*, 189.

In the next examples you will see if percussion can also play a part in a synth sweep. In this example it is only the addition of the sweep and a slight prolongation in the melody that build the necessary tension for the return of the anthem groove. Armin van Buuren's "4 Elements" uses a synth sweep in the percussion ensemble. See example 21.

Example 21

Armin van Buuren, "4 Elements," (2001) 3:33 into the track, mm. 1-49

The musical score is divided into two systems, each containing six staves. The first system covers measures 1 through 6, and the second system covers measures 7 through 16. The percussion ensemble consists of Snare Drum, High Hat, and Bass Drum. The synthesizers are labeled Synthesizer 1, Synthesizer 2 (Piano), and Synthesizer 3. The key signature is three sharps (F#, C#, G#) and the time signature is common time (C). The score shows a 'Breakdown' section where the High Hat plays a continuous eighth-note pattern with accents, while the Snare and Bass Drums play simple rhythmic patterns. The synthesizers provide a harmonic accompaniment, with Synthesizer 2 playing a piano melody and Synthesizer 3 playing a bass line. The second system shows a continuation of these patterns, with a slight change in the High Hat pattern and a more active bass line in Synthesizer 3.

17 **Buildup** 18 19 20 21 22

S. Dr. H. H. B. Dr.

Bass hit

Synth 1

Synth 2

Synth 3 *mf*

23 24 25 26 27 28 29

S. Dr. H. H. B. Dr.

Synth 1

Synth 2 Synth sound

Synth 3

30 31 32 33 34 35 36 37 38 39 40 41 42

S. Dr. H. H. B. Dr.

Bass hit

p

Synth 1

Synth 2

Synth 3

In this example Armin has percussion play throughout the entire breakdown/buildup section. While the synth sweep can be the sole gesture towards the anthem, the percussion often reinforces it. There are some normal features I have already discussed: a bass hit at m. 17 that sets off the buildup section, and the off-beat snare from mm. 33-48 that provides a smoother transition to the anthem (as example 3).

However instead of a breezy synthesized sound, the composer brings in a high hat crescendo (basically a suspended cymbal crescendo) to serve as the synth sweep. The reason this is still a synth sweep and *not* a new technique is that it does the same thing as the breeze sound; it provides a wash of sound that moves towards the arrival of the anthem in one single gesture. This sweep lasts for only a measure, and the hypermeter will illustrate this. See example 22.

In example 22 you can see how the synth sweep can be an extremely short moment in the hypermeter: here it is beat four of the last bar of hypermeter before the anthem. However, aside from the bass hit every 4 bars of hypermeter, Armin offers little to grasp onto for the lead into the anthem, which means that this synth sweep provides a

Example 22

Armin, “4 Elements” Hypermeter Reduction of Percussion, 3:33 mm. 1-49

The score for Example 22 shows three percussion parts: S. Dr., H. H., and B. Dr. The music is divided into three sections: Breakdown (measures 1-4, 5-8, 9-12, 13-16), Buildup (measures 17-20, 21-24, 25-28, 29-32, 33-36, 37-40, 41-44, 45-48), and Anthem (measure 49). The S. Dr. part features a consistent pattern of eighth notes with accents. The H. H. part has a similar pattern with accents and a crescendo marking in measure 49. The B. Dr. part has a simple pattern of eighth notes with accents.

crucial aspect of the transition from buildup to anthem. ATB’s “L.A. Nights” shows how the synth sweep frequently integrates with other features I have already discussed. See example 23.

Example 23

ATB, “L.A. Nights,” (2009) 0:32 into the track, mm. 1-25

The score for Example 23 shows six parts: Snare Drum, High Hat, Bass Drum, Synthesizer 1, Synthesizer 2, and Piano. The music is divided into two sections: Breakdown (measures 1-8) and Buildup (measures 9-10). The Snare Drum part has a pattern of eighth notes with accents. The High Hat part has a similar pattern with accents. The Bass Drum part has a simple pattern of eighth notes with accents. The Synthesizer 1 part has a sequence of eighth notes. The Synthesizer 2 part has a sequence of eighth notes. The Piano part has a sequence of eighth notes.

11 12 13 14 15 16 17 18

S.Dr. H. H. B. Dr. Synth 1 Synth 2 Pno.

19 20 21 22 23 24 25 Anthem

Rest measure

Synth 1 becomes increasingly overdriven

Pno.

If you look at example 23, you will see that ATB uses no synth breeze sound, or a suspended cymbal sound that pushes into the anthem; however, this song still uses a synth sweep. ATB takes synth 1 from mm. 21-24 and pushes the volume up dramatically, and while doing this he changes the timbre from a purer square wave sound to a more overdriven saw wave sound. The overdriven saw wave begins to lose the purity of attack and sustain, and begins to sound more like a noise than a pure tone. This is the same

effect as a breeze sweep or a suspended cymbal; those techniques embody a dynamically charged noise more so than a pure tone. The evolution to a louder, more overdriven timbre is what gives this the same synth sweep effect of an overpowering wash of sound.

The now-familiar device of a rest measure integrates with the synth sweep. ATB has removed the snare and high hat in m. 24, and you can follow the length of the rest measure length with the accompanying piano hook. The combination of synth sweep with rest measure redefines the role of the synth sweep. Unlike percussion which always falls silent during a rest measure, the synth sweep sustains through the rest measure. A rest measure suspends tension for a more powerful release at the anthem, and a synth sweep in general provides another point of focus besides the melodic hook. The combination of the two offers creates a more powerful release point.

Example 24

ATB, “L.A. Nights” Hypermeter Reduction of Percussion, 0:32 mm. 1-25

The image shows a hypermeter reduction of percussion for ATB's "L.A. Nights", measures 1-25. The score is divided into sections: Breakdown (measures 1-4), 5-8, Buildup (9-12), 13-16, 17-20, 21-24, and Anthem (25). The parts shown are Snare Drum (S. Dr.), Hi-Hat (H. H.), and Bass Drum (B. Dr.). The S. Dr. part shows a pattern of eighth notes with rests. The H. H. part shows a pattern of eighth notes with rests. The B. Dr. part shows a pattern of eighth notes with rests. A "Synth 1 sweep" is indicated in measures 21-24.

The hypermeter reduction shows how the synth sweep is more closely related in this example to example 20 where the synth sweep also filled the fourth bar of hypermeter in the buildup section. In the second breakdown of “L.A. Nights,” ATB combines the synth sweep with other features. See example 25.

Example 25

ATB, "L.A. Nights," 2:42 into the track, mm. 1-17

The musical score for Example 25 consists of six staves: S.Dr. (Snare Drum), H.H. (Hi-Hat), B.Dr. (Bass Drum), Synth 1, Synth 2, and Pno. (Piano). The score is divided into two systems, measures 1-12 and 13-17. The first system is labeled "Breakdown/Buildup" and the second system is labeled "Anthem".

Measure 1: S.Dr. has a single note. H.H. has a rhythmic pattern. B.Dr. has a single note. Synth 1 and Synth 2 are silent. Pno. has a melodic line.

Measures 2-4: S.Dr. has rests. H.H. has a rhythmic pattern. B.Dr. has single notes. Synth 1 and Synth 2 are silent. Pno. has a melodic line.

Measure 5: S.Dr. has a snare roll starting with repeated 16th notes. H.H. has a rhythmic pattern. B.Dr. has single notes. Synth 1 and Synth 2 are silent. Pno. has a melodic line.

Measures 6-12: S.Dr. has a snare roll. H.H. has a rhythmic pattern. B.Dr. has single notes. Synth 1 and Synth 2 are silent. Pno. has a melodic line.

Measure 13: S.Dr. has a snare roll. H.H. has a rhythmic pattern. B.Dr. has single notes. Synth 1 has a note. Synth 2 has a note. Pno. has a melodic line.

Measures 14-16: S.Dr. has a snare roll. H.H. has a rhythmic pattern. B.Dr. has single notes. Synth 1 has a note. Synth 2 has a note. Pno. has a melodic line.

Measure 17: S.Dr. has a snare roll. H.H. has a rhythmic pattern. B.Dr. has single notes. Synth 1 has a note. Synth 2 has a note. Pno. has a melodic line.

Annotations: "Breakdown/Buildup" (measures 1-12), "Snare roll starts" (measure 5), "Anthem" (measure 17), "Rest Measure" (measure 17), "Synth 1 becomes increasingly overdriven" (measures 13-17).

Example 25 is essentially the same as example 23, but adds a snare drum roll. At m. 5 the snare goes into a snare roll with the repeated 16th notes. While it is true that the snare never moves to faster rhythmic activity, the 16th notes still provide enough of a

boost to rhythmic motion for tension to build. Thus, you are able to hear a full combination of a snare roll, rest measure, and synth sweep. ATB is aiming for a more hurried approach to the anthem on the second time around. The inclusion of the snare roll provides a more rushed approach, and the fact that he changes the rest measure from one full measure to the half measure means that the suspension effect is also hastier and to the point.

Spinning melodic riffs

Example 26 is the first demonstration of the *spinning melodic riff*, a somewhat more complex technique:

Example 26

Benassi Bros, “Hit My Heart,” (2004) 2:11 into the track, mm. 1-19

Breakdown/Buildup

The musical score for Example 26 is presented in a multi-staff format. The top three staves are for the drum kit: Snare Drum, High Hat, and Bass Drum. Each staff begins with a whole note rest, indicating a full measure of silence. The fourth staff is for the Voice, written in a treble clef with a key signature of one sharp (F#). The lyrics are: "hit my heart? Are you gon-na leave me once a-gain? Ba-by don't you hit my heart. Are you gon-na". The fifth staff is for Synthesizer 1, and the sixth staff is for Synthesizer 2, both in bass clef. The synthesizer parts consist of whole notes, with Synthesizer 1 playing a higher register and Synthesizer 2 playing a lower register.

9 10 11 12 13

S.Dr.

H. H.

B. Dr.

break my heart? Are you gon-na make me cry - a - gain? Ba-by don't you break my heart.

Synth 1

Synth 2

14 15 16 17 18 19 Anthem

S.Dr.

