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Finding Our Rhythm: Contextualizing Second Language Development Through Music-Based Pedagogy

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Abstract

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In my dissertation, I introduce a music-based intervention designed to develop students' pronunciation (speech rhythm) in a U.S. college-level English as a second language classroom. The intervention draws heavily on the rhythmic properties of rap and other forms of popular music. Rather than contending solely with the binary question of whether the intervention works (or results in "best practices"), I use mixed methods to examine individual student outcomes through the lens of three major complex subsystems of second language development (Larsen-Freeman, 2011): ideological, interactional and speech production. I aim to demonstrate that students' rich in-class interactional practices and ideological understandings of the (African American) language associated with the music in the intervention (and with my own Blackness as a teacher-researcher) reveal as much about their second language development as does an assessment of their speech rhythm production. Building on the premise that language learning is an endeavor that is not only cognitive in nature, but also social, my dissertation advocates for a much fuller contextualization of second language development and classroom practices.

FINDING OUR RHYTHM:

CONTEXTUALIZING SECOND LANGUAGE DEVELOPMENT

THROUGH MUSIC-BASED PEDAGOGY

Catrice Barrett

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DEVELOPMENT THROUGH

MUSIC-BASED PEDAGOGY

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Catrice Barrett

Dedicated to my Grin 'n' Barrett Crew – DuWayne, Amira and Zay Zizzle

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ABSTRACT

FINDING OUR RHYTHM: CONTEXTUALIZING SECOND LANGUAGE

DEVELOPMENT THROUGH MUSIC-BASED PEDAGOGY

Catrice Barrett

Betsy Rymes

Each person learning a second or foreign language faces a unique developmental path. Individual learning trajectories have been obscured, however, by the search for "best practices" in second language educational research and praxis (Edge & Richards, 1998). This one-size-fits-all view has been further reinforced by a predominant cognitivist tradition, which orients to cognition mainly through mechanical and input and output processing, or a "mind as machine" metaphor (Boden, 2006). My dissertation aims to offer an alternative to this tradition.

In my dissertation, I introduce a music-based intervention designed to develop students' pronunciation (speech rhythm) in a U.S. college-level English as a second language classroom. The intervention draws heavily on the rhythmic properties of rap and other forms of popular music. Rather than contending solely with the binary question of whether the intervention works (or results in "best practices"), I use mixed methods to examine individual student outcomes through the lens of three major complex subsystems of second language development (Larsen-Freeman, 2011): ideological, interactional and speech production. I aim to demonstrate that students' rich in-class interactional practices and ideological understandings of the (African American) language associated with the music in the intervention (and with my own Blackness as a teacher-researcher) reveal as much about their second language development as does an assessment of their speech rhythm production. Building on the premise that language learning is an endeavor that is not only cognitive in nature, but also social, my dissertation advocates for a much fuller contextualization of second language development and classroom practices.

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CHAPTER 1

INTRODUCTION

"Listening for rhythm signals attending to the flow of interactions. There is rhythm in poetry, rhythm in speech, and rhythm in a classroom."

-Katherine Schultz, 2003, p. 43

Overview and Framing the Problem

There is a place in our songs, in our speech and even in our silence where rhythm lives. Each world language is distinct in what linguists refer to as its *speech rhythm*. In the case of language, rhythm is comprised of alternations between prominent (stressed) and non-prominent (unstressed) syllables. English speakers manipulate three major speech features - pitch, duration and intensity (volume) – to produce the prominence contrasts that result in the rhythm a listener perceives. White and Mattys (2007) found there to be a direct influence of speech rhythm patterns from the first language to the second language. When applied to English, these patterns can result in particular pronunciation challenges for learners, such as robotic cadence, misconstrual of their social intent, or even intelligibility issues (Anderson-Hsieh et al., 1992). When we consider that all around the world, rhythm is universally experienced through music, and, as Gilbert (2008) suggests, English communication is organized into "musical signals," the starting point of this dissertation is a seemingly simple question: could the use of music in a second language classroom help English language learners develop their speech rhythm?

A Poetic and Musical Approach to the Problem

In this dissertation, I begin by proposing a music-based approach to helping students develop their L2 English speech rhythm. There are several reasons for this. Speech rhythm is a unique suprasegmental language feature in that it carries its own embedded connections to music. For example, Patel and Daniele (2003) compared the rhythmic patterns of spoken English and French with the rhythm found in the music of these two languages; they found that the musical differences in rhythm between English and French trended in the same direction as the linguistic rhythmic differences (i.e., more stressed and syllable timed, respectively). In a sense, then, rhythm can be thought of as the common ground between music and language. As English language learners build fluency, the language-music connection seems to be a natural and engaging next step toward aligning their fluency with the techniques (linking, vowel reduction, etc.) used to produce English rhythm. Gilbert (1994) recognized this by suggesting an emphasis on the musical (and suprasegmental) aspects of pronunciation over segmentals as a means to move beyond the more decontextualized methods that have been used traditionally.

The embrace and prioritization of suprasegmental pronunciation instruction is hardly new news (Munro & Derwing, 1995). Perhaps one of the more noteworthy byproducts of the move away from singular dedication to small structural units has been the push to recognize the need for more context in pronunciation teaching (Gilbert, 2008). In this dissertation, I would like to expand that line of reasoning even further. If we are really looking to attend to *context*, what types of (research) questions about music-based pronunciation pedagogy really help us understand the complexity of second language development?

Attending to the Context of Learning Beyond Binaries

My contemplation over the issue of exactly what to investigate about music-based pedagogy has been rewarded by face-to-face interaction with other scholars and educators. When attending a conference or similar space of intellectual exchange, I had grown accustomed to being approached with a familiar question – "Oh, what is your dissertation about?" As a dutiful doctoral candidate, I prided myself on reducing my answer to this question down to a solid 3-second elevator speech – "I'm researching a music-based approach to teaching pronunciation to English language learners." Interestingly, after sharing this, I was typically asked to advise on tricks, tips and "best practices" for using music in the classroom. As much as I appreciated my immediate expert status upgrade, I began to question the assumption underlying some of the responses. They seemed to imply a one-size-fits-all view of music in the classroom. Eventually, another question emerged for me: Could it be that the learners and the environment determine what is actually "best?" As far as my dissertation was concerned, this was the path of no return.

My focus shifted beyond just seeking to make a binary determination about whether the music-based intervention *works*. Using mixed methods, I have found it worthwhile, instead, to research the intervention by adopting "a (complex) systems perspective" (Larsen-Freeman, 2015) on second language development. In particular, I view music-based pedagogy through the lens of three major complex subsystems of second language development (Larsen-Freeman, 2011): speech rhythm production (recorded student samples), ideological (reflections on societal varieties of language) and interactional (student exchanges during in-class activities). In this way, I am able to

investigate more than just knowledge and skills. I can also examine my positionality as a Black teacher-researcher (among the very few in TESOL – Nero, 2006), and how this factors into what my learners bring to the social fabric of my music-based pronunciation classroom. These contextual nuances complicate traditional, one-dimensional (often solely cognitive) views of what it means to learn a second language. Additionally, from a teaching perspective, my dissertation complicates the notion that best practices – i.e., specifiable procedures and predictable outcomes (Edge and Richards, 1998) - exist for teaching through music in the second language classroom.

CHAPTER 2

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Complexity Theory: A (Meta) Theoretical Framework for Second Language Development

As Ravitch and Riggan (2011) argue, the task of a theoretical framework is not only to piece together a relevant range of theories, but also to unpack and consider the underlying assumptions theories hold with regard to which tools and ideas are of value in answering the research question(s). The power of a reflexive theoretical framework is twofold: it enables us to re-consider existing relationships among concepts in the literature and it inspires us to uncover new ways of relating relevant aspects of our inquiry.

Over the past few decades, scholarship on second language development has yielded an increasingly multifaceted view of language learning processes. Much of the advancement is due to a willingness of scholars to engage the field in ongoing self-criticality about its tacit assumptions on second language learning. Recent work has addressed the need to move traditional theoretical and methodological stances in a more expansive direction. Firth and Wagner (1997), for instance, leveled a pivotal critique at the field for its tendency to account too narrowly for language as an individual cognitive system that develops in isolation. They argued instead for an "enhanced awareness of the

contextual and interactional dimensions of language use" (p. 285). Apart from reductionist theoretical orientations, there are also some methodological assumptions that may also overlook the contextual richness of language in use by individuals. Data in second language studies are often collected before and after an intervention, which suggests that these points hold the most meaningful revelation about what has been learned. In some cases, these data are entirely quantitative and typically aggregated, obscuring the individual variability within the group. Above all, the few existing studies on L2 speech rhythm development - and L2 pronunciation more broadly (see Derwing & Munro, 2005) - lack a classroom context to authentically reflect the contingencies of learning in such a domain.

Raising these conceptual issues about second language research traditions is not meant to imply that there exists a perfectly comprehensive theory of language development. It does, however, expose the need to consider how our teaching and research agendas are guided by specific belief systems about language, or theories of language. With the term "theory of language," I am taking a cue from scholars such as Gee (2012) and van Lier (2004), who argue that our theories of language are typically tacit and underexamined in our actual practice as scholars or educators. With an attempt to bring as much conscious attention as possible to my own theory of language, I am approaching this work with the belief that that learners draw from multiple subsystems of language to find and create meaning throughout their unique developmental trajectories. Therefore, second language development must be studied in a way that accounts for a much fuller context of language learning. Below I present Complexity Theory (CT) as a framework harmonious with these aims.

Complexity Theory is a theory that originates from the natural sciences. Put simply, CT aims to explain the interaction of elements in a complex system. In many ways, CT reveals order from seemingly random, chaotic and dispersed elements of an expansive system. From a natural sciences perspective, CT has been used to interpret the growth or behavior of organisms in relation to other elements of the environment (e.g., other organisms, climate, etc.). Commitment to interaction and interconnectedness is a feature of CT, which has greatly facilitated its adoption into second language research. Diane Larsen-Freeman has been one of the major champions of CT in terms of applying its principles to the area of second language learning. Her work (1997; 2006; 2011; 2015 and many more) posits that the ways that language is conceived, taught, learned and used can each be thought of as individual systems. The ecological orientation of CT offers a means of working beyond traditionally reductionist theories of second language development. Rather than dividing cognitive and social concerns, CT supplies a way to harmonize them, as they are both relevant to the true operation of the complex system of second language development. Larsen-Freeman explains: "complexity [is] a metaphorical lens through which diverse perspectives [on language development] can be accommodated, indeed integrated" (2000, p. 173). She further highlights the distinguishing features of a complex system as:

- emergent – giving rise to spontaneous occurrences
- dynamic – always changing
- open – boundless
- adaptive – responsive to change in the environment
- interconnected – operating across different levels of time and scale

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- nonlinear – yielding effects not proportionate to a cause

(Larsen-Freeman, 2015)

Thus, if second language development is taken to be an entire complex system, the contribution of CT lies in how it accounts for the ways in which multiple subsystems of language development interact – that is, not simply at a pre and post-intervention time point, but across an extended series of points in time and in relation to cognitive and social influences. In 2006, Larsen-Freeman applied the tenets of CT through a mixed-methods empirical study on the emergence of complexity in the writing of five adult Chinese learners of English. In the quantitative analysis she found that the aggregated averages of the whole class, when plotted over time, differed significantly from the micro-level trajectories of individual learners. In other words, although learners had been exposed to the same second language instruction over a 10-month period, they exhibited drastically divergent patterns of development in the areas of complexity, fluency and accuracy. The qualitative analysis revealed that over time certain learners showed increased ability in morphosyntax, the expression of agency (through narration) and in establishing intersubjectivity with the audience.

 Empirical work employing CT so far highlights the value of attending to the *contextual* nuances that guide individuals along their respective paths of development. Given the central role of context in the title of this dissertation (and in CT– see Larsen-Freeman, 2015), it is worth taking time here to clearly establish what I mean by context. Drawing from van Lier (2004), I see context not just as extraneous detail about the learning environment. While context certainly includes the surroundings of the

classroom (if this is, in fact, where learning is taking place), it is important to understand context as existing not only externally, but also within and through the environment. As interaction proceeds (or not) through language and other communicative means in the environment, so too is the context being constructed moment by moment. Schultz (2003) alludes to the socially constructed nature of context through her reference to the "rhythm in a classroom" (p. 43) – a thematically suitable parallel to the musical aims of this study. To be clear, the context of learning exists both within and outside of the classroom; likewise, it exists inside and outside of one's brain. Motivated by these considerations, I have devised a theoretical framework intended to engage analytically with the implementation of music-based pedagogy through the lens of three complex subsystems of language development: speech production, ideology and interaction.
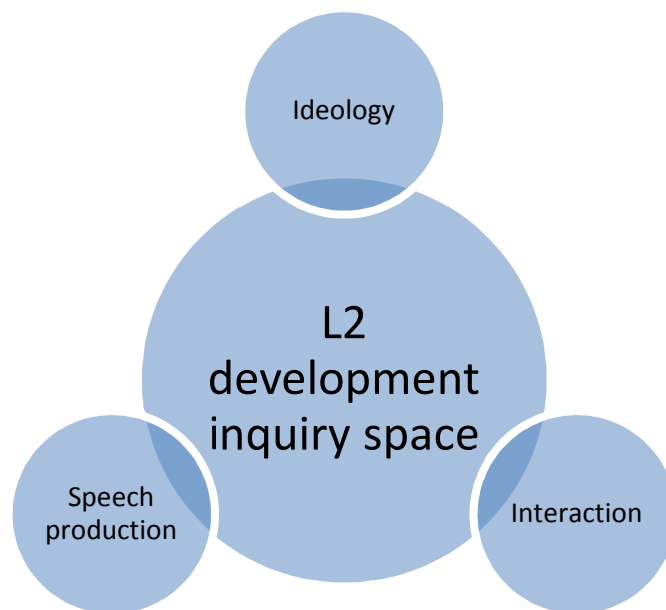
Figure 2.1 A Visual Representation of the Theoretical Framework

Figure 2.1 shows that each of the three focal subsystems of language development

works independently at its level of scale, yet *interconnectedly* with the larger system of

second language development. By way of the constant *dynamic* change inherent to the

subsystems, one would expect spontaneously *emergent* activity to stem from any or all

subsystems in a way that may trigger *(co)adaptation* from another subsystem,

demonstrating the *openness* of all subsystems in the space. The progression of outcomes

that result from this activity could move in systematic, yet unexpected directions as a

result of the *nonlinear* nature of change in the larger complex system of L2 development.

Taken together, these core principles depict the anticipated work of CT in this study.

Another way to understand the theoretical framework is in how it serves to

illustrate the efficacy of CT as a metatheory.   A metatheory is a broad conceptual

container within which each subsystem's theoretical principles operate. Overton (2007)

elaborates: "Theories and methods refer directly to the empirical world, while

metatheories refer to the theories and methods themselves" (p. 154).

Literature Review

Speech Production

The music-based pedagogical approach of this study was designed largely to be

responsive to and compatible with phonological properties of English speech rhythm.

Therefore, I begin with theoretical coverage and a review of scholarship in this area.

Theoretical Foundations Of Speech Rhythm

Loritz (1999) describes rhythm as the "central organizing mechanism of

language" (p. 142). At the lowest level of English rhythm is one of its smaller, building-

block components – stress. The stressed syllables of a word are characterized by being

louder, longer and higher in pitch than unstressed syllables. Accordingly, these three features translate to three common (stress) correlates used to measure speech rhythm acoustically – intensity, duration, and fundamental frequency (pitch or f0). While phoneticians claim that there are as many as six levels of word stress, only three levels are typically presented to students in a pronunciation course – stressed, unstressed and reduced (Celce-Murcia et al., 2010).

Although our ears are perceptually attuned to cross-linguistic rhythmic differences, the matter of developing a taxonomy to account for these differences has generated decades worth of debate. This debate essentially boils down to a divide between advocates and opponents of the *rhythm class hypothesis*. According to the rhythm class hypothesis, there are three rhythm classes, or discrete categories for grouping the world's languages based on rhythm: *syllable-timed*, *stress-timed* and *mora-timed*. The first two classes were coined by Pike in 1945; the mora (proposed by Bloch, 1942; Han, 1962; Ladefoged,1975) only applies to Japanese and will not be discussed further in this study. The term syllable-timed implies that the start of each syllable is equidistant in time from the start of the next syllable; stress-timed means that the start of each *stressed* syllable is equidistant in time from the start of the next stressed syllable. This distinction has long been accepted as a way to explain the perceptual differences in linguistic cadence such as the "machine gun rhythm" (Lloyd, 1940, p. 25) of French or Spanish (typically classified as syllable-timed) and the "Morse code rhythm" of English or Dutch (typically classified as stress-timed). As Abercrombie (1967) asserted, these categories rely on the principle of isochrony, or the idea that either syllables or interstress intervals are identical in duration throughout an utterance. A common illustration of this

principle that has been used in pronunciation teaching is the "cats chase mice" rhythm

drill below (Celce-Murcia et al., 2010, p. 320):

the CATS		CHASE		**MICE**
the CATS	have	CHASED		**MICE**
the CATS	will	CHASE	the	**MICE**
the CATS	have been	CHASing	the	**MICE**
the CATS	could have been	CHASing	the	**MICE**

In this drill, the three levels of sentence-level stress are represented typographically as

follows: lowercase = unstressed, capitalized = normal stress, capitalized and boldfaced =

strong stress (focus word). Each line contains a different number of total syllables, but

the time it takes to say each line is the same. Native speakers of English would use

vowel reduction on the function words in between the stressed syllables to keep the

rhythm "flowing" on time. What's more, the stressed syllables fall at the same point in

time for each utterance, implying equal interstress intervals. This is the basis of

isochrony theory and consequently, for the classification of English as *stress*-timed.

Although "syllable-timed" and "stress-timed" have remained generally accepted

as apt descriptors of speech rhythm over the years (Mehler, Dupoux, Nazzi & Dehaene-

Lambertz, 1996), later studies began to challenge isochrony as the basis of speech

rhythm. Bolinger (1965) showed that the duration of interstress intervals is not constant,

but is influenced by the specific types of syllables. Compared to languages such as

Cantonese, Mandarin and Spanish, English allows for syllables that are *heavy*, that is,

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containing consonant clusters, diphthongs or tense vowels in coda position (Setter, 2006).

These phonotactic differences can pose a challenge for speakers/learners who are not

accustomed to producing the amount of contrast required to distinguish the "heavy"

syllables from the "light" ones in English. In Dauer's (1983) seminal study she points

out that syllable structure, vowel reduction and word stress (rather than interstress timing)

bring a language *relatively* closer to being categorized as stress or syllable timed. This

reasoning has been supported by a recent mass of studies (Grabe & Low, 2002; Ramus,

2002; Torgersen, 2012), which favor the idea of a rhythmic continuum over discrete

rhythm classes.

The Measurement Of Speech Rhythm

The theoretical developments which began to challenge isochrony and the rhythm

class hypothesis generated a renewed interest in the study of speech rhythm. Particularly

over the last decade, this interest has resulted in a number of proposed metrics for

quantifying speech rhythm. Typically, these metrics of rhythm are based on

measurements taken from the acoustic speech signal. The *Normalized Pairwise*

Variability Index (nPVI) (Grabe & Low, 2002) – is one such metric that has been

particularly successful in its adoption.

The nPVI is the result of continual refinements to earlier calculations, which also

looked at durations at the lowest level of the prosodic hierarchy - the phonetic level. In

order to show prominence in certain syllables over others in a language, there must be

some marker that will distinguish more prominent units from the less prominent. As the

nucleus (or peak) of a syllable, the vowel serves this function. The *vocalic* nPVI

calculation exploits the prominence-marking feature of the vowel by measuring the

difference between adjacent vowel durations. In the visual representation of the vocalic nPVI in Figure 2.2 below (taken from Nolan & Asu, 2009) the greater slope of the solid slanted line illustrates how, in the case of stress-timed languages, prominence differences are greater than in syllable-timed languages (dotted line):
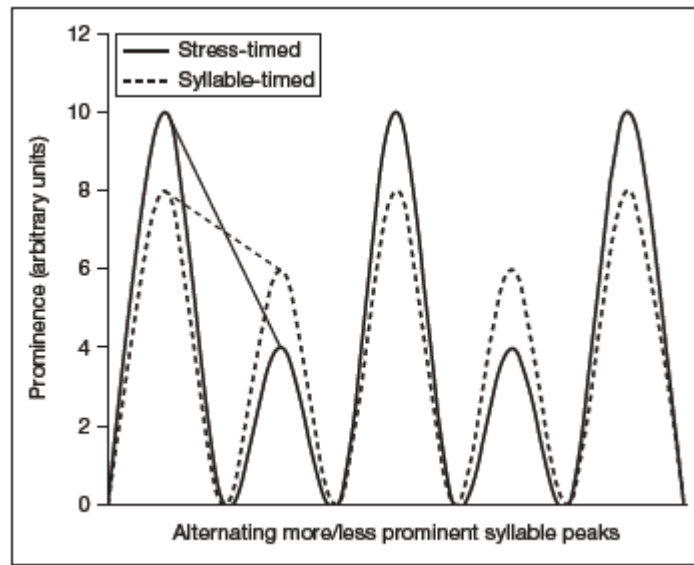
Figure 2.2 Comparison of Prominence Alternation in Stress and Syllable-Timed Languages

This principle applies directly to the nPVI, as a higher nPVI indicates a greater contrast in vowel durations, suggesting a more stressed-timed rhythm. As a linguistic example, consider the following sentence, in which the bolded syllables are stressed. A speaker who applies a stress-timed rhythm to the utterance would differentiate the stressed syllables (and consequently the vowels in these syllables) by making them longer, louder and/or higher in pitch than the unstressed and reduced syllables:

Ex**cuse** me. **Where** is the **gro**cery **store**?

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A lower nPVI value, on the other hand, indicates that the vowel durations across the utterance are not much different in length from each other, which is a feature common to the rhythm of syllable-timed languages. A syllable-timed rendition of the same English utterance might convey much less contrast, giving a similar emphasis to all syllables. Consider the following, for instance:

__ __ ____ _ __ _____ ____
Ex**cuse me**. **Where is the grocery store**?

Regular alternation between stressed and unstressed syllables and their vowels thus provides the contrastive basis of the nPVI calculation. An important critique of studies using nPVI, however, is that they tend to focus exclusively on duration (Nolan & Asu, 2009; Cummings, 2011) when rhythm has been known to manifest multidimensionally through three correlates: duration, intensity and pitch. In some respects, a focus on duration seems well supported by studies that have shown it to be the most salient correlate of the three (Adams & Munro, 1978; Beckman & Edwards, 1994). On the other hand, research on L2 rhythm has brought forth considerable evidence regarding L1 influence on the salience of particular correlates in speech rhythm production. Lee and Cho (2011) found that for Japanese L1 speakers, intensity was the most salient marker of English L2 speech rhythm. It is unclear why this is the case, given that intensity is not generally regarded as key in the Japanese prosodic system. For speakers with Mandarin (a tone language) as an L1, numerous studies have found fundamental frequency (pitch) to be more salient than the other two correlates in English L2 speech rhythm production (Zhang, Nissen, & Francis, 2008; Barto-Sisamout, 2011; Keating & Kuo, 2012).

As a result of cross-linguistic influence considerations in L2 speech rhythm production, there is a clear disadvantage to focusing solely on duration. Only in the past couple of years has speech rhythm scholarship begun actively applying techniques that seek to address the limitations of a one-dimensional approach to measuring rhythm. Fuchs (2014) conducted a perceptual experiment where he found that a 60 Hz increase in f0 contributed to a perceived increase in duration of 4%. Using these results, he modified the nPVI to include a factor to account for the f0 influence. When comparing his modified nPVI to the traditional version on British and Indian English data, the modified nPVI correlated more closely with reported perceptions than did the traditional nPVI. He (2012) draws on L2 data to make another contribution toward modifying the nPVI to be multidimensional. Instead of using duration, he calculated an nPVI.db (for intensity). Applying this metric, he was able to quantitatively differentiate the L2 English of Mandarin speakers from that of native English speakers. Based on the results of a few existing studies, a multidimensional approach to the nPVI appears promising, but is in need of further investigation.

Issues In The Teaching Of Speech Rhythm

Theoretical linguistics has enriched pronunciation pedagogy with a wealth of information. Studies about rhythmic differences among languages enable instructors to make more informed choices about the potential needs of students. In their groundbreaking study, Anderson-Hsieh et al. (1992) confirmed the role of speech rhythm as an intelligibility factor in L2 speech. This work is complemented empirically by numerous studies such as Grabe and Low's (2002) acoustic confirmation of the strong syllable-timed profile of Spanish. The classification they devised would suggest that

learners with Spanish as an L1 would make good candidates for rhythmic instruction in English, a language with strong stress-timed properties. Identifying the rhythmic classification of learners' L1 may be the simpler part of the equation, however. As more details emerge about the mechanics of speech rhythm production, the options for setting instructional priorities and sequences becomes another issue to contend with.

With so many levels of the prosodic hierarchy available, there is little agreement in the literature over where to begin teaching speech rhythm. Gilbert (2008) proposes an incremental approach through which learners move progressively through the prosodic hierarchy, which she represents figuratively as the "prosody pyramid" (Figure 2.3). Instruction begins from the top of the pyramid, with the stressed vowel (or syllable peak), and moves downward toward accentual phrases (commonly referred to as "thought groups" in pronunciation teaching). Celce-Murcia et al. (2010) agree that mastery of smaller stress units such as words is necessary before tackling larger units. Chela-Flores (2001), on the other hand, argues for just the opposite. She contends that learners benefit more from a bottom-up approach where they start with larger "fully fledged meaningful utterances" (p. 88). Her claim is that this ordering is more effective at facilitating skill transfer across the levels of the hierarchy (than vice versa).
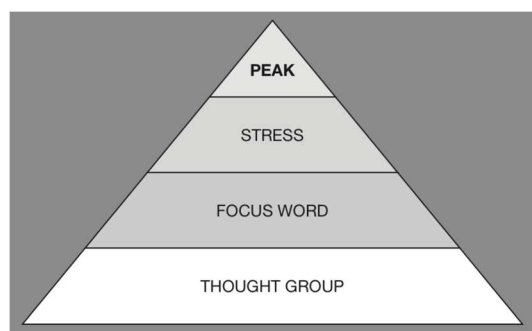
Figure 2.3 The Prosody Pyramid (Gilbert, 2008)

Since rhythm is a matter of systematically altering prominence, an additional point of contention in speech rhythm pedagogy is whether to begin by showing students how to produce strong stress units or weak ones. In her textbook, *Targeting Pronunciation,* Sue Miller (2007) urges instructors to teach sentence level stress by beginning with the focus word, the most strongly stressed word in an accentual phrase. Her reasoning is that the focus word naturally attracts the most attention and will therefore be the easiest unit for students to orient to both perceptually and in their speech production. Liang (2003) sees the issue differently, however. Based on her work as an EFL instructor in China, she has noticed that Chinese students tend to overuse strong forms. In the sentence "John thinks that man is evil," for example, the pronoun *that*, depending on whether it is pronounced with a full stressed vowel or a weak, reduced vowel, completely alters the meaning of the sentence. As a result, Liang recommends using weak forms as a starting point for orienting learners to the important ways in which vowel reduction impacts the rhythm of spoken English.

Lacking a clear consensus on how to teach speech rhythm poses a challenge to ESL/EFL instructors, who commonly already lack confidence and training in pronunciation teaching (Faez and Valeo, 2012). Despite these challenges, the efforts of second language scholars and educators who have sought to exploit the shared rhythmic connections between natural spoken language and music/poetry may offer a valuable perspective to the challenge of teaching speech rhythm.

Music, Poetry And Rap Based Approaches To Second Language Instruction

Perceptually, it is very obvious to the human ear that music and natural speech are different. The sustained and continuous flow of melody is one main differentiating factor

in music. Music also exhibits more periodicity, whereby the structured temporal organization of a musical composition is provided in the form of a time or meter signature[1]. While isochrony and its claims to a similar regularity of timing in natural speech have failed under empirical scrutiny (see discussion above), the connections between language and music can be found along other dimensions.

At perhaps the most basic starting point, both music and language are universal to all human cultures. Duration, intensity (volume), pitch and tone are acoustic elements used in the production of both speech and music. Coupled with the instincts of innovative educators, the speech-music connection has opened up numerous possibilities in language education over the years.

