THE PRAGMATIC FUNCTION OF INTONATION: CUEING AGREEMENT AND DISAGREEMENT IN SPOKEN ENGLISH DISCOURSE AND IMPLICATIONS FOR ELT

Lucy Pickering, Guiling Hu & Amanda Baker

Although prosody is central to the interpretation of spoken language and understanding of speaker intent, it has traditionally been neglected in cross-cultural studies of pragmatics and overlooked in ESL/EFL materials. This study investigates prosodic (mis)matching to indicate (dis)agreement by native speakers of American English (AES) and Chinese learners of English (CLsE) in order to contribute to our understanding of cross-cultural manifestations of speech acts and the study of second language intonation acquisition and teaching. Twelve AESs and 12 CLsE completed an interactive preference task in pairs. Each pair viewed ten pictures of concept cars and were asked to browse through the pictures and agree together on one of the ten cars as their top choice. Their conversations were audiotaped using headset microphones, and analyzed using a Kay Elemetrics Computerized Speech Laboratory. (Dis)agreement sequences were coded for pitch (mis)matching using Brazil's (1997) model of discourse intonation. The results showed that both AESs and CLsE manifested pitch concord in the majority of agreement sequences. However, while AESs consistently used pitch mismatching as a cue to signal disagreement with their interlocutor, this was not the case in the CLsE discourse suggesting that pedagogical intervention may be appropriate.

1.1 Introduction

Approaches to spoken discourse analysis have demonstrated that prosodic features in English such as intonation, stress and pausing play a key role in determining how participants manage interaction (Akker & Cutler, 2003; Brazil, 1997; Chafe, 1994; Couper-Kuhlen, 1996; Cutler, Dahan & van Donselaar, 1997). These features are particularly significant when considering the discourse-pragmatic functions of intonation (Chun, 1988) where prosody has been shown to form a natural link between linguistic and sociolinguistic aspects of language (Brazil, 1997; Gumperz, 1982). Non-referential functions of pitch variation include regulation of turn-taking in conversation, and the communication of sociolinguistic information such as status

differences, solidarity or social distance between interlocutors (Couper-Kuhlen & Selting, 1992).

Despite its important role, prosody has traditionally been neglected in cross-cultural studies of pragmatics and is rarely approached in English language teaching (ELT) literature (although see Cauldwell, 2002 and Levis, 1999); yet the small body of existing research suggests that there may be a mismatch of prosodic cues in second language (L2) learners' expression of (dis)agreement which may be detrimental to their interactions with native English speaker interlocutors (Hewings, 1995; Pickering, 1999, 2004). In light of these findings, we investigate the pragmatic function of intonation in cueing (dis)agreement in the naturally-occurring discourse of American English speakers and Chinese learners of English. We are particularly interested in the possible role of pitch level matching between interlocutors to cue (dis)agreement.

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2.1. Literature Review

Much of the foundational work on the description of sequences of agreement and disagreement in English comes from the area of conversational analysis where the focus has been on the sequential organization of conversation and the examination of turn-taking structures (Couper-Kuhlen & Selting, 1996). This research has established that there is a strong preference for agreement between interlocutors (Davidson, 1984; Pomerantz, 1984; Sacks, 1987); thus sequences are generally "structured so as to maximize occurrences of stated agreements and disagreement turns/sequences so as to minimize occurrences of stated disagreements." (Pomerantz, 1984, p. 64). Preferred

options include a ‘minimization of the gap’ between speaker turns in which the second speaker is invited to agree with the assessment made by the first speaker:

(1)
A: well that was fun Claire
B: Yeah, I enjoyed every minute of it (p.60)

As the dispreferred option, disagreements may be prefaced with initial agreement components in order to ‘downgrade’ disagreement:

(2)
A: You are afraid of your father
B: Oh yes. Definitely. I- I am. To a certain extent.
(Sacks 1987, p. 63)

Or speakers may formulate their question in such a way that disagreement will be avoided:

(3)
A: Those’re- Are those that same- No that’s not the present I gave you
B: No I know- I’ve broken from the pattern
(Sacks 1987, p. 64)

These examples also show additional strategies used to mitigate disagreement including prefacers such as ‘uh’ and ‘well’, delay devices including ‘repair initiators’ such as ‘what’ or ‘hmmm?’ or silence, i.e. an overlong pause before turn initiation.