H. H.

B. Dr.

Spinning melodic riff

Synth 1

Synth 2

In example 26, notice a suspension of harmony from mm. 15-18.²⁸ Normally—according to the pattern established by the other three repetitions of the dominant harmony every four measures—the harmony was supposed to move from V^{6-5} to i after mm. 16, but we see that the harmony is sustained an extra two measures. This

²⁸ While this is the first time I have mentioned harmony, it has not been a mistake. Until this point, there has been nothing to say about the harmony contributing to building tension. Every example has been locked into a repetitive harmonic succession that does not change from the breakdown/buildup section to the anthem section. I mention harmony here for the first time, because this is the first time it has contributed to building tension; it suspends the harmony and provides a tension-building prolongation.

accomplishes what any dominant prolongation does; it builds the tension by delaying the expectation of tonic arrival through the dominant's suspension.

I do not think that it is coincidence the Benassi Bros have provided the spinning melodic riff here. If you look at the rhythm of synth 1 from mm. 9-16a, you see that it changes once it hits m. 16b. Instead of repeating the upper b^2 for the extra eighth note, it moves back down to the e^2 and starts a much shorter two-note rhythmic pattern of 16^{th} plus 8^{th} repeated over and over.²⁹ This change of rhythm acts as a diminution in the way a snare drum roll does; the faster repetition, or *spinning out of the melodic riff*, increases the forward drive towards the arrival of the anthem.

Notice that the synth 2 line moves to sustained whole notes and also has a slight crescendo. This sustained line works like a synth sweep and a rest measure at the same time. Because the rhythmic activity of the synth 2 line stops, I hear a suggestion of a rest measure, and as the sustained two-measure note gets louder, I also hear it as a synth sweep. This ambiguity is what creates some of the careful nuance in the more complex examples of buildups. The hypermeter will show more of the interaction of all of these forces. See example 27.

Note that in this example there are six beats in the fourth bar of hypermeter. This is because with the spinning melodic riff and the dominant prolongation, the normal passage of hypermeter temporarily expands, causing the next downbeat to instead prolong until two beats later. This metric irregularity helps explain the synth sweep/rest measure produced by synth 2 in mm. 17-18 and explains in part why the melodic riff has spun out until m. 19. For another example of a spinning melodic riff, see example 28.

²⁹ I bracketed the old unit of repetition as x and the new as y in the score. It moves from a half measure unit to a dotted eighth note unit of repetition.

Example 27

Benassi Bros, "Hit My Heart" Hypermeter Reduction of Synthesizers, 2:11 mm. 1-19

Breakdown/Buildup 1-4 5-8 9-12 13 14 15 16 17 18 Anthem 19

Synth 1

Synth 2

1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 5 6 (added beats) 1

Example 28

Benassi Bros, "Illusion," (2004) 1:24 into the track, mm. 1-19

Breakdown/Buildup 1 2 3 4 5 6

Snare Drum

High Hat

Bass Drum

Voice

I want to be your il - lu - sion be your il - lu - sion to make you happy to-night

Synthesizer 1

Synthesizer 2

S.Dr. 7 8 9 10 11 12

H. H.

B. Dr.

Synth 1

Synth 2

En - joy this trip with me I want to be your e - mo - tion be your e - mo - tion why

13 14 15 16 17 18 19 Anthem

S.Dr.

H. H.

B. Dr.

Spinning melodic riff (Heavy Echo)

don't you turn off the lights _____ i - mag - ine how we could be liv-ing?

Synth 1

Synth 2

This example follows mostly the same plan as example 26, but with a few changes. There is no longer a suspension of the dominant, but what does happen is a suspension of sorts in the vocal line. If you look at mm. 7-9 and compare the vocal line to mm. 15-17 you see that the line turns back on itself in mm. 17-18. Instead of moving G-A^b-B^b-B-C, the melody turns back down (G-A^b-B^b-B-B-A^b-B^b) and then becomes heavily echoed. This process, while different than the first example, also creates a spinning melodic riff. Coincidentally, the hypermeter does the exact same thing as example 27, so I will not provide it here. I will return to other examples of spinning melodic riffs in the combinations section, but for now I will move on to bass drum leads.

Bass Drum Leads

A *bass drum lead* is essentially the same device as a snare roll, however I put it in this chapter because it has the bass drum in the buildup, and it does *not* use the snare roll. For the first example of a bass drum lead I use the second breakdown of “Fly to Colors.” See example 29.

Example 29

Markus Schulz, "Fly to Colors," 5:20 into the track, mm. 1-17

The musical score for Example 29 is divided into two sections: "Breakdown/Buildup" (measures 1-16) and "Anthem" (measures 17-18). The score is arranged for five parts: S.Dr. (Snare Drum), H.H. (Hi-Hat), B. Dr. (Bass Drum), Synth 1, and Synth 2. The "Breakdown/Buildup" section features a steady, repetitive pattern in all parts. The "Anthem" section begins with a rest measure for the S.Dr., H.H., and B. Dr. parts, followed by a "Bass lead" in the B. Dr. part, and then the Synth 1 and Synth 2 parts.

The texture is remarkably simple in this first example. In fact unlike example 19 where the synth 1 line sustains through mm. 14-16, in this example the synth 1 line moves on with its regular repetition. The bass drum on the last beat of hypermeter is also straightforward. I believe that this bluntness is the desired effect. Rather than a snare roll which has a higher, more piercing tessitura, the bass drum is mellower; instead of an exciting push into the anthem, it makes a more subtle and relaxed gesture to the arrival. A bass lead in combination with a rest measure is a much more common technique than a bass lead without a rest measure. See example 30.

Even though this example is quite a bit longer than the previous one, I still hear the bass lead producing a similar effect; the mellow-ness of the bass forms a more subdued push to the anthem. Just as the snare/high hat/bass leads often used a rest measure to break up the wash of sound pushing towards the anthem, the bass lead often needs it as well, if not just to give separation in the lower register before the anthem. The rest measure still serves the place of suspending the built-up tension from the lead and

Example 30

Armin van Buuren, "Burned with Desire," (2003) 2:20 into the track, mm. 1-41

Breakdown

Snare Drum

High Hat

Bass Drum

Voice

Synthesizer 1

Synthesizer 2

Synthesizer 3

Buildup

S. Dr.

H. H.

B. Dr.

Voice

Synth 1

Synth 2

Synth 3

For each for-got - ten kiss For all the mem - mor - ies For all the times ____ a look said all we had to ____ say. _____. You played your part

18 19 20 21 22 23 24 25

S. Dr. H. H. B. Dr.

Bass hit

—so well A mod-ern Ro - me-o You came on Cu - pid's wings, — and then you flew — a-way. — When you touched my face

Synth 1

Synth 2

Synth 3

26 27 28 29 30 31

S. Dr. H. H. B. Dr.

When you called my name — I burned with de - si - re. —

Synth 1

Synth 2

Synth 3

32 33 34 35

S.Dr.

H. H.

B. Dr.

Bass lead starts

When you touched my face _____ When you called my name _____

Synth 1

Synth 2

Synth 3

36 37 38 39 40 41 Anthem

Rest measure -----

I burned with de - si - re. _____ But you left me in _____ the rain. _____

making the arrival of the anthem that much more dramatic. The addition of the high hat to this bass lead still does not move this to the “snare roll” category, because the high hat sound is much quieter than the snare roll.

Before looking at the hypermeter, note that the length of the rest measure is the longest example (unless you officially count example 26’s ambiguous synth sweep/rest

measure) so far: two measures. Armin has used the vocal line as his hook, but the line in mm. 39-40 is only one and a half measures. Armin could have extended the percussion until beat 3 of m. 39, but instead he gives the music two beats to breathe before the vocal hook comes in.

This is a common dramatic gesture; a similar example in speech might be to pause slightly before a point is made, e.g. “if you two don’t cut that out...I’ll ground you for a week.” Once the percussion ensemble stops—listeners hear a rest measure happening, but the expectation is that some hook plays through the rest measure. When the hook is not there, in effect, the composer has suspended the rest measure itself. Looking at the hypermeter we will see how Armin keeps the music organized. See example 31.

Example 31

Armin, “Burned with Desire” Hypermeter Reduction of Percussion, 2:20 mm. 1-41

Armin divides the breakdown and buildup sections evenly. He uses two bars for the breakdown, introduces the buildup with the high hat hit and introduction of the vocal line. Then he divides the buildup into two groups of 4 bars of hypermeter. The first group divides evenly in two by the introduction of the counterpoint line in synth 2 at m. 17, and the second group divides in half with the bass drum lead entrance. The rest measure spans

the entire second half of the last bar of hypermeter, making it the longest seen so far. For the second breakdown of the song, Armin uses another bass lead, but changes a few things the second time around, as seen in example 32:

Example 32

Armin van Buuren, “Burned with Desire,” 4:52 into the track, mm. 1-34

Breakdown

The breakdown section (measures 1-16) features a steady bass drum groove. The vocal line is silent, with the word "When" appearing at the end of measure 16. The synth parts consist of a rhythmic lead (Synth 1) and a sustained bass line (Synth 2 and Synth 3).

Buildup

The buildup section (measures 17-24) features a snare drum pattern that intensifies. The vocal line includes the lyrics: "you touched my face _____ When you called my name _____ I burned with de - si - re. _____ When". The synth parts continue with their respective patterns, with Synth 1 providing a rhythmic accompaniment and Synth 2 and Synth 3 providing a sustained bass line.

The musical score for 'Anthem' shows a breakdown section from measure 25 to 34. The percussion ensemble (S. Dr., H. H., B. Dr.) maintains a steady four-on-the-floor rhythm. A 'Rest measure' is indicated between measures 31 and 33. The lyrics are: 'you touched my face When you called my name I burned with de-si-re. But you left me in the rain.'

The first glaring difference between example 30 and 32 is that the bass drum is present in example 32 from mm. 1-13 with a steady four-on-the-floor rhythm. If you look back to examples 13 and 15, you will be reminded that they too contained this phenomenon. But unlike those examples where the bass entered with the high hat and snare to start a gradual snare/high hat/bass lead, example 32 starts with the bass maintaining through the breakdown section. Even though the bass drum plays a steady quarter-note groove, I hear a breakdown because the rest of the texture has cut out, and also, Armin adds nothing until he removes even more of the texture. At m. 13 the bass cuts off, and Armin brings us into the buildup with the entrance of the vocals and high hat at m. 17. The bass drum's presence through most of the breakdown is an example of a breakdown that begins and actually "breaks down" further. I hear this producing a gradual process of decay rather than a completely abrupt one.