A number of studies in ESL/EFL have attested to the benefits of using music in the classroom. Regardless of where we are from, our innate affinity for music makes it an accessible and inviting way to introduce learners to difficult or otherwise intimidating concepts. In a Colombian primary school EFL class, Pérez Niño (2010) observes how teachers use music as thematic containers within which new vocabulary is introduced. Oftentimes, a chorus or other part of a song is repeated in such a way that reinforces language and aids in memorization (Mora, 2000). Pérez Niño also notes how teachers offered listening to music in class as a muse or impetus for stimulating speaking among students. In an extensive teacher research dissertation, Terrell (2012) exploits the

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[1] The time signature (also known as meter) is a notational convention used in Western musical notation to specify how many beats are in each bar and which note value constitutes one beat. From a pedagogical perspective, the beats in a line often have a one-to-one correspondence with each stressed syllable. A musical approach helps students identify how and where to direct their loudest, longest and highest pitched changes in syllable production. It also helps them to practice hearing a difference as stressed and unstressed syllables alternate. Miller (2007) uses this same "beats" approach to describe the production of stressed syllables in Chapter 5 of the *Targeting Pronunciation* textbook.

acoustic cues that are shared between language and music to teach pragmatic aspects of pronunciation to English language learners (ELLs). These shared cues include: a high speech rate and intensity for anger; low voice intensity and rising pitch contour for fear; and slow speech rate and falling pitch contour for sadness. These are emotional features than can be found in music of any genre, making a large pool of resources for teaching to draw from.

On a spectrum, with music being located on one extreme and natural speech on the other, poetry seems to fall somewhere in the middle. Similar to natural speech, there is typically no instrumental composition accompanying poetic verse. And even if there is, the poetic meter or rhythmic organization is not so tightly bound to that of the music (as it is in rap, which will be discussed shortly). On the other hand, poetic meter lends a musical quality to poetry through structure and tendency for pattern repetition. As Frances Mayes (1987) notes, "Recurrence of a sound is itself music. Like the chorus in a song, a refrain or rhyming pattern, once set up, rewards our anticipation." Therefore, in this study, the term "music-based" will include poetry as well. Consider an example using a common meter in English poetry, iambic pentameter:

x / × / × / × / × /
So **long** as **men** can **breathe**, or **eyes** can **see**,
× / × / × / × / × /
So **long** lives **this**, and **this** gives **life** to **thee**.

Each unstressed (x), stressed (/) pair forms the basic unit, or foot, of the meter. In this case, the iambic foot gives a "daDUM" rhythm to the verse, which repeats a total of five

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times for each line - hence *penta*meter. This type of repetitious "play with sound texture" (Disney, 2012, p. 6) can be exploited to make the patterning of stressed and unstressed syllables more apparent to learners. Hadaway, Vardell and Young (2001) advocate strongly for the use of poetry in the ESL classroom, identifying it as an "ideal entry point to language learning" (p. 799). Below is a list provided by Hadaway et al. (2001) that I have slightly adapted, which explains ways that poetry contributes to oral language development:

1. The reading and re-reading of poetry through choral and read-aloud activities promotes fluency

2. The brevity and short lines appear less intimidating to language learners than academic prose and other genres

3. Repetition of words and rhythmic patterns aids deciphering of meaning and builds familiarity and habit with target forms

4. The accent on focus words is sometimes exaggerated or repeated in ways that draw attention to meaning

5. Provides succinct or humorous character sketches that can be used to spark discussion

While poetry has enjoyed a certain amount of coverage in second language research and textbooks, it has a not-too-distant relative that could potentially provide some of the same benefits to learning as poetry. The relative I am speaking of is also known as rap, or the verbal dimension of hip-hop culture. Countless scholars have

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documented the centrality of rhythm to rap in its context as a Black cultural formation. In her seminal book, *Black Noise,* Tricia Rose (1994) describes rap as "a Black cultural expression that prioritizes Black voices from the margins of urban America . . . a form of rhymed storytelling accompanied by highly rhythmic, electronically based music" (p. 2). Likewise, Tilford Brooks (1984) highlights that "one of the most characteristic qualities of Black music in the New World is its rhythm" (p. 11). Yasin (1997) documents the historical shifts in the relationship between talk and the beat in African American music across centuries. He notes that prior to rap, talk typically foregrounded music in African American traditions. Rap changed this paradigm by requiring a careful coordination of syllables, words, dialectal features of African American English (AAE) and the beat.

Recently, Black linguistic styling and affect have spread globally, expanding hip-hop's sphere of influence far beyond its previous confinement to the United States. Over the past decade, in particular, English globalization has become energized by the linguistic practices of the imagined community commonly referred to as the Global Hip Hop Nation (GHHN) (Alim, Ibrahim & Pennycook, 2009). Naturally, elements of Black linguistic styling and affect persist through these processes. GHHN membership spans China (Barrett, 2012a), Tanzania (Higgins, 2009) and Brazil (Roth-Gordon, 2009), all of which have engaged with hip-hop in ways that both reflect and create novel, complex sociolinguistic changes. The lyrical innovation of youth through the vehicle of hip-hop music serves as this study's main inspiration for bringing the artform into the ESL classroom. Furthermore, due to its underexplored status in the literature on suprasegmental pronunciation, rap, in a sense, is the flagship element of this study's interest in music.

Perhaps one of the most compelling works exploring the linkages between poetry and rap is Adam Bradley's *Book of Rhymes* (2009). Ironically though, as Bradley points out, much of rap's popularity rests on the fact that the populace tends not to regard it as poetry! But at closer glance, one realizes that rap is nothing less than urban poetry anchored in kindred relationship with the beat. An easy demonstration of this would be to recall the poetic meter from the example above (so long as men can breathe . . .). Just as a pentameter line is marked by five feet (or daDUMs in the iambic case), the "meter" of rap is marked in beats rather than feet. To be precise, there are typically four quarter note beats per rap line (also known as 4/4 time). Bradley illustrates with a simple transcription of rapper Melle Mel's classic verse on Grandmaster Flash's "The Message:"

<div style="text-align:center">

one   **TWO**   three   **FOUR**

STANDing on the front **STOOP**, HANGing out the **WINDOW**,

WATCHing all the **CARS** go by, ROARing as the **BREEZES** BLOW

</div>

The elegant simplicity of this verse works well for suprasegmental pronunciation teaching as it offers a clear and clean break of the verse into thought groups and focus words. Thought groups – or accentual phrases - are a unit of speech commonly covered in suprasegmental pronunciation pedagogy (Miller, 2007). They are small, logical ways that we (often unconsciously) group our words in order to facilitate listener processing. In English, thought groups consist of one strongly stressed (focus) word and are connected to the next thought group with lengthening of the focus word and a brief pause. Since thought groups exist in poetry/rap and in natural speech, the former offers a way to

practice thought grouping in the latter. Returning to the rap example above, the thought grouping would be represented like this (focus word underlined and slash indicating a pause): *standing on the front stoop/ hanging out the window*.

Looking to rap for insight on the teaching of speech rhythm is a logical move. After all, rhythm is the heartbeat of rap. Unlike traditional literary poetry, the pacing and timing of rap are contractually entangled in the *dual rhythmic relationship* (Bradley, 2009) between vocals and the beat. The beat works as a guidepost for the vocals, forcing regular breaks in cadence and constant re-adjustment of syllables into the allotted timeslot. This relationship translates into an interesting learning opportunity for English language learners. For an unfamiliar learner, the task of reciting rap lyrics over a beat can make it difficult to fluently utter a sentence that might otherwise cause less difficulty for him/her. In my experience designing and facilitating ESL/EFL rap/poetry workshops, the beat of rap serves as a signal of urgency, prompting the learner to consider what is hindering his/her fluency. Oftentimes, the issue is anomalous production of English speech rhythm (i.e., inability to connect smoothly across word boundaries, difficulty creating contrast between content and structure words, etc.). Indeed, the unforgiving nature of the beat has prompted many of my students into a practice trance, retracing the steps of their stressed and unstressed syllables, connected speech and even segmental issues. When applied in this way, rap has the ability to aid in the development of ESL students' self-monitoring and metalinguistic competence. Both of these skills are essential for sustained progress after students have left the classroom (Miller, 2007).

Beyond its distinctive sonic character, rap has historically been a bold and unrelenting artform from a cultural standpoint. One thing that rap fans (and non-fans)

know for sure is that the music has a commanding presence. If explored from the perspective of its roots in Black, urban spaces and its subsequent global proliferation, the boldness of rap has not only been befitting, it has been necessary for elevating voices out of the margins of society.   One feature that gives rap its attitude is the artist's tendency to overemphasize accented syllables. The advantage that this characteristic sound holds for pronunciation instruction is that it draws explicit attention to the way that alternating prominences work in English speech.

At present, small traces of rap and chanting activities have appeared in pronunciation teaching materials. Other than Fischler's (2009) investigation of the effectiveness of her rap-based word stress textbook, *Stress Rulz* (2006)*,* however, I found no empirical work that studies the use of rap-based materials in the pronunciation curriculum. *Stress Rulz* is a collection of raps, each focusing on a particular rule regarding the use of word stress in English. The raps are reminiscent of the earlier *Jazz Chants* (Graham, 1978), which rely on choral repetition of rhythmic verse. Hadaway et al. (2001) blend poetry and music into "singing poems" for English language learners to form a more melodic variety of poetry. In the 1996 edition of their *Teaching Pronunciation* book, Celce-Murcia et al. included a brief suggestion of rap lyric creation for the teaching of speech rhythm. They advised that the lyrics should be recorded in a language lab due to students' possible hesitation to be embarrassed about sharing. Interestingly, the rap creation suggestion was removed entirely from the second edition of the text (Celce-Murcia et al., 2010).

This section has covered theoretical background on the phonological properties of English speech rhythm as well as the challenges and possibilities that exist around the

issue of teaching the mechanics of speech rhythm to L2 learners. However, the

mechanics of speech production only constitute one subsystem in the ecology of the

larger complex system of second language development (as reflected in the theoretical

framework presented earlier in Figure 2.1). Another important - and less emphasized -

consideration that enters the equation of introducing a learning intervention is the issue of

how ideologies about language factor into second language learning.

Ideology

Theories Of Language In Pronunciation Teaching And Learning

As ESL students become exposed to new forms of talk (including pronunciation),

the possibilities for including these into their own communicative repertoires (Rymes,

2010) expand.   New repertoire elements are not adopted indiscriminately, however. As

Lippi-Green (1997) contends, they are filtered through an ideological system, which is

ultimately constructed through discourse (i.e., talk about language and groups of

language users). Gee (2012) refers to these constructions – whether tacit or overt – as

theories of language:

> [A theory of language is] a set of generalizations about . . . language and
> language acquisition in terms of which descriptions . . . can be couched
> and explanations can be offered . Theories ground beliefs and claims to
> know things [about language] (p. 13)

A range of theories of language circulate regularly in the second language

classroom. According to van Lier (2004), a normative, prescriptive theory of language is

concerned with the absolute correctness to language based on form. This is a view

undoubtedly familiar to students and teachers of pronunciation. On the surface, this view

is presented as non-ideological and noble in its aims to lead students to an objective

"true" form of correctness. It turns out, however, that a prescriptive theory of language is not non-ideological at all; it simply obscures and standardizes its ideologies. These ideologies are grounded in norms that privilege and reproduce the language use of particular sectors of society.

Ironically, despite the fact that non-native speakers make up the majority of the world's English speakers (Jenkins, 1998), prescriptive theories of language often fail to honor these speakers' accents. According to Rymes (2009) this reality has direct implications in the classroom: past, present and future all converge as individuals bring outside social contexts (e.g., religious, racial and other affiliations) with them. Parrino (1998) observes this phenomenon at work in her own adult ESL class. In her chapter on "The Politics of Pronunciation," she notes several cases in which students state their pronunciation goals, not in terms of self-generated desires, but rather in terms of criticism they received from others about their accent. This intersubjective process of ideology formation operates internally on learners' own speech as well as upon external varieties of language encountered in the social milieu.

African American English

Students devise theories of language about their own speech and also about the varieties of language they encounter daily. Of the many varieties of English in the United States, ESL students' theories of language about AAE are central to this study for a couple of reasons. First, the music-based pedagogy of this dissertation relies heavily on rap, an artform historically derived from and associated with African American speech (Bradley, 2009; Richardson, 2006; Smitherman, 2006). This connection is meaningful in terms of the sociocultural context of the music-based intervention taking place in this

study. Secondly, although there are large numbers of ESL students attending educational

institutions in America's urban centers - which have been known for historical reasons to

have significantly large African American populations (Wilkerson, 2010) – little research

has documented ESL students' discursive experiences with African Americans. Third, as

a Black teacher-researcher (among the very few in TESOL – Nero, 2006), I anticipate

that students' reading of my race will play a part in their ideological responses (both tacit

and overt).

  Geneva Smitherman (2006) describes AAE as "a style of speaking English words

with Black flava – with Africanized semantic, grammatical, pronunciation and rhetorical

patterns" (p. 3).   A strong ideological ambivalence toward Black English has existed for

centuries, on the part of both Whites and Blacks. Smitherman playfully proclaims that

America has found itself in a state of loving and hating on Black language all at the same

time. Pejorative theories that have framed AAE as "baby talk" (Harrison, 1884) and

"intellectually lazy, indolent" (Bennett, 1909) have been documented existed historically

as systemic mechanisms for reinforcing White supremacy. However, not all disparaging

theories about AAE exist in some distant past, nor are they always articulated by Whites.

Legendary Black comedian Bill Cosby, in his scathing class-laden critiques of (low-

income) Blacks, regularly dismissed AAE as not being English at all. At the NAACP

award ceremony held in commemoration of the 50th anniversary of the Brown vs. Board

of Education decision, he states:

> [They] can't speak English. [They don't] want to speak English. I can't
> even talk the way these people talk. "Why you ain't where you is go." I
> don't know who these people are. And I blamed the kid until I heard the
> mother talk (laughter). Then I heard the father talk. This is all in the
> house. You used to talk a certain way on the corner and you got into the
> house and switched to English. Everybody knows it's important to

speak English except these knuckleheads. You can't land a plane with "why you ain't..." You can't be a doctor with that kind of crap coming out of your mouth. There is no Bible that has that kind of language. Where did these people get the idea that they're moving ahead on this?

(Schochet, 2013)

The historically commonplace disdain for AAE led to an important ideological shift that began around the early 1970s. Spears (1998) documents overt campaigns fueled by the influence of the Black Panther Party and the broader Black Power Movement to do the exact opposite of what Cosby condemns – using AAE publicly and proudly. Spears refers to this as "uncensored mode;" it reflects deliberate sociocultural efforts to reverse White supremacy as it is enacted through tacit and overt theories of language. Likewise, the work of Walt Wolfram (1969) and William Labov (1970) lent academic credibility to this movement, as they helped to promote the legitimacy of AAE as a linguistic system by documenting its rule-governed nature. Their efforts served as a catalyst for a rich tradition of linguistic scholarship that affirms the value of AAE through coverage of its structural, social and cultural depth – see Baugh, 2003; Rickford & Rickford, 1976; Smitherman, 1977; Alim, 2006 and others.

To date, the historically ambivalent ideologies circulating about AAE typically have been researched from the perspective of informants who are American-born or have had longstanding ties with African Americans (Rickford, Sweetland & Rickford, 2004). Notwithstanding their noticeable absence from this body of literature, ESL students have in fact demonstrated an awareness of the distinction between AAE and other English varieties. A few existing studies have explored ESL student ideologies about AAE.

Eisenstein and Verdi (1985) looked at learner attitudes in an adult ESL class in New York. Their study utilized a verbal guise approach, common to studies on language attitudes. The approach examined L2 English students' social judgments (about items such as job status, friendliness, etc.) after they had heard speech samples of AAE, the racially unmarked (i.e., White) New Yorkese and Standard English varieties. Similarly, Al Kahtany (1995) used verbal guise methodology and found that Saudi students studying at a U.S. university – whom he describes as arriving to the U.S. with a "dialectal *tabula rasa"* (p. 165) - view AAE less favorably than Standard American English. He also found that students' length of time in the U.S. correlated negatively with their perception about the linguistic quality/value of AAE. Likewise, there was also a correlation between students' rating of the AAE speaker's education level and the appropriateness of AAE as a medium of instruction. From a more contemporary standpoint, Haeusler (2010) employed perceptual dialectology techniques in which 102 community college ESL students in California were asked to draw boundaries around areas on a map that mark dialect differences. The students were also asked to listen to speech samples - one of which was an AAE sample – and classify them accordingly. Overall, AAE was one of the two varieties most accurately identified (19.6% of instances), while students experienced much less success identifying regional varieties such as Californian, Bostonian and Southern Englishes. Haeusler partially attributes the strong AAE recognition to the dissemination taking place through the activities of the Global Hip Hop Nation (Alim, 2009).

Additional studies, while not focusing directly on AAE, point out that proficiency level (Schmidt, 2011) plays a role in the way that students judge so-called nonstandard

dialects of English. Drawing from the Middle Eastern EFL context, Buckingham (2014) attests that teachers' own accents factor into students' instructional preferences. Little is known, however, about how students perceive the use of materials grounded in African American language and culture, or how they perceive instructors who are Black speakers of AAE. Furthermore, the verbal guise technique is limited in how it can account for the context in which language is actually used for authentic interaction.

Hip-Hop Pedagogies: Language, Ideology And Music Intertwined

When discussed with respect to subsystems of speech production (as was covered in previous sections), the *phonological* connection between language and music is central. However, when it comes to *ideological* subsystems of language development, there is another dimension to music-based pedagogy in which hip-hop has played a central role. Hip-hop pedagogies have developed over recent years as a counternarrative to the symbolic and ideological violence present in institutional practices (including/especially educational ones) that privilege standardized English and marginalize, ignore or subordinate Blackness and related forms of variety in linguistic expression.   Flores and Rosa (2015) remind us of the need to critically inspect these *raciolinguistic ideologies* and the work that they do to enforce uneven norms of appropriateness. With an eye toward this crisis in the education of Black and Brown youth, Kirkland (2008) proposes the incorporation of popular and student-generated hip-hop texts as a means of advancing New English Education.

In recent years, a number of scholar-educators have responded to the call to merge a critical view of hip-hop, literacy and education. For instance, Marc Lamont Hill (2009) works in the role of teacher-researcher, pushing students to explore topics such as identity

and authenticity in what he calls an "applied ethnographic" hip-hop program. Morrell (2002) uses rappers Grand Master Flash and T.S. Eliot's account of devastation in their communities to have students draw interpretive linkages between social commentary in canonical poetry and hip-hop music. Alim (2007) uses a critical language awareness approach, urging high school students to become ethnographers of their own encounters with raciolinguistic ideologies. Hip-hop pedagogues continue to advance their work through online collaboration. As is the case with the Global Hip Hop Nation, the internet facilitates collaboration and discussion that has propelled the efforts of the hip-hop educational agenda forward. The #hiphoped Twitter community consists of a growing group of educators, scholars and community activists whose weekly online meetings are open to the public and are aimed at exploring one key topic related to the integration of hip-hop and education.

As mentioned earlier, the main goal of hip-hop pedagogies is to respond to unmet need for affirmation and literacy development among America's Black and Brown youth. With all of the insight gained from these studies, there is little work that has sought answers about how the (raciolinguistic) ideological premises that necessitate hip-hop pedagogies in the first place affect ESL learners, particularly those who inhabit the same urban communities as the students served by hip-hop pedagogies. Furthermore, although it has received increasing global attention and popularity, hip-hop remains highly indexical of controversy and inner-city U.S. Blackness, both of these being things toward which ESL students have varying perceptions and relationships. In light of this reality, it is important to understand how international students perceive AAE and hip-hop in the context of their learning.

Interaction

The research landscape in second language development has been in the midst of a "social turn" (Block, 2003). Language learning is no longer regarded simply as a within-individual cognitive process (Doughty & Long, 2003), but rather a (co)constructed experience negotiated through social interaction. This interaction can take many forms and can be re-organized to suit the particularities participants deem necessary to accomplish an objective, whatever they define the objective to be. In this section, I review theoretical constructs that have contributed to our understanding of the influence of social interaction on second language development.

Sociocultural Theory

Sociocultural Theory (SCT) presents a set of principles that illuminate the relationship between student engagement in classroom interaction and associated cognitive processes. This is mainly because SCT posits that individual cognition is never simply relegated to the individual mind. Instead, cognition is primarily a *mediated* activity. That is to say that cultural and linguistic resources encountered in the social milieu function as tools that facilitate and iteratively re-shape the mental facilities, and from an L2 perspective, the linguistic development of the individual.

Lantolf (2000), who has been a major champion of SCT in second language development, maintains that *regulation* is one form of mediation. Regulation enables individuals to control resources (object regulation), their own behavior (self-regulation) and even the behavior of co-participants (other regulation) in order to achieve a goal. In a classroom context, the relevance of regulation quickly becomes apparent as individuals deploy language as a tool to make attempts to reach the learning objective collectively.

In this way, SCT offers an opportunity to capture the cognitive, affective and behavioral contextualization of second language classroom engagement (Fredricks and McColskey, 2012) in ways not possible through traditional, aggregated survey-based quantitative metrics. Tocalli-Beller and Swain (2007) emphasize this point. They use an SCT framework to analyze in-class student discourse and show that adult ESL students "talk to learn" as they work on a task of interpreting riddles and puns. Likewise, Donato and McCormick (1994) draw on SCT to demonstrate French learners' joint construction of a reflexive verb form, a task that neither participant was able to complete alone. The scholarly trajectory paved by SCT research holds great potential for second language pronunciation pedagogy. As pronunciation instruction increasingly incorporates communicative approaches, more sociocultural research is needed in order to aid our understanding of how communicative engagement in pronunciation tasks and subsequent "development [are] based on collaboration . . ." (Vygotsky, 1978, p. 210).

Participation Structures And Frameworks

According to SCT, learning is structured around the regulation of behavior. Since language mediates behavior, it is helpful to couple with SCT a framework that accounts for the ways in which talk and ensuing interlocutor roles around talk structure regulation.

In her ethnographic study on the classroom communication patterns of Warm Springs indigenous students, Philips (1972) introduced the term *participant structures[2]* in order to comment on "the several possible variations in structural arrangements of interaction" (p. 377) occurring among participants in a classroom setting. Broadly

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[2] Also sometimes referred to as "participation structures."

speaking, participant structures can fall within one of two main categories: student-teacher and student-student. Studies in second language development have covered student-teacher interaction based on various configurations of students working with the teacher at one time (whole class, small group or a single student) (Nassaji, 2013). Likewise, with the rise of communicative language teaching came an increased focus on student-student interactions, particularly small-group and dyadic interactions (Doughty & Pica, 1985; Butler & Zeng, 2015; Storch, 2002).

Although it may appear that participant structures lend themselves to student agency, they stem from *arrangements* typically determined by the teacher (likely in her lesson plan). The lesson planning process is key to address at this juncture since, as teachers, we intend to shape students' second language development by setting "performance" or "behavioral" objectives, which the participant structures aim to support. This is what we are trained to do. Embedded in these objectives are our expectations about what students will *do* interactionally, how they will *respond* to our lessons.

Indeed, there are studies that offer empirical support for the benefits of music-based pedagogies (Graham, 1978; Israel, 2013). On the other hand, particularly when asked to create lyrics or verses, students' perceptions about learning, genre and expressing themselves creatively in a second language become relevant. Research supports Krashen's notion that the *affective filter* (1981), or constraints on learning based on fear or anxiety, plays a part in music-based pedagogy for ESL students. Educators who have used poetry and rap with students point out that it can feel intimidating or even irrelevant for the student (Erazo, 2012). Some students may feel that they have nothing

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to contribute. ESL students sometimes have a sense of vulnerability about mispronouncing words or not being able to follow the rhythm (Hadaway, Vardell & Young, 2001).   Therefore, the literature clearly shows that affective and perceptual factors play a part in influencing student interaction during in-class activities.

Of the existing music-based studies in ESL instruction, the study of engagement is commonly limited to analysis of student perceptions of instruction, which have been gathered though self-reporting instruments (Fischler & Jensen, 2006; Cunningham, 2014). In a recent study, I departed from this approach, using discourse analysis and other qualitative methods to study Puerto Rican students' participation in a hip-hop media creation course (Barrett, 2012b). Of the ESL learners, I found that L2 English ability impacted the extent of their interest and participation in the hip-hop class activities. Over the years, other scholars have also pointed out that there are limits on the effects of instruction on second language development (Ortega, 2014). In his depiction of second language classroom discourse as a complex system, Seedhouse (2014) adopts Breen's (1989) "task-as-workplan" versus "task-in-progress" to analyze the gap. Still, additional work is needed to understand how what students *think* of the elements present in the interactional context (Rymes, 2009) of the music-based L2 classroom impacts what they *actually* do.

With the literature having established that affect matters and that students use language to regulate their own and others' behavior in learning activities, the question remains of how regulation happens within (teacher-assigned) participant structures and how it potentially disrupts pre-determined behavioral objectives. Goffman (1981) presented *participation frameworks* as a concept for understanding the complex and

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dynamic shifts in participant roles that occur moment by moment in any interaction. Each participant's role in the participation framework is defined according to his/her relation to an utterance. A participant functions as either a speaker or hearer. As it pertains to the latter, a speaker can be ratified (officially included) or unratified (unofficial, an overhearer/eavesdropper). Roles in the participation framework are largely based on what the interactional context reveals about participant intent and interest in the utterance. Since its inception, participation frameworks, as a construct, has evolved. Goodwin (2006) brought more attention to the role of the hearer, emphasizing her nonverbal contributions to communication. Observing a discussion among university colleagues, Boblett (2012) notes that participants do not always agree on each other's roles in the interaction and instead work to negotiate them.

Classroom-based studies point to a range of factors that contribute to the role that ESL students take up in participation frameworks. Kwan (2000) found that non-native English students participated at disproportionately low rates compared to their native-speaking peers in a Hong Kong university classroom. Through discourse analysis she was able to attribute the participation patterns to the discursive designation of a select group of native speakers as ratified speakers (per Goffman's framework). Young and Miller (2004) conducted a longitudinal study exploring the evolving participation framework between an ESL writer and his tutor. Initially, the quantity of the learner's talk was low and he depended greatly on his tutor to initiate sequences of the "revision talk" routine. Over time, as the learner's linguistic skills and familiarity with the tasks grew, he developed more autonomy, thus shifting into a co-instructional role in the session. Larson (1999) emphasizes the value of unratified participants, overhearers, in a

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kindergarten story writing activity. Despite the fact that they did not officially "have the floor," overhearers took information they heard in other students' stories and repurposed the details for consideration and new interactions with peers seated closer to them.

Interactional theories are but one piece of a larger movement of alternative (often socially rooted) approaches to second language development (Atkinson, 2011). While the uptake of these approaches increased with Firth and Wagner's (1997) call for more socially cognizant approaches to SLA, almost two decades ago, social approaches have not been incorporated into much of the scholarship that documents ESL learning outcomes through music-based pedagogies (Fischler, 2006; Graham, 1978; Israel, 2013). If it were following a traditional cognitivist paradigm, this dissertation would solely focus on how students process input and display changes in speech production. However, using Complexity Theory (one of the theories included in Atkinson) as a metatheoretical framework presents an opportunity to more fully contextualize my students' second language development. Context unfolds though the analysis of three subsystems of language development, each illustrating the impact of the learner's involvement with (and as agents of) language at different levels of scale (Figure 2.4).
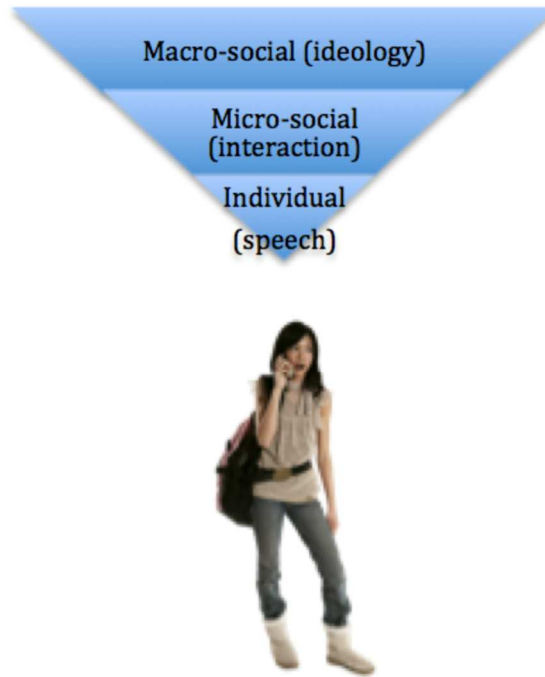
Figure 2.4 Three Subsystems of Language Development: An Ecological View

The ecological lens afforded by Complexity Theory necessitates a view of the uniqueness of individual students' learning paths. Working from the premise that each subsystem of language development – speech production, ideology and interaction - is open, dynamic and yields new and spontaneous influences on a students' overall second language development, I approach music-based pedagogy, not seeking to make a binary determination about whether the music intervention worked, but instead with the following research questions:

Research Questions

1. **How do students describe their experiences with African American English? (Ideology)**
   a. How do students' theories of language reflect their encounters with and beliefs about Blackness, specifically African American Blackness?
   b. How does my presence in the classroom influence the expression of these theories of language?
   c. How do students' racialized theories of language inform their own language use?

2. **How do students use language to negotiate their participation during in-class music activities? (Interaction)**
   a. How do students' perceptions of the music-based activities come to bear on in-class interaction?
   b. How do students use language during music-based pronunciation activities to regulate their own behavior and that of others?
   c. What do these forms of engagement reveal about differences in development among the students participating in the interaction?