In addition to lexical and syntactic devices, (dis)agreement options may also be cued by phonetic features including speakers’ choice of pitch (Ogden, 2006). A consistent feature of agreement sequences noted in the literature is variously known as ‘melodic matching’ (Couper-Kuhlen, 1996), ‘pitch concord’ (Brazil, 1997) and ‘prosodic matching’ (Szczepek Reed, 2006) and refers to a preference for a second speaker to match his/her initial pitch choice in terms of relative pitch height to the final pitch choice

of the first speaker. In contrast, a mismatch of pitch choice or 'concord breaking' (also referred to as 'prosodic non-matching' by Szczepek Reed, 2006) can mark dissonance when a significantly higher or lower pitch choice is used by the second speaker.

Both French and Local (1983) and Wennerstrom (2001) found that in interruptions and other instances of competition for the floor, speakers raised both their pitch and volume; Wennerstom proposes that "for English speakers, a high key response can convey a contrast in attitude with respect to the prior contribution" (p. 240). Selting (1996) and Gunthner (1996) note the same phenomenon in German conversational data where mismatched high key responses cued rebukes or amazement and required repair.

Significantly lower pitch choices by a second speaker resulting in a mismatch between interlocutors can also signal a discrepancy or discord between speakers in English (Schegloff, 1998; Wennerstrom, 2001). Muller (1996) reports similar findings in the use of recipiency tokens such as 'uh huh', 'yeah' and 'right' in Italian. While affiliating tokens were prosodically matched with the emerging talk, disaffiliating tokens exhibited concord breaking as they were realized with a significantly lower pitch register.

In addition to pitch concord, i.e. interlocutors' matching of pitch levels in consecutive utterances, analysts have also looked at pitch movement, or the shape of pitch contours in the assessment of speaker contributions. Using Brazil's (1985/1997) model of intonation in discourse as a framework, Hewings (1995) reports that English-speaking informants uniformly used a rising tone when contradicting a previous speaker in order to avoid the appearance of overt disagreement that might be inferred from a falling tone. Rising tones also co-occurred with speakers' choices to withhold agreement. Hewings concludes that there is an "exploitation of the Rising/Falling opposition for

socially integrative purposes" (p. 262). In an analysis of teacher-student exchanges, Pickering (2001) also found that teachers exploited tone choices in order to promote social convergence in the classroom particularly when it came to disagreeing with a student response. Teachers consistently used a rising tone to indicate withholding of agreement which communicated to the student that the answer was incorrect. A similar 'yes, but' strategy found to be communicated phonetically in classroom discourse is a withholding of agreement in the form of a level tone on delay devices such as //➔ WELL// or //➔UM//. This use of prosodically significant lexical continuers is described by Muller (1996, p.133) as "short tokens, 'long' prosody."

Ogden (2006) looks at both tonal contours and pitch concord in the production of second assessments in (dis)agreement. In cases of strong agreement he describes a phonetic "upgrade" that comprises an expanded pitch range, a higher pitch in the speaker's range and the use of more dynamic pitch contours. Similar features co-occurred with overt disagreements, although use of this option was rare. More typically, disagreements were prefaced with an agreement marker such as a lexical continuer and demonstrated a 'phonetic downgrade' comprising a narrower pitch range, a lower pitch and a lack of dynamic pitch movement.

In both English and German agreement sequences, Koester (1990) found that pitch matching in speakers' mid range was most common. However, low pitch and high pitch concord-breaking responses did occur. Tonal contours were also varied in second assessments and no particular tone (rising, falling or level) was found to be more prevalent. Koester's data show very few disagreements between speakers and no consistent intonational features were found for either German or English, although

English speakers preferred to use a rising tone for initial agreement markers in agree + disagree (i.e. 'yes, but') sequences while German speakers preferred a level tone. Overall, findings suggest that agreement sequences between interlocutors may be supported by some kind of "prosodic alignment" (Szczepek Reed, 2006, p.60) between speakers while disagreement sequences may exhibit prosodic disaffiliation.

2.1.1. *The Prosody of L2 (Dis)agreement Sequences*

There is strikingly little research on the prosodic characteristics of learner language in general and this includes investigation of the prosodic features of (dis)agreement sequences. With regard to pitch concord, Koester (1990) found that a lack of pitch concord between German learners of English (in this case use of a low pitch choice where a mid pitch choice was expected) prompted a first speaker to confirm their partner's agreement. This suggests that the L2 speakers understood the function of concord breaking in this case and perceived it as a meaningful pragmatic cue. Similar results were found in Pickering (2009) in an investigation of intonation as a pragmatic resource in English as a Lingua Franca (ELF) interactions. Although not focused specifically on (dis)agreement sequences, data showed that pitch level choices and the shape of tonal contours were used by interlocutors to signal trouble spots and negotiate their resolution.