The rest measure also behaves differently in example 32 compared to 30. At mm. 31-33 the percussion ensemble has fallen silent and it seems like a nearly identical rest

measure as in example 30; however, the main difference is that the vocal hook does not come in for another whole measure. This extra measure fosters an ever so slightly increase in tension as the expectation of the hook and of course the anthem that follows holds off for an extra measure when compared to the first breakdown. With it, Armin has cleverly made the arrival of the anthem more final the second time around since it has the added weight. The hypermeter shows how the suspension of the rest measure works. See example 33.

Example 33

Armin, “Burned with Desire” Hypermeter Reduction of Percussion, 4:52 mm. 1-34

The image shows a hypermeter reduction of percussion for Armin's "Burned with Desire". The score is divided into sections: Breakdown (measures 1-4, 5-8, 9-12, 13-16), Buildup (measures 17-20, 21-24, 25-28), and Anthem (measures 29, 30, 31, 32, 33, 34). The notation includes S. Dr., H. H., and B. Dr. parts. A "Beat Incise" is marked at measure 31.

Unlike example 31, example 33 has a 4-bar breakdown section instead of a 2-bar breakdown. Then, instead of two 4-bar units for the buildup, Armin shortens it to one 4-bar unit, but when we get to the rest measure something new happens. Because the melodic hook starts a full measure later, the four-measure hypermeter bars are offset. Unlike the two Benassi Bros examples where the hypermeter simply has added beats to accommodate the spinning melodic riff, in this example, Armin has put a small one-beat incise into the four-measure hypermeter bar. This hypermeter beat incise has the effect of stretching that dramatic pause before the hook to its limits, giving just a little bit more

tension before the arrival. I will now move on to combinations of the three techniques mentioned so far.

Combinations

As DJs combine the synth sweep, spinning melodic riff, and bass leads, the most common trend is that the synth sweep is almost always involved in any combination. Our first example is no different. See example 34.

Example 34

Armin van Buuren, “This World Is Watching Me,” (2007) 3:20 into the track, mm. 1-33

Breakdown/Buildup

The musical score for 'Breakdown/Buildup' consists of seven staves. The top three staves are for percussion: Snare Drum, High Hat, and Bass Drum. Each of these staves begins with a half note (represented by a 'c' in a circle) followed by a series of rests. The fourth staff is for Voice, showing a melodic line in a treble clef with a key signature of three flats and a common time signature. The fifth and sixth staves are for Synthesizer 1 and Synthesizer 2, both of which are mostly silent with only a few notes at the beginning. The seventh staff is for Synthesizer 3, which plays a complex, rhythmic pattern in a bass clef, featuring many beamed notes and rests.

6 7 8 9 10 11 12

S.Dr. ||

H. H. ||

B. Dr. ||

Synth 1

Synth 2

Synth 3

It drains the blood from me. It pales my skin so deep.

13 14 15 16 17 18 19 20 21 22 23 24

S.Dr. ||

H. H. ||

B. Dr. ||

Synth 1

Synth 2

Synth 3

Now all that's left is all I need. This world is watching me. This world is watching me.

The image shows a musical score for measures 25-32. The score is written for S.Dr., H.H., B.Dr., and three Synth parts (Synth 1, Synth 2, Synth 3). The key signature is B-flat major (two flats). The time signature is 4/4. The score includes annotations such as 'Synth breeze/percussive sound' above the H.H. staff, 'Bass lead' above the B.Dr. staff, 'cres.' (crescendo) under the H.H. staff, 'Rest Measure' with an arrow pointing to measure 32, and 'mf' (mezzo-forte) below the H.H. staff. The word 'Anthem' is written above measure 33. The score shows a steady bass line in the B.Dr. part and a sweeping synth line in the Synth 1 part.

Looking at mm. 25-32, Armin has provided an 8-bar synth sweep, which is the longest seen so far. While he might have had room to play with the synth 2 line and produce a spinning melodic riff (he does something similar later as we will see in Chapter 3), he chooses instead to combine the synth sweep with the bass lead. At the second half of m. 32 the bass lead cuts off, which means that this is a combination of a synth sweep with a bass lead and rest measure.

So how does this combination affect the anthem? Looking back you are able to see that every eight bars, Armin changes something in the texture or line. When the bass lead enters at the last group of eight bars, this provides a steady drive to the anthem, but with the addition of the synth sweep, you have a wash of sound pushing through as well. Previously I noted how the synth sweep was generally used as an anacrusis, but I feel that because the synth sweep starts in conjunction with the bass lead, the sweep's function changes. The hypermeter will clarify this point. See example 35.

Example 35

Armin, “This World Is Watching Me” Hypermeter Reduction, 3:20 mm.1-33

The hypermeter shows how Armin has evenly divided the buildup into four 2-bar groups. The effect of this steady grouping and the bass lead and the synth sweep starting on a downbeat that moves straight to the anthem is a very powerful downbeat at the arrival of the anthem. Markus Schulz’s “Lost Cause” contains another example of a bass lead and synth sweep used in conjunction. See example 36.

If you look at m. 26, you can see how the bass drum lead enters and the synth sweep starts at m. 29. However, there is a strange occurrence at m. 31. I have notated the music here in 7/8 but the important idea is that because synthesizers 1 and 2 have stopped, there is no longer anything to determine where the downbeats actually are, aside from the listener’s maintained sense of the beat. When the synth 2 and 3 lines come back in with loud sustained whole notes and the rest of the percussion ensemble returns to normal rhythm, the sense of beat has to change or you get an anthem that is skewed by an eighth note.

This process where the beat is redefined is called “turning the beat around” or

Example 36

Markus Schulz, "Lost Cause," (2007) 2:57 into the track, mm. 1-33

Breakdown/Buildup

Snare Drum

High Hat

Bass Drum

Voice

eyes can't love me. Your smile is gone

Synthesizer 1

Synthesizer 2

Synthesizer 3

S. Dr.

H. H.

B. Dr.

Synth 1

Synth 3

The musical score consists of two systems. The first system (measures 17-24) features a percussion ensemble (S.Dr., H.H., B.Dr.) and three synthesizers (Synth 1, Synth 2, Synth 3). Synth 1 plays a rhythmic pattern of eighth notes, while Synth 2 and Synth 3 play complementary patterns. The second system (measures 25-33) introduces a 'Bass lead' in measure 26 and a 'Synth breeze sound' in measure 31. The piece concludes with a 'TBA' section in measure 32 and an 'Anthem' section in measure 33. Dynamics include *ff*, *mf*, and *pp*.

TBA; first explained by Butler.³⁰ Usually in Butler’s examples an established beat is redefined by the addition of a new texture or rhythm. While this is the case in this example (the synth lines and percussion ensemble being the addition of new texture and rhythm), I feel another aspect of Butler occurring as well. Earlier in the book, Butler mentions an idea called metrical underdetermination, a concept where “there is not

³⁰ *Unlocking the Groove*, 141.

enough information to make a decision about beat division.”³¹ I feel that while the lingering beat that is maintained by the listener through mm. 25-32 *is* turned around, the effect is not as jarring as a normal TBA because of this underdetermination concept. In this example the beat is underdetermined until m. 33 because the only texture is a steady stream of eighth notes and a sustained synth sweep—the beat could be heard anywhere. What helps to further downplay the abruptness of change here is that when the bass drum does move to a different rhythm (repeated 16th notes in m. 32), that line fades away. This causes the listener lose track of where any rhythmic stress is and allows the TBA to be less jarring.

For a combination of a synth sweep with spinning melodic riff, Tiesto’s, “Walking on a Cloud” demonstrates this combination well. See example 37.

Example 37

Tiesto, “Walking on a Cloud,” (2004) 4:40 into the track, mm. 1-33

Breakdown/Buildup

The musical score consists of seven staves. The top three staves are for percussion: Snare Drum, High Hat, and Bass Drum, each with a steady eighth-note pattern. The fourth staff is for Voice, with lyrics 'I I I' and 'Ev-en if you want-ed me to'. The bottom three staves are for Synthesizer 1, Synthesizer 2, and Synthesizer 3. Synthesizer 1 has a sustained chord, Synthesizer 2 is silent, and Synthesizer 3 has a melodic line.

³¹ *Unlocking the Groove*, 111.

10 11 12 13 14 15 16

S. Dr. H. H. B. Dr.

I can't come down I can't come down Ev-en if you want-ed me too I can't come down

Synth 1 Synth 2 Synth 3

17 18 19 20 21 22 23 24

S. Dr. H. H. B. Dr.

I can't come down I can't come down Can't touch the sky

Synth 1 Synth 2 Synth 3

synth sweep
cres. -----

The image shows a musical score for a track titled "Anthem". It consists of six staves: three for percussion (S. Dr., H. H., B. Dr.) and three for synthesizers (Synth 1, Synth 2, Synth 3). The score is in 4/4 time and has a key signature of one sharp (F#). Measures 25 through 32 are marked with measure numbers. In Synth 1, a "Spinning melodic riff" is shown, which becomes a "rest measure" at the end of measure 32. Synth 2 has a "real synth sweep" starting at measure 23, marked with a forte (f) dynamic. Synth 3 provides a bass line. The word "Anthem" is written above measure 33, where the percussion changes to a new pattern.

This example employs many devices in order to bring in the arrival of the anthem. Similar to the spinning melodic riff shown in example 26, “Walking on a Cloud” also has a suspension of harmony before the anthem. Recall that in example 26, this suspension created an effect of almost a synth sweep and rest measure at the same time, and this process occurs in example 37 as well. In fact, it leans towards a rest measure more in this case, because for one, it actually has a rest measure (beat four of m. 32) in the synth 1 and 3 lines, and secondly, there is a separate synth that carries the real synth sweep. You can find the real synth sweep in synth 2 starting at m. 23.