3. **What patterns emerge in students' speech rhythm production over the course of the term? (Speech Production)**
   a. What was the general trend in movement of student scores over time?
   b. Is there evidence of cross-linguistic influence in learners' L2 speech rhythm development?
   c. How do the three acoustic correlates of rhythm interact for each student?

CHAPTER 3

METHODOLOGY

Design

This study is an action research project that uses mixed methods in order to provide a dynamic view of the unfolding complexity of language development. Quantitative data are collected using a time-series design, or regular series of acoustic measurements of student speech. Combined with a thorough qualitative analysis of recorded speech assignments and classroom discourse, such frequent quantitative measurements reveal the "relevant properties underlying the developmental process" (Larsen-Freeman, 2006, p. 595). While it is common for intervention studies to use an experimental design with control groups, I analyze the activities of one focal group of students in depth, which I believe is best suited for attending to the highly context-dependent nature of my research questions.

Setting And Participants

For my fieldwork and data collection, I took on the role of teacher-researcher in an Intensive English Program (IEP) at a university in a major urban area in the northeastern US. Based on a 2014-2015 university report, the student body is 55% White, 12% African American, 5% Latino and 10% Asian. These numbers are not inclusive of the international students, who comprise 7% of the student population. Based on an analysis of 2010 Census data, the city is ranked among the top 10 most segregated cities in the US. In many neighborhoods, a single racial group represents 75%

or more of the total population. To compound matters, universities throughout the area (including the one in this study) have long faced contempt from longtime Black residents, due to continual expansion efforts that result in the marginalization and/or displacement of community members. Amidst this backdrop, students of the IEP arrive to the university and typically choose from three housing options: homestay through a local agency; "safe and comfortable"[3] student apartments in the university area; or off-campus housing in other parts of the city.

All informants were international students. The contextual details of the students' living environment sit at the backdrop of their language encounters, layering their daily lived experiences with new questions and choices. Swavely (2014) emphasizes the need to understand international students as a distinct population of English language learners. As it pertains to this study, international students' unfamiliarity with many U.S. cultural references and likelihood to identify more with home language and culture (ibid.) are relevant factors to consider in the way they might orient to materials based on U.S. popular culture. Moreover, this rich setting responds to Derwing and Munro's (2005) call for more pronunciation research occurring in actual classroom environments.

The course, Intermediate Pronunciation, met twice a week for 90 minutes over a span of seven weeks. Of the six speaking proficiency levels in the program, the intermediate course was designed for students at levels 3-4.[4] At least once a week, students engaged with a music-based activity as a means of practicing a target skill. These music-based interventions included choral repetition of poetry, rap and music lyrics (Appendix D),

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[3] This is the language used to describe the housing on the advertising provided to students. The language clearly alludes to the fear of safety that exists with regard to the proximity of the university to primarily Black low-income communities.
[4] The levels are further divided into two parts: A & B, the former leading to the latter. Occasionally, level 5 students enroll in the Intermediate Pronunciation course.

round robin language drills over an instrumental, creation of rap lyrics and cloze activities for listening practice.

I taught the pronunciation course a total of four times: I used the first three occasions as pilots for this research. The fourth time I taught the course, I used it for the main study. The full scope of data collection was not undertaken for the pilots. Instead, they were used to try techniques on specific aspects of the course (e.g., instructional activities, survey and group discussion questions, etc.). The ideological data resulting from the pilots was unexpectedly rich and, as a result, will be combined with data from the main study to answer RQ1, making a total of 36 students (see section below for breakdown of each group of students). For the remaining two research questions, I concentrate on data from six focal students in the main study. I will also note areas in the methodology section in which the pilot studies were useful in evolving my thinking and/or the research instruments.

Pilot Study Participants
Fall 1 2013

This was a class of 18 students from mostly Arabic (13) and Mandarin Chinese (4) first language backgrounds. There was also one student from Mali, whose first language is unknown.

Fall 2 2013

With an enrollment of six students, the Fall 2 course was much smaller than the previous session. Still, the majority of students' L1 was Arabic (5 - four males, one female), and one (1) was a female with Japanese as an L1.

Spring 1 2014 (Pronunciation Coaching)

By design, the coaching courses in the program are small. Typically, no more that 5-6 students will be assigned and many are Chinese L2 speakers of English. The coaching courses are slightly different in that they are not part of the IEP. Rather, students have been conditionally admitted to the university pending successful completion of the English language program. In order to enter the program, they must demonstrate enough English proficiency to score within the range of 65-78 on the TOEFL iBT exam. In this particular course, there were a total of six (6) students: two Arabic-speaking males and four Mandarin-speaking students (3 male, 1 female).

Main Study Participants

A total of only eight students were enrolled in the class used for the main study. The pilot revealed that student attendance tends to wane as the term progresses. This is further complicated by the politics of the elective course (as secondary to core courses in the program).   Therefore, as a matter of practicality, six focal students were chosen from the group of eight based on their regular class attendance and assignment completion. Fortunately, this group was more diverse in their L1s than the pilot groups. The L1s represented were Arabic (2), Mandarin (2), Korean (1) and French (1).

The students reported pop and rap music as their preferred genres, not unusual for a group in the 19-26 year-old age range. Given that all students had been in the US for well under a year, these genres probably were not brand new to the students. It is more likely that they enjoyed them in their home countries as well. Such forms of entertainment were certainly accessible to them in their home language and in English, as the average time the students had spent learning English is 13.3 years. This is consistent with the copious amounts of scholarship documenting the global spread and innovation of

English through popular culture (Barrett, forthcoming; Alim et. al, 2009). Table 3.1 lists

the six focal students' profiles:

Table 3.1 Focal Student Profiles

Name	Age	Area of Study	Home Country/L1	Gender	Years Learning English	Length of Time in US	No. Languages Spoken	Speaking Proficiency Level (of 6)
Omar	25	Law	Egypt/ Arabic	M	18	1 week	2	5
Sahar	20	Biomedical technology	Saudi Arabia/ Arabic	F	7	8 months	2	4
Jung	26	Chemistry	S. Korea/ Korean	M	20	3 months	3	4
Marcela	18	Medicine	Ivory Coast/ French	F	18	1 week	2	3
Yifei	20	Tourism Mgmt.	Taiwan/ Chinese	F	10	6 months	2	4
Mei	19	Int'l Business	China/ Chinese	F	7	6 months	2	4

Pedagogical Strategies And Key Elements

The Intermediate Pronunciation course ran for seven weeks. During the weeks 3-6 of

the course, a total of seven music-based activities were used in the class for pronunciation

instruction[5]. A capstone speech project was reserved for the final week.

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[5] Due to extreme winter weather conditions, two class sessions were cancelled. The instructional schedule (with respect to music-based activities) proceeded as listed; however, our coverage of connected speech was minimized. Also, end-of-class voice recording was not collected (bringing the total to four voice recordings). This is discussed further in Chapter 5.

Due to the rhythmic focus of the research questions and my agreement with the idea that suprasegmental features such as rhythm "carry more of the overall meaning load than do segmentals" (Celce-Murcia et al., 2010, p.163), a great proportion of classroom instruction has been designed to address several foundational aspects of speech rhythm (see Barry, 2007; Celce-Murcia et al., 2010). The sequencing of these targets follows the order recommended by Gilbert (2008) in her prosody pyramid (covered earlier in Figure 2.3). The instructional schedule is listed in

Table 3.2 below with corresponding music activities and speech recording collection:

Table 3.2 Summary of Weekly Pronunciation Targets and Activities

Week	Pronunciation Targets	Music-Based Activity[6]	Voice Recording Submitted
Week 1	Introduction and Goal Setting		⧠
Week 2	Vowel Sound Foundations		
Week 3	Word Stress	• Stress Rulz Rap	⧠
Week 4	Sentence Rhythm/Focus Words	• The Echo Game (chant) • Birds Eat Worms (rap rhythm drill)	
Week 5	Reduced Speech/Vowel Reduction Thought Groups	• Vowel reduction in pop songs (cloze listening) • Robert Louis Stevenson Poems • Rap Creation	⧠

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[6] As mentioned in the literature review, the term "music-based" includes poetry, rap and music.

		Project
Week 6	Articulation of Problem Vowel and Consonant Sounds Linking Vowel and Consonant Sounds (Connected Speech)	• Sounds of American English in Music Project
Week 7	Capstone Formal Speech Project – TED Talk	
Week 11 (One month after course completion)		🗆

Pronunciation targets were covered using Celce-Murcia, Brinton and Goodwin's

Communicative Framework for Teaching Pronunciation (2010, p. 45). The framework

is a welcome improvement upon traditional pronunciation teaching methods, which often

forsake communicative goals for a more behaviorist, isolated focus on individual targets.

Shown in Table 3.3 below (adapted from Celce-Murcia et al., 2010), the communicative

framework begins with presentation and listening discrimination of a target. From there,

students engage with controlled activities that eventually guide them toward a more

communicative use of the target. With the exception of the vowel reduction cloze

listening exercise, the music-based activities of this study correspond to the third (and

most controlled productive) phase of the framework. As such, they are not fully

communicative in nature and work more toward raising students' awareness of how the

feature is used linguistically. This underscores an important point, which is that the

music-based activities function most effectively as an enhancement to communicative

goals rather than a replacement for them.

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Table 3.3 A Communicative Framework for Pronunciation Teaching

1	**Description and Analysis –** illustrations of how the feature is produced and when it occurs within spoken discourse
2	**Listening Discrimination –** focused listening practice with feedback on learners' ability to correctly discriminate the feature
3 *music-based activities*	**Controlled Practice –** short exercises with special attention paid to the highlighted feature to raise learner consciousness
4	**Guided Practice –** structured communication exercises, such as information-gap activities or cued dialogues, that enable the learner to monitor for the specified feature
5	**Communicative Practice –** less structured, fluency-building activities (e.g., role play, problem solving) that require the learner to attend to both form and content of utterances

Data Collection And Analysis

Research Question 1 (Ideology)

The pilot studies were instrumental in helping me face the quandary of how to elicit students' racialized theories of language. Initially, I had real concerns about whether asking direct questions about race would be effective. During Week 1 of the pilots, I experimented with informal, whole group discussions, or Talk Time, where I invited students to share their experiences with and views on English pronunciation. Our initial Talk Time discussion took place after students completed the pre-instructional survey, which, in part solicited students' views on their ability to interact with diverse speakers of English (Appendix F). After all students completed the survey, I opened the floor for sharing. Through the pilot study Talk Time discussion, I unintentionally discovered the elicitation method that invoked the topic of race. Without fail, each time

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we arrived at the section of the survey that deals with issues of desired accent, intelligibility and experience with language variety, I ask the students "Is there any group of speakers in the U.S. who you have a hard time understanding?" Across all three pilots and the main study, this question prompted the mention of (African American) Blackness and Black speech.

Talk Time discussions were audio and video recorded. To capture the rich contextual detail of students' expression of racialized theories of language, I transcribed the discussions and conducted discourse analysis instead of the verbal guise technique (Lambert et al., 1960) commonly used to study language attitudes toward AAE (Eisenstein & Verdi, 1985; Purnell, Idsardi & Baugh, 1999). A discourse analysis approach extends the insights of verbal guise in a few important ways:

- Rather than restrict students' answers to the choices (or binaries) listed on a scale, the issues that are relevant to students can be inferred.

- The intersubjectivity that unfolds through discourse reveals ideological nuance not apparent in quantitative data[7]. In other words, the linguistic (and non-linguistic) devices participants use to coordinate their participation in the discussion (e.g., narrative, laughter, the usurping of turns, etc.) add a meaningful layer to the content of their contributions. This also reveals much of the overlap between the ideological and interactional strands of the conceptual framework (mentioned earlier).

- Analyzing discourse occurring in my classroom enables me to interrogate my assumption that my own Blackness plays a significant role in students' invocation

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[7] Eisenstein and Verdi (1985) did solicit brief comments from participants at the end of their data collection, which they analyzed qualitatively. Still, this was not the bulk of the analysis, nor was it a discourse analysis approach.

of raciolinguistic ideologies (Flores and Rosa, 2015). Discourse anchors my efforts to remain reflexive and accountable for the dimensions of my professional self that I am writing into the study (Rymes 2009; Wall, 2004). More specifically, I examine these dimensions in the form of overlap and tension among my three identities (or "selves", if you will) co-existing in the learning space: teacher, researcher and Black female.

Research Question 2 (Interaction)

Kumaravadivelu (1991) states "the more we know about the learner's personal approaches and personal concepts, the better and more productive our intervention will be" (p.107). In order to examine the richness of learner subjectivity about music-based classroom tasks, I asked students to complete a 5-point Likert scale questionnaire about their musical preferences and habits. This was done both before and after the course (Appendices F & G). Students also reported on their perceptions about specific learning tasks through surveys and reflective journaling.

I looked to the survey data to enhance my understanding of what students do in the interactional context of learning (Rymes, 2009). Interaction was captured through audio and video recording of all music-based activities. Classroom interactions relating to the major themes in the Research Question 2 (negotiation, regulation and developmental differences) were identified broadly, transcribed in detail and coded for discourse analysis. Nonverbal communication such as gaze, posture and gesture was also taken into account during analysis. In cases where discourse was not abundant or available, I offer narrative description based on: a.) my observation of the interaction in the video/audio and b.) reflective memos (field notes) I wrote immediately after teaching

each class session. The memos documented challenging interactions as well as those I deemed to be pedagogically fruitful.

Research Question 3 (Speech Production)

To collect speech production data, I asked each student to submit four voice recordings as instruction proceeded through increasingly higher levels of the prosody pyramid. Students used their personal devices (cell phones, laptops, etc.) to record the speech samples in quiet spaces outside of class time. They submitted the recordings through email as homework assignments. The recordings occurred at the four points shown earlier in Table 3.2: pre-instruction (Week 1), after the word stress unit (Week 3), after the thought group unit (Week 5) and one month after instruction (Week 11). Each student recorded him/herself reading a passage entitled "My Exercise Program" (Appendix A). The passage is taken from the *Targeting Pronunciation* textbook (Miller, 2007) and deliberately includes speech features that highlight issues with speech rhythm such as: compound nouns, phrasal verbs, linked consonant clusters and an alternating range of content words (nouns, verbs) and function words (articles, pronouns, etc.).

Typically, studies looking to analyze speech rhythm employ one of two available options: perceptual judgments by qualified raters or measurements of the acoustic speech signal. In this study, I look to the latter – the acoustic speech signal - for its greater degree of precision, objectivity and attention to the target speech feature. The Penn Phonetics Lab Forced Aligner (Yuan and Liberman, 2008) was used to automatically segment all vocalic intervals in the speech signal (Appendix B). Accounting for three cases of missing data, I collected a total of 21 speech samples (6 focal students X 4 time points). An average of 284 vocalic tokens were measured for each student recording. All

recordings were re-sampled for the Forced Aligner at a rate of 11,025 Hz. Overall, the Forced Aligner accurately aligned phone (individual physical sound) boundaries. However, I performed a manual second pass on each speech sample to examine and adjust boundaries per the syllabification criteria below.

Pauses and hesitations were excluded. Formant structure was examined to align boundaries such that the most canonical portion of the vowel measurement was maintained. Periodicity in the waveform served as another primary cue. Formant transitions for obstruents counted as part of the consonantal rather than the vocalic interval   Post-vocalic glides (e.g., *play*) were included as part of the vowel. Glides and liquids were treated as consonants, apart from vocalized /l/ following a vowel, which was analyzed with the vowel. Except for diphthongs, adjacent vowels were measured separately, with changes in vowel quality used as a cue (per Thomas & Carter, 2006). After a stop, vowels were measured at the onset of voicing (i.e., following the release burst) (per Torgersen & Szakay, 2012).

Additionally, I found it necessary to account for certain L2 idiosyncrasies in the alignment of the vowel boundaries. Stress placement errors (e.g., AErobics class) were not excluded since stress misplacement does not detract from the goal of measuring contrast between adjacent vowels. The same is true for epenthesis, particularly when additional vowel sounds are added as a learner shows dispreference for producing a consonant cluster (e.g., physically → [FI -zɪ - kə -li] instead of [FI -zɪ - kli]). Likewise, vocalic intervals displaying vowel quality errors were also included as these offer important developmental insight.

L2 speakers of English have been shown to use correlates other than duration more saliently in their stress production (Barto-Sisamout, 2011; Lee & Cho, 2011). Therefore, I chose to extend the typical time-centric focus on duration (ms) common in acoustic studies on rhythm by including a measurement of the mean pitch (Hz) for the vocalic interval[8] and intensity (dB, using the dB method in Praat). I wrote a Praat script to calculate a vocalic *Normalized Pairwise Variability Index (nPVI)* for each acoustic correlate (equation available in Appendix C). Each student recording resulted in the calculation of three indices, together forming a *multidimensional* nPVI: nPVI-duration, nPVI-intensity and nPVI-f0.

When applied to quantitative data empirically, Complexity Theory (Larsen-Freeman, 2006) has shown that details of individual developmental paths can differ drastically from the claims we are able to make about the group as a whole. With this in mind, I analyze the multidimensional speech rhythm data, seeking cues to explain variability at three levels of scale: group, interindividual and intraindividual (ibid.).

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[8] Consonantal intervals were also segmented but not included in the analysis, as Grabe and Low (2002) identified vocalic intervals as more reliable in their classification of speech rhythm.

Table 3.4 summarizes the research questions and instruments:

Table 3.4 Summary of Research Questions and Instruments

Research Questions	Surveys	Reflexive Journals	In-Class Audio/Video Transcripts	Recorded Reading Audio
RQ1: How do students describe their experiences with African American English? (Ideology)	*		*	
RQ2: How do students use language to negotiate their participation during in-class music activities? (Interaction)	*	*	*	
RQ3: What patterns emerge in students' speech rhythm production over the course of the term? (Speech Production)				*

Limitations

Although this classroom research study provides unique insight to the overall body of speech rhythm pronunciation research, some limitations exist:

1. To control for variation in the phonological structure of the speech samples (which affects the nPVI values), all recordings consist of identical read passages for each student rather than spontaneous speech. Therefore, any variability that may occur based on these different elicitation methods will not captured by this study.

2. The results of this study are intended to provide insight about the complex interaction of multiple factors of language development. While this in-depth, dis-aggregated approach may shed light on new dynamic factors involved in

L2 speech rhythm development, results are not necessarily generalizable to other students.

3. Despite assuring my students during the consent process that their choices about participating in the study will not impact their grade, it is possible that my role as teacher-researcher impacted students' responses. For instance, in the non-anonymous follow-up surveys, some students may have felt obliged to speak favorably about the pedagogy to avoid offending me as the teacher. In anticipation of this issue, I triangulated data in search of consistency across sources.

CHAPTER 4
UNDERSTANDING ESL STUDENTS' THEORIES ABOUT AFRICAN AMERICAN ENGLISH: MUSICALITY, INTELLIGIBILITY AND THE COLOR LINE (IDEOLOGY)

Introduction

As far as I know, international students who speak English as their 2nd language learn about the African-American English here [in the US]. The African-American dialect was non-existent in all teaching books that I had. Not even sure, how many of the book characters were actually African-American! For me back home, my only exposure to African-American accent/slang was movies, so I had to rely on the subtitles and google-ing the words.

–Sammy (Personal communication 1/14/2014)

As stated at the outset, the theoretical framework of this dissertation is motivated by an interest in the role of ideology, interaction and speech production as subsystems of second language development. In response to this goal, each results chapter will foreground data interpreted primarily in light of one of these subsystems. Interest in the ideological subsystem of second language development is captured through the first research question: How do students describe their experiences with African American English (AAE)?

In the sections that follow, I draw from in-class, whole group discussions that took place during the first week of class. As is common in many classroom settings, the first week was a period of breaking the ice, setting learning goals and establishing expectations (which includes an interactional rhythm – Schultz, 2003) for the classroom environment. In harmony with the affordances of a discourse approach, I have organized this chapter based on two major themes I observed in these initial conversations with my students: 1.) an awareness of race and racialized features of language and 2.) the

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perceived musicality/intelligibility of AAE. In line with the research questions, I analyze

these themes with particular attention to accounts of students' life encounters, the

influence of my presence (as a Black instructor) and the ways that ideology shapes

students' language use preferences, and thus their second language development.

Students' Awareness Of Race And Racialized Features Of Language

Much of the discourse in this chapter indicates that the international students in

this study, at the very least, have come to categorize African American English as distinct

from what I will call "Classroom English." Classroom English consists of (and tends to

be dominated by) teacher talk, modified to be comprehensible for English learners;

Classroom English is also easily identifiable by the work it does to uphold the

conventions of Dominant American English[9] (Paris, 2009). A large part of this work is

supported by the boundaries that classroom English does *not* cross in terms of analyzing

or exploring so-called non-standard forms of English. The constraints of Classroom

English are artificial, however, and do not prevent students from noticing race and

developing their own theories about race and racialized speech.

Below I present one such conversation through which the students and I construct

and critique a theory of appropriate racial referencing. The conversation takes place at

the beginning of class after students have returned from a few days on break. Before

getting to the business of pronunciation teaching, I decide to ask my students what they

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[9] Dominant American English is a term coined by Paris (2009) to foreground matters of power and privilege. The term is more commonly known as "standard" English.

did on the weekend. Jia Ji excitedly responds first, announcing that he and his Chinese

friends played basketball with a group of Black men[10]:

1   Jia Ji: Uh, I play basketball with a Black man. And uh,=

2   =(students laugh)

3   . . . (conversation continues)

4   Catrice: Great! Okay, so you played with, you said an American? A Black man?

5   Jia Ji: Yeah, yeah, [yeah.]

6   Catrice: [uh huh] So, you have American friends?

7   Jia Ji: Yeah.

8   . . . (conversation continues)

9   Catrice: Okay, so were there any other Chinese people, or were [you the only one?]

10   Jia Ji: [Yeah, yeah, yeah.] I have a

11   Chinese friend.

12   Catrice: And everyone else was (.5) Black?

13   Jia Ji: No. Two, uh, two Chinese man and uh eight Black man.

14   (Students laugh)

15   Catrice: Wow!

16   Junwen: It's amazing!

17   Catrice: It is amazing. So, so, you guys, uhm, did you understand each other's English okay?

18   Jia Ji: Just so-so, but uh, um some um, basic rules we can understand. And some, uhm.

19   And in fact, we had some problems, but we can communicate with each and then um.

20   They are very friendly, so there is no trouble to play. Yeah.

   Jia Ji's basketball game occurred on one of the many available spaces around campus

where African Americans who attend the university and/or reside in the local

neighborhoods interact with the ESL students of our program. Noteworthy in Jia Ji's

narration of this event is his continual use of the term "Black" to racially identify his

basketball buddies. His linguistic choice shapes the discourse by invoking two different

responses: laughter from fellow students (lines 2 and 13) and an uptake of the term by me

(lines 4 and 11).

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[10] Discourse analysis transcription key in Appendix H.

I will start by discussing my choices and perspective in moving the conversation along. Viewing Jia Ji's statement purely from the perspective of my Black female self, I was curious to know why he thought it was relevant to mention the race of the men he played with. Was he trying to make a connection with me based on his reading of my own Blackness? Did he somehow feel that my class was a safe space to address racial particularities? As a researcher, I was elated that, without solicitation or invitation, he would break the false pretense of colorblindness (Herrera & Rodriguez Morales, 2009) and invoke race in a space where it typically lives unspoken. I wanted to understand how students - who come from societies where race exists at varying levels of societal consciousness - sort through the mess of racial politics in the US. Accordingly, on line 4, I acknowledge the emic perspective with which he uses the term "Black," and I continue with this term as a frame for my follow-up questions.

During the conversation, it quickly became apparent that my intrigue was not the only response generated by Jia Ji's story. Classmates laugh on line 2 when Jia Ji specifies the race of his basketball buddies, and then again on line 13. Over the course of the term, Jia Ji was repeatedly the "butt" of many jokes, sometimes to the point where I had to reprimand other students for teasing him (about his pronunciation, etc.). Based on this broader classroom dynamic, my impression is that the students' laughter may be explained as amusement over the *faux pas* of Jia Ji's repeated racial references. After Jia Ji finishes his story, Ahmed, a student from Saudi Arabia, who has spent three years in the US, offers a critique of Jia Ji's use of the term "Black":

1   Catrice: Ahmed, did you want to say something?
2   Ahmed: Yeah. I think so that we can't say Black man or Black wo- Black.
3   Catrice: Yeah. Are you asking me is okay to say=

4 Ahmed: =No. It's not okay.

5 Catrice: It's not okay?

6 Ahmed: Yeah.

7 Catrice: Okay. That's a good question, so did everyone hear Ahmed's question? He asked is

8   it okay to say Black man, Black woman. Or, is that offensive?

9 Jia Ji: Yeah.

10 Catrice: So, uh, in America (1.5), you can say it, but you have to be careful.

11 Zhaomi: Uh, we should say [African American.]

12 Catrice: [African American] is more acceptable.

13 Ahmed: [yeah, yeah]   It's sometimes

14   considered

15   like a Black woman, like white and Black and . . .

16 Catrice: Yeah. Like an insult?

17 Ahmed: Yeah.

Gee (2012) explains that our discourse can reveal theories of language that are tacit or overt. Jia Ji's comfort first, in foregrounding the race of his basketball partners, and secondly, in referring to them as Black, implies a theory that could be interpreted quite simply as*: it's fine to refer to individuals as Black.* Finding this theory unacceptable, Ahmed, on the other hand, layers the discourse with a more overt theory that is directly oppositional to Jia Ji's: "*it is not okay" (line 4) to refer to individuals as Black.* I mistake Ahmed's use of "I think" as tentativeness (line 2), which leads me to re-frame his assertion as a question. Even as Ahmed firmly emphasizes his certainty on the matter by cutting off my insinuation that he is asking a question (line 3), I use my discursive dominance as a teacher (Rymes, 2009) to insist on framing his statement as a question. At this point, a mini-power struggle has ensued between Ahmed and me, with his asserting and my questioning his theory of language. I go on to re-formulate Ahmed's assertion as a question. I do this as a strategy to invite responses from other students (line 7). Admittedly, an unfortunate side effect of this strategy is that I may have

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undermined Ahmed's authority to make such a sure statement. Zhaomi affirms Ahmed's

theory by adding that it is better to say "African American" than Black (line 11). Zhaomi

later shared with me that she gave this response because she attended an international

school in China where her class covered a unit on the Civil Rights Movement in the US.

Her Canadian teacher informed the class that it is better to say African American to avoid

focusing on the color of people's skin, thus highlighting the role that we play as teachers

in formulating students' theories of race and language use.

In addition to sharing their views on which terms are best for referring to African

Americans, a few students demonstrated an awareness of specific linguistic features of

African American English. I compiled the collection of features in Table 4.1. These

stemmed from accounts of student experiences that were shared anecdotally during our

initial review of the completed pre-instructional survey - particularly, its questions about

our experiences with pronunciation in the U.S. and our goals for the course:

Table 4.1 Descriptions of Words and Phrases Students Associated with African American English

African American English Word or Phrase	Linguistic Category	Dominant English Equivalent
1. [aks]	Phonological	Ask
2. [TUESdɪ, MONdɪ] *reduced vowel on second syllable*	Phonological	Tuesday, Monday
3. [hongry]	Phonological	Hungry
4. [na:n na:n] *monophthongization of* /aɪ/	Phonological	nine

5. Ain't worried bout nothin	Grammatical & Phonological	Not worried about anything
6. Missing or weak final –s *e.g., she <u>work</u> at the mall; put on your <u>clothe(s)</u>*	Grammatical & Phonological	
7. Kicks	Lexical	(Athletic) shoes
8. Hey! Yo, man!	Lexical	(A way to get someone's attention)

Since no direct measures were taken to solicit students' knowledge of AAE features, it is entirely possible that the students' collective knowledge is even more extensive than what is listed above. Still, even this limited set holds interesting revelations about students' awareness and social affiliations. For instance, Ahmed (from the earlier excerpt) reported enjoying the way that African Americans pronounce "nine nine." His awareness is very sharp as he has noticed a subtle vocalic feature, which can be traced to the Southern roots of African American English. Fridland (2003) confirms that in a pre-voiced context (in this case, before the voiced consonant 'n'), Southern African American English speakers (in Memphis) tend to weaken the glide occurring in the diphthong */aɪ/,* or they completely monophthongize the sound. In class, Ahmed (to the amusement of his classmates) imitated this feature of AAE with precision.

Likewise, during a discussion about the meaning of the word "ain't", Abdullah, a Saudi Arabian male in his early 20s explained that while he understood the meaning of "ain't," he was confused about its meaning in one his favorite rap songs:

> Abdullah: I heard song like confuse me. Like, it say "ain't worry bout nothin."

Catrice: Ain't worried bout nothin?

Zhaomi: (chuckles)

Abdullah: I don't know, like, is he worried or not? It's kind of confusing.