On the other hand, data comparisons between English native speakers (NSs) and L2 speakers suggest that there may be significant differences between the two groups in their use of pitch cues to signal pragmatic intent. Hewings (1995) found that advanced learners of English from Korea, Greece and Indonesia showed a tendency toward using

falling tones in disagreement sequences whereas NSs consistently used rising tones when contradicting a previous speaker to avoid the appearance of overt disagreement implicit in a falling tone. Similar results were found by Ramirez Verdugo (2005) with Spanish learners of English who used primarily falling tones and thus did not "express the reservation implied in the native speakers' fall-rise contour" (p. 2100).

Mennen (2007) finds that there are some significant differences in pitch range characteristics between native English speakers and German speakers of English. She suggests that German exhibits a narrower pitch range than English, thus German speakers may transfer this characteristic to English and be perceived as more negative. Such differences may also result in unintentional concord breaking by L2 speakers of English. Anderson (1990) reports an interaction between a NS of English and a Dutch speaker of English in which high pitch choices by the NNS project conflict and result in a failed interaction. Pickering (2002, p. 11-12) reports a similar confusion over interpretation of a Chinese speaker's pitch choices which confounds the expectations of a North American undergraduate student and results in miscommunication.

The data we investigate here focus on Chinese learners of English (CLsE) and in light of the possible impact of cross-linguistic transfer, we were also interested in the prosodic characteristics of (dis)agreement sequences in Chinese. To date, there are few studies focusing on characterizing pragmatic competence of NSs of Chinese and none that consider the possible role of prosodic cues in the manifestation of (dis)agreement in spoken discourse. Recently, however, researchers have begun to examine possible attitudinal functions of Chinese intonation. In a series of studies investigating friendly speech in Mandarin, Li and associates (F. Chen, Li, Wang, Wang, & Fang, 2004; Li,

Chen, Wang, & Wang, 2004; Li & Wang, 2004) found that the average pitch mean was higher in friendly speech than in neutral speech. Hu (2005) found that register-raising is also used to show surprise. Yuan, Shen and Chen (2002) further report that the pitch used to express anger, fear, or joy is higher than that used to express sadness. In addition, they suggest the entire pitch contour fluctuates more greatly when expressing anger and joy as opposed to fear and sadness. Consideration of these studies as a whole suggests that Chinese speakers may use a higher pitch register and a greater contour fluctuation to express an attitude that is not neutral.

In this study, we extend the current research by investigating (dis)agreement sequences in native speakers of American English and Chinese learners of English. We focus specifically on use of pitch concord, namely, "a preferential relationship holding between pitch level choices in adjacent utterances" (Anderson, 1990, p.106) as a cue to signal (dis)agreement between interlocutors.

3.1 Method

3.1.1 *Participants*

Twelve native speakers of American English (NSE) and 12 Chinese learners of English (CLsE) participated in the project. Both groups comprised undergraduate and graduate students enrolled in a tertiary institution in the South Eastern United States. Six male (M) and six female (F) participants in each group formed two male-male, two male-female and two female-female pairs. As Liang and Jing (1995) found that rates of disagreement between Chinese speakers decreased with an increase in social distance, particular care was taken to choose pairs of speakers who were familiar with each other

(e.g., colleagues and friends in the same program) and who had equal social status. This resulted in equitable participation by individual speakers in the interactions (Kasper, 2000). The Chinese learners of English were administered a questionnaire prior to the data collection which included a self-evaluated proficiency score on a 10 point scale (10 represented NS competence and 1 represented no experience with English.) Their responses are given below in Table 1.

	Mean	Range
Age	27	23-31
TOEFL	616	590-650
Age at beginning of English instruction	12	10-13
Years of formal instruction	12	10-15
Years of residence in the US	3;6	1 – 5
Self-evaluation of English proficiency		
Speaking	5.8	5-7
Listening	7.4	5-8
Reading	7.6	6-9
Writing	6.3	5-8

Table 1. Chinese Learners of English

In total, we collected approximately 23 minutes of data from the six native speaker pairs and approximately 35 minutes