The last feature is the spinning melodic riff. At m. 31 and m. 32, Tiesto has slightly modified the line in synth 1. In m. 32, the line becomes broken up. Instead of moving down to the lower d^1 four times, it only reaches down once. It is as if the line has spun out and run out of steam—losing the energy to rapidly leap down and up again. It is this spinning out that leads to the rest measure here; the synth 1 line needs a momentary rest to start back up with the faster version of itself in m. 33.

Example 38 is another instance of a spinning melodic riff plus synth sweep.

Example 38

Markus Schulz, "Perfect," (2007) 1:55 into the track, mm. 1-33

Breakdown

Snare Drum

High Hat

Bass Drum

Voice

you're per - fect. 'Cause you're

Synthesizer 1

Synthesizer 2

Buildup

S.Dr.

H. H.

B. Dr.

Bass hit

per-fect in the way that you are per - fect like the moon and the stars and the sun in the sky

Synth 1

Synth 2

26 27 28 29 30 31 32 33 Anthem

S. Dr.

H. H.

B. Dr.

Spinning melodic riff
(heavy echo)

get-ting high - er ev-en knows when it's time to sur-ren - der 'cause you're per - fect

Synth 1

Synth 2

synth sweep

Schulz uses a bass hit at m. 17 and a high hat hit at m. 25. Similar to the last example, there is something of a suspended harmony at mm. 31-32. He uses the same suspension of harmony to bring some momentum into the buildup (mm. 15-16). There is a synth sweep in the synth 1 line starting at m. 31b that leads into the arrival of the anthem at m. 33.

The spinning melodic riff here is in the vocal line. The heavy echo effect in mm. 31-32 is similar to example 28. Like example 28, the vocal line begins to turn around on itself starting at m. 29 when the line alternates between a and b, not quite deciding on any pitch, but rather wandering between the two. This indecision creates the effect of the melodic line spinning out, especially when the heavy echo effect amplifies the alternation between a and b that much more.

Our last example conveniently illustrates a combination of a bass lead, a spinning melodic riff, and a synth sweep all used in conjunction with one another. See example 39.

Example 39

Paul van Dyk, "Connected," (2003) 1:18 into the track, mm. 1-17

Breakdown/Buildup

Snare Drum

High Hat

Bass Drum

Synthesizer 1

Synthesizer 2

Synthesizer 3

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

9 10 11 12 13

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

14 15 16 17 Anthem

Synth breeze sound

Rest measure

Spinning melodic riff

This passage posed several unusual transcription difficulties because the synth 1 and 2 lines are heavily echoed throughout and alternate channels from right to left speakers with nearly every note. The ‘x’ note-heads are an attempt to show how some of the echo effect works in this passage. That being said, the combination of the three techniques is easy to see. There is a bass lead plus rest measure from mm. 13-16. The synth sweep is at m. 16, and the spinning melodic line is a combination of synthesizers 1 and 2.

The spinning melodic line is a bit harder to define. There are several reasons I hear this as a spinning melodic line. First, the echo effect is turned up in mm. 15-16 (cf. examples 38 and 28) which creates one aspect of the spinning melodic line. Also, from m. 15 to m. 16, the synth 1 and 2 lines change from having the upper b^{b1} repeated six times to only being repeated three times; the echoed B^b sound has spun itself out and needs to take a rest. The synth 2 line also changes its character slightly—moving from the repeated f^1 s, to the c^1 a perfect fourth lower. The change of direction is another hint that the melodic line is spinning out and is weakening. This is reminiscent of example 37 where the synthesizer line also has seemingly run out of steam. In the second breakdown a few more things happen while still maintaining the bass lead, spinning melodic riff and synth sweep. See example 40.

Example 40

Paul van Dyk, “Connected,” 3:54 into the track, mm. 1-26

Breakdown/Buildup

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

6 7 8 9 10

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

11 12 13 14 15 16

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

17 18 19 20 21

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

The musical score shows six staves: S.Dr., H.H., B.Dr., Synth 1, Synth 2, and Synth 3. Measure 22 is a rest measure for all instruments. Measure 23 begins with a 'Bass lead' in the B.Dr. staff and a 'Spinning melodic riff' in Synth 1. Measure 24 continues the 'Spinning melodic riff' in Synth 1. Measure 25 is a 'Rest measure' for Synth 2 and Synth 3, but Synth 1 continues with a 'Synth breeze sound' and the B.Dr. continues with the 'Bass lead'. Measure 26 is marked 'Anthem' and features a melodic line in Synth 1.

Compared to the first breakdown, this second breakdown still utilizes a synth sweep at the last measure before the arrival of the anthem, and a bass lead that lasts three measures long. But in the second breakdown, Paul van Dyk does not have a rest measure in the bass lead after those three measures, instead choosing to combine the last measure with the synth sweep. However, if you look at the synth lines I think you can hear that synth 2 and 3 have something of a rest measure in m. 25. The effect here is a more subtle rest measure. Usually only a synth sweep and/or a small melodic hook sustains through the rest measure, but this time the synth sweep and bass drum play through the rest measure, which helps soften the abrupt build-up of tension when nearly everything drops out of the texture. The spinning melodic riff goes through the same process as the last example, but this time stops during the last 2 beats of m. 25, as opposed to the last eighth note in example 39. By comparing the hypermeter of these two examples, a few differences are apparent. See example 41.

The hypermeter reductions show how the first breakdown of “Connected” lines up nicely with every device supporting regular hypermeter. The second breakdown,

Example 41

Paul van Dyk, “Connected” Hypermeter Reduction of Examples 39 and 40

First Breakdown

The musical score for the 'First Breakdown' section consists of three staves: S.Dr. (Snare Drum), H.H. (Hi-Hat), and B.Dr. (Bass Drum). The score is divided into two main sections: 'Breakdown/Buildup' and 'Anthem'. The 'Breakdown/Buildup' section is further divided into measures 1-4, 5-8, 9-12, 13, 14, 15, and 16. The 'Anthem' section begins at measure 17. The S.Dr. staff shows a series of rests in measures 1-16, followed by a series of eighth notes in measure 17. The H.H. staff shows a series of rests in measures 1-16, followed by a series of eighth notes in measure 17. The B.Dr. staff shows a series of eighth notes in measures 13-16, followed by a series of eighth notes in measure 17. A 'Synth Breeze Sound' is indicated in measure 16.

Second Breakdown

The musical score for the 'Second Breakdown' section consists of three staves: S.Dr. (Snare Drum), H.H. (Hi-Hat), and B.Dr. (Bass Drum). The score is divided into two main sections: 'Breakdown/Buildup' and 'Anthem'. The 'Breakdown/Buildup' section is further divided into measures 1-4, 5-8, 9-12, 13-16, 17-20, 21, 22, 23, 24, and 25. The 'Anthem' section begins at measure 26. The S.Dr. staff shows a series of rests in measures 1-16, followed by a series of eighth notes in measure 17, and a series of eighth notes in measure 25. The H.H. staff shows a series of rests in measures 1-16, followed by a series of eighth notes in measure 17, and a series of eighth notes in measure 25. The B.Dr. staff shows a series of eighth notes in measures 13-16, followed by a series of eighth notes in measure 17, and a series of eighth notes in measure 25. A 'Synth Breeze sound' is indicated in measure 13. A 'Synth Breeze sound' is also indicated in measure 25. A circled '5' is marked below measure 25, with the text '(added beat)' below it.

however, has an extra beat in the hypermeter that I think is best explained with an added beat. Paul van Dyk removes the rest measure in the bass lead, perhaps to provide a more continuous push through the added beat of hypermeter. The rest measure in the synth lines allow the music to still build up some of the extra tension that the rest measure usually creates. This combination of a subtle rest measure and all three devices of bass lead, synth sweep and spinning melodic riff help demonstrate just how many techniques can be woven together with careful nuance and artistry.

In the next chapter I will look into examples of the most complex breakdown/buildup/anthem sections. In these most complex sections, composers truly begin to toy with expectations and feelings of tension and release. I will show how they carefully thwart where arrival points occur, and also how they prematurely infuse elements of release while building tension and vice versa.

Chapter 3— Buildups with False Arrivals and other Trick Features

This chapter will show through the most complex cases how composers push the established norms and continue to design other important devices. I will show some trends among the more complex examples, but in general, these songs become unique enough that common traits are fairly limited.

First, I will address the technique of the bass drum false arrival. The bass drum false arrival is a device I think composers created in order to establish a different level of arrival at the anthem. The bass drum false arrival is similar to a weak imperfect authentic cadence. In an imperfect authentic cadence, any number of factors can weaken the strength of the cadence, whether it is non-root based movement in the bass, or the soprano voice not settling on tonic. Essentially in the bass drum false arrival the composer sets up an arrival of the anthem, and rather than providing a full release of the tension, the composer thwarts the listener by leaving out a couple elements of the needed return to a four-on-the-floor groove. He or she then provides the real arrival at some point later on. This will be explained further in the first example that has a relatively simple bass drum false arrival. See example 42.

Example 42 appears to be fairly normal; if you look right before the anthem, you might mistake it to be a normal a buildup that uses a synth sweep to bring in the anthem. Also we see standard bass hits at mm. 1, 9 and 18. But you only need to look at mm. 34-45 to hear something unusual. Those measures bring in a straight four-on-the-floor bass line without the rest of the accompanying groove. It looks like the bass drum arrived at the anthem, but the rest of the percussion has fallen behind. Even stranger, after this bass

Example 42

Armin, "Sunspot," (2003) 2:50 into the track, mm. 1-50

Breakdown

Snare Drum

High Hat

Bass Drum

Voice synth oohs

Voice

Synthesizer 1

Synthesizer 2

Synthesizer 3

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

Synth Sweep Sound

Rest measure?

18 **Buildup** 19 20 21 22

S. Dr. H. H. B. Dr.

Bass hit

Synth 2 Synth 3

23 24 25 26 27

S. Dr. H. H. B. Dr.

Synth 2 Synth 3

28 29 30 31

S. Dr. H. H. B. Dr.

Synth 2 Synth 3

32 33 34 35 36

S. Dr. H. H. B. Dr.

Bass drum false arrival

Synth 2 Synth 3

37 38 39 40 41

S. Dr. H. H. B. Dr. Synth 2 Synth 3

42 43 44 45 46

S. Dr. H. H. B. Dr. Synth 1 Synth 2 Synth 3

47 48 49 50 Anthem

S. Dr. H. H. B. Dr. Synth 1 Synth 2 Synth 3

Synth Sweep Sound

drum arrival, the bass drum goes away for four measures (mm. 46-49) before coming back at the real arrival of the anthem in m. 50.