As it pertains to rap and hip-hop culture, in many cases my ESL students rely on me to explain meanings and share songs. Abdullah's level of interest in rap proved to be informative, however, even for me. When I erroneously identified the artist of "Ain't worried 'bout nothin'" as the pop rap sensation Lil Wayne, Abdullah informed me that it was actually French Montana. Montana, who re-located to New York at age 13 from Morocco, exemplifies and embodies the expansive global linguistic flows (Alim et al., 2009) of hip-hop language and culture. Montana shares Abdullah's Middle Eastern origins and serves as a model of the cultural in-group affiliations with hip-hop that Abdullah has expressed a desire to attain. Abdullah's way of grappling with the semantics of "ain't worried 'bout nothin'" provides a momentary glance at the meaningful role of rap in his second language development. That is, for some learners rap music serve as a formidable resource in expanding their communicative repertoires (Rymes, 2010) beyond Dominant American English and into the realm of Black English as a Second Language (BESL) (Ibrahim, 1999). In addition to its role as a learning resource, music (and rap in particular) was mentioned by several students as a descriptor for the sounds of African American English.   In the next section, I explore these multiple accounts of musical (un)intelligibility that surfaced as students described their experiences.

Intelligibility And The Perceived Musicality Of African American English

While the comments in the table above show how some students were able to pinpoint exact linguistic features they had encountered in African American English,

most students were not as precise in their descriptions. Generally speaking, students

tended to describe their perceptions of AAE based on three factors: speed, clarity or

prosodic features, the most common of which was a musical "melody," or intonation.

Due to the context of the survey questions being discussed, students (across different

classrooms) consistently coupled these musical perceptions of AAE with statements

about whether they desired to incorporate these speech patterns into their own

communicative repertoires (Rymes, 2010). Therefore, in this section I present discourse

excerpts illustrating the precise ways in which students expressed thoughts about the

perceived musicality of AAE, its intelligibility and how this impacted their second

language development (i.e., desire [not] to become speakers of AAE).

Rejecting African American English

It's Not As Clear As I Want

The following discussion also occurred during the first week of class, but in a

different classroom. The discussion is centered around the first goal listed on the

"General Goals" section of pre-instructional survey (Appendix F), which states "[my goal

is] to sound like a native speaker." When administering the survey, my intention as a

researcher and teacher was to ask questions that challenge students to consider that a

range of native speech varieties exist (Rampton, 1995). Below, I begin the conversation

with students by drawing on my personal experiences to check their understanding of

regional language variation:

1   Catrice: Have you ever heard the difference between the Southern accent in America and the
2   Northern accent?
3   Several students: Yeah.

4	Catrice:	Like me, I'm from the South, okay? But, I don't really use my Southern accent unless I
5		talk to my family.
6	Huda:	Uh huh.
7	Catrice:	When I talk to my family (I begin to impersonate a strong Southern accent), then I start
8		talking real country like this, and I sound a lot different than I sound as a teacher.
9		(several students laugh)
10	Catrice:	Did you hear the difference?
11	Chorus of students:	Yeah! (laughter)

On line 4, I explain that a Southern accent is part of my communicative repertoire (Rymes, 2010). Then, with an exaggerated Southern twang, on line 7, I demonstrate my accent. Huda acknowledges her understanding of the contingent nature of my language use, uttering "uh huh" on line 5.   She later distinguishes between my classroom repertoire and my "other way" of speaking (as we will call it for now), explaining that the latter is not only context-dependent, but also inaccessible to her: "because you teach us, you could speak uh *clearly*, but uh other way, sometimes we can't understand" (classroom discussion, 9/10/13). I have chosen to add emphasis to Huda's use of the term "clearly," as it appeared numerous times in student explanations across several classrooms. My impression is that the term itself functions as an element of students' repertoire for describing and categorizing varieties of (English) speech.

As a case in point, the discussion above continues, and I invite students to comment on my impersonation of myself using Southern speech (line 7 above). Amidst the laughter and liveliness of the discussion, the issue of speech clarity emerges again:

1	Catrice:	Does anyone want that kind of accent?
2	Sarah:	No. (laughs quietly)
3	Catrice:	No? Sarah, you hurt my feelings (I laugh)
4		(students laugh)
5	Catrice:	Why not? Why don't you want the Southern accent?

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6   Sarah: It's not the clearly as I want.

7   Catrice: It's not friendly?

8   Sarah: Clearly as I want.

9   Yi Xin: It's like rap.

10   Catrice: It's like rap? Oh, okay. What do you mean? (my laughter and students laughter)

11   Yi Xin: Like singer, rap singer. Cause I live on that street. There's all of African American people,

12   so they speak and I cannot understand. Always like "hey, yo man!!" (she laughs)

Sarah's remark about lack of clarity (line 6) signals a way of describing speech that I encountered numerous times in my conversations with students. When students use the term "clear" without any other accompanying details, it implies that there is a quality to "clear speech" that is simply self-evident enough to not require any further elaboration. Of course, there is also the possibility that students face disciplinary and/or linguistic limitations in their repertoires for finding the precision with which to pinpoint the linguistic features that demark clarity. After all, even the average native English speaker would be hard pressed to identify such features. On the other hand, the fact that Sarah's remark prompted another student, Yi Xin, to elaborate further, in racial terms, suggests that judgments about clarity can stem from a reading of more than just linguistic features.

     Working with the assumption that speech clarity is related to (if not interchangeable with) intelligibility, literature on the latter has consistently supported the notion that listeners' social biases influence intelligibility (Lindermann and Subtirelu, 2013). One interesting observation I can make about the above interaction is the way that my *Black* female self is summoned and ascribed by Yi Xin (line 11), even in spite of my efforts to foreground another marked aspect of my linguistic identity (Southernness, line 5 – Charity Hudley & Mallinson, 2010). I would argue that Yi Xin has formulated a schema within her theory of language that maps (my) Black skin onto a unitary category of

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speech, more specifically an unintelligible type of speech that "[she] cannot understand" – line 11. Kang and Rubin's findings (2009) confirm the role of speaker-group biases in speech perception. Using matched guise methodology, they found that non-native speaking listeners of English scored lower on a listening comprehension task with an Asian guise (i.e., the same recording of a native speaker was played twice, once accompanied by a photo of a Caucasian lecturer, then with a photo of an Asian lecturer). They refer to this phenomenon as *reverse linguistic stereotyping*, whereby "attributions of a speaker's group membership cue distorted perceptions of that speaker's language style" (p. 442). Since Yi Xin is an English language learner, the word "distorted" may not completely explain her stereotyping. It is worth taking into account that her ability to make precise distinctions among U.S. language varieties is still developing and will become more sophisticated with increased exposure (Ballard, 2013; Eisenstein and Verdi, 1985).

Nonetheless, this experience also raises issues about the role of power and status in students' orientation to language varieties. The social status and acceptability of AAE as a legitimate language has been constantly been debated in mainstream America (Wolfram, 1998). As students acclimate socially and culturally to English in this context, the prevailing perception of Blackness and Black language as lower in status – combined with students' pre-existing ideas - operates on students' *language ideology filter* (Lippi-Green, 1997). In other words, a student's views on the "[racialized] hierarchy of nativeness" (Nero, 2006, p. 29) can make a difference in whether they will accept the *communicative burden* of trying to understand AAE, or simply dismiss it as altogether "unintelligible."

Also noteworthy here is the way in which Yi Xin orients to AAE through the reference of rap music. Sociolinguists around the world have documented the rise of global hip-hop culture and its wide-reaching impact on youth identities and language practices (Alim et al., 2009; Barrett, 2012a). The global popularity of hip-hop has generated an emblematic effect for some English language learners. Agha (2007) describes an *emblem* as something perceivable that is attached to a social persona. Based on the comments of Yi Xin and several other students in my classroom, rap is emblematic (in a general sense) of Black personhood and thus *all* forms of Black language, regardless of whether they are truly musical or hip-hop related. My initial survey results show that mostly all of my students either listened to rap or knew what it was before they arrived in the United States, an indication of an era and social climate much different from that of Eisenstein and Verdi's study (1985). This holds major implications as it reveals the importance of contemporary forms of mass media in propagating new sociocultural resources (Forman, 2002; Ibrahim, 1999) for the development of students' communicative competence (Canale & Swain, 1981). And while one aspect of this competence is the ability to discern and (potentially) apply the sociolinguistic practices of various discourse communities, for students such as Sarah and Yi Xin, the ideologically complex issue of (un)intelligibility has hindered their desire to join the community of African American English speakers.

This is only half of the story, however. The next section reveals that these same comprehension challenges do not yield an effect of avoidance for all students. On the contrary, the challenges, (rap) musical associations and distinct pronunciation features increase some students' motivation to learn African American English.

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Embracing African American English

Should I Speak Differently To Them?

Like the conversations from previous sections, the following discussion occurred during the first week in another elective pronunciation class. In the typical fashion, I begin asking students to think about whether they have difficulty understanding particular groups of American English speakers. Miki, a Japanese mother of two, brings a racial observation into the discussion:

1   Catrice: So, are there certain groups of American people that you really don't understand? Like (.5)
      yeah?
2   (signaling to a student who wants to respond)
3   Miki: I understand *you*, but [African Americans], they speak [differently].
4   Catrice: [mhmm]
5   Doaa: [yeah]
6   Catrice: Yeah?
7   Miki: Yeah. Um=
8   Catrice: =So, did everybody hear ?=
9   Ehab: =Fast. They speak fast.
10   Catrice: African Americans speak fast?
11   Miki: It's like a more like a [music]. Sometimes it depends on [person]. But I- I still have
12   problem to understand them.
13   Catrice: [mmmm]   [mhmm] A lot of my
14   students say that
15   Miki: Yeah?
16   Ehab: Their accent is difficult to understand.
17   Miki: Do you speak [differently] to [them]?
18   Catrice: [Yes!]   [Yes!]

Similar to the discussion with Jia Ji (which occurred in a completely different class), from the lens of my Black female perspective, I notice that Miki's reading of my

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own Blackness has influenced her decision to foreground race. This is confirmed by the way Miki inserts me (and my intelligible speech) into her comparison with other African Americans, who she finds unintelligible (line 3). In asking whether "I speak differently to them" (line 17), Miki is exploring whether it is possible to bifurcate my teacher identity from my Black female identity based on my language use. My Black female self realizes the danger of Miki positioning me as exceptional. Nero (2006) candidly reports having similar experiences as a one of very few Black TESOL professionals in the field. She shares that "being the exception means attending to, and living with, a host of ambivalent (often contradictory) attitudes and expectations from students and colleagues alike" (p. 25). Morgan (2014) offers a quintessential example of a very similar and exceptionalizing comment commonly directed toward Blacks: "s/he speaks so well! s/he's so articulate!" (p. 143). As she explains, the trouble with such comments is that no matter how well-intentioned they are, the underlying message is that something less is expected of you as a person. Therefore, pragmatically they are "an indirect insult masquerading as a compliment" (p. 143). In retrospect, I believe it would have been beneficial to discuss that flexible languaging ability is not exclusive to me as a Black teacher, but it is a practice used by many Blacks. From my experiences, students readily relate to this idea, especially when they are asked to consider how they experience it in their L1.

Miki is not alone in her observations about African American speech, however. Further into the discourse, multiple students begin to build on each other's comments intersubjectively. In other words, they are working together to co-construct an ideological view of AAE. On line 5 - before Miki has finished her sentence - Doaa, a

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young female student from Saudi Arabia, chimes in with a brief "yeah" to indicate her agreement with Miki's view of me as an exceptional speaker of AAE. With similar eagerness, Ehab (also from Saudi Arabia) abruptly cuts off my attempt to ask whether other students heard Miki's comment. He uses his turn to add specificity to the description of African American unintelligibility, indicating that "they speak fast." (line 9). Miki re-enters the discussion on line 11 with an alternate explanation for the unintelligibility: "it's more like a music." She also explains that there is a contingent nature to Black unintelligibility, noting that "it depends on person." Ironically, her very next utterance returns to her original paradigm whereby all Blacks are *racially lumped* (Lopez and Espiritu, 1990) together "I still have a problem to understand *them*." (my emphasis added)

As I respond Miki's question of whether I "speak differently to *them*" (line 17, my emphasis again), two issues arise. One, my Black female self knows that if Miki witnessed me outside of class speaking to the right person at the right moment, the exceptional "me" would quickly become lumped with *them*. Would that change the way she thought of me? And secondly, I was curious to know who *they* are to my students. Although not listed here, in my later responses, I choose "we," a different deictic pronoun than the "they" that my students use. At the moment of the conversation and in retrospect, these references feel like they are expanding the cultural chasm between my students and me. They truly highlight not only my allegiances and identification, but also the reason why, in this conversation, I found myself in the position of African American cultural ambassador.

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As line 17 shows, Miki begins to turn the tables on Classroom English and its characteristic dominance of (my) teacher talk. Suddenly, the roles are reversed as Miki embarks on a series of questions (which continue beyond the excerpt above).   In later follow-up conversations, my researcher self learns that Miki's questions and observations stem from tangible needs in her life outside of my classroom. Miki explains that her son's daycare teachers are African American and she really struggles to communicate with them. She admits that sometimes she nods her head or verbally indicates that she's following the conversation even when she is not understanding. Perhaps influenced, in part, by her understanding of the currency that lies in the fluidity of my repertoires (which include AAE), Miki expresses that she thinks she should learn to speak AAE. She also requests that I teach the class in African American English (rather than Dominant American English). Miki's desire to join the discourse community of African American English speakers resonates with an identity approach to second language development. Norton Peirce (1995) uses the term *investment* to describe the nature of this desire. She explains that it differs from the conventional idea of motivation in that it is sometimes ambivalent and looks beyond the individual to account for broader social and interpersonal influences. Miki's narrative reveals that in "the index of power relations between interlocutors" (Nero, 2004, p. 3), she feels compelled to accept the communicative burden. What this implies is that Miki's desire to speak African American English may be driven by the high stakes of her (childcare) needs and her self-perception as the less powerful speaker in interactions with African Americans. This interpretation differs drastically from earlier accounts where students rejected the idea of becoming speakers AAE.   The different power principles at play reveal both the unique

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learning trajectories of individual students as well as the complex nature of ideology as it interfaces with second language development.

We Must Learn Or The Streets Will Laugh At Us

In the classroom where primary data collection occurred, "the streets" emerged as a term from a particular student, Omar, as a way to mark a communicative repertoire that was useful outside of the classroom. Omar's repeated invocation of "the streets" typically introduced refreshing doses of criticality that added depth to the discussion. In fact, as students continued to co-construct a description for "the streets" (in those or other terms), I began to understand that the underlying semantic potency of the term depended directly on the ways that students differentiated it from Classroom English.

Earlier in the discussion, Omar pointed out that he noticed how, "in the streets," some people pronounced "hungry" as "hongry." The vowel shift in this word ([ʌ] → [o]) is phonologically emblematic of African American English. Not sure whether Omar was hinting at this, I used his observation to pose a question to the class:

1 Catrice: . . . Omar said, "hongry" or "hungry." Like in the South where I'm from, if I'm talking to
2   my family I'd say "ma, I'm so hongry." I would say hongry. But, here in the class with
3   you guys, I'd never say hongry. I'd say (styling my voice to be high-pitched and
4   exaggeratedly formal "oh, I'm so hungry." Ya know? Because I have to be so formal.
5 Several students: (chuckling and smiling)
6 Catrice: So (.5) I don't know. Is that a good thing? Do you think it's good for teachers to change
7   their pronunciation when they come to class? Omar, do you think I should talk to you guys
8   like I talk to my mom?
9 Omar: Yes
10 Catrice: Yes? (laughs) Why?
11 Omar: Uh, cause [if you talk formally] we will use the same accent for the street, for every place
12   we go. But if we talk formally with outside people, they will laugh about us for sure.

Similar to an earlier example, I am using my own experiences as a multidialectal speaker of English to elicit ideological responses from my students. But this time, the student response is much different. My approach blurs the lines among my researcher self, who is seeking "data collection;" my teacher self, who is seeking more substantive engagement in the classroom (Nystrand & Gamoran, 1991); and my Black female self, who is clearly experiencing an ideological crisis about her own language use. As I rethink this conversation, what strikes me as unconventional is the way that I have used this platform as a teacher to unsettle any notion of myself as all-knowing. Instead, I have invited students to weave their own experiences into the analysis of a provocative question – "should I speak AAE to my ESL students in class?" (lines 7-8).

Admittedly, I was surprised by Omar's request for me to speak AAE in the classroom with him and the other students (line 9). He and Miki were the only two students from whom I had ever received such a request (although, I must mention that there were other students in the class who chimed in to support the idea). His stance contrasts starkly with earlier comments from students who took comfort in my maintaining the distance between the "clarity" of my Classroom English and the bewildering unintelligibility of AAE. In the face of such a revolutionary proposition, my own ideological discrepancies were brought to the fore. Unwittingly, my attempt to spur students into challenging the role of Dominant American English in the class revealed that I, too, had not resolved the question of whether or how it was possible to use additional language varieties in my classroom. I recall, for a moment, imagining what it would be like (feel like) to speak AAE with a group who might not understand me, much less respond back to me in AAE. This moment revealed much about the way that AAE

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maps on to my own identity as a speaker. I expect that when I speak AAE, it will be reciprocated. Through the lens of my double consciousness as a Black female (DuBois, 1903), a primary condition for speaking AAE with non-Blacks is that I can trust them enough to not to equate my way of speaking with ignorance. I expect that when I speak AAE, the main purpose is to bond and connect around a shared experience that is not just linguistic, but historical and cultural. My discomfort, then, with honoring Omar's request was that the conditions of my social expectations did not align with the interlocutors or the setting.

Despite my hesitation to honor his request, I was intrigued by the idea that, also similar to Miki, Omar's response to the challenge of not being able to communicate with AAE speakers is one of accommodation, not avoidance. His approach is utilitarian and is undoubtedly tied to his investment in a particular form of personhood (Norton, 1995). This particular brand of personhood gets sketched out discursively through his expressed desire to participate effectively in the community he has identified as "the streets." Since Omar, nor anyone else, could possibly know or predict the behavior of all people in the streets, his supposition that the community "will laugh about" (line 12) his developing repertoire is an indication of imagination. According to Wenger, imagination allows a learner to "expand oneself . . . [and] create new images of the world" (as cited in Kanno and Norton, 2003). Omar's discourse demonstrates how he engages with this process, envisioning the parameters for his participation in the *imagined community* (Anderson, 1991) of the streets.

From a pedagogical perspective Omar is calling for an approach to classroom interaction that aligns more closely with learners' investments (Norton Peirce, 1995).

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There is a particular theory of language learning that he is putting forth. That is, that the teacher's language choices in class play a part in constraining or expanding his communicative repertoire. This is evident when he states that by upholding the use of Dominant American English, I only equip him to use the "same accent in the street, every place [he] goes" (line 11).

Summary

In this chapter, I examined the ideological subsystem of second language development as it is reflected through student discourse. The data show that students' racialized theories of language materialize and sometimes shift as a result of their encounters with interlocutors of various races, in various locations (within and outside of the U.S.) and across various social contexts (in schools, basketball courts, daycares and so on). By and large, student accounts of their experiences with AAE pivoted on a common narrative of Black unintelligibility and a perceived musical quality in Black speech.

Opening the floor of the second language classroom to active, intersubjective reflection on student encounters produced even more potential for students such as Jia Ji and Miki to incorporate new knowledge into their raciolinguistic ideological frameworks. The students' racialized theories of language functioned not simply as abstract concepts, but as true ideological filters (Lippi-Green, 1997) that guide language preferences and choices. With their ambivalent embrace and rejection of AAE, it is clear is that my ESL students are ideologically entangled in the "linguistic push-pull" originally noted by

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Smitherman (1977) almost 40 years ago. As such, views toward AAE can no longer be discussed as a phenomenon pertinent only to Black and White American audiences.

These insights raise a number of important questions for this study. Could music and other mass media offer a more meaningful link to the communicative world outside of the classroom? How might students respond to the presence of non-dominant varieties in music (such as AAE in rap), especially if these have been deemed unintelligible by some of them? As a teacher, how can I be culturally responsive to learners' articulated ideologies and needs?

This chapter has set up a starting point for considering how my teaching choices and students' participation choices are ideologically nuanced and driven.   I follow this current into the next chapter, where the music-based pedagogy is actually implemented. I take up the lingering questions of this chapter in order to explore music-based pedagogy in the moment of interaction, thus attending to what I see as a second complex subsystem of L2 development.

CHAPTER 5
STUDENT ENGAGEMENT WITH MUSIC-BASED
PEDAGOGY (INTERACTION)

Introduction

I begin this chapter by sharing encounters that occurred with two female Muslim students during the pilot phase of my dissertation. It was the first week of classes. One of my students approached me to regretfully inform me that she had dropped the class. When I asked why, she revealed her concerns about the mention of "body movement (kinesthetic learning)" in the syllabus. She explained that although she enjoyed me very much as a teacher, there were certain forms of body movement, namely dancing, which her religion deemed unacceptable for her to engage in, especially in male company. While I appreciated her candor, I was dismayed to learn that there was an unintended side effect to my trying to explain "kinesthetic learning" with the descriptor "body movement" for my ESL students! What I had thought to be a harmless, perhaps even appealing aspect of music-based pedagogy had cost me a student. Hoping to avoid repeating this situation in subsequent semesters, I started discussing the syllabus with students, clarifying that "body movement" meant that we would sit at our desks and move our hands and heads as a technique for learning pronunciation. I thought for sure that this was the remedy. Later, I learned that it was not.

In the following semester, misalignment surfaced yet again. This time it was with another female Muslim student. Since she had not opted to drop the class, I discovered her dissent in another way. We were working on a word stress rap, and I noticed that she was not participating. She sat completely stoic, not even bothering to pick up her

worksheet and look at it. Amidst the sea of instruments, chanting and laughter, her

silence was loudest, noticeably shifting the interactional rhythm (Schultz, 2003) of the

class. After class, I asked her if everything was okay; I mentioned that she seemed

withdrawn. She shared with me that (secular) music was strictly prohibited by her

particular sect of Islam. She had rightfully exercised her freedom of choice, adhering to

her faith in, what I saw at the time to be, the most unlikely of moments: class time.

Each of these two separate instances depict the significance in-class interaction as

a subsystem of second language learning. In this chapter, I continue exploring the

connection between (music) task perception, in-class talk and participation in order to

answer Research Question 2 – How do students use language to negotiate their

participation during in-class music activities?

Overall Student Judgments about Music and Learning

To begin, I look at students' judgments or overall evaluations about the

effectiveness of using music to improve pronunciation. In the pre and post-instructional

survey, students answered parallel items about their musical preferences and habits.

Before instruction, students already agreed firmly with the idea that music is useful for

improving pronunciation (1 for strong disagreement, 5 for strong agreement).   Post-

instruction, students' support of using music to improve pronunciation increased by 12%.

Since judgments about music and learning were generally very positive from the outset,

the increase is not very drastic. Two students' ratings increased at the end of instruction;

the others were already high and remained the same. Nonetheless, the results shown in

Table 5.1 do suggest that student views and experience with the music-based pedagogy

was, in fact, positive.

Table 5.1 Learners' Judgments about Usefulness of Music for Improving Pronunciation

Student	Pre-instruction	Post-instruction
Omar	5	5
Sahar	5	5
Jung	4	5
Marcela	3	5
Yifei	4	4
Mei	5	5

Analyzing Two Music-Based Activities in the Interactional Context

Rymes (2009) explains that within the interactional context, routinized classroom speech events are the main unit of analysis. Within these events, we can observe patterns such as turn-taking, narrating and problem solving, which reveal the nuance of student participation.

Of the seven total music activities in the course, I will examine the interactional context of two: the Stress Rulz rap (word stress) and the Sounds of English in American Music Project (articulation of problem segmentals). I have selected these activities mainly because of their noticeable interactional contrast and their combined contribution toward an integrated portrait of speech rhythm development (Barry, 2007). I begin each activity analysis section by describing the activity's participant structure, text source and aims, as I found these to be influential features in shaping the interactional context.

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Activity 1: Stress Rulz Rap

Participant Structure

Students rehearse in pairs with teacher rotating and coaching; students perform for the class round robin style in pairs (seated).

Text Source

"Change that Funktion" from Janelle Fischler's *Stress Rulz* book (Appendix D)

Activity Aims

This activity occurred in Week 3, right before the second voice recording submission. It followed a series of lessons about vowel sounds and how word stress is realized on peak vowels in English speech (Gilbert, 2012). The text is intended to help students remember the rule for the case when two words have the same spelling, yet word stress production changes based on the part of speech (or "funktion" – e.g., OBject [noun] vs. obJECT [verb]). These pairs of words are embedded into rap stanzas for students to recite over a beat. Students were also already familiar with the schwa sound and were asked to identify it when it occurs in unstressed syllables of the target words.

Students' Views about the Activity

I asked students to offer their perceptions of the Stress Rulz Rap activity by responding to five short answer questions in their reflective journal. The six focal students gave feedback on this activity. Table 5.2 summarizes feelings students expressed immediately after the activity. I categorized these broadly as favorable or unfavorable. Of the 6 students, 5 reported that there was some aspect of the activity they found enjoyable; likewise, 5 of the 6 offered unfavorable comments.

Table 5.2 Students' Comments about Stress Rulz Rap Activity

Enjoyed	Did not enjoy
Emphasizing stressed sounds in the way that rappers do	The long sentences
Learning new rules about words	The speed (too fast) (x2)
The way that music makes me feel better	That the song was not a popular rap song (x2)
Singing loudly	
The sound of the rhymes (x2)	

The commentary captures the range of student experiences with the Stress Rulz rap activity. Below, I use this commentary as a basis for building a discussion around the diverse forms of behavior *regulation* or interactional "process[es] that students use to initiate and direct their efforts to acquire knowledge and skill" (Zimmerman, 1989, p. 329).

The "Rehearsal Time" Speech Event

Regulating as a response to (in)authenticity (the back of the room). Students' level of familiarity with rap outside of class seemed to influence their engagement with rap inside of class. As students worked in pairs, the participation of one of these pairs, in particular, differed from the rest of the class. While the majority of students could be found clustered together near the front of the class, Omar and Marcela sat as far in the back as possible, regulating their own interactional space in a way that disconnected them from the other two groups (Figure 5.1).

Figure 5.1 Student Seating Positions During Stress Rulz Activity
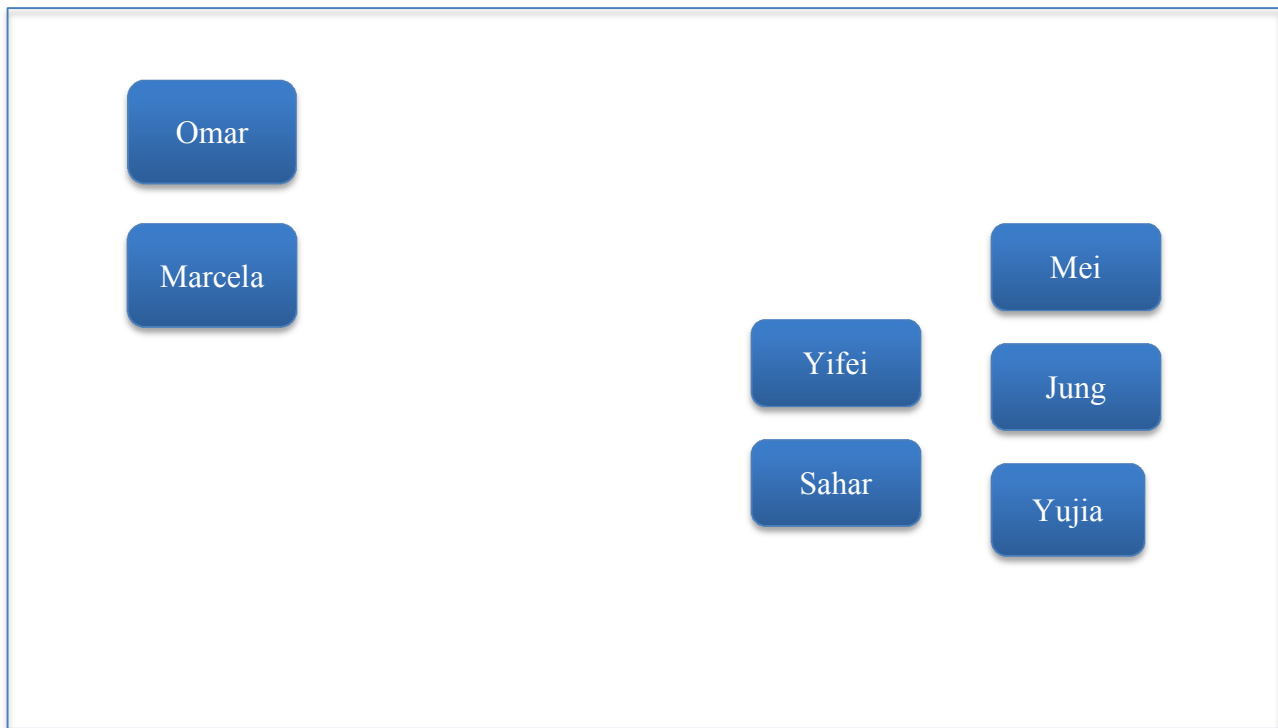
Marcela and Omar were not close friends, nor had they not intentionally chosen to work together. I had paired them, apparently unaware of their shared indifference toward the activity. Throughout the rehearsal portion of the activity, the pair spent most of their time glancing at cell phones, the groups in the front or papers on their desk. For this portion of the activity, I asked the students to rehearse by reciting the stanzas and becoming "one voice." Despite these instructions and the strong communal interactional rhythm that had taken hold among the groups at the front of the room, Omar and Marcela seemed to be engaging separately rather than together. At the time of the activity, I often intervened and offered strategies to help them rehearse. Still, I was puzzled by their apparent disconnection. Omar certainly was not shy; he was one of my most outspoken

students. The pair later offered comments in their reflective journals that shed more light on what I observed to be disengagement from the activity:

> Omar: I didn't enjoy [the rap] because it is more educational than fun.

> Marcela: I did not really enjoy [the rap] because I was expecting for a popular song. But the rap was funny. I enjoy it a little bit.

Omar and Marcela's displeasure with the Stress Rulz rap demonstrates the importance of considering the uniqueness of individual student participation. It is highly likely that these students' views played a role in the drastic interactional differences I observed between their group and the groups at the front of the room. In observing classroom discourse, or in this case, the lack thereof, Rymes (2009) reminds us that the broader social context of discursive practices outside of the classroom influences the local interactional context of the classroom in significant ways.

In the initial survey, both of these students mentioned rap as one of their preferred musical genres, meaning they were more familiar with forms of rap outside of what they experienced in my class. Omar, who consistently displayed a very high level of critical thinking, was the student (from the previous chapter) who made a comment in class about it not being socially appropriate to use the "same accent" with every person, in every situation. His commentary shows that he is highly attuned to the situated nature of language use and the associated cultural capital that accompanies a broad communicative repertoire. Consequently, as Omar also shared in class, his expectation for music is that it will expose him to new linguistic horizons, thus helping reach a social goal of communicating for purposes far beyond Classroom English. Even more specifically,

Omar expressed that he expected that the use of rap music in my classroom would help him to learn "the slang of the street." With this in mind, I learned that Omar and Marcela found the inauthenticity of the source, with its textbook packaging and absence of actual urban U.S. literacies and communicative practices, drastically misaligned with their social goals and values ascribed to music. Karbach (2013) explains further: "unless students see a direct relevance between what they are going to learn and how that information will help them in their actual life, it becomes hard to hook and maintain their attention."

Regulating to form new knowledge and new roles (the front of the room). Not all students possessed Omar and Marcela's advanced knowledge of rap. In these cases, students were faced with the vulnerability of engaging with rap as a discursive practice in unfamiliar ways, all while being watched by peers (and a teacher/researcher). Consequently, I found that this situation resulted in learners seeking ways to make new knowledge connections or to regulate behavior in a way that eased the anxiety of not knowing.

Sahar is a student who I would describe as soft-spoken and diligent. She is a female Saudi Arabian student, who frequently participated in class by asking questions, taking notes (even, or perhaps I should say *especially* during our seemingly tangential discussions about language or events from the real world, i.e., outside of our classroom – more on this later). She commented about enjoying the Stress Rulz rap because it allowed her to stress certain sounds the way that actual rappers do. In her survey, Sahar did not list rap as a genre of music she listens to, yet through the activity she has linked stress, a salient and very characteristic feature, to rap as a cultural emblem. She noted

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that the activity prompted her to listen for stress and the important words whenever she happened to hear rap outside of the class. Thus, drawing on the social context, or the ability to connect with a broader global discursive practice, Sahar shows how she is building new knowledge in a way that increases her sense of competence as a learner and a participant in the rap activity.

Sahar was able to use the task to build informational connections; however, there were times at the front of the room when the real-time demands of the activity prompted students to retreat or reposition their roles. Students' self reports confirmed that they faced challenges with the task. As noted in the table above, the speed of the beat and the times when lines were overloaded with more syllables than the students could handle in time caused the most issues. This is not surprising, as the pace of rap is very uncompromising. It was precisely these challenges that revealed where students needed work with speech rhythm. In many cases their difficulties derived from not understanding how to shorten and reduce structure words and connect quickly across word boundaries. We later used activities to address these issues. However, to survive the moment of rehearsal time, students took some interactional liberties to gain a sense of self-efficacy with the Stress Rulz task.

While seemingly simple on its surface, the task of repetitive listening and recitation of lyrics creates a cycle of engagement in which students constantly self-observe, self-judge and self-regulate (Zimmerman, 1989). Toward the goal of learner autonomy, such self-monitoring techniques are an encouraged component of contemporary pronunciation pedagogy (Miller, 2007).   During the activity, some students could be observed regulating their own behavior through kinesthetic means such

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as tapping the desk, a foot or nodding their heads as they rehearsed. What the participation structure of pairwork added to this equation, however, is a layer that confirms that the learning process occurs not merely inside the head, but can be observed socio-cognitively through interaction. This happens as individuals' observe, judge and regulate themselves and others simultaneously.

One very salient example of interactional improvisations in the regulation process was observed through the scaffolding procedure of the activity. Initially, students were introduced to the Stress Rulz rap by way of the model rapper provided with the materials. After identifying the key stress features (contrasts) and taking the song home to rehearse privately, the model was eliminated and students were asked to rehearse to an instrumental with their partner in class. The removal of this scaffold exposed students who, for whatever reason (i.e., insufficient practice, etc.), had not achieved the skill to recite the lyrics fluently. At this point, socially-mediated regulation took hold. Whether they were willing or not, proficient students replaced the model that had been removed for the less proficient students.

Jung was one of the more proficient students. A young businessman from Korea, Jung expressed that he enjoyed the activity because music brought him emotional enjoyment, regardless of genre. Unlike the other students at the front of the room, the ease with which Jung navigated the rap activity could be attributed to his prior experience with global hip-hop flows (Alim et al., 2009). While Jung did not report that he listened to U.S. hip-hop (in English) very much, he was a fan of Korean hip-hop. He demonstrated this enthusiasm during our class time by pulling out his cell phone and rapping in Korean to the song *My Father* by the Gangnam Style sensation, Psy.

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Jung's quiet yet jovial energy contributed collegial character to the participation frameworks at the front of the room during rehearsal time.   In his group of three, he seemed to be the most comfortable with reciting the rap lyrics. Mei, who was sitting next to Jung, clearly observed his skill and comfort with the lyrics, which differed drastically from her own. In response to what she noticed, she moved my audio recorder closer to Jung. Later, as Mei managed to recite a full line of the lyrics fluently, Jung reciprocated the appraisal of success by passing her the recorder (to which she laughed and pushed it away bashfully).   These mini-appraisals were frequent and resulted in a constant shifting of status in the participation framework – from hearer to main performer (and then back to hearer again). Through these small playful moves, the two students are regulating the interaction in a way that indicates their active observation and judgment of each other's progress with the task. Aside from indicating an awareness of being under the watchful eye/ear of a researcher, these status-shifting pranks created a paradoxical space wherein play and laughter served to mitigate students' very palpable anxieties around the task of preparing to "perform."

Mei's estimation of Jung's skills yielded an additional participation strategy shown in the interaction below. This was the second of three in-class rehearsals that the groups did without an explicit model (i.e., to the instrumental). Mei begins by confessing her trepidation to a nearby group member in Mandarin:

1   Mei: 我不知道是哪一句。
2   I don't know which sentence we're supposed to do.

3   Yixin：跟上节奏。
4   (swirls hands in a circular motion) *Follow the rhythm.*

5   Mei：我只会第一句。
6   I can only do the first sentence.

7   Yixin：第一句?
8   (smiles) *The first sentence?*

Contrary to what happened in the recorder passing episodes, the excerpt above shows Mei automatically casting Jung (a Korean, non-Mandarin speaker) into an unratified status in the participation framework. Yixin, on the other hand, was previously uninvolved, and now finds herself recruited to assist Mei with completing the task. Mei's use of her L1 is significant in a couple of ways here. First, it because it drastically reduces the number of listeners that can understand, her inability to follow the task goes undetected, thus saving face for her. Secondly, Mei's comment serves as a discursive indicator of low self-efficacy or "perceived capability to perform [an] activity" (Zimmerman, 2000, p. 83). Self-efficacy, stemming from educational psychology, has traditionally been studied from a bounded, quantitative perspective. As can be seen here, however, a sociocultural approach to discourse analysis complements traditional approaches, as discourse also provides key insights into how Mei has covertly positioned herself as a struggling learner in this interaction. In the excerpt below (overlapping student speech in bold text), Mei seeks a suitable regulation strategy to overcome her struggles:

1   (♪♫ Music starts ♪♫)
2   (Jung raps alone and continues)
3   Jung: [**To proDUCE means**] we make a little more. But the [**PROduce**] is the [**lettuce**]
4   we buy at the store.
5   Mei: [**To proDUCE means**] (mumbles)   [**proDUCE**]   [**letter**]

6		(mumbles)	
7	Jung:	**[To inSULT]** express words as cold as ice. But the **[INsult** is the comment that	
8		isn't nice.]	
9	Mei:	**[To inSULT]** (mumbles)	**[inSULT** is the comment
10		that isn't nice.]	

It is evident in many ways that Jung's abilities provide much needed support for

Mei. While she cannot keep pace with the full length of the rap at the sentence level, she

is able to chime in with the key vocabulary (contrast) words that we covered previously.

For example, on line (5), Mei raps a few of the first words of the line "To proDUCE

means." Quickly, she loses the pace, which Jung continues to sustain, and her intelligible

utterances are exchanged for mumbles. Even the mumbling is worth mentioning because

Mei mumbles in time with the beat. Mei has observed both herself and Jung and judged

the amount of linguistic load that is reasonable for her abilities, given the timing

demands. Essentially, Mei has developed a strategy of imitation. Lantolf (2000) explains

that, from a SCT perspective, imitation is developmentally relevant in the sense that "it

involves goal-directed cognitive activity that can result in transformations of the original

[cognitive] model" (p. 203). Mei has observed both herself and Jung and judged the

amount of linguistic load – including the amount of imitation- that is reasonable for her

abilities, given the timing demands. As a result, she has committed to a set of priorities as

part of her regulation process. The pattern of her utterances suggests that her order of

priorities would look something like this: articulate focal stress words; keep pace with the

beat; and least importantly - articulate every word precisely.

Interestingly, even though Mei's discourse shows a strong commitment to the

focal stress words, there are still issues with her production. The purpose of the activity

was for students to note and produce the stress contrast between verbs and noun pairs that are spelled alike. While Mei was able to do this successfully when pronouncing the words in isolation (prior to rapping), she consistently applies the *same* stress (not a contrast) to the pair of words during the rap. (proDUCE twice on line 5 instead of proDUCE/PROduce and inSULT twice on line 9). This corresponds to similar findings in second language pronunciation research in which scholars argue that correct pronunciation at a lower phonological level does not necessarily equate to success at a higher level (Celce-Murcia, Brinton & Goodwin, 2010, Chela-Flores, 2001).

Beyond discussing her skill level, I am really seeking to emphasize the resourcefulness of Mei's engagement process. Guided first by a plea for assistance in her L1 and later, by the more fluent discourse of Jung, she found a way to engage jointly with fellow students when support was removed from the activity. In this way, she is able achieve success in a task that probably would have been impossible for her without the participation of others. Mei's engagement here shows that she is operating in her Zone of Proximal Development (ZPD), or the distance between her current level and the level at which she is able to function with assistance (Vygotsky, 1978). Although this glimpse of students' differential engagement in an in-class interaction, it, admittedly, is limited in terms of what it can imply about the students' second language development in a more permanent sense (Boxer, 2008). Toward this end, a more extended series of observations are offered in the next chapter. Nonetheless, this interaction confirms the underpinnings of Complexity Theory in its illustration of diverse paths of pedagogical engagement for Mei and Jung.

Shifting the Participant Framework in "Performance Time" Speech Event

After three rounds of rehearsal, the students were faced with the task of sharing or "performing" their raps for the rest of the class. The performances were brief and informal, as each student remained in their original seated position and was assigned only a couple of lines from the lyrics.

Although not officially assigned (through the participation structure) to work together as a group of five, the "front of the room" crew, co-constructed a more inclusive participation framework. They showed an intense awareness of one another's engagement with the rap. As shown in the image in Figure 5.2, the students mainly demonstrated this awareness through nonverbal communication such as adjusted gaze, chuckling or even turning completely around to observe classmates in another group.

Figure 5.2 Front of the Room Students Noticing Each Other's Performances

In order to avoid appearing "off task," students would wait for me to turn my back to engage in lighthearted taunts with one another. These transgressive practices were the

substance of an *underlife* (Goffman, 1961) that developed through brief episodes of play. Since underlife activities, by definition, are covert, I only discovered them when watching our recorded class sessions. The Stress Rulz activity did not allow for passive participation, especially for the cluster of students at the front of the room. The activity demanded constant vocal engagement and observation. If examined for its larger purpose, then, the classroom underlife served as an interactional means for my students to build a sense of community with one another through their shared need to manage the very palpable sense of vulnerability brought on by being monitored constantly. Similar to what was noted above (rehearsal time), during performance time, I observed Jung passing my recorder to classmates. This time he had turned around to Yifei and Sahar, who were seated behind him.

1   (Jung turns around and tries to hand my audio recorder to Yifei and Sahar)
2   Yifei: (smiles and waves her hand quickly) No!
3   Sahar: (bashfully looks away and gestures) No, thank you.

None of the students were eager to be singled out as the star rapper of the class. This was understandable and expected, especially given their varied levels of familiarity with and interest in the genre. In addition to using play as a mechanism for responding to the demands of the activity, students found other clever ways to re-arrange the participation framework of the speech event. For the purposes of performance, I had assigned individual sections of the lyrics for the students to recite individually. At the moment of performance time, however, the students' preference for community and connection around the activity prevailed over my instructions:

1   Catrice: Now this is the instrumental. The guy [the model], he's not singing. It's just us,
2   okay?

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3   (Yujia and Jung nod)

4   Catrice: You ready?

5   (silence)

6   (Jung scratches his head, chuckles and looks down)

7   (♪ Music starts ♪)

8   (Other students begin their turns)

9   Mei: (gestures to Jung and Yujia) Together! We together.

10   (Yujia looks toward Mei)

11   (Jung nods his head)

12   Jung and Yujia: An [**OBject is something we can feel and see. To OBject expresses**]

13   a feeling that we don't agree

14   Mei: [**OBject is something we can feel and see. To obJECT**

15   **expresses**]

16   (mumbles)

17   (Yifei, Yujia and Jung laugh, shift in their seats)

18   (the group finishes the remaining lyrics)

19   Yifei: [(laughs and gestures to Sahar) We should have sang together.]

As with rehearsal time, I began the performance time speech event by reminding

the students that we were no longer using a model. In retrospect, I realize that this may

have only heightened their anxieties about performing, as evidenced by the silence on

line 5 in response to my question "are you ready?" Despite what I read as initial

trepidation by some students, many of them successfully recited their lyrics both in time

with the beat and placing correct stress on the focal vocabulary words. Sahar and Yifei

began, each reciting their lyrics separately. As Omar and Daniela picked up their

respective turns, Mei reacted to her discomfort with the idea of performing solo. On line

9, as others are in the middle of their performance, she turns to her groupmates, in a

somewhat panicked state and declares that they will perform together. Jung quickly

consents nonverbally (line 11), and Yujia acknowledges the proposal with eye contact.

Once the other students have finished their turns, Yujia, Mei and Jung jump right

into the next section of lyrics, in unison. Their deviation from the task instructions was

evident, but so was their commitment to the task. Consistent with Wright's findings, the

group "manipulate[d] the task process in order to make it manageable in their own terms"

(as cited in Barkhuizen, 1998, p. 87), which I certainly could appreciate. The decision to

perform as a group was initiated by Mei, who, as noted previously, was a student who

struggled the most with the activity. Although all of this would imply that Mei stands to

benefit most from a group performance, something very unexpected happened. Lines 12-

14 show that a slight divergence in stress production occurred as the group jointly recited

the lyrics. This portion of the lyrics was supposed to highlight the stress contrast between

OBject as a noun and obJECT as a verb. In actuality, Jung and Yujia misplaced stress on

the verb, pronouncing it as OBject. Despite her earlier struggles and her characteristic

mumbles that follow, Mei was the only member of her group that correctly pronounced

obJECT, as shown on line 14. This outcome is certainly interesting as Mei's unassisted

success may imply that in just a short amount of time, she is making strides toward

moving to the next phase in her ZPD (i.e., being able to complete a task alone that was

impossible for her previously). It is likely that the other students' blunder was

attributable to the cognitive demand of keeping the quick pace of the beat while also

needing to recall the stress rule. What is clear is that Jung and Yujia did not

mispronounce the word due to a lack of knowledge. The regulation process of self/other

observation and judgment was fully at work, as several students (including Jung and

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Yujia) give a series of nonverbal cues on line 16 (laughter, etc.) to indicate that they noticed the mistake. Second language pronunciation research supports the idea that these moments of noticing one's own errors are a major prerequisite of development (Derwing & Munro, 2005; Schmidt, 1990; Smith & Beckmann, 2005).

Such implicit moments of metacognitive awareness can be harnessed for more explicit purposes. They present opportunities for students to reflect on questions such as "what surprised you as you worked through this activity?" Likewise, questions such as "what would you like to try next?" can serve as a springboard for students to contribute to personalizing their learning. In the following section, I discuss the Sounds of American English Music Project, which followed this line of reasoning. I examine students' discursive participation in an activity in which they were invited to choose a language feature to work on and the music with which to explain the feature to classmates.

Activity 2: Sounds of American English Music Project

Main Participant Structure

A single student is at the podium instructing the whole class. Teacher occasionally chimes in to support the instruction.

Text Source

Targeting Pronunciation Textbook (Miller, 2007); music and media found online by students

Activity Description

This activity introduced a segmental focus into our series of music-based activities. The intention was to hone students' production of consonant sounds as a precursor to a later lesson on linking (connecting sounds across word boundaries). As Barry (2007) notes, linking relates to the bigger picture as it one of the main components that plays a role in speech rhythm perception. Unfortunately, the harsh weather conditions of the Spring 1 session resulted in class cancellations, preventing us from completing the lesson on linking. The music activity being described, however, was completed in its entirety. As a way of customizing instruction and setting clear instructional priorities, I designed the linking lesson with a focus on sounds that were most obviously problematic for students. I arrived at this conclusion based on an analysis of the voice recording samples students submitted over the course of the term (i.e., My Exercise Program – Appendix A). Therefore, in the Sounds of American English Music Project, students selected one problematic sound and researched its articulation in several environments (beginning, middle, end of a word). Then, the student selected and shared one English song that uses the sound repeatedly for the class to practice. And, if time had allowed, the subsequent linking lesson would have used all sounds covered in the Music Project to guide students toward the task of producing connected speech.

The "Presentation Time" Speech Event: Can Recitation Become Communication?

As the previous section indicated, the Stress Rulz rap activity prompted a variety of perceptions and interactional responses from students. In addition to its limitations of using an inauthentic rap text, the participation frameworks of the Stress Rulz activity were constrained, to some extent, by a heavy emphasis on recitation. While this

limitation was overcome through subsequent activities, which moved along Celce-Murcia et al.'s (2010) Communicative Framework for Teaching Pronunciation, it raises the question of what other forms of participation become possible by offering students the chance to inhabit the role of instructor? In this section I address this question by examining the American Music Project, and, on some levels, contrasting its interactional affordances with those of the Stress Rulz activity.

A major feature that distinguishes the American Music Project from the Stress Rulz rap is the self-directed, exploratory nature of the project. As mentioned earlier, the object of each student's inquiry was a single consonant sound he/she selected based on his/her own goals and self-assessment. Jung, reflecting on the activity, stated:

> While I'm making the presentation file [for the music project], I can understand well about how to make the 'r' sound. It is very helpful to me.

A customized learning approach does much to highlight the variety of student participation taking place. Rather than passively receive information or engage with the rote repetition of traditional behaviorist approaches to pronunciation instruction (Celce-Murcia et al., 2010), the American Music Project engaged the students "on the basis of personal filters: experiences, goals, curiosities and beliefs" (Cole as cited in Karagiorgi & Symeou, 2005, p. 18). As an L1 speaker of Korean, Jung's choice for the project was driven by his own goals and beliefs about the "r" sound, which he described during his presentation as "always very hard for me."   Roberta, a non-focal student participant in the course, also expresses her preference for the practical nature of the project:

> Music project [was my favorite] because I can put in action what I learned in previous class.

Similar to the Stress Rulz activity, I turn to interaction for clues on how students'

in-class talk facilitated the learning process. Overall, I found that two key discursive

mechanisms surfaced during this activity as common means for students to position

themselves with respect to specialized knowledge about pronunciation: instructional talk

and metacommentary.

Instructional Talk. The American Music Project called for students to briefly

become an instructor in order to explain a pronunciation feature to classmates. This

entailed a role reversal, which shifted them temporarily from recipients of knowledge to

constructors (and instructors) of knowledge. To some extent, students' linguistic choices

reflected their differing notions of what is needed to "perform" the teacher role

successfully. From a communicative perspective, some students' language use was not

very performative, as it simply mirrored that of a formal speech or presentation. Others

responded to the task by drawing on a more instructional repertoire to function

effectively.

Jung was the student who most frequently used instructional talk to present his

project. He repeatedly displayed his repertoire through the appropriation of specialist

terminology:

1 Jung: The "r" sound is a sound we make continuously without stopping . . . Step two is
2   when we say the "r" sound, the very back of the tongue or actually our throat is
3   constricted.
4 Roberta: Constricted? (5)
5 Catrice: Constricted means it's [tight]
6 Jung: [tense]
7   (he continues)
8 Jung: Now that we understand these points, let's practice a phrase. Repeat after me.

9   (students laugh)

Despite his many pronunciation issues, Jung has a strong command of English

vocabulary and grammar. He was one of the most diligent students in the class, always

taking notes and asking questions about language he encountered both in class and out of

class. My impression of Jung is that he was willing to take chances with his English, as

shown in his use of the word "constricted" to describe the throat (line 3). While the

audiolingual-based practice of repetition drills (traditionally prevalent in pronunciation

teaching – Celce-Murcia, 2010) is certainly part of Jung's teaching technique, his flexible

repertoire also enables him to expand beyond the confines of this tradition. Jung's

discourse shows that he is constructing new knowledge on multiple levels. He is

developing new vocabulary, practicing fluency as he instructs and he is building his

capacity to describe pronunciation features metalinguistically. Interactionally, this

display also presents an opportunity to bridge a discrepancy between the knowledge Jung

has constructed and that of his peers. Jung's use of the word "constricted" generates

silent yet fervent confusion, which gets vocalized quickly by Roberta on line 3. As Jung

delays in responding, I quickly assume the role of co-teacher (as I did regularly during

the project) and explain on his behalf. Perhaps my "help" was a bit hasty as Jung speaks

over me, showing that he can offer his own gloss for the term (line 6).   Taking his role

as teacher very seriously, no doubt, Jung continues by using instructional talk to prompt

student participation – "Now. . .repeat after me" (line 8). Rather than immediately taking

up the command, students respond with laughter, essentially breaking the frame

(Goffman, 1974) of Jung's performance. The students' open expression of amusement

here with Jung's appropriation of teacher talk was one of many moments in which

"serious" instructional moments were transformed into opportunities for play. Such

occurrences displayed the students' preference for participation frameworks in which a

spotlighted student (whether rapping, presenting, etc.) made him or herself available to be

at the center of the punchline. This was particularly true when Jung was involved.

Below, Mei also attempts to use a teacher repertoire to instruct classmates on

pronouncing "p" and "b," a distinction that is particularly difficult for speakers of English

with Arabic as an L1:

1	Mei:	First, when you-- when we speak "b" we mouth like the picture.
2		(1.5) Yeah. So, uh (2) we will – we should breathe from
3		(unintelligible) and close your lips to pronounce the sound li:ke
4		"baby" ⬇
5	Catrice:	Baby.
6	Mei:	Or tob. [sic]
7	Jung:	Tub.
8	Catrice:	Let's try to say that with her. Tub.
9	All:	Tub.

Mei's teacher repertoire consists of a couple of key features. First, her

pronoun use shifts between "you" and "we" repeatedly on line 1. The interactional

move that follows suggests that her use of "we" serves to set up her positioning as a

model. On line 4, Mei further to attempts to gain standing as an instructor by using

a sharp falling intonation on the word "baby" as a cue for students to repeat after

her. She seems to be facing a similar authority issue as Jung because I was the only

"student" to pick up on the cue and repeat (line 5). She garners a slight bit more

participation from Jung (line 7) as she models the next word "tub." It's not until I

step back into full teacher mode and explicitly request participation that all students

follow along (line 9). She continues her lesson:

1	Mei:	The "b" is voiced and the "p" is voiceless. Sometimes we don't
2		know if our pronunciation is right or wrong, so we can use a paper to
3		check (she holds a piece of tissue near her mouth to show the
4		aspiration of "p.") And we can practice some words like "rub it off."
5	Jung:	It's "r" sound. It's mine.
6	Marcela:	(chuckles)
7	Catrice:	(laughs) Yeah! It is.
8	Mei:	Now you can repeat. Rub it off.
9	All:	Rub it off.
10	Mei:	And some words like "hop along."
11	All:	Hop along.
12	Catrice:	What happened with "hop along?"
13	Omar:	It's connected and we schwa the "a."

Mei continues her lesson by demonstrating a technique for checking the aspiration of a word-initial voiceless stop. This is a not a technique that she was instructed to use, but rather she discovered it through her search for materials online. As Mei finishes her explanation on line 4, just as in the previous excerpt, she signals for students to repeat by saying "we can practice." Rather than respond to the cue with repetition, Jung sees an opportunity to excitedly point out that Mei's example phrase "rub it off" uses "the 'r' sound." He claims the sound as "mine," a reminder to the class that he taught a lesson on 'r' (line 5). Noticing that her implicit prompt for repetition did not produce the response she intended, Mei uses a more explicit teacher repertoire: "now you can repeat" (line 8). On line 10, Mei introduces another phrase with the target sound for students to repeat, "hop along." This time I invite the students to break the frame of repetition by asking what they noticed about the pronunciation of the phrase (line 12). Omar insightfully applies his knowledge of two concepts we had been covering: linking (connected speech

across word boundaries) and the schwa sound (ə). Together as a class, we used the American Music Project as a means of building a participation framework that invited students to construct their emerging pronunciation knowledge beyond repetition. In retrospect, the true value of our engagement with the project stems from the range of knowledge that counted as relevant to the learning endeavor. While, obviously, explicit knowledge about pronunciation certainly played a major role, I believe that an atmosphere that welcomed sharing additional repertoires and forms of knowledge was what contributed to students' enduring comfort in seeking such interactive participation frameworks throughout the course as a whole. The next section highlights metacommentary as an additional communicative resource in the diverse forms of knowledge construction students displayed in their engagement with the American Music Project.

Metacommentary. Rymes (2014) describes metacommentary as a means of "commenting on communication" (p. 5). Metacommentary positions the knowledge of each participant in the interaction in different ways, as it does important work to signal "which features of one's repertoire are most relevant" (ibid). From a second language development perspective, metacommentary does much to highlight the diverse communicative resources that shape how students construct and apply their knowledge of pronunciation, or of language in general. In many classrooms, such talk might very well be considered "off task" or bracketed as inconsequential. Another way to view this, however, is as a manifestation of student investment in and ownership of their knowledge. Put differently, in the Music Project, metacommentary served as a mechanism for claiming expert status

over one's own way of knowing; this was a right that, through discourse, essentially was re-distributed away from me as a teacher to the class as a learning community.

Several students used metacommentary as a tool to express both what mattered to them and what they wanted others to know about them in the context of the project. Mei, for example, began her presentation by using her name to offer a lesson to classmates on Chinese phonology:

> Hello, everyone. First I want to introduce my name . . . In America the "qiao" will pronounce "cow," but in China, the "qi" pronounced "chi."

Mei frames her explanation of her name's pronunciation through a cross-linguistic comparison. Her choice reflects the value she sees in extending the assigned pronunciation lesson beyond the boundaries of English and into the multilingual assets of her repertoire. It is also likely that her reference to the American pronunciation of her name is based on lived experiences in which American English speakers have applied their own phonology, unintentionally mispronouncing her name. In this sense, Mei's metacommentary shifts the locus of expertise from teacher to student. She has used her awareness of the elements of her repertoire to contribute pronunciation knowledge to the class that even I as the teacher may not have otherwise had access to.

Similarly, Sahar concludes her pronunciation lesson by commenting on idiomatic language, which she used to interpret the larger life lesson she found in the song she chose:

> And finally, I like this [wisdom] and I found its meaning in the song. Age is just a number, but maturity is a choice. Also, no pain no gain. Because I think every successful person has a painful story and every painful story has a successful ending.

As Sahar's metacommentary shows, some students connected with the music in the project in ways that extend far beyond the objectives I devised for my lesson plan. Metacommentary adds spontaneity, a contingent sense of personal relevance to the lesson that complements rather than competes with lesson objectives. There is also something to be said about how music - laden with social, cultural and sometimes political values - offers possibilities for more substantive forms of expression. What results is engagement not only with the technical elements of segmental pronunciation, but also particular moments for inserting a sense of personal stance.