This is an example of a bass drum false arrival. At m. 34, Armin could have given a normal arrival at the anthem and nothing would have been strange; but instead, he decides to not put the high hat, snare, or synth 1 back into the texture. This bass drum false arrival releases some of the built-up tension, but not all of it because the rest of the percussion ensemble has not re-entered for the full release. For the ear, this presents a problem; the bass drum false arrival releases some tension, but then the addition of the rest measure and synth sweep help to add a little more tension. When the real arrival at m. 50 hits, I think overall I hear it as a shade more subtle. A look at the hypermeter will further demonstrate how this bass drum false arrival works. See example 43.

Example 43

Armin, “Sunspot” Hypermeter Reduction of Percussion, 2:50 mm. 1-50

Normally bass hits reinforce the hypermeter, but the bass hit at m. 18 would not fall on a downbeat of hypermeter which is quite strange. But Armin has provided an added beat right before the buildup. If you go back to m. 17 in example 42, you see that the voice synth line sustains the last harmony an extra measure compared to the previous three iterations of its four-bar line. Also, I hear the synth 2 and 3 lines suggesting a rest

measure when combined with the synth sweep that leads to the buildup. This prolongation produces an extra beat of hypermeter before the buildup, and when it is combined with the devices of the rest measure and the synth sweep, it serves to emphasize the arrival of the buildup. I think this weight allows some room for a somewhat de-emphasized anthem.

The hypermeter also shows that the bass drum false arrival at m. 34 falls on the downbeat of the first measure of a 4-bar unit of hypermeter. This entrance on the beginning of the 4-bar unit helps reinforce the idea that Armin could have had the anthem enter here, but instead chose to continue with the buildup. Balance could have been the main consideration for this. So far I have not presented a single example of a breakdown section that was longer than the buildup section, and if the anthem came at m. 34, the breakdown would have been 17 measures long, while the buildup was only 16. I think Armin responded to this need to balance the buildup and added more weight to it through increased duration.

Armin's "This World Is Watching Me" has a third breakdown/buildup/anthem section that shows how a bass drum false arrival can be emphasized even more, causing it to be almost the central focus of the entire breakdown/buildup/anthem section. See example 44.

Notice that the bass drum is present throughout most the breakdown with steady quarter notes. Something like this has not been seen since example 32, where the breakdown went through a process of further decay before the buildup. The procedure is similar here; by m. 9 even more instruments have dropped out of the texture and the music actually begins a gradual *ritard* over the next four measures. This sounds similar to

Example 44

Armin van Buuren, "This World Is Watching Me," (2007) 5:00 into the track, mm. 1-17

The musical score is divided into three sections: **Breakdown** (measures 1-8), **Buildup** (measures 9-16), and **Anthem** (starting at measure 17). The instruments are S.Dr., H.H., B.Dr., Synth 1, Synth 2, and Synth 3. The lyrics "world is watching me" are written under the vocal line in Synth 1. The **Buildup** section features a "Bass Drum False Arrival" at measure 13. The **Anthem** section begins at measure 17. Performance markings include *molto rit.* and *a tempo*.

a spinning melodic riff in synth 2; you saw the spinning melodic riff almost spin out and lose all energy in earlier example. The bass drum returns with steady quarter notes at m. 13 with the *a tempo* return. This leads me to hear that the spinning melodic riff has

almost produced the arrival of the anthem without a true buildup (eliding the buildup), but the music proceeds to make it clear that the real anthem is at m. 17, not m.13.

With the *a tempo* return, the synth 2 line becomes very chaotic. While not notated, the bass line is heavily distorted and slightly echoed. The goal of this line is to reach its regular rhythm motion of m. 17, but it has to move through all the distortion and broken lines to reach it. To me it sounds like a second spinning melodic riff, but the process is less clear since you get the sense that the bass line is gaining energy up to m. 17, rather than spinning out, as has been the case in the other spinning melodic riffs. To help clarify that the bass line is building up to the arrival of the anthem at m. 17, Armin gives a rest measure in the bass drum at m. 16. This technique helps cue in the listener that the bass drum false arrival was used to dramatically push towards the anthem while obscuring the actual arrival and making it more subtle. The hypermeter will this entire process. See example 45.

Example 45

Armin, “This World Is Watching Me” Hypermeter Reduction, 5:00 mm. 1-17

Example 45 shows again how the bass drum is present through the breakdown and that the breakdown itself has a gradual “break-down” process. What is attention-

grabbing is that the buildup is only one bar of hypermeter long; this is the first time there has been an example of a buildup which is shorter than the breakdown. I think this is because Armin needed this third and last breakdown/buildup section to move forward quickly once it reached the bass drum false arrival. If the bass drum was allowed to continue for too long, I think the listeners would begin to hear the false arrival as a weaker real arrival and then be confused once the proper anthem came.

The next example will demonstrate how when a bass drum plays throughout the entire breakdown and buildup sections, it creates a very different kind of arrival at the anthem. See example 46.

Example 46

Armin van Buuren, “Communication Part 3,” (1998) 5:17 into the track, mm. 1-28

The musical score for Example 46 is titled "Breakdown" and consists of seven measures. The score is arranged in a grand staff with the following parts:

- S.Dr. (Snare Drum):** Shows vertical stems at the beginning of each measure, indicating snare hits.
- H.H. (Hi-Hat):** Shows a circled 'x' in the first measure, indicating a hi-hat opening.
- B. Dr. (Bass Drum):** Plays a steady quarter-note pulse throughout the section.
- Synth 1:** Remains silent throughout the section.
- Synth 2:** Plays a melodic line consisting of eighth notes, starting on a middle C and moving up and down.
- Synth 3:** Plays a bass line consisting of eighth notes, starting on a low C and moving up and down.
- Pno. (Piano):** Remains silent throughout the section.

8 **Buildup** 10 11 12 13 14

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

Pno.

15 **Snare roll starts** 16 17 18 19

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

Pno.

20 21 22 23

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

Pno.

Bass joins roll

24 25 26 27 28

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

Pno.

Anthem

No percussion?

The most noticeable feature of this second breakdown/buildup section is that the bass drum persists through every measure. Ignoring the constant bass drum this example appears to be a normal breakdown/buildup that could have been included into the first

chapter. Armin uses a standard snare/high hat/bass lead that starts at m. 17. The bass and high hat move to faster diminutions at mm. 23-24 which helps to give that straightforward drive to what should be the arrival of the anthem in m. 25. However, when the anthem arrives, the percussion ensemble is noticeably tacet, which undermines my definition of an anthem set out from the start of this paper. A look at the hypermeter is needed to further explain what is occurring here. See example 47.

Example 47

Armin, “Communication Part 3” Hypermeter Reduction, 5:17 mm. 1-28

Aside from the bass drum being present throughout mm. 1-24, you can see that this example looks like a normal snare/high hat/bass lead. However, when the anthem arrives at m. 25, the percussion ensemble is absent for the next two beats of hypermeter. These two beats of hypermeter are not an example of added beats or a rest measure because of the harmony and regularity of the hypermeter; if you study example 46 at mm. 25-27 you can see that with the arrival of the anthem, Armin actually resolves the harmony from V to i and continues with the next 8 measure unit of repeated harmony. Then in m. 27, the full synth 3 line comes back in where it should be two measures after the start of a new 8-bar unit. The uninterrupted harmony reinforces the fact that this is an unusual anthem.

This process of withholding some of the elements of a cadential arrival is familiar enough in classical music. The arrival of the anthem simply withholds the full return of groove until m. 27. Because there is not a full return at m. 25, I hear this suspending the full release of the tension of the buildup until it is fully released two measures after the anthem. Armin has created a facet in the music where the release of tension occurs at two points rather than all at once. The impetus to do this might come from the bass drum's persistence throughout every measure. As the bass drum never goes away, it would be harder for the listener to distinguish when the actual arrival of the anthem occurred, knowing that active bass drum lines in the breakdown/build sections downplay the anthem to begin with. For these reasons, the anthem needs to momentarily do the opposite of what it normally does: take the percussion away in order to show that it *should* be there.

This song is one of the most famous in the repertoire of popular trance music because of the ways Armin plays with the arrivals. Example 48 is from a different remix of “Communication Part 3” and contains another example of Armin being crafty with a breakdown/buildup section.

False Arrivals

This remix demonstrates the next major topic of discussion—the false arrival. The false arrival is a device that composers designed in order to tease the listeners' expectations, increase tension and help divide the breakdown/buildup sections into increasingly lengthy sections. The false arrival is similar to a deceptive cadence. Essentially in the music we are expecting the arrival of the anthem, and rather than give us what we expect, the composer thwarts us and provides the real arrival at some point

Example 48

Armin van Buuren, "Communication 3 (Coldware remix)," 3:58 into the track, mm. 1-41

Breakdown/Buildup

The musical score is divided into two systems, each containing six staves. The first system covers measures 1 through 6, and the second system covers measures 7 through 12. The staves are labeled as follows:

- S.Dr. (Snare Drum): Shows a consistent pattern of snare hits on measures 1, 2, 4, and 6 in both systems.
- H. H. (Hi-Hat): Shows a consistent pattern of hi-hat hits on measures 1, 2, 4, and 6 in both systems.
- B. Dr. (Bass Drum): Shows a consistent pattern of bass drum hits on measures 1, 2, 4, and 6 in both systems.
- Synth 1: Features a melodic line in the treble clef, primarily consisting of eighth-note runs with some accents.
- Synth 2: Features a melodic line in the treble clef, primarily consisting of eighth-note runs, with some rests.
- Synth 3: Features a bass line in the bass clef, primarily consisting of eighth-note runs.

Measures 7-12 show a continuation of the drum patterns, with Synth 2 and Synth 3 continuing their respective lines. Synth 1 continues its melodic line. The overall texture is dense with rhythmic elements.

This musical score is divided into three systems, each containing staves for S.Dr., H. H., B. Dr., Synth 1, and Synth 3. The key signature is B-flat major (two flats) and the time signature is 4/4.

System 1 (Measures 13-17):
Measures 13, 14, and 15 show a steady drum pattern with S.Dr. and B. Dr. playing. Measure 16 features a "Bass lead" in the B. Dr. staff. Measure 17 begins with a "Snare roll starts" in the S.Dr. staff and a "Trick bass drum hit" in the B. Dr. staff. Synth 1 plays a continuous eighth-note melody, Synth 2 is silent, and Synth 3 plays a steady eighth-note bass line.

System 2 (Measures 18-22):
Measure 18 continues the snare roll in the S.Dr. staff. Measures 19, 20, 21, and 22 feature a snare roll in the S.Dr. staff and a slash symbol (//) in the H. H. and B. Dr. staves, indicating a change in the drum pattern. Synth 1 and Synth 3 continue their respective parts.

System 3 (Measures 23-27):
Measure 23 continues the snare roll in the S.Dr. staff. Measures 24, 25, 26, and 27 feature a snare roll in the S.Dr. staff and a slash symbol (//) in the H. H. and B. Dr. staves. Synth 1 and Synth 3 continue their respective parts.

The image displays three systems of a musical score, each consisting of five staves: S.Dr. (Snare Drum), H.H. (Hi-Hat), B.Dr. (Bass Drum), Synth 1, and Synth 3. The score is divided into three systems, with measure numbers 28-32, 33-37, and 38-41 marked at the beginning of each system.

- System 1 (Measures 28-32):** S.Dr. has a pattern of eighth notes with 'x' marks. H.H. and B.Dr. are mostly silent. Synth 1 has a melodic line with the annotation "Extended dominant prolongation begins" starting at measure 30. Synth 3 has a rhythmic accompaniment.
- System 2 (Measures 33-37):** S.Dr. continues with eighth notes. H.H. is silent. B.Dr. features "Trick bass drum hit" annotations at measures 33 and 37. Synth 1 continues its melodic line. Synth 3 continues its accompaniment.
- System 3 (Measures 38-41):** S.Dr. has a pattern of eighth notes. H.H. is silent. B.Dr. features "Trick bass drum hit" annotations at measures 39 and 40. Synth 1 has a "Rest measure (synth 1)" at measure 40 and a "Pseudo-synth sweep" at measure 41. Synth 3 continues its accompaniment.

later on. This song mainly uses what I call a *trick bass drum hit* to achieve the false arrival.

The trick bass drum hit is such an effective technique because with almost all arrivals on an anthem, the only percussion instrument you hear at the downbeat is the

bass drum. It is not until the off-beat that one usually hears the high hat sound, so composers are able to exploit this ambiguity with the trick bass drum hit. The DJ builds tension to sound like the arrival of the anthem is coming (using any of the devices seen in the previous examples), and then at the moment the anthem should have arrived, the music provides *one* hit of the bass drum. This has the effect of convincing the listener that the arrival has come, but then when they do not hear the ensuing high hat or further four-on-the-floor bass drum line, they realize that they have been tricked, and much to their delight, the buildup section continues.

This remix of “Communication Part 3” generously offers the listener five trick bass drum hits, which directly corresponds to five false arrivals. The false arrivals take place at the downbeats of mm. 17, 33, 37, 39, and 40. A large factor behind what makes the trick bass drum hit successful is the hypermeter support, but for now, I will address the other factors behind these false arrivals. The first one at m. 17 happens through a combination of two things. The harmony sustains a dominant prolongation from mm. 15-16, and consequently, a normal place for the arrival of the anthem would be at the resolution of the dominant which occurs at m. 17. Also, the supporting synth 2 doubling of the synth 1 line and the bass lead of m. 16 give this false arrival what would be a bass drum lead as we have seen from chapter 2.

A dominant prolongation that sounds like it might resolve in m. 33 also supports the false arrival at m. 33. The snare drum roll that starts at m. 17 also assists this arrival. Because the snare drum roll sustains from m. 17 on, gives almost any moment the ability to become the arrival of the anthem (Armin takes advantage of this fact for the later false arrivals). Also, from mm. 22-32 the synth 1 line has gradually been shifting in its

repetition to reach a higher tessitura, with one of the highest points being m. 32, right before the false arrival. I hear this change of register signaling that an arrival could be happening soon, so when the bass drum hits at m. 33, the listener almost expects it.

The last three trick bass drum hits (mm. 37, 39, 40) all fall into the same group. The previously mentioned dominant prolongation actually lasts from mm. 31- 40 and the snare roll also sustains through this entire section as well. These two factors dramatically increase the tension in the music, as the listener yearns for the resolution that just does not seem to come. There is another device that further facilitates this group of false arrivals—the spinning melodic riff.

The spinning melodic riff for these trick bass drum hits is generated from the synth 1 line. From mm. 33-36 you can see that the higher tessitura of the synth 1 line maintains throughout these measures, and instead of the usual 8-bar repeating line, the synthesizer sticks to a one-bar unit.³² This is the first step of the spinning out.

After the mm. 33-36 one-bar unit, the line further disintegrates into a half-bar repeating unit in mm. 37-38 which aids the trick bass drum hit of m. 39. Once that false arrival occurs, the line spins out *even more*: it turns into a one-beat repeating unit in m. 39. Armin has provided a false arrival for all three disintegrations of his spinning melodic riff. Each unit of repetition reiterates exactly four times before each trick bass drum hit. The one-bar unit of mm. 33-36 repeats four times over four measures, the mm. 37-38 half note unit repeats four times over two measures, and the one-beat unit of m. 39 repeats four times over one measure. This remarkable symmetry creates something of a diminution like a snare drum roll gradually increases the tension through a faster and

³² I bracket the first instance of these stages throughout mm. 33-40.

faster rhythmic motion, and this symmetry helps to greatly increase the tension for the real arrival of the anthem in m. 41.

The steadily increasing regularity of these trick bass drum hits has progressively increased the tension up until m. 40. When the music gets to m. 40, Armin has actually reached the end of his spinning melodic riff; it has no more room to spin out further, so he actually introduces a rest measure in the synth 1 line. While this rest measure transpires in the synth line, the snare drum roll that started from m. 17 finally reaches 32nd note diminutions, which is a definite cue that the real arrival is coming very soon. As the snare drum roll falls silent for the rest measure in the second half of m. 40, the synth 1 line comes back in with a unique rising 16th note line which outlines the dominant harmony (prolonged from mm. 31-40), and I hear it sounding similar to a synth sweep. This combination of devices sets up a very powerful release at m. 41 with the true arrival of the anthem.³³ Example 49 provides the needed insight at the roll hypermeter plays with this example.

Example 49

Armin, “Communication 3 (Coldware remix)” Hypermeter Reduction, 3:58 mm.1-41

The image shows a musical score for three parts: S.Dr. (Snare Drum), H.H. (Hi-Hat), and B.Dr. (Bass Drum). The score is divided into sections by hypermeter markers. The S.Dr. part has a melodic line that becomes increasingly complex and dense in the later measures. The H.H. part has a simple, rhythmic pattern. The B.Dr. part features a series of 'Trick Bass Drum Hits' that become more frequent and complex in the later measures. The score is annotated with hypermeter markers and section names: 'Breakdown/Buildup' (1-4, 5-8, 9-12, 13-16), 'Trick Bass Drum Hit' (17-20, 21-24, 25-28, 29-32, 33-36), and 'Anthem' (41-44). The B.Dr. part has a '5' written below it in the later measures, indicating a 5-measure hypermeter.

³³ As an aside, I am sure that the fans are very aware of the power of this release. Having been in the audience with Armin spinning this tune live, I can say that this anthem produced one of the loudest cheers of the night.

So far I have ignored how hypermeter may or may not reinforce these trick bass drum hits. You can see that the hits at m. 17 and m. 33 are supported through hypermeter since they both arrive on the downbeat of a 4-bar unit, and the hit at m. 37 occurs on a downbeat of hypermeter and can be heard as a strong arrival point as well. At this point, the remaining two hits at mm. 39 and 40 do not need to be bolstered by downbeats of hypermeter because of the overwhelming support of the spinning melodic riff.

Armin van Buuren’s “Love You More” will show how a false arrival can be used to introduce a new breakdown/buildup section entirely. See example 50.

Example 50

Armin van Buuren, “Love You More,” (2006) 4:52 into the track, mm. 1-49

Breakdown/Buildup

S.Dr. 1 Snare roll

H. H.

B. Dr.

Synth 1

Synth 2

Synth 3

I've been a - way ___ too long ___ and ev-ery day ___ I missed you

7 8 9 10 11 12

S.Dr.

H. H.

B. Dr.

more. _____ You look like you did be - fore, on - ly pret - tier. _____

Synth 1

Synth 2

Synth 3

13 14 15 16 17

S.Dr.

H. H.

B. Dr.

False Arrival/Breakdown2

Sus. Cymbal Synth sweep

Trick bass drum hit

Weak spinning melodic riff

and ev - ery day _____ I missed you more. _____ been a - way

Synth 1

Synth 2

Synth 3

18 19 20 21 22

S.Dr. H. H. B. Dr.

— too long and ev-ery day — I missed you

Synth 1

Synth 3

23 24 25 26 27

S.Dr. H. H. B. Dr.

more. Oh you look like you did be - fore, on - ly

Synth 1

Synth 3

28 29 30 31 32

S.Dr. H. H. B. Dr.

pret - ti-er. Ev-ery day — I love you more. I love you —

Synth 1

Synth 3

The image shows a musical score for two sections: 'Buildup2' and 'Anthem'.
 The 'Buildup2' section (measures 33-40) includes:
 - S.Dr. (Snare Drum): A series of vertical lines indicating drum hits.
 - H. H. (High Hat): A series of vertical lines with a 'x' symbol, indicating a 'synth sweep' at measure 40.
 - B. Dr. (Bass Drum): A series of vertical lines with a 'b' symbol, indicating a 'Bass hit' at measure 33.
 - Synth 2: A melodic line with a 'cadenza-like' label, featuring a series of notes and rests.
 - Synth 3: A series of vertical lines with a 'x' symbol, indicating a 'synth sweep' at measure 40.
 - Vocal line: A line with lyrics: "... more... Ev-ery day I love you more...".
 The 'Anthem' section (measures 41-49) includes:
 - S.Dr.: A series of vertical lines with a 'x' symbol, indicating a 'Snare roll starts' at measure 41.
 - H. H.: A series of vertical lines with a 'x' symbol, indicating a 'synth sweep' at measure 48.
 - B. Dr.: A series of vertical lines with a 'b' symbol, indicating a 'Bass hit' at measure 41.
 - Synth 2: A series of vertical lines with a 'x' symbol, indicating a 'synth sweep' at measure 48.
 - Synth 3: A series of vertical lines with a 'x' symbol, indicating a 'synth sweep' at measure 48.