From a more interactional perspective, students also found ways to interject metacommentary about music or artists into the middle of a lesson:

1   Mei: I found a song is from Justin Bieber's "Baby."

2   Catrice: Who knows about Justin Bieber?

3   Omar: Yeah. He just went to uh, [jail.]

4   Catrice: [Yes, he did!] (laughs)

5   Other students: [(laugh loudly)]

This interaction is unconventional – especially for an ESL pronunciation classroom – in many ways. Typically, asking a student to bring in a pop song for us to examine (and sing) is not part of the agenda. And even if/when it is, questions about whether students "know about Justin Bieber" don't tend to count as relevant or important knowledge at all. But it is precisely these elements that open up a space for student engagement in the pronunciation classroom to move from recitation to communication. Additionally, Omar's metacommentary also shows that this activity resonates more closely with his social goals of using music in English as a tool to stay

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current with events and language in contemporary American youth culture. Judging from the lively laughter brought about by Omar's comment, he wasn't the only student privy to Bieber's misfortune. Throughout the various presentations, Omar was constantly offering comments about where artists would be playing this weekend, what genres the music belonged to, etc. Numerous ethnographic studies in education support the pedagogical logic underneath such interaction. Scholars readily attest to the central role of music and popular culture as a tool for enriching the language-culture link that is so crucial for true second language development (Ibrahim, 2009; Forman, 2002). While these activities typically are regarded as something that students do on their own time, the engagement that students display in the American Music Projects gives reason to consider how we can continue to harness the value of music and culture along with in-class learning objectives.

Metacommentary also played a role during the singing portion of the activity. Just as in the Stress Rulz activity, performing was an element of the American Music Project. After watching a music video, we used the African American tradition of call and response to structure the participation framework for singing the songs students had chosen. A single individual would sing one line and wait for the entire group to sing it back. Afterwards, we would reflect on our pronunciation of words in the song that use the target sound of that particular lesson. Unless there were volunteers to lead, I would typically take the leading role in the song. In the excerpt below, classmates noticed Marcela's enthusiastic voice ringing out above everyone else's as we finished the song "Girl on Fire" by Alicia Keys.

1   (♪   Music playing ♪)
2   Marcela: (♪□ singing ♪□) She's walking on fire. This girl is on fire.

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3	Other students:	(laughter)
4	Catrice:	Oh yeah! [Marcela!] Let's give it up for Marcela.
5	Omar:	[yeah!]
6	All:	(applause)
7	Jung:	She's an R&B girl.
8	Catrice:	Jung, do you listen to R&B?
9	Jung:	Yes, I like. Korean singers sings a lot of R&B songs. I can follow, but I
10		like the vibration and the (.5) what is the name? Ad-lib?
11	Catrice:	Ad-libs. Yeah.
12	Jung:	I like the part when they ad-lib together like (♪□ he starts singing ♪□)

According to Marcela, R&B was one of her preferred genres of music, which she had enjoyed even before arriving to the U.S. from the Ivory Coast. Her skill at singing R&B resonates with Jung, who also became a fan R&B not in the U.S. but in Korea. And, although R&B is commonly regarded for its roots in African American culture, Jung's contact with R&B has come through renderings of the genre in Korean and English alike. Consequently, Jung's estimation of Marcela as "an R&B girl" is metacommentary that situates him as a participant in complex, transnational flows of hybridized language and culture (Pennycook, 2007). The use of a repertoire that reflects the processes of globalized Black popular culture in an educational context speaks to a larger question of how to engage with students encountering so-called non-standard varieties of language such as BESL (Black English as a Second Language) (Ibrahim, 1999). This is an area that is in continued need of study, as it relates to both Black and non-Black immigrants. As Jung's repertoire shows, he is indeed familiar with techniques of R&B singing such as the "vibration" (line 10) or runs[11] demonstrated by Marcela in her singing on line 2; he also mentions the practice of "ad-libbing" or improvised vocal inflections used to add

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[11] "Runs" is a colloquial term for referring to the musical technique of melisma. Melisma is the singing of a single syllable of a lyric while moving through multiple musical notes in succession. ("Melisma", 2014)

intensity to the song. Thus the song has served as a springboard for enabling Jung and Daniela to draw on media-based elements of their repertoire to educate the class.

Several other students chose songs that indexed African American music culture in some way. Whether it was a rap verse in a Justin Bieber song or a full R&B track, the students' music selections pivoted on the blurred lines surrounding American pop as a derivative of other genres. In other words, some students accessed genres such as R&B, hip-hop, rock and so on only as they were filtered through the lens of pop music. The students themselves showed varying degrees of interest in exploring the original genres apart from pop. Through metacommentary, I began to understand that for some students, the superficial features of pop functioned as a more accessible proxy for "American" language and culture. Other students, like Jung, used repertoires that displayed a greater depth of engagement with the elements of American pop's component genres (R&B, etc.).

For example, when Omar was unable to successfully locate a song for his project on -*ed* word endings, he contacted me for suggestions. Remembering that, during our Stress Rulz activity, he had expressed an interest in learning slang through more authentic hip-hop, I recommended the song "I Can" by African American New York-based rapper Nas (a song I had used with other ESL students). I also recommended a pop song by Pink called "Who Knew." To my surprise, Omar picked the pop song. In an email to me he explained his decision to choose the pop song over the hip-hop song:

> Hello Catrice,
> I picked the pop one because it will be easier for my classmates, plus my music project
> was about the word endings so i [sic] need a clear song to hear the words well.
> (personal communication 3.14.14)

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Like all the other students in the class, Omar named the Music Project as his favorite because "most of the songs are updated and interesting." Indeed, the pop songs appealed very much to students' goals of sharing authentic, inside cultural knowledge with an imagined community of English speakers. On the other hand, Omar's metacommentary also suggests his belief that the language of some music forms (pop) are more accessible to English language learners than other music (hip-hop). While both of the songs I suggested make abundant use of the target feature of his project ("-ed"), he distinguishes their suitability for the task based on his need for a "*clear* song." This implies that there is a clarity of speech in the pop song - sung by a White female artist – that is absent from the hip-hop song. By now it is evident that "clarity," as invoked through the repertoires of participants in my study, serves as a barometer for intelligibility. Similar to Chapter 4, this type of metacommentary reveals the ideological filter at work for second language learners as they encounter different varieties of English speech, particularly those that are different from the White, middle-class norms often reflected in the textbooks from which they are often taught (Mendes, 2009). The main difference in Omar's case is that AAE is being commented on as it is delivered through music.

Summary

This chapter has covered the interactional subsystem of second language development as it unfolds during in-class music based activities. I have explored how students use language as a means of achieving different forms of participation. The survey and journal data offer valuable insight into how perceptions of difficulty and authenticity in the Stress Rulz rap directly impact students' participation. In particular, it

is useful to note how task perception contributed to discrepancies between my intended participant structure and the actual participation frameworks that ensued among students. When students perceived the task to not be challenging enough, their withdrawal resulted in a full breakdown of the participant structure. On the other hand, when the task was perceived to be too challenging, students regulated their behavior and that of others in order to maintain a sense of self-efficacy with the task. Oftentimes, this involved imitation, codeswitching and overt recruitment of peer cooperation.

Additionally, interaction occurring during both activities – Stress Rulz and the American Music Project – revealed differences in student knowledge and development in two areas: linguistic and cultural. Through discourse, learners repeatedly positioned themselves as knowledgeable (e.g., Jung's use of specialized language about pronunciation and African American music) or struggling (e.g., Mei's pleas for help in Chinese). Learners' choices also reflected judgments about the knowledge of their classmates. In the American Music Project, students such as Jung chose to use terminology above fellow students' level. Omar, on the other hand, avoided bringing in an authentic rap song to avoid introducing difficulty for his classmates.

The activities covered in this chapter, each admittedly with its own limitations, created opportunities for students to engage with music in a non-teacher-fronted format. While this holds useful implications for better understanding and fostering the unique communicative abilities of individual students, the substance of interaction is ephemeral. In order to overcome this particular limitation, the next chapter takes a longitudinal view of students' L2 development as it is analyzed through the speech production subsystem.

CHAPTER 6
AN ACOUSTIC ANALYSIS OF LINGUISTIC DEVELOPMENT (SPEECH RHYTHM PRODUCTION)

Introduction

The primary research question that this chapter seeks to answer pertains to students' emergent patterns of speech rhythm production. At first glance, it might appear that the chapter closely resembles traditional cognitivist approaches to research on second language development, both in its aims and methods. Particularly, in contrast with the previous two results chapters, the more positivist orientation of the research question leads to a systematic, quantitative measuring of skill that mirrors traditions anchored in the input-output line of inquiry. Despite these superficial similarities, Complexity Theory contributes a number of principles that depart from cognitivist traditions in a number of key ways.

First, rather than be dismissed as trivial or marginal, context plays a key role in the larger analytical portrait. As will be discussed further in the concluding chapter, the ideological and interactional agency of students serves as an emic frame around the presentation of the six focal students' data in this chapter. Secondly, as empirical work has shown (Larsen-Freeman, 2006), details of individual developmental paths can differ drastically from the claims we are able to make about the group as a whole. Finally, this chapter recognizes a learner's language to be an autonomous dynamic system that self-organizes based on contextual factors meaningful and apparent to the learner (Larsen-Freeman, 2014). Therefore, it logically follows that learner language will not be compared with an elusive set of target language norms regarded as the "ultimate

yardstick of success" (Ortega, 2009, p. 140). In the absence of native speaker comparison (and control groups), it is necessary to establish a definition of what I am counting as progress in speech rhythm development. Working from the empirical claim that, in English, speech rhythm development proceeds from syllable to stress-timed characteristics (for L2 speakers and native-speaking children alike – Ordin & Polyanskaya, 2014), I interpret an increase in the nPVI as growth (Figure 6.1). My interpretation is also informed by phonological influences from the L1 (handled on a per case basis in the analysis below) and by a search for developmental stability, the latter indicating growth per the principles of Complexity Theory (Larsen-Freeman, 2015).

With these considerations in mind, I uncover emergent developmental patterns by traversing three levels of scale within the complex subsystem of speech rhythm production: group, interindividual and intraindividual (Larsen-Freeman, 2006).
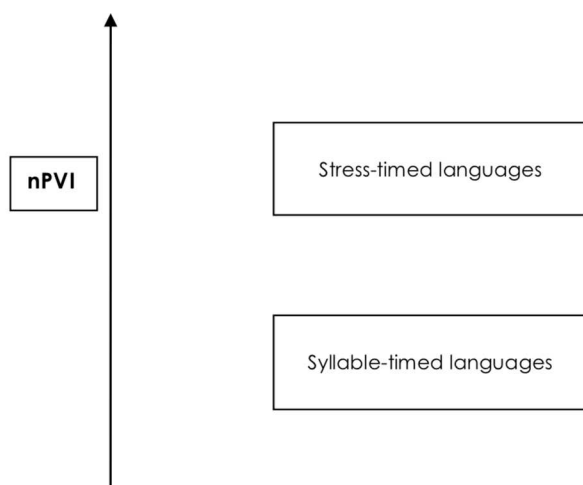

Figure 6.1 Timing Class nPVI Scoring Continuum

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Group Patterns

In order to capture the multiple dimensions of speech rhythm production, an nPVI was calculated for the three main correlates of speech rhythm: duration, fundamental frequency (pitch/F0) and intensity. The nPVI captures the amount of variability between all adjacent pairs of syllables in the utterance for a particular correlate (normalized for speech rate). Table 6.1 shows the average change in speech rhythm per correlate for the six focal students. These are also plotted in Figure 6.2. The four measurements were taken during weeks 1, 3, 5 and 11.

Table 6.1 Mean group scores (with standard deviation) for all three correlates

	Time 1	Time 2	Time 3	Time 4
nPVI-duration	49.87 (6.37)	51.35 (4.91)	52.80 (3.44)	52.73 (3.46)
nPVI-f0	10.88 (2.91)	12.33 (3.48)	12.25 (3.82)	12.39 (3.70)
nPVI-intensity	5.87 (.54)	5.41 (1.00)	6.48 (.85)	5.46 (1.95)

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Average change in F0
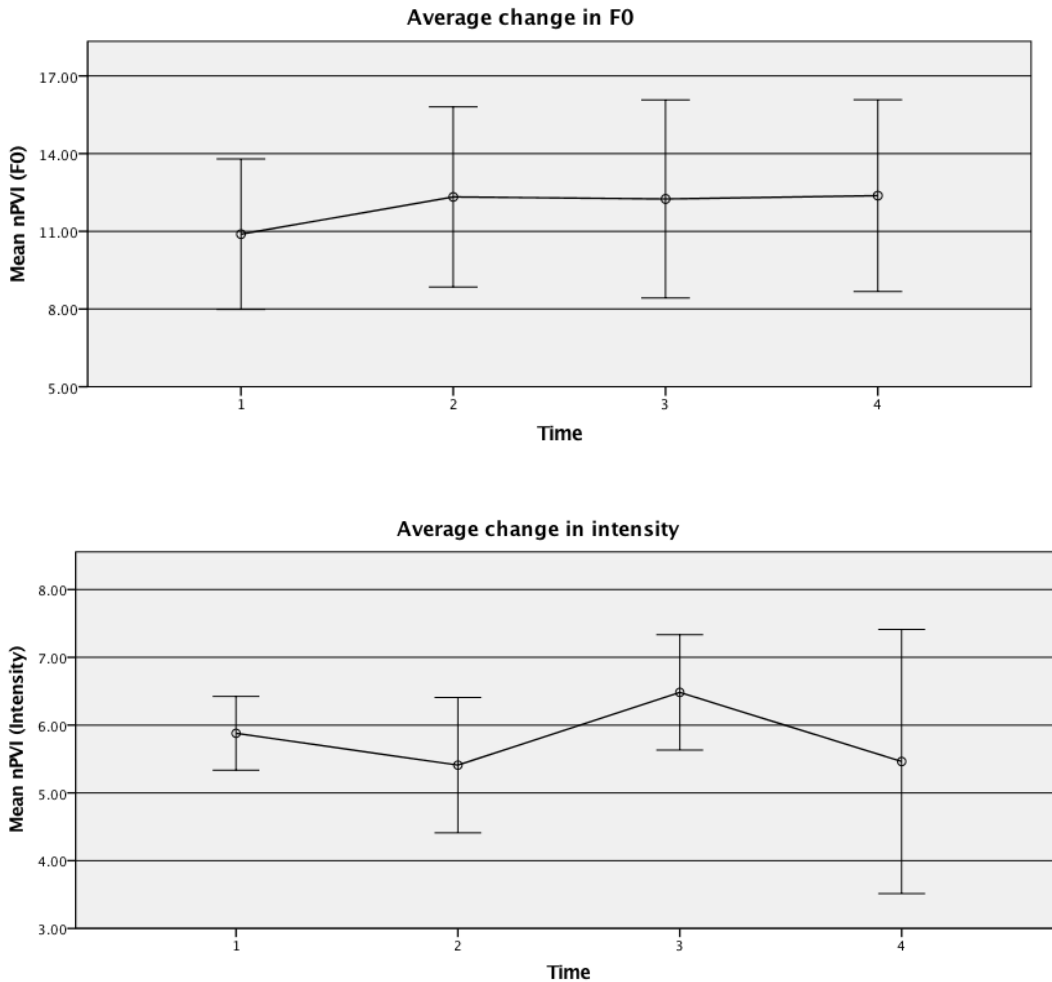
Average change in intensity
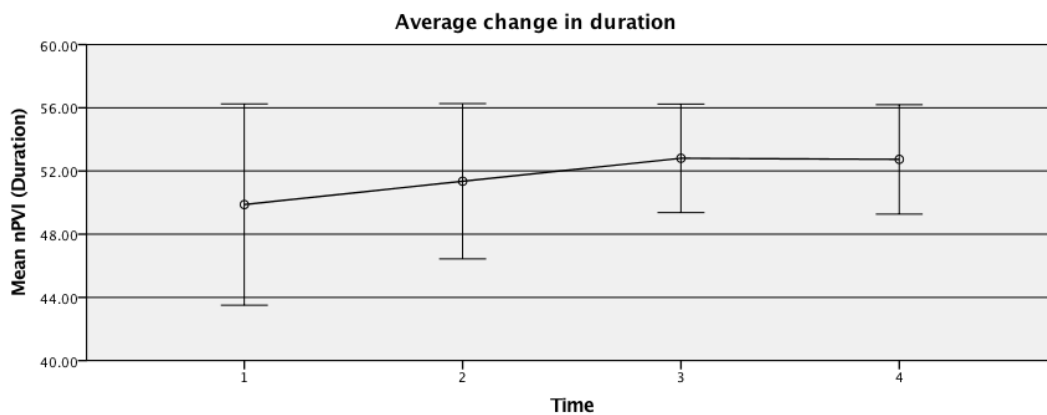
Figure 6.2 Group Averages over Time on Three Rhythm Correlates

The averaged results appear to be fairly encouraging at the group level. On duration and f0, the class begins to show an increase in scores as early as Time 2. These gains, while modest, hold steady through the end of the course and into the month after course completion. For duration, the mean increases a total of 6%, from 49.9 (Time 1) to 52.8 (Time 4). The mean f0 score increases by 14%, from 10.9 (Time 1) to 12.4 (Time 4). The group pattern for intensity differs slightly, with a dip at Time 2. Scores then rise again by the end of the course and decline a month afterwards. Overall, the aggregated

results suggest that students left the course with improved speech rhythm production. This is only a fraction of the story, however. As the standard deviation bars show, there is quite a range of individual variability beneath the aggregate. What is the role of this individual variability? Larsen-Freeman (2015) notes that traditionally the custom has been to "dismiss variability as noise or measurement error or attribute it to 'outliers'" (p. 1). Guided by Complexity Theory, I relocate individual variability in this analysis, moving it from the margin to the center of inquiry, thus illuminating the interaction of multiple factors of development as they unfold for individuals in context.

Interindividual Variability

Rhythm Classes

That which has traditionally been called the "rhythm class" (i.e., duration-based metrics) is simply timing, a single component of rhythm. Nolan and Asu (2009) argue, "we cannot assume that the rhythm of a complex signal such as speech is dependent solely on duration" (p. 68). Following from the discussion in the literature review, my analysis of *multiple* acoustic correlates of rhythm is motivated by the need to develop more robust rhythm typologies. Seeking to avoid portraying duration as an all-encompassing rhythm metric, I depart from convention and refer to duration-based classification as a "timing class" (instead of a rhythm class). I will also draw from accent class – another prosodic system typology, largely predicated upon pitch/tone - to plot the f0 measurements. Given that both L1 timing (White & Mattys, 2008) and L1 accent (Benet, et al., 2012) are both prosodic properties which have been found to influence L2

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speech rhythm production, clustering individual scores based on these categories poses an

opportunity to capture a more holistic sketch of development.

Timing

Variability in timing, as expressed at the phonetic level, was captured through the

nPVI-duration calculation. While the aggregated scores (in the graphs above) suggest a

uniform pattern of growth in duration, interindividual results tell a different story.

Students' duration scores were grouped according to the timing class of their L1, as

shown in Table 6.2. Upon visual inspection of the data, a clear dispersion pattern

emerged, as shown in the scatterplot below (Figure 2.1):

Table 6.2 Student L1 Timing Classes

Stress-timed	Syllable-timed	Unclassified[12]
Sahar (Arabic)	Marcela (French)	Jung (Korean)
Omar (Arabic)	Mei (Mandarin)	
	Yifei (Mandarin)	

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[12] Attempts to classify the timing of Korean have been inconclusive. Studies have shown it to be stress-timed (Lee, 1982), syllable-timed (Kim et al., 2008) and mora-timed (Cho, 2004).
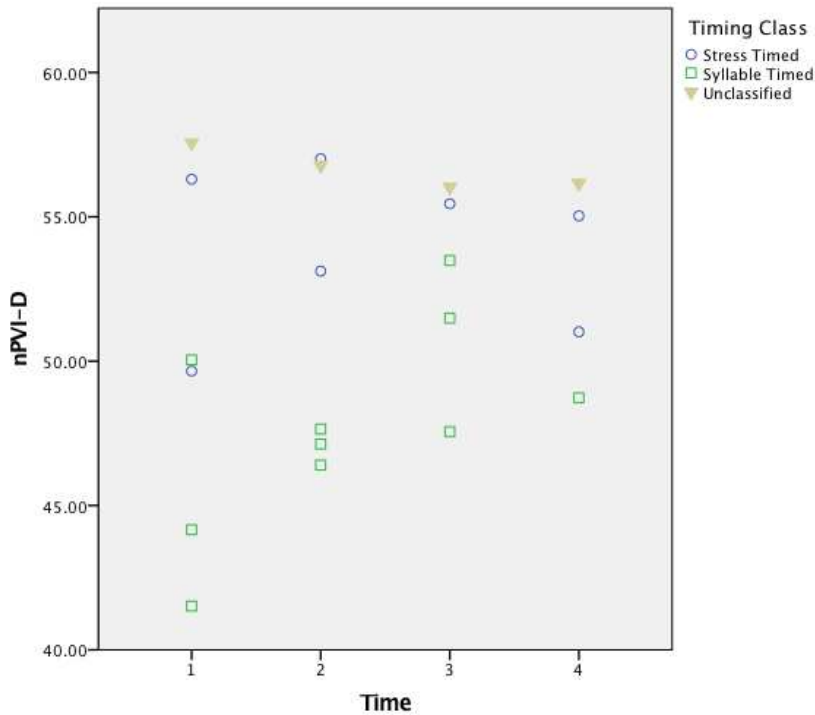
Figure 6.3 nPVI-Duration Scores Grouped by L1 Timing Class

Each data marker on the scatterplot represents an individual student score. With one minor exception at Time 1, all the scores of students with a stress-timed L1 are higher than those of students with a syllable-timed L1. What is interesting to confirm is that these distinctions are also present in L2 speech production. Likewise, Jung's (the Korean speaker) scores are on the higher end. Jung was one of the more diligent students. He also showed a strong rhythmic sensibility (recall his interest in Rhythm and Blues and hip-hop). These aspects of his background may explain his high duration score. Mok and Lee (2008) offer one other possible explanation: "[the] frequent occurrence of taps and strong final lengthening make Korean more similar to stress-timed languauges *durationally* (my emphasis)" (p. 3). It is also worth noting that the scores converge over time, with less variability among all scores at Time 4 than there was at the

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outset. Mainly, the change is occurring with students on the bottom half of the graph (more on this later).

Accent

Accent pertains to the way in which prosodic properties of speech (i.e., the acoustic correlates, or some subset of them) are manipulated to cue prominence. There are two broad categories commonly used to classify languages based on their accentual properties: pitch-accent or stress-accent. English is a prime example of the latter, as prominence can be realized through a combination of the three correlates used throughout this study – duration, intensity and pitch. However, in pitch-accent languages, pitch is the main or only cue used to signal prominence and pitch can be used contrastively at the lexical level (i.e., to distinguish word meaning).[13]   Table 6.3 shows student names categorized according to the accent class of their L1. From this grouping, a scatterplot was produced (Figure 6.4) which shows the clustering of nPVI-F0 scores over time.

Table 6.3 Student L1 Accent Classes

Stress-accent	Pitch-accent
Sahar (Arabic)	Marcela (French)
Omar (Arabic)	Mei (Mandarin)
	Yifei (Mandarin)
	Jung (Korean)

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[13] The accent classes (or prosodic typology) as constructs have been debated for some time, and similar to timing, some scholars prefer to discuss languages in terms of how they contain (sometimes mixed) properties of tone and stress, rather than seeking to relegate languages to one class or another. Still, the two accent classes remain in conventional use among linguists and educators as broad mechanisms for describing the prototypical prosodic profile of a language. For an extended discussion on this, see Hyman (2009) and van der Hulst (2011).
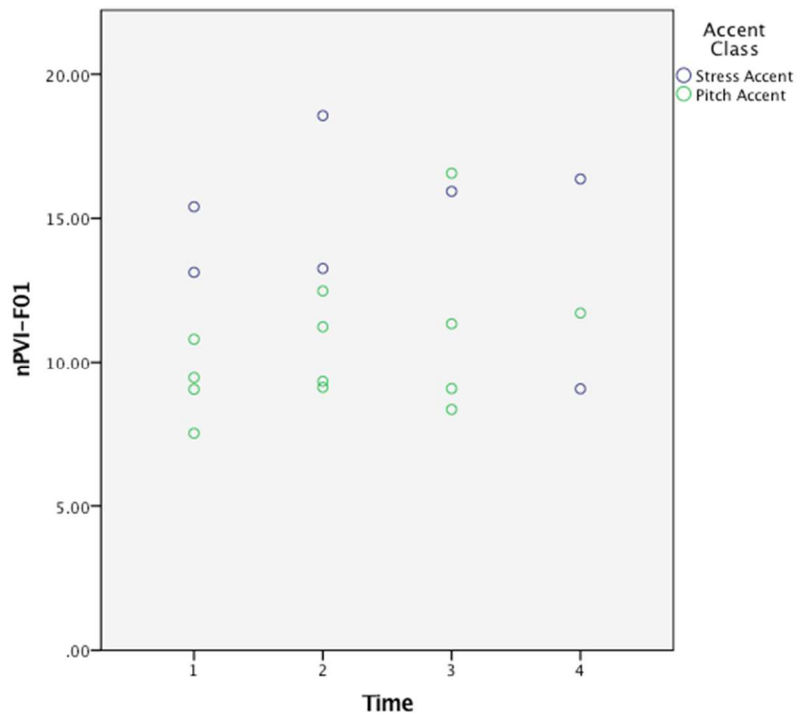
Figure 6.4 nPVI-F0 Grouped by L1 Accent Class

Overall, Figure 6.4 shows that students with a stress-accent L1 display more

variability in their use of pitch in L2 English. At first glance, these results might seem

surprising, given that pitch is the prosodic property over which we would expect speakers

of a pitch-accent L1 to have the greatest command.   The results must be interpreted with

caution, however, bearing in mind that, in other languages, pitch serves a variety of

accentual purposes at the level of various phonological units. Therefore, the distribution

and production of pitch in pitch-accent L1s may not overlay seamlessly with English

phonological systems. Working from van der Hulst's (2011) definition of accent as "an

abstract mark of a position that can be cued by various phonetic properties [such as stress

or pitch]" (p. 6), we can deduce that each language designates specific spots in a word to

be marked for prominence.   Therein lies the division of labor – accentual marking is

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phonological, accentual production is phonetic. In Mandarin (the L1 of Mei and Yifei), each syllable functions as a word and is marked with a lexical tone. English, on the other hand, has no lexical tone. Instead, a single syllable is marked for stress in each (potentially multisyllabic) word and three acoustic correlates are used to cue this stress. Eady (1982) found that, indeed, Mandarin L2 speakers of English produce greater f0 fluctuations than native speakers because the former were attempting to apply pitch changes as liberally at the syllable level as they occur in the L1. Could the results in Figure 6.4 imply the opposite? Compared to the stress-accent group, Mandarin speakers showed moderate pitch fluctuations among adjacent syllables. This could be attributable to the instruction, which encouraged students to be cautious about differentiating between stressed and unstressed syllables. In the case of Marcela, the explanation for lower fluctuation may be more straightforward. Her L1 is French, which regularly requires the application of pitch to "intonational phrases" (van der Hulst, 2011), a unit higher than the word level. It is possible, then, that a part of Marcela, Mei and Yifei's prosodic development in English entails learning to apply pitch at the word level and reconciling this with the demands of fluency and higher-level intonation in longer stretches of speech? That there may be a trade-off between fluency and accentual marking of the correct intonational unit is an area deserving further exploration.

Zuraiq and Sereno's (2007) study supports the high variability in f0 reflected in the scores of the Arabic-speaking students. They found that Arabic speakers of L2 English tended to use pitch for stressed syllables to a greater extent even than their native English speaking counterparts. With Arabic speakers being the only L1 represented in the stress-accent category, all of this certainly begs the question of whether their high

position in the graph reflects an overutilization of pitch for signaling stress or an underutilization on the part of the pitch-accented L2 speakers. Without additional data, it is difficult to conclude.
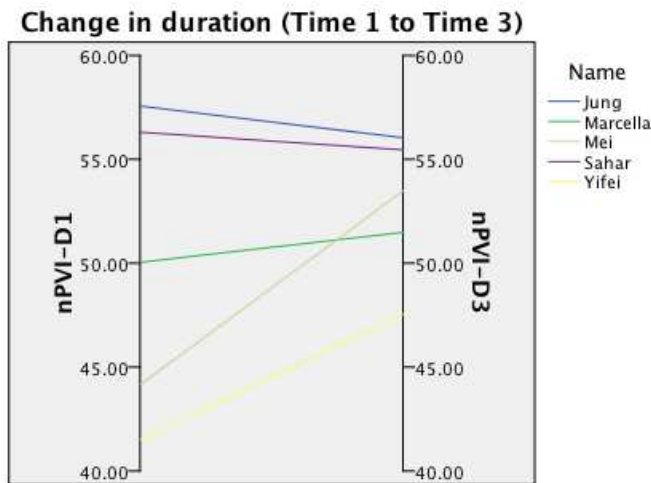
Stability Thresholds

In addition to offering clues about the influence of L1 rhythmic properties on L2 speech production, the interindividual data also leads to a compelling discovery about growth in speech production scores across the three rhythm correlates. When aggregated (see above), duration and f0 score growth appeared to be fairly steady and uniform for the group. In reality, not all students experienced growth in my class, however. The question becomes, then, is there a way to account for discrepancies in growth? To gain a closer glance here, individual student scores were plotted for each correlate according to the following contrast pair: Time 1-Time 3 (beginning of class to end of class). The result was a set of parallel plots that show that, rather than uniform growth, students experienced variation in growth depending on their initial score levels.

The emergent pattern is very clear. It is predicated on a law of diminishing returns. In other words, only students whose starting scores fall below a certain level are the ones likely to experience growth. In line with the principles of Complexity Theory, I refer to the level at which scores begin to show diminishing growth as the *stability threshold*. Above the stability threshold many student scores show a greater level of stability or even moderate downward movement at times. This is expected. Larsen-Freeman (2015) explains:

> Another quality of complex systems that is important to bear in mind is their initial state dependence . . . As the learner's developing system makes its way through state space, it arrives at attractor states, periods of stability, but never stasis" (p. 2) . . . One interpretation of the term is

that the starting point of a system affects its trajectory. The orientation of a boulder at the top of a hill will influence the path it takes when it is dislodged. An adjacent boulder may well wind up in a very different place from the first, depending on its initial orientation and the path it takes as it rolls downhill. (p. 13)

With a larger sample size, the precise point of the stability threshold could likely be ascertained through a non-linear regression. Of course, this would only apply at the group level. In the context-rich case of the sample size of this study, however, the parallel plots in Figure 6.5 illustrate the stability threshold at work while also allowing a glimpse of individual results. Some student scores were not able to be plotted on all graphs due to missing data (i.e., student did not submit a recording at the time).
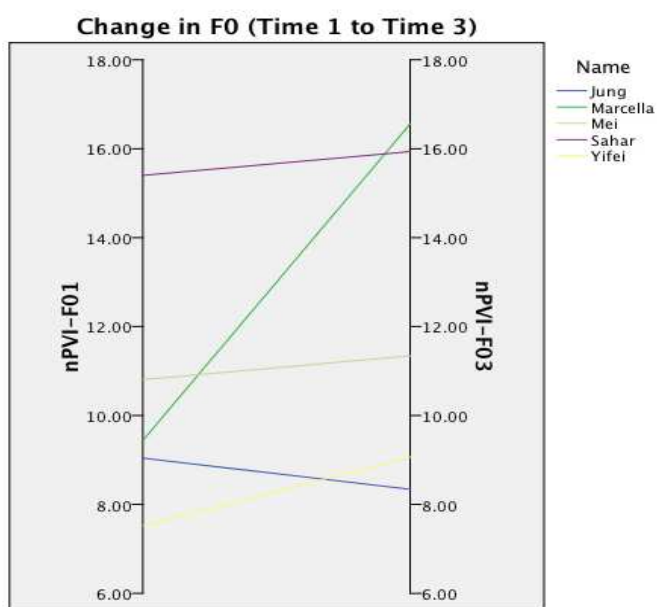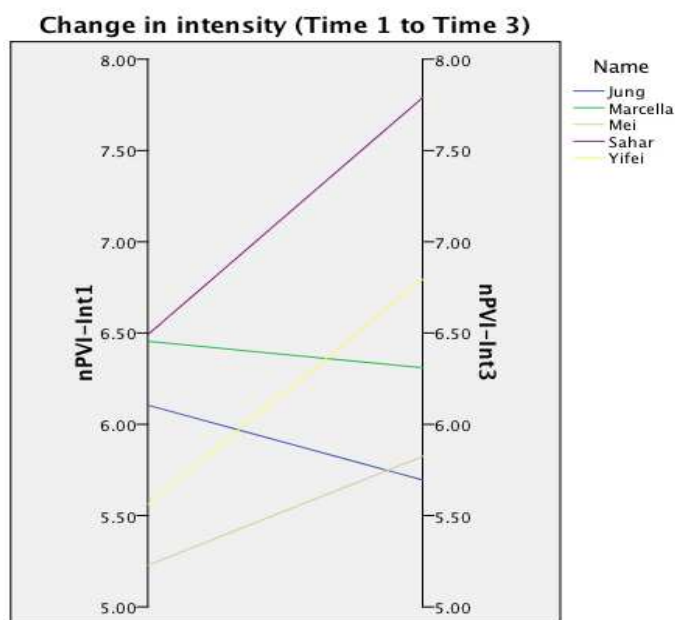
Figure 6.5 Parallel Plot of Change in Students' nPVI Scores for All Three Rhythm Correlates from Time 1 to Time 3

In the case of duration scores, the stability threshold appears to be around 50.0.

Jung and Sahar – who both began the course with scores in the upper 50's – only

experience a slight decline in duration scores on both plots. Marcella's initial score of

50.5 improves only moderately by the end of the course (increasing at a rate of 3%) [14],

and declines one month after course completion. In the latter case, the slope of her line

resembles that of the higher scores very closely, adding further support to the idea that

she has reached a similar state of stability in the duration dimension of her speech rhythm

development. On the other hand, the two students with lower initial scores – Mei and

Yifei – display more drastic score changes. Their duration scores increase at rate of 21%

and 15%, respectively. Likewise, for these two students, the rate of increase is also

higher in the area of intensity, 11% and 22%, respectively. Interestingly, they outpace

one another in an almost reverse fashion on duration and intensity.

If there is a stability threshold for intensity scores, it may exist somewhere in the

approximate range of 5.50-6.00. As mentioned, the two students below the threshold

show the highest rate of change. Jung and Marcella, with initial scores above the

threshold only decreased by a rate of 7% and 2%, respectively. Unlike the consistent

pattern in the duration data, the intensity scores present one exception to the stability

threshold. Sahar's initial intensity score was the highest of all. At this level (and in

accordance with the general trend), her score would be expected to hold steady or decline

only slightly. However, not only does Sahar's score move in the opposite direction (an

increase), it does so at a rate of 20%, similar to peers below the stability threshold.

The stability threshold principle is strongest for duration; the results are more

erratic for intensity and f0. Nonetheless, the data point in a direction that inspires both

promise and caution. One interpretation is that the nPVI may be useful for identifying a

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[14] ** Rate of change was calculated as $M_S - M_P / M_P$, where M_S = subsequent correlate measurement and M_P = previous correlate measurement. For example, where Time 1 (previous) = 49.66 and Time 4 (subsequent) = 51.01, the calculation would be 51.01 – 49.66/ 49.66.

common L2 speech rhythm developmental threshold. On the other hand, due to the small size of the focal student sample, this idea is speculative at this point and is in need of further exploration.

Intraindividual Variability

There is yet another angle from which we can enrich our understanding of the variability of speech rhythm development. Intraindividual analysis allows the most granular glimpse into the interaction of all speech rhythm correlates as they unfold uniquely for each student. At this level, the nebulous detail within the "error bars" of the aggregated data comes into clearer focus. Larsen-Freeman (2006) explains, "[using intraindividual analysis] it is possible to identify attractors or preferred paths within individual performances" (p. 601). To uncover these paths, I examine a multidimensional portrait of each learner's speech rhythm development - i.e., looking at all three correlates at once. To ensure comparability across the correlates, I transformed each correlate (from the set of scores produced by the learner) into z-scores and plotted them across time.

A core principle of the multidimensional analytical approach to speech rhythm development is that interaction among the three correlates is key. I began exploring this by looking interaction at the group level. A Pearson Product-Moment correlation test was run on the collection of all nPVI scores (n=20). Of the correlates, a significant relationship exists only between nPVI-intensity and nPVI-F0 (p=.03, r=.49). In other words, to the extent that a speaker shows increased variation in intensity (across adjacent vowels), so too does variation in f0 increase. Although this was the overall pattern in the

group results, the graphs below show that, for individual students, the correlate pairs that co-varied together across time extend beyond the intensity-f0 combination.

Mei

As can be seen in Mei's graph, Figure 6.6, intensity and f0 did co-vary for Mei, falling in line with the group correlation result. Additionally, the general trajectory for her development across time was upward and linear. The low value of her initial scores on all correlates likely contributed to this particular growth pattern. While intensity did move in an upward direction, the duration-intensity crossplot (Figure 6.12) shows that compared to duration, intensity gains were relatively minor. This supports He's (2012) findings that sensitivity toward intensity is an issue for L1 Mandarin speakers of English. He found that this particular group of L2 English speakers produces intensity across adjacent syllables with significantly less variability than native speakers. Not only has this trend been reported in speech production, L1 Mandarin speakers also show perceptual insensitivity toward intensity, compared to other English speakers (Wang, 2008).
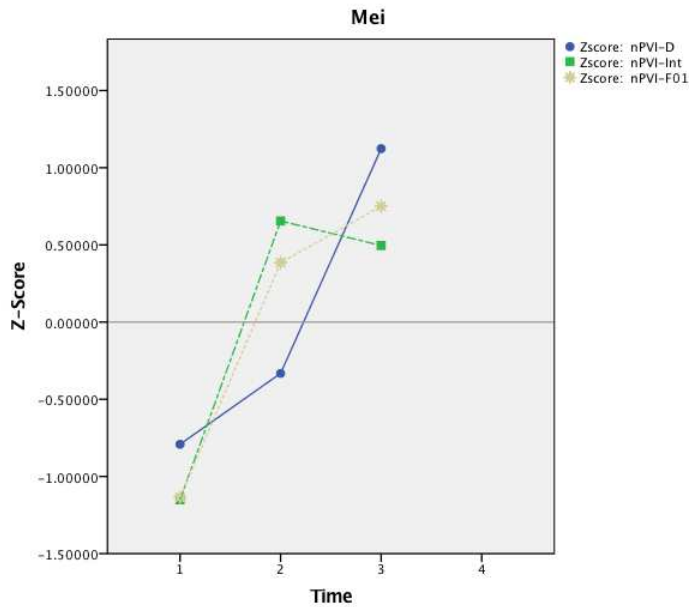
Figure 6.6 Intraindividual Variation for Mei on Three Rhythm Correlates

Omar

In Omar's developmental portrait (Figure 6.7), intensity and f0 also co-varied, as they did with Mei (and the group result). Moreover, the intensity-f0 crossplot (Figure 6.14) shows that, unlike Mei, Omar's gains in intensity and f0 were fairly even and proportional, hence the linear arrangement of his data. Omar also exhibits interesting durational patterns. The initial gap between duration, on the one hand, and intensity/f0, on the other, begins to close at Time 2, yet a month after course completion it emerges again. Unfortunately, due to missing data is it unclear where Omar stood developmentally at the end of the course.

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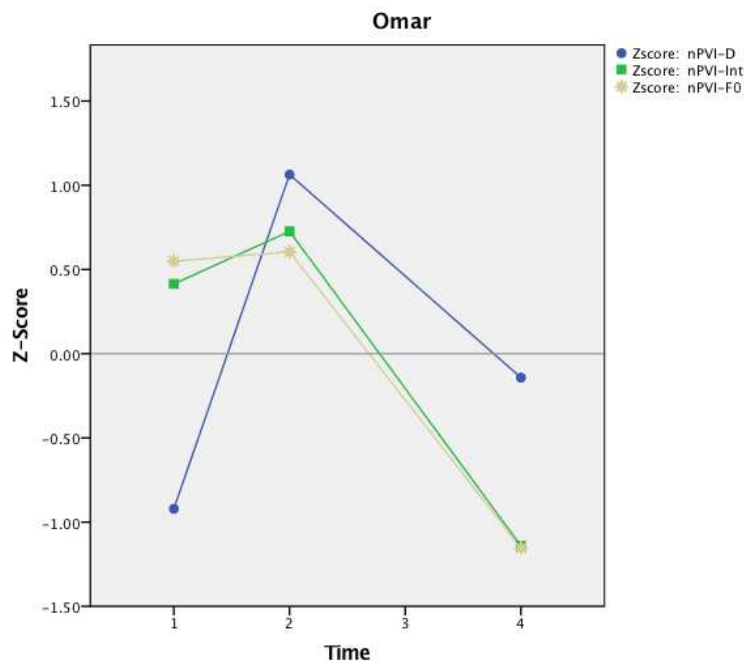
Figure 6.7 Intraindividual Variation for Omar on Three Rhythm Correlates

Yifei

According to Yifei's developmental portrait (Figure 6.8), duration and f0 co-varied across all time points. At Time 2, the duration-f0 pair soar together, resulting in a trade-off with intensity, which climbs much more slowly. It is not until Time 3, the end of the course, do intensity gains emerge for Yifei. Judging from the duration-intensity crossplot (Figure 6.12), even these are quite modest. Moreover, similar to Mei, Yifei's Mandarin L1 likely contributed to her speech rhythm development taking this particular trajectory, with respect to intensity (He, 2012).
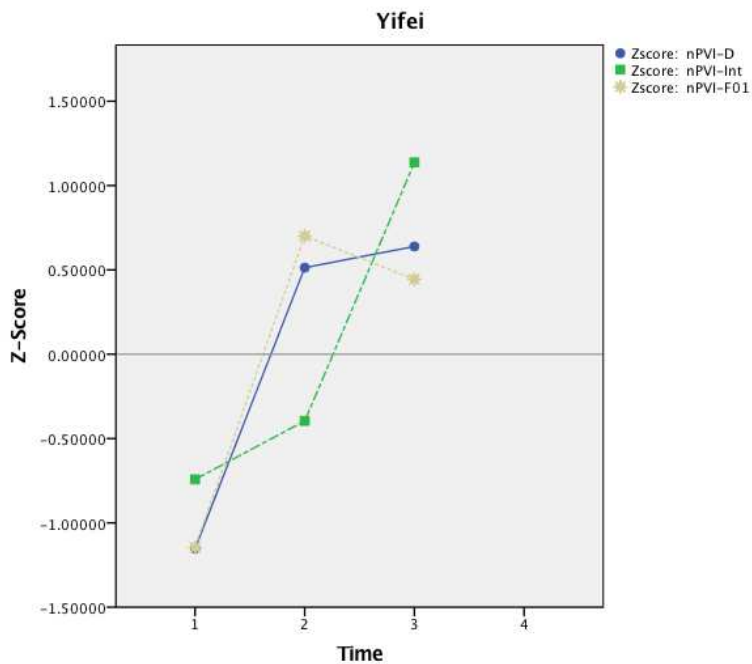
Figure 6.8 Intraindividual Variation for Yifei on Three Rhythm Correlates

Sahar

Being one of the students whose duration began well above the stability threshold, the major question for Sahar was what changes would result for her on the other two acoustic correlates and how stable would duration remain once changes occurred with the other two correlates? Based on the crossplot in Figure 6.12, Sahar's nPVI-duration score remained high throughout the span of the study. Sahar's L1 is Arabic, a language similar to English in its longstanding classification as stress-timed (Abercrombie, 1967). Furthermore, with respect to duration, Zuraiq and Sereno (2007) point out that "Arabic learners of English resemble native speakers of English in their use of duration information" (p. 830). Sahar's strong durational control is also attested by the fact that even as she shows gains in intensity, duration remains relatively unchanged.
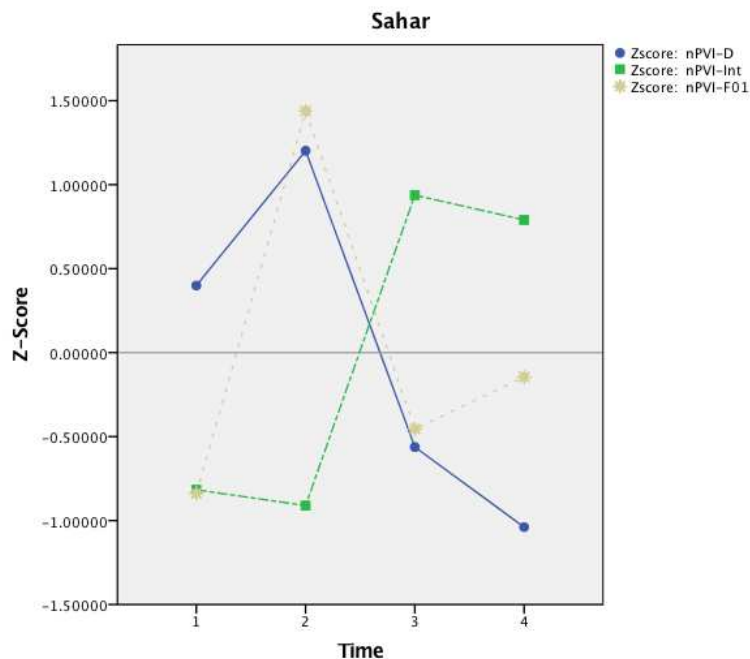
Figure 6.9 Intraindividual Variation for Sahar on Three Rhythm Correlates

Marcela

As shown in Marcella's developmental portrait (Figure 6.10), duration and intensity fluctuate up and down, and they do so in coordination with one another. On the other hand, f0 is relatively low at the outset and steadily climbs by the time of course completion (Time 3). The progression of f0 (pitch) is especially interesting to observe in Marcella's developmental portrait since subsystems of pitch production function much differently in her L1. French lacks tight coupling of pitch to the syllable peak, a foundational phonological feature of English as a stress-accent language). Instead, in French, intonational contours are linked to the end of phrases; that is, at a higher level of the prosodic hierarchy (Ordin & Polyanskaya, 2014). Therefore, Marcela's low initial nPVI-f0 may potentially be interpreted, not as an inability to produce variation in pitch, but perhaps as an application of pitch at a higher phonological level than is common in

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English. Her upward trajectory in nPVI-f0, then, could reflect her increased ability to make adjustments in pitch at the peak level of the syllable, as is conventional in English (i.e., on in the vowel, the unit of analysis of the nPVI calculation).
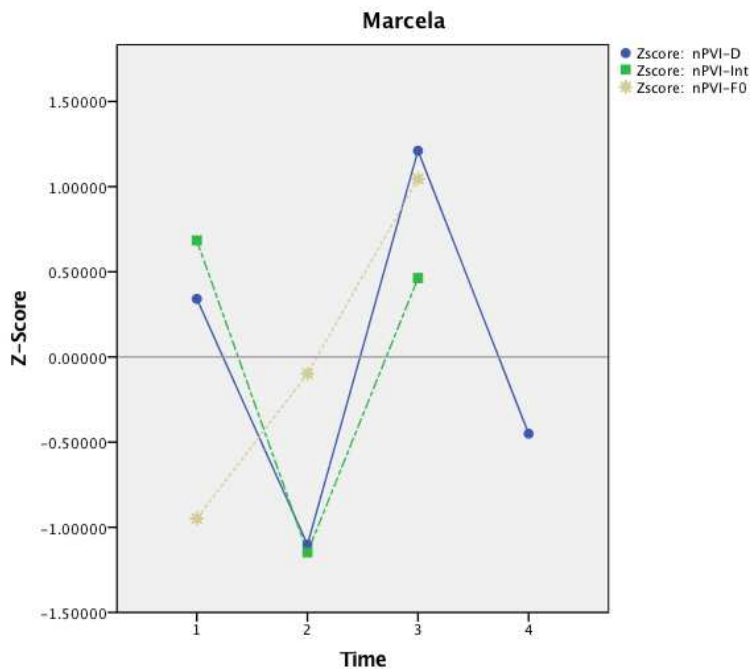
Figure 6.10 Intraindividual Variation for Marcela on Three Rhythm Correlates

Jung

Like Sahar, Jung maintained a high and stable nPVI-duration throughout the study (Figure 6.11). Upon closer inspection though, in Jung's developmental portrait there appears to be a trade-off between intensity and F0. To the extent that variability in F0 rises, intensity variability falls. Nonetheless, duration remains intact. Jung's case may enrich existing speech rhythm studies which have made claims that intensity is the dominate correlate among L1 Korean speakers of English (Lee and Cho, 2011). Such claims have been predicated on a cross-sectional view of intensity vis-à-vis other stress

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correlates.   However, Jung's developmental path may shed light on the flexibility of

intensity as L1 Korean learners seek to make adjustments to other rhythmic properties of

their speech.
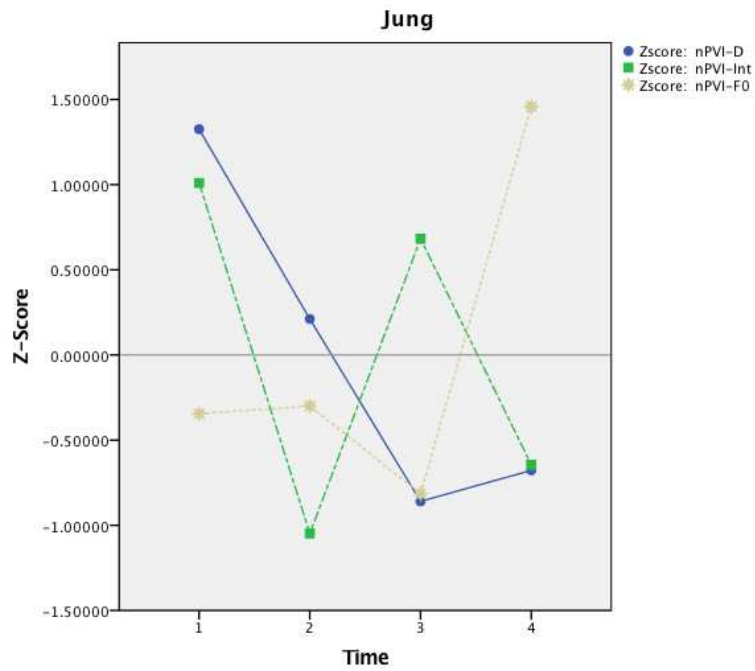
Figure 6.11 Intraindividual Variation for Jung on Three Rhythm Correlates
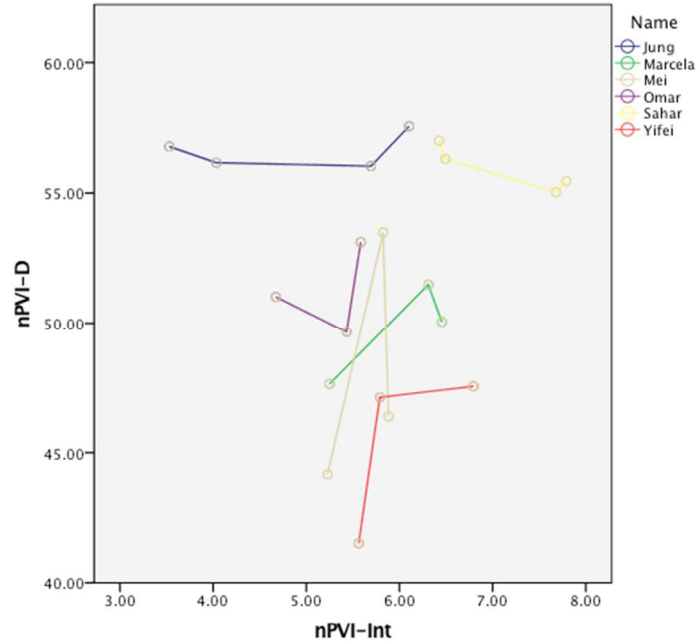
Figure 6.12 Change in Duration Compared with Intensity for Six Students
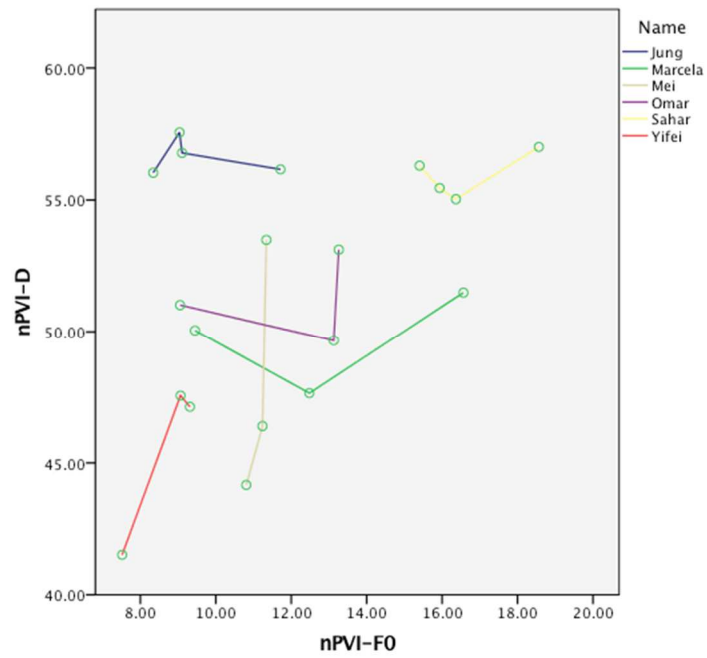
Figure 6.13 Change in Duration Compared with f0 for Six Students

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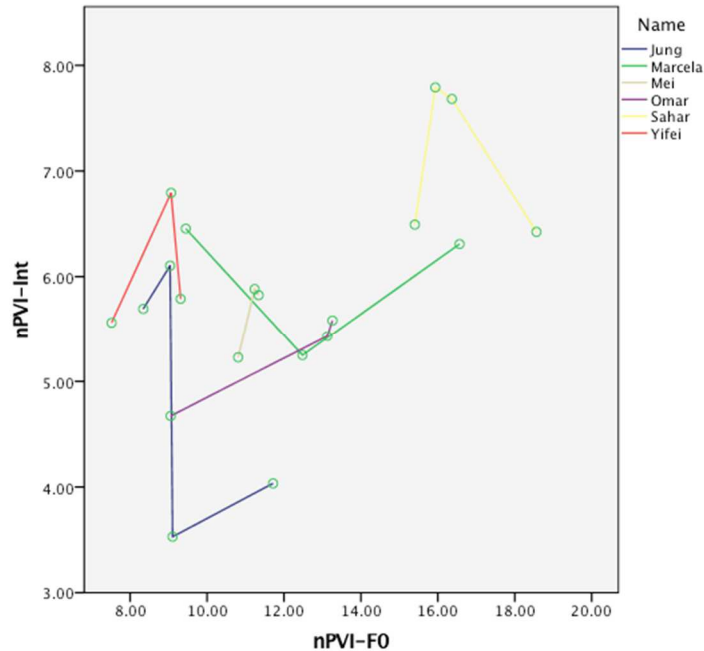
Figure 6.14 Change in Intensity Compared with f0 for Six Students

Summary

This chapter examined the complex subsystem of speech rhythm production for the six focal students in my music-based pronunciation course. The results shed light on their emergent developmental patterns. When aggregated, the data suggest improved outcomes for the group, particularly in the areas of duration and f0. Moreover, attending to variability at the individual levels raises new concerns and questions about speech rhythm development.

For each student, there were two acoustic correlates that functioned as attractors to one another in the sense that they co-varied in the direction and pace of their movement across time. The composition of these attractor pairs varied per learner (duration-intensity, intensity-f0, etc.), yet interestingly existed for all. As van Geert and Steenbeek (2005) explain, linguistic elements of a complex dynamic system - such as the

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elements of these attractor pairs – can behave in ways that are supportive, conditional and even competitive. In the space that remains for this chapter, I will elaborate on the behavior of the correlates in light of this observation.

A key interpretive point to mention is the role of gains in student scores. Since, by definition, complex systems are dynamic and open to outside influence (Larsen-Freeman, 2011), their ever-changing nature is a given. As the results of this chapter demonstrated, this change can occur in any direction, up or down, for all students. Thus, the data, in conjunction with the tenets of Complexity Theory, give reason to believe that stability is a much more fruitful enterprise than directionality. Stability is a meaningful sign of learning within the complex subsystems of language development. Larsen-Freeman (2006) refers to "phase shifts" as a key indicator of stability. Phase shifts are characterized by the dominance of a particular form (or correlate, in this case) whereby a "critical [stability] threshold is crossed" (p. 592). Throughout, I have noted points at which the data suggest the presence of these thresholds. Of the three correlates, the clearest threshold emerged for duration, coincidentally being the correlate most commonly studied and associated with speech rhythm. Additionally, duration has been argued to be the most salient stress correlate for native speakers of English (although not without some debate - see Fry, 1955; Adams & Munro, 1978; Beckman & Edwards, 1994).

The stability threshold for duration was clear both: 1) in the gains it predicted based on initial nPVI-duration score and 2) in the patterns it exhibited through interaction with the other two correlates. Put differently, beneath the stability threshold, learners experienced a smaller range of change in nPVI-intensity; above the threshold the range of

intensity gains widened (Figure 6.12). Again, this exemplifies the phase shift perfectly in that the "[stability] threshold is crossed, and some wider reorganization is triggered" (Larsen-Freeman, 2006, p. 592). In other words, on the upper end of the threshold, resources are reallocated such that intensity can now become a focus. All the while, upper-end learners – in this study, at least – continue to maintain stability in duration.