At m. 17 I have marked a false arrival that turns into a new breakdown section, but the important question is, how does this happen? What matters is the way Armin establishes the false arrival. You can hear a snare drum roll start at m. 1, and it continues all the way to m. 16; this adds one element of a standard breakdown/buildup section. Additionally, the synth 3 harmony lingers on the same chord from mm. 15-16, which helps increase tension through its prolongation. Also I hear the suspended vocal line over the word “more” as a suggestion of a spinning melodic riff (although this is perhaps the weakest example so far). Finally, a synth sweep occurs in the high hat at m. 16. All of these devices contribute to the false arrival at m. 17.

But instead of continuing with a regular percussion groove, the ensemble falls silent after the trick bass drum hit, and synth 2 drops out of the texture as well. Armin has moved from five instruments (snare, vocals, synths 1-3) to three (vocals, synths 1 and 3), producing another breakdown section. However, it is not an example of a combined breakdown/buildup section because the music will “break down” further.

At m. 33, we see that most of the texture has dropped away and left behind the vocal line with a cadenza-like measure; the second breakdown section has dwindled down from three voices to one. When the synth 1 line comes back in at the end of the cadenza, its addition establishes the second buildup section. After that, there is a normal buildup. A bass hit at m. 41 brings in a snare roll from mm. 41-48, and when the snare moves to 32nd note diminutions in the second half of m. 48, the high hat joins in with it. The anthem arrives normally in m. 49.

Armin has used this technique of a false arrival in order to create one larger breakdown/buildup section that itself consists of two individual breakdown/buildup sections. Unlike the last example where the false arrivals were essentially abandoned, the false arrival in example 50 leads to an interruption. The music moves to what should be a major arrival, but after the false arrival thwarts the release of tension, the music starts over from the beginning. A classical interrupted phrase does the exact same thing. An interrupted phrase will establish a structural dominant; the dominant never resolves, and a new phrase starts from the beginning (tonic). A look at the hypermeter will further illustrate how Armin has organized these two sections. See example 51.

Example 51 clearly illuminates how Armin has organized the two separate sections. The first breakdown/buildup section is only four bars long and the false arrival

Example 51

Armin, “Love You More” Hypermeter Reduction, 4:52 mm.1-49

The musical score for "Love You More" by Armin is presented as a hypermeter reduction from measures 1 to 49. It is organized into four main sections: Breakdown/Buildup (measures 1-4, 5-8, 9-12, 13-16), False Arrival/Breakdown2 (measures 17-20, 21-24, 25-28, 29-32), Buildup2 (measures 33-36, 37-40, 41-44), and Anthem (measures 45, 46, 47, 48, 49). The score features three staves: S. Dr. (Snare Drum), H. H. (High Hat), and B. Dr. (Bass Drum). The S. Dr. staff shows a consistent pattern of snare rolls and hits, with a notable "Trick Bass Drum Hit" at measure 41. The H. H. staff includes various rhythmic patterns and a synth sweep at measure 16. The B. Dr. staff shows standard bass hits at measures 1, 5, 9, and 13, which serve as indicators of 4-measure hypermeter downbeats.

enters on the downbeat of a 4-bar group. From there you can see that the second breakdown/buildup section is twice as long as the previous one. The second breakdown lasts for four bars, and the second buildup lasts four bars as well. Armin provides a bass hit at m. 41 on a downbeat of hypermeter, and a snare roll also starts on that same downbeat. Everything sounds and looks standard except for this false arrival and subsequent breakdown/buildup section. Turn your attention to Tiesto’s “Just Be,” for another example of a false arrival that turns into a new breakdown/buildup section. See example 52.

Again the questions to ask are, how does Tiesto approach the false arrival, and how does he turn the false arrival into a new breakdown/buildup section? At m. 9-16 a standard snare roll happens right before the false arrival. The snare reaches 32nd diminutions at m. 16, and the high hat also joins in with a synth sweep to accompany the snare diminution. Aside from that, there are standard bass hits at mm. 1, 5, 9, and 13, which serve as a remarkably consistent indicator of 4-measure hypermeter downbeats. All of this leads to a strong indication of an anthem arrival, so the tension continues to

Example 52

Tiesto, "Just Be (Antillas Radio Cut)," 2:00 into the track, mm. 1-33

Breakdown/Buildup

Snare Drum

High Hat

Bass Drum

Voice

Synthesizer 1

Synthesizer 2

8

9 Snare roll

10

11

12

13

B. Dr.

Synth 1

Synth 2

14

15

16

17 False Arrival/
Buildup2

Sus. cymbal
Synth sweep

mf *f*

Trick bass
drum hit

know, it's not so far to where I go, the hard-est part is in-side me I need to just be to just be

18 19 20 21 22 23

S.Dr.

H. H.

B. Dr.

Synth 1

Synth 2

24 25 Snare roll 26 27 28

S.Dr.

H. H.

B. Dr.

just be

Synth 1

Synth 2

29 30 31 32 33 Anthem

S.Dr.

H. H.

B. Dr.

mf *f*

Weak spinning melodic riff

Synth 1

Synth 2

build when m. 17 thwarts this expectation with a trick bass drum hit.

The absence of the percussion ensemble, along with Tiesto moving from three voices (snare and synths 1 and 2) to two voices (synths 1 and 2) in m. 17, establishes a new breakdown/buildup section. The second breakdown/buildup section follows almost the exact same plan as before; only the synthesizer and vocal lines are any different. There are still bass hits every four measures, and the snare enters after eight measures with the synth sweep-accompanied 32nd diminutions in the measure before the arrival of the anthem. Similar to the last example I again hear a very weak spinning melodic riff in the synth 1 line. Instead of the mm. 31-32 repeating the a¹ five times, the last repetition loses some energy and dips down to the subtonic (g¹). If you look at the hypermeter, you can see how Tiesto has organized the two sections together. See example 53.

Example 53

Tiesto, “Just Be (Antillas Radio Cut)” Hypermeter Reduction, 2:00 mm. 1-33

The diagram illustrates the hypermeter reduction for measures 1-33 of Tiesto's "Just Be (Antillas Radio Cut)". It consists of three staves: S. Dr. (Snare Drum), H. H. (Hi-Hat), and B. Dr. (Bass Drum). The measures are grouped into sections: Breakdown/Buildup (1-4, 5-8, 9-12, 13-16), False Arrival/Breakdown2/Buildup2 (17-20, 21-24, 25-28, 29-32), and Anthem (33). A 'Trick Bass Drum Hit' is marked at measure 17. The diagram shows the rhythmic patterns for each instrument across these sections.

The hypermeter reduction appears to divide evenly into two equal sections. In fact, only looking at the percussion, there are no differences between the first

breakdown/buildup section and the second. The regular bass hits on every downbeat of hypermeter further emphasize the consistency of the hypermeter. I think that this is in part what makes this example tick. With the false arrival in m. 17, and the continuation from square one, Tiesto has essentially created a parallel interrupted period with these two sections of breakdown/buildup.

In a “textbook” parallel interrupted period a phrase progresses and sets up a structural dominant. That dominant is abandoned and the music re-starts with the exact (or nearly exact) material before reaching the same dominant and allowing that one to resolve to tonic, closing the period. In “Just Be,” mm. 1-16 build tension and the expectation of the release at the anthem, but then Tiesto thwarts that release and begins nearly the exact same phrase in mm. 17-32; the only non-parallel facet is in the synthesizer lines. To my ears all of these things come together to produce a very powerful double buildup. Tiesto has given the straightforward drive and power of a snare roll combined with a synth sweep and repeated it in order to increase the tension that much more the second time around. The more-rhythmically-active synthesizer lines in the second breakdown/buildup section only help to increase the forward drive to the arrival of the anthem at m. 33.

Conclusion

It is my hope that the techniques and procedures discussed in the body of this thesis will provide common ground for further analysis. Now that I have defined and illustrated how hypermeter, bass hits, snare rolls, snare/high hat/bass leads, rest measures, synth sweeps, spinning melodic riffs, bass leads, false bass drum arrivals, trick bass drum hits, false arrivals and other interactions of all of these devices work in trance, I have reached a level where scholars can now talk about this music with common terminology and understanding.

I hope that work can now begin in earnest to analyze much more music. I have only begun to scratch at the surface of more complex songs; there are plenty more stellar pieces to analyze. Analyzing this music will elucidate and reinforce some of our most basic concepts of music theory. Theorists are always looking for crisp and clean examples that demonstrate essential concepts and principles of music, and I think trance and house can supply many of these examples. Trance and house offer two special characteristics; they have a focused emphasis on rhythm, texture, tension, and release, and at the same time they move aspects like harmony and embellishment of melody to a less vital status. Perhaps the true value in studying the techniques in this music lies in the fact that these characteristics trim away extra variables and allow the theorist to view and speculate more directly on basic, fundamental aspects of music.

The strategies discussed in this thesis extend to new music as well. While it is beyond the scope of this thesis to discuss it here, there is a definite trend in current popular music (starting from 2007 to now) of adapting trance and house devices into the canon; this infiltration is a large topic to trace. In fact many songs on the Billboard Top

40 are nothing *but* trance and house music performed by the pop icons of today. The most recent albums of figures like Britney Spears, Katy Perry, Lady Gaga, Jason Derulo, and many others are basically trance and house records. Lyrics have also begun to reflect the introduction of EDM into popular music. For example Usher released a song in which the lyrics during the chorus are “’cuz, baby, tonight, the DJ’s got us falling in love again.” Another example that also directly references the DJ and the breakdown/buildup/anthem form itself is Kesha’s “Tik Tok.” In this song the bridge, which happens to be a section of breakdown/buildup/anthem, directly calls to the DJ; “DJ, you build me up. You break me down. My heart, it pounds, yeah you got me.”

This recent development of popular music means that in order to have a complete conversation about popular music today scholars need to know about some of the devices discussed in this thesis. When early Rock and Roll started out closely following the techniques of Blues music and Rhythm and Blues, it called for similar imperative to study the roots of the music, rather than just the genre itself.

Another topic not in the scope of the thesis is the discussion of how individual breakdown/buildup/anthem sections apply to the entire form of these songs. Many trance and house songs can be seen through the traditional form of popular song (verse, chorus and bridge), but the devices of breakdown/buildup/anthem create a separate sense of formal boundaries which redefine the large scale structure of the music. The music can be seen either as verse, chorus, bridge or as movement from one breakdown/buildup/anthem to the next. The breakdowns, buildups, and anthems can also be mixed anywhere into the verse, chorus, or bridge; the many combinations demand further study. Now that I have defined the basic devices of breakdowns, buildups, and anthems, this study can begin.

While collecting examples of some of the top DJs and finding the techniques for this thesis I found that Armin van Buuren by far used the widest array of the techniques explained here. In fact, of the 22 songs in this thesis, Armin is found 9 times and uses every technique addressed in the thesis. In many ways I have found him to be the most inventive and masterful composer in this genre. But perhaps there is a correlation between the mastery of every technique discussed in this thesis and Armin van Buuren's ranking as the number one DJ in *DJ Magazine* for the last four years (the only DJ to do this) and ranking in the top five for the last eight years. Tranceaddict.com has ranked him as number one since 2005 (the first year they started their top 250 list).³⁴

Perhaps giving further defense of my view that Armin is one of the most talented composers in trance and house, I would like to explore another technique in future research. I noticed a trend recently (particularly in Armin's music) where DJs seem to focus on producing subtle arrivals at the anthem rather than extremely powerful arrivals. While I suspect that hypermeter plays a strong role in this (instead of the anthem arriving on a hypermetrical downbeat, it arrives on a weak beat) there could be more devices that help make an anthem arrive more subtly. Armin van Buuren's "In and Out of Love" is a great place to start addressing this phenomenon.

³⁴ Simply go to <http://www.trancaddict.com/top250> and you will see links for previous years as well as the ranking for 2010 (accessed July 15, 2011).

Appendix: Selected Works for Further Study

Armin-Yet Another Day

Armin-The Sound of Goodbye

Armin-Exhale

Armin-Simple Things

Armin-Clear Blue Moon

Armin-Touch Me

Armin-In and Out of Love

Armin-Wall of Sound

Armin-Zocalo

ATB-Swept Away

ATB-Humanity

ATB-What About Us

ATB-Far Beyond

ATB-In Love with the DJ

ATB-Long Way Home

ATB-Here With Me

Benassi Bros-Light

Benassi Bros-Feel Alive

Benassi Bros-Get Better

Benassi Bros-Make Me Feel

Benassi Bros-Feel So Fine

Benassi Bros-Rocket in the Sky

Benassi Bros-Every Single Day

Benassi Bros-Run to Me

Markus Schulz-I Am

Markus Schulz-Daydream

Markus Schulz-The New World

Paul Van Dyk-Reflections

Paul Van Dyk-That's Life

Paul Van Dyk-Nothing But You

Paul Van Dyk-Kaleidoscope

Paul Van Dyk-Crush

Paul Van Dyk-Homage

Paul Van Dyk-Spellbound

Tiesto-Love Comes Again

Tiesto-Traffic

Tiesto-Nyana

Tiesto-Adagio for Strings

Works Cited

- Amico, Stephen. "‘I Want Muscles’: House Music, Homosexuality, and Masculine Signification." *Popular Music* 20, no. 3 (2001): 359-78.
- Bradby, Barbara. "Sampling Sexuality: Gender, Technology, and the Body in Dance Music." *Popular Music* 12, no. 2 (1993): 155-76.
- Butler, Mark J. "Turning the Beat Around: Reinterpretation, Metrical Dissonance, and Asymmetry in Electronic Dance Music." In *Music Theory Online* 7, no. 6 (2001) <http://www.societymusictheory.org/mto/issues/mto.01.7.6/toc.7.6.html> (accessed April 4, 2009).
- _____. *Unlocking the Groove: Rhythm, Meter, and Musical Design in Electronic Dance Music*. Bloomington, IN: Indiana University Press, 2006.
- Fritz, Jimi. *Rave Culture: An Insider’s Overview*. Victoria, BC: Smallfry Enterprises, 1999.
- Gore, Georgina. "The Beat Goes On: Trance, Dance and Tribalism in Rave Culture." In *Dance in the City*, edited by Helen Thomas, 50-67. New York: St. Martin’s Press, 1997.
- Hadley, Daniel. "‘Ride the Rhythm’: Two Approaches to DJ Practice." *Journal of Popular Music Studies* 5 (1993): 58-67.
- Horgan, Chris. "Pandora Presents...Electronic Dance Music, Part I." In *Pandora Video Series: Music 101*, http://blog.pandora.com/archives/show/2007/05/electronic_danc.html (accessed April 8, 2009).
- Hutson, Scott R. "Technoshamanism: Spiritual Healing in the Rave Subculture." *Popular Music and Society* 23, no. 3 (1999): 53-78.
- Krebs, Harald. "Some Extensions of the Concepts of Metrical Consonance and Dissonance." *Journal of Music Theory* 31 (1987): 99-120.
- Langlois, Tony. "Can You Feel It? DJs and House Music Culture in the UK." *Popular Music* 11, no. 2 (1992): 229-38.
- Lerdahl, Fred, and Ray Jackendoff. *A Generative Theory of Tonal Music*. Cambridge, MA: MIT Press, 1983.
- Lester, Joel. *The Rhythms of Tonal Music*. Carbondale: Southern Illinois University Press, 1986.
- Loza, Susana. "Sampling (Hetero)Sexuality: Diva-Ness and Discipline in Electronic

- Dance Music." *Popular Music* 20, no. 3 (2001): 349-57.
- Maira, Sunaina. "TranceGlobalNation: Orientalism, Cosmopolitanism, and Citizenship in Youth Culture." *Journal of Popular Music Studies* 15, no. 1 (2003): 3-33.
- McLeod, Kembrew. "Genres, Subgenres, Sub-Subgenres, and More: Musical and Social Differentiation with Electronic/Dance Music Communities." *Journal of Popular Music Studies* 13, no. 1 (2001): 59-76.
- Meyer, Leonard. *Emotion and Meaning in Music*. Chicago: University of Chicago Press, 1956.
- Narmour, Eugene. *Beyond Schenkerism: Toward and Alternative in Music Analysis*. Chicago: University of Chicago Press, 1977.
- Rothstein, William. *Phrase Rhythm in Tonal Music*. New York: Schirmer Books, 1989.
- Schacter, Carl. "Rhythm and Linear Analysis: A Preliminary Study." *The Music Forum* 4 (1976): 281-334.
- _____. "Rhythm and Linear Analysis: Aspects of Meter." *The Music Forum* 6 (1987): 1-59.
- _____. "Rhythm and Linear Analysis: Durational Reduction." *The Music Forum* 5 (1980): 197-232.
- Spicer, Mark. "Accumulative Form in Pop-Rock Music." *Twentieth-Century Music* 1, no. 1 (2004): 29-64.
- Tjora, Aksel H. "The Groove in the Box: A Technologically Mediated Inspiration in Electronic Dance Music." *Popular Music* 28, no. 2 (2009): 161-77.

For Further Reading

- Bader, Rolf. "Perception and Analysing Methods of Groove in Popular Music." *Systematische Musikwissenschaft* 2, no. 1 (1994): 145-54.
- Clough, John, and Jack Douthett. "Maximally Even Sets." *Journal of Music Theory* 35, no. 1 (1991): 93-173.
- Covach, John. *Understanding Rock: Essays in Musical Analysis*. Edited by John Covach and Graeme M. Boone. New York: Oxford University Press, 1997.
- "Dance Music." In *The Encyclopedia of Popular Music*, 4th ed., edited by Colin Larkin. New York: Oxford University Press, 2006.

- Handel, Stephen. "Using Polyrhythms to Study Rhythm." *Music Perception* 1, no. 4 (1984): 465-84.
- _____. "The Differentiation of Rhythmic Structure." *Perception and Psychophysics* 52 (1992): 492-507.
- _____, and James S. Oshinsky. "The Meter of Syncopated Auditory Polyrythms." *Perception and Psychophysics* 30, no. 1 (1981): 1-9.
- Hasty, Christopher. *Meter as Rhythm*. Oxford: Oxford University Press, 1997.
- Katz, Mark. *Capturing Sound: How Technology Has Changed Music*. Berkeley: University of California Press, 2004.
- Middleton, Richard. *Studying Popular Music*. Philadelphia: Open University Press, 1990.
- Peel, Ian. "Dance Music." In *Grove Music Online. Oxford Music Online*, <http://www.oxfordmusiconline.com/subscriber/article/grove/music/47215> (accessed April 8, 2009).
- Prendergast, Mark. *The Ambient Century: From Mahler to Moby—The Evolution of Sound in the Electronic Age*. New York: Bloomsbury, 2003.
- Shapiro, Peter. *Modulations: A History of Electronic Music—Throbbing Words on Sound*. New York: Distributed Art Publishers, 2000.
- Stephenson, Ken. *What to Listen For in Rock: A Stylistic Analysis*. New Haven, Conn.: Yale University Press, 2002.
- Tagg, Philip. "Analysing Popular Music: Theory, Method, and Practice." *Popular Music* 2 (1982): 37-67.
- Temperley, David. "Syncopation in Rock: A Perceptual Perspective." *Popular Music* 18, no. 1 (1999): 19-40.
- _____. *The Cognition of Basic Musical Structures*. Cambridge, Mass: MIT Press, 2001.