Larsen-Freeman also notes that phase shifts are characterized by fluctuation among *competing* forms. This principle surfaced with learners in the interaction between duration and f0. For learners below the stability threshold, when duration did increase, it did so at the expense of a change in f0 (e.g., Mei and Yifei). On the other hand, learners whose initial duration scores were above the stability threshold experienced more liberal change in f0. Thus, although duration was the main correlate for which a clear stability threshold seemed to be operating, it revealed useful information about how learners coordinate resources within the various subsystems of speech rhythm. The value of these findings cannot be underestimated. Combined with our existing knowledge of L1 influence (White & Mattys, 2007), they stand to make valuable contributions both broadly and within the burgeoning niche of (longitudinal) acoustic research on L2 speech rhythm development (c.f. Li & Post, 2014).

A final point to take into account is the issue of scale. The nPVI calculation, as carried out in this study, is global. That is, it was computed at the level of an entire paragraph reading, and, as such, is only able to provide insight about speech rhythm development with respect to the entire extended utterance. Complexity Theory draws on fractal geometry to make the claim that patterns of language development "are self-similar at different levels of scale or magnification" (Larsen-Freeman, 2006, p. 612).

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Typically, this principle is applied to development situated at different timescales. It is worthwhile to test whether the same self-similarity holds when the behavior of the acoustic correlates of speech rhythm are examined at a lower level of the prosodic hierarchy (sentence, syllable, word, etc.).

CHAPTER 7
DISCUSSION AND CONCLUSION

The benefits of music-based second language instruction have been lauded extensively in the literature (Hadaway et al., 2001; Mora, 2000; Terrell, 2012; Graham, 1978). Research on music-based and other interventions in SLA is constrained, however, by the lack of emphasis on language/music as a cultural formation and by the reduction of "effectiveness" into an isolated set of factors or "best practices" that lead to development for all learners at all times. This study set out to contribute a richer contextualization of second language development by introducing an intervention - rooted in the rhythmic practices of poetry, rap and other forms of music - to help ESL college students develop their speech rhythm. In order to bring attention to the uniqueness of individual development, I examined the context of the intervention through three complex subsystems of language development: ideology, (in-class) interaction and speech production. In doing so, the study brings into harmony perspectives on language development often researched as if they were distinct: cognitive-social and macro-micro.

Complex Subsystems Of Language Development: Connections and Context

Much of this dissertation has concentrated on the aspects of language learning that pertain to ideology, interaction and speech production as individual subsystems. In the space that remains, I attempt to synthesize these insights into a unified view that might reveal their (inter)connectedness to the larger complex system of second language development.

Returning to my initial assertion that any attempt to articulate a view of second

language development must always begin with a theory of language, I turn to Larsen-

Freeman (2014) for her contribution to the discussion:

> In sum, the view I am putting forth here (as I have for some time, e.g.,,
> Larsen- Freeman, 1997) is that *language* (my emphasis) as realized in a
> speech community is an open system, always changing, never fixed and
> that the language resources of its speakers are a dynamic network of
> language-using patterns: emergent, mutable and self-organizing. Their
> development within language learners, then, is not as an act of
> conformity, but rather is extended from continuing dynamic
> adaptedness to a specific present and ever-changing context (Larsen-
> Freeman, 2006b, 2011b).

What Larsen-Freeman (and others – c.f. Bley Vronman, 1983; Ortega, 2009) have

brought to the forefront is an evolved view of interlanguage, one in which success is no

longer measured according to the alignment between the learner's language and a fixed

(usually idealized, White native-speaking[15]) target. Instead, each learner's language

development can be thought of as its own dynamic and autonomous complex system,

constantly adapting to new conditions. This study's emphasis on context marks an

important step in building on an evolved view of interlanguage. In particular, attention to

context at macro-social (ideology), micro-social (interaction) and individual (speech

production) levels exposed a multilayered series of *affordances* to which learners

responded. Affordances differ from input. Van Lier (2004) frames them as "possibilities

for action" (p. 81), which bring the agency of the learner front and center. Through the

lens of affordance we, as educators and scholars, recognize learners' ability to respond on

their own accord – i.e., in a non-linear fashion – to instruction.

Previous chapters revealed learners' responses to affordances that unfolded within the

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[15] See Curtis and Romney (2006) for several in-depth narratives on this topic by a diverse group of TESOL
professionals.

context of each subsystem of ideology, interaction and speech production. Of course, activity within these subsystems does not exist in a vacuum. Given the *relational* nature of Complexity Theory, the entire system constantly remains *open and adaptive.* By way of relationships among subsystems, the system itself is greater than the sum of its parts (Seedhouse, 2010). In light of this, I now zoom out to the highest level of second language development to highlight the interconnectedness of affordances and learner responses to these across subsystems.

Ideology and Speech Production

Through learners' narratives about their experiences with African American language, the adaptive work of the *ideological* subsystem and its relationship with *speech production* came to light. In particular, the repeated juxtaposition of AAE with "clear" speech revealed an affordance in the form of the ontological struggle of adapting one's linguistic resources to the reality of language variation in the U.S. Consistent with Larsen-Freeman's (2015) claim that "learners perceive and transform a pattern in accordance with their previous language experience" (p. 6), the lack of intelligible "clarity" of hip-hop music (and associated Black language) became a factor in students' metacommentary about choices they make in their own language use.

The ideological data showed that some students embrace AAE and related forms of speech in music. Their adoption of these forms could yield variation in speech production, rhythmic and otherwise. As learners accumulate these new resources, Rymes (2010) explains that they become part of a communicative repertoire, or "collection of ways individuals use language and literacy and other means of communication (gestures, dress, posture, accessories) to function effectively in the multiple communities in which

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they participate" (p. 528). A repertoire approach to language accounts for the way that

learners navigate not only between the L1 and L2, but also the perpetual expansion of

communicative options that enable learners to highlight their (dis)affiliations with diverse

communities, both real and imagined.

 Bearing in mind that which a repertoire approach affords to second language

learning, I would argue, that the clear/unclear dichotomy expressed repeatedly by the

second language learners of this study is a false one. "Clarity," in these cases, masks

reciprocity. Understanding (and communication for that matter) is a mutual endeavor,

wherein individuals produce speech and hearers use the knowledge and experiences at

their disposal to make sense of what was spoken. From this standpoint, judgments about

the clarity of non-textbook varieties of English are an incomplete rendering of a larger

story. What remains to be addressed are limitations of some learners to discern the more

complex features of language that distinguish the multiple repertoires of English in

America. Even these limitations existed at different levels, with some learners showing

higher awareness than others. The learners of this study took different paths toward

being able to identify, classify and interpret different features of AAE. Furthermore, their

local and global histories with the semiotics of Black culture influenced their

expectations and contributions to the music-based activities in class. To some extent, all

of this suggests that – in addition to structural linguistic elements - racialized cultural

knowledge functions as a key contextual component of the emergent communicative

repertoires of English language learners, particularly those in U.S. urban spaces.

Ideology and Interaction

Apart from students who rejected the potential of AAE to enhance their

communicative repertoires, there were those who took interest in my "insider knowledge" as an affordance of their language learning. Through their *ideological* orientations to AAE, these students sought to shift the *interactional* dynamics of my classroom by requesting that I teach lessons using AAE as a medium of instruction. This gave me much to consider personally and professionally. It challenged my own ideological views and discomfort around using AAE to address non-Black speakers. In many ways these encounters highlight the need for more reflexivity about the role of the teacher alongside students as agents in the complex system of second language development.

As I had presupposed in the design of this study, music (and, in particular, music with links to African American language and culture) served as a locus of connection between the macro-social ideological subsystem and in-class interaction. Students' classroom interactions with my music-based pedagogy were structured around their own prior social goals and investments in particular music and popular culture communities. In some ways, they showcased their knowledge freely as an asset to enrich their positioning among peers. Jung was a consistent example of this, regularly incorporating metacommentary about African American musical and linguistic practices into his presentations. Ultimately, this added to his ability to participate as a learning asset to peers in rap activities. In other cases, however, students' ideological stances led them to withhold insider cultural knowledge from peers. This occurred with Omar's song choice in the American Music Project. "Clear" speech emerged yet again as a the factor that prevented him from presenting contemporary hip-hop songs to classmates, despite the fact that such songs enriched his social goals of achieving sociolinguistic efficacy in what he referred to as "the streets."

Interaction and Speech Production

The centrality of the classroom context in this study brings both optimistic revelation and cause for cautious interpretation. On the one hand, the data support the notion that cross-linguistic influence is evident in the acoustic characteristics of L2 speech rhythm. Particularly in the area of nPVI-duration, students below a certain stability threshold made more gains toward stress-timing than other peers. Mei and Jung are notable examples of the connection between *interactional* and *speech production* patterns. Of all students below the stability threshold, Mei made the highest gains in nPVI-duration. She was also the student who showed the most interactional resourcefulness in recruiting peer support through her in-class struggles. The quantitative data imply that she made developmental advances toward success. Likewise, Jung's position as the student with the highest nPVI-duration score supports the key role he played as a support system for weaker peers during in-class music exercises. This certainly bodes well for the potential of the stability threshold as an assessment tool for identifying students who may need additional support with speech rhythm development.

On the other hand, however, there are some important considerations to make about the interactional context of speech recordings. The measurements may have been constrained by the fact that they were elicited as a class assignment (implying that a classroom repertoire was in use) and that the sensitivity of the nPVI metric required that they occur as students read text. Given that pronunciation research has shown that differences exist in production during controlled versus spontaneous speech (Derwing et al., 1998), what needs to be determined through further research, then, is how students adapt their speech rhythm production to a wider range of interactional contexts. For

instance, when communicating in English with other L2 speakers, might Mandarin speakers eschew the rhythmic patterns produced for recordings in my class in favor of a rhythmic repertoire that more aptly indexes another aspect of their identity? These questions will be better addressed once acoustic metrics of rhythm are developed that can accommodate the contingency of spontaneous speech as it occurs across a broad range of social contexts. In the meantime, this line of reasoning presents an opportunity for models of second language instruction that are more responsive to the cultural exigencies surrounding students outside of the classroom.

Pedagogical Implications and Recommendations

The theme of the 2016 TESOL Convention is "Crossing Borders, Building Bridges." In this study, students shared narratives of Black unintelligibility, linguistic avoidance and struggles to operate beyond the confines of Classroom English. Their accounts reflect very real language borders between ESL students and members of the communities around them. As I make recommendations for ways forward in the teaching of speech rhythm, I would be remiss not to acknowledge that we as a profession are grappling with a deficiency. The deficiency lies not in the students' abilities, but in our efforts, as educators, to equip them to function effectively in diverse communicative circumstances. As implied by the TESOL Convention theme, the gap that we are witnessing necessitates a building of bridges that connect our students and us to the destinies we wish to inhabit together.

In the context of music-based pedagogy, this study has illustrated that there are ideological, interactional and speech production factors contributing to *unique* developmental paths for individual ESL students. If development does not conform to a

one-size-fits-all model, then neither should instruction. Educators seeking to use music for pronunciation instruction best serve their students when they reformulate their view of "best practices" by investigating the contextual elements of the class that might constrain or enable students' interaction with music. The American Music Project (the most highly rated music-based activity of this study) exemplifies this idea nicely. Many of the comments students offered about their satisfaction with the American Music Project related to the opportunities the project offered for them to tailor their learning experiences. In light of the positive relationships between student satisfaction, self-efficacy and performance found in the literature on educational psychology (Chemers et al., 2001; Zimmerman, et al., 1992), it is worthwhile to highlight the pedagogical elements that students rated most positively:

- self-assessment of one's existing level of development

- flattened knowledge hierarchies in the classroom

- (digital) curation of authentic language resources

In the space that remains, I will bring these factors of engagement into conversation with two pedagogical models: *service learning* and *participatory digital pedagogies*. My recommendations are offered with the thought that these models hold the potential to lift many of the limits for authentic, meaningful communication imposed on students by the bounded context of the traditional pronunciation (and, more broadly speaking, second language) classroom.

Service Learning

Service learning is an experiential, community-based model of education (Kendell, 1988). Although commonly confused with volunteerism, service learning differs based

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on its emphasis on *mutual* benefit, meaning that students in service stand to gain as much as those being served. As described by the National Service Learning Clearinghouse (Seifer & Connors, 2007), the approach involves the combination of "meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility and strengthen communities" (p. 5). Over the past two decades, second language scholars and educators have tapped into the potential that service learning offers for simultaneously developing students' content, cultural and linguistic knowledge (Heuser, 1999). Russell (2007) introduced service learning to her high school ESL students based on her observation of their feelings of alienation in their own home and school communities. Likewise, the students of this study, expressed feelings of confusion, isolation and distance, particularly in their dealings with African American members of the local community.

That the pronunciation course in this study began by offering students a space to vocalize these feelings about their out-of-class language experiences established a tenor of transparent reflection, which is regarded as a hallmark of service learning. As noted earlier about the American Music Project, students felt that they benefitted immensely from the chance to reflect, self-assess and chose a suitable course of action toward their learning goals. However, bearing in mind what this study has shown about students' struggles with diverse forms of English in their communities and the need to consider connections among the complex subsystems of language development, self-directed pronunciation learning must push further than what we accomplished in the American Music Project. The issue centers on a crucial question: how can students articulate and pursue pronunciation knowledge and goals beyond "l" and "r"?

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Service learning offers important answers to this question. First, students' sense of agency is transformed as they are no longer regarded as passive recipients of knowledge in isolated classroom contexts, but as agents of civic responsibility. Led by this sense of civic responsibility, learners find purpose in interacting in areas of the community and with individuals they might normally avoid or feel no need to have contact with (and vice versa for native-speaking members of the community) (Russell, 2007). It is through the building of these cross-cultural bridges that service learning has been shown to "foster a concern for the 'other'"(Carney, 2004). In many ways, this challenges the existing theories of language of both sides – learners and others in the community (Ciacco & Walker, 1998). The potential this holds for pronunciation instruction is tremendous. It offers learners a chance to repeatedly experience authentic, diverse language use in order to unpack the complexity of social issues like the Black unintelligibility narrative (as one example). Likewise, learners have a chance to experiment with new forms of expression and build up their communicative repertoires. Studies on service learning in ESL have also noted other benefits such as accelerated language ability (compared to classroom instruction) (Cummings, 2009) and increased confidence interacting with native speakers (Hummel, 2013). As learners cycle back and forth between their community service and classroom reflection spaces, knowledge hierarchies are flattened, as they turn to their civic encounters for answers about language variety. While the instructor coaches through the reflective portions of service learning, no longer is she the sole source of linguistic examples and cultural knowledge. In fact, there are several techniques useful for facilitating the interpretation of sounds, terms, ideologies and cultural knowledge encountered. These include the development of a community phrasebook (which could

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include phonological glosses of terms) (Russell, 2007), personal language journals,

multimedia portfolios, wikis, interviews and class discussions.

Participatory Digital Pedagogies

Just as service learning offers ESL students opportunities to learn language by

venturing beyond the isolated setting of the instructed classroom, today's digital

technologies supply learners with endless contact with diverse varieties and speakers. I

am using the term *participatory digital pedagogies* as a union of two important aspects of

engagement with technology in the 21st century. Starting with perhaps the most self-

explanatory piece, "digital pedagogies" involve the use of technology for teaching and

learning. The term "participatory" stems from Henry Jenkins' (2009) "participatory

culture," essentially being the opposite of one-way, passive paradigms of consumer

culture. Through the participatory nature of today's Web 2.0 technologies, users are

invited to not only consume content, but to produce it actively and often in collaboration

with or based on feedback from members of a broader community.

Given that it is commonplace for college-aged ESL students to be highly engaged

as members of digital communities on their own time (fan fiction, gaming, music, etc.),

scholars and educators have begun the important work of exploring how the same might

be leveraged for instructed language learning. In many cases, digital citizenship exposes

learners to forms and usage they would never encounter in language textbooks. Research

has shown that, similar to the case of service learning, L2 learners' participation in online

communities results in increased linguistic and cultural knowledge, or more specifically

"the semiotic resources they have available for the construction of desired social

identities" (Thorne, Black and Sykes, 2009, p. 804).

As a means of developing L2 language awareness, Thorne and Reinhardt (2008) created the *bridging activities* pedagogical framework. It builds on pedagogical elements used in the American Music Project, as students select their own digital vernacular interests and explore, structural, functional and pragmatic aspects of actual language use with their instructor. Rymes and Leone (2014) have also recently introduced *citizen sociolinguistics*, which also works with the principle of flattened knowledge hierarchies, as expertise on language use no longer rests with trained specialists. Instead, everyday members of social media communities' use of and talk about language (or metacommentary) is regarded as rich insight about the ever-changing nature of language structure, use and ideology. Figure 7.1 shows an example of citizen sociolinguistics pedagogical objectives in a high school language arts classroom.

Citizen Sociolinguistics in High School

PURPOSE: To develop and deepen students' awareness of language variety and function – in daily life and in literature – by having them engaging in sociolinguistics research.

OBJECTIVES: Students will...
- complete language awareness activity and discussion
- investigate on-line sociolinguistic data troves and select examples of interest
- analyze dialect surveys and the kinds of data they elicit
- develop sociolinguistic research questions related to their community/interests
- develop a research plan
- conduct research
- present findings

Figure 7.1 Pedagogical Sketch of Citizen Sociolinguistics for High School Students

Similarly, a citizen sociolinguistics approach could be adapted for ESL students learning pronunciation. Following coverage of class content, students could be tasked with working in groups and generating their own questions about certain forms and uses of language (this could be scaffolded by prompts or guidelines if the instructor would like to focus on particular regions or features). From there, students could mine web resources such as accent tags, Google (auto-complete), Urban Dictionary, Twitter, etc. to gather data from other citizen sociolinguists about their language questions (Rymes & Leone, 2014). Participatory digital communities not only support ESL learners' receptive skills, but also allow them to join the conversation on language by posting questions and offering their own (meta)commentary to users within the community.

In sum, through a synthesis of findings across three complex subsystems of language development (ideological, interactional and speech production), this study has identified the need for pedagogies that 1.) aid students in developing communicative repertoires suitable for the actual cultural and social environments that await them outside the classroom and 2.) facilitate the type of personalized learning needed to support the growth of students' repertoires at their individual levels of development. Toward this end, I have offered service learning and participatory digital pedagogies as instructional recommendations. These pedagogical models hold immense promise for pronunciation instruction in their manner of "strengthen[ing] ecological relations between language practices and identity dispositions developed within both instructional L2 settings and the plurilingual world outside of school." (Thorne, Black & Sykes, 2009, p. 814). To the extent that we value the rich linguistic landscape of our students and the communities in which they participate, our pedagogical approaches will advance. It is my sincerest hope

that this work will inspire new and engaging possibilities for many English language

learners.

APPENDIX A
VOICE RECORDING TEXT (MY EXERCISE PROGRAM)

My Exercise Program

I used to love to sleep late on weekends until I watched my neighbor exercising every day and looking very physically fit. Now I wake up at 5:30 in the morning, put on my exercise clothes and tennis shoes, drink some orange juice, and take off. By 7 o'clock I've walked over sixteen blocks to the gym and worked out for sixty minutes in an aerobics class. Yesterday I also jogged about fifteen minutes on a treadmill and rode my bike five miles to my friend's house. When I finished exercising, I was unusually hungry and enjoyed an early lunch. I ate a cheeseburger, a large green salad, some sliced cucumbers, three bags of potato chips, a milk shake, rice pudding, and five chocolate chip cookies for dessert. That's been my routine for several weeks now, and I have seen signs of improvement. Recently I decided to keep a record of my workouts and record my progress in a notebook. My friend who is a professional trainer doesn't agree with my ABCs for working out. He says I'm better off sleeping late and skipping the huge lunch. What do *you* think? Maybe I *am* better off sleeping late.

Voice Recording Homework – Week 1

Instructions:

Step 1. Record yourself reading the paragraph above. First read it silently to get familiar with the content. When recording, speak as naturally as possible. You will get full homework points for participating in this assignment. **This is not a test, so relax.**

Step 2. After you have recorded your reading, listen to your recording to practice self-monitoring. Answer the following questions and submit them on **Blackboard** with your voice recording:

- What did you hear or notice about your pronunciation, your voice, or both?
- What do you like or dislike about listening to your speech on a recording?

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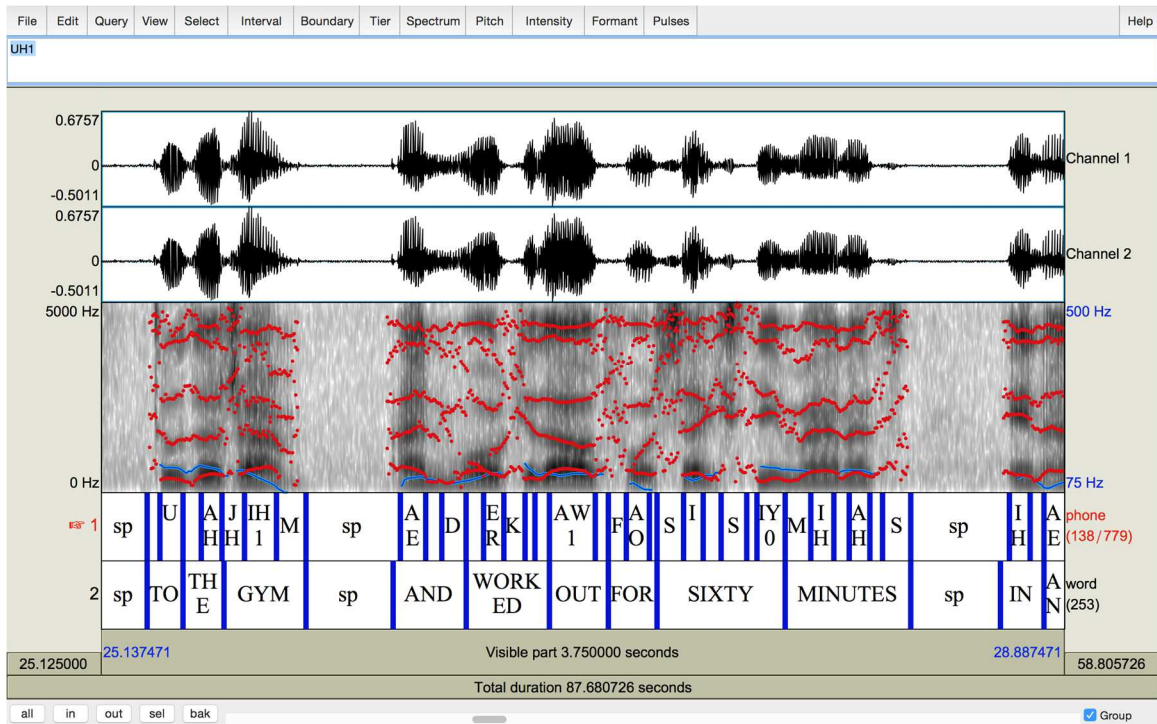
APPENDIX C

NORMALIZED PAIRWISE VARIABILITY EQUATION

d = duration[16]
m = total number of vowel intervals

$$nPVI = 100 \left[\sum_{k=1}^{m-1} \left| \frac{d_k - d_{k+1}}{(d_k + d_{k+1})/2} \right| / (m-1) \right]$$

---

[16] *This variable was substituted for f0 and intensity in separate calculations.*

APPENDIX D
STRESS RULZ RAP ACTIVITY

Change That *Funk*-tion

(Tracks 7 and 8)

The accent of a word is the subject we sing,
When the function is a-changing from an action to a thing.
(Repeat)

To proDUCE means we make a little more,
But the PROduce is the lettuce we buy at the store.

To inSULT expresses words as cold as ice,
But an INsult is the comment that isn't nice.

To reCORD, we build a CD album creation.
A REcord is a piece of paper with important information,

REFuse is garbage we throw in the trash,
But to reFUSE we say "no" to that dirty cash.

An OBject is something we can feel and see,
To obJECT expresses a feeling that we don't agree.

A DEsert is a hot place with lots of sand,
But deSERT means that we left our friends without a helping hand.

So when the word is a noun, please remember the rule:
The accent's on the first part, so don't be no fool.

When the word is a verb, don't lose your cool,
The accent's on the second syllable. Now you know the rule.

APPENDIX E
SOUNDS OF AMERICAN ENGLISH IN MUSIC PROJECT

SOUNDS OF AMERICAN ENGLISH IN MUSIC

For this project, you will be using music to present and teach a particular American English sound to your classmates.

Tell us about the sound

➢ **Describe how to make the sound:** Use your book to find out what parts of the mouth are used to make the sound. Explain how these parts of the mouth move to make the sound (for example, tongue moves up to touch the gum ridge – see Chapter 8 for examples of mouth movements and sounds).

➢ **Model the sound. Give the class a few sample words to try out the sound:** Provide a list of 8-10 words that use your target sound. Demonstrate by saying the sound first. Then, let the class listen and repeat after you.

➢ **Choose an activity for the class to practice the sound.** Look in the book or online to find an activity for the class to practice the sound.

Pick a song that uses your target sound

➢ **Tell us about the genre and artist of your chosen song:** What are the characteristics of the genre of your song (for example, rap has strong drum beats). Who is the singer? What is the song about?

> ➢ **Share 1 (one) sample song from the genre with lyrics:** Choose any 1 (one) song from the genre. It is best if you can find a YouTube video of the song that has lyrics. Then, choose a short portion of the lyrics that use the target sound. Put the short portion of lyrics (4-6 lines) on a PowerPoint slide for the class to sing.

APPENDIX F

PRE-INSTRUCTIONAL SURVEY

Student Pronunciation Survey

1. What is your full name?
2.
   A. Is English your second (or third or fourth) language?
   B. What is your first language?
   C. What is your age?
   D. How long have you been learning English?
   E. What is your IELP Listening & Speaking level (for example, 3A)?
   F. What college major are you interested in (for example, computer science)?

3. How many semesters of pronunciation classes have you had in the past? (check one)

Never	1 Semester	2 Semesters	3 Semesters	4 Semesters

4. What categories of music do you listen to **in English?** (for example, rap, pop, rock, etc.)

Check a box for each statement below to show how much you agree or disagree:

5. I speak English often.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

6. I speak English with native speakers often.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

7. I understand most of what native speakers say to me.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

8. I speak English often.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

9. Students learning English should take pronunciation class.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

10. Students learning English should find opportunities outside of class to learn and practice pronunciation.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

11. Music can be helpful for improving students' pronunciation.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

12. Television can be helpful for improving students' pronunciation.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

13. What do you think "good pronunciation" means? (write your opinion below)

_____

_____

_____

9. What do you hope to accomplish regarding your pronunciation?

General Goals
- Read this list of possible goals. Find the three that are the most important to you. Write *1* next to the goal you think is the most important. Write *2* next to the second most important goal and *3* next to the third most important.

    My goals are:

a. _____ to eliminate my accent completely and sound like a native speaker

b. _____ to communicate in English clearly, effectively and comfortably

c. _____ to speak so that others can understand me much more easily than they

do now

d. _____ to gain confidence in new speaking situations (for example, public speaking,

interviews, etc.)

e. _____ to understand rapid speech more easily

f. _____ to speak more quickly

g. _____ to improve my career opportunities

h. _____ (something else) – write it here:

_____

- Some of these goals may not be important or realistic. Write *X* next to any that you think are neither important nor realistic.

APPENDIX G

EXIT SURVEY

Check a box for each statement below to show how much you agree or disagree:

1. I learned a lot about English pronunciation and what it sounds like.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

2. I can understand conversations in English more easily.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

3. People seem to understand my speech more easily.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

4. I have more confidence speaking English and I am more comfortable.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

5. I know what areas I need to focus on to improve my pronunciation.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

6. I feel that I still have more work to do on my pronunciation.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

7. After taking this class, I can see that I have made progress toward improving my pronunciation.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

8. The music activities we did in this class were helpful for improving my pronunciation.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

9. Music can be helpful for improving students' pronunciation.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

10. I believe that it is possible for my pronunciation to sound like a native speaker.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

11. I attended class regularly, did homework and participated in class activities

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

12. I improved my monitoring skills by paying attention to my pronunciation for brief periods every day.

Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree

13. On average, how many minutes per week did you practice pronunciation outside of class (not including your homework)?

Not at all	1-10 minutes/week	11-20 minutes/week	20-60 minutes/week	60+ minutes/week

14. If you practiced pronunciation outside of class, what are some things that you did? If you did not practice much, tell why not:

_____
_____
_____

What is your opinion of rap music?

_____
_____
_____

15. Which area of pronunciation work did you find most helpful? (Circle one)
    A. Segmentals   (this includes **single** sounds such as: English consonant and vowel
                                    sounds)
    B. Suprasegmentals (this includes **multiple** sounds together such as: stress, sentence
                                    rhythm, thought groups, intonation)

APPENDIX H

DISCOURSE ANALYSIS TRANSCRIPTION KEY

Symbol	Description
(0.5)	Pause in tenths of a second
=	Interrupted turn (of one speaker by the next)
wor-	Truncated/cut-off word
[ ]	Overlapping speech
( )	Non-verbal acts
thanks	Translated text (italics)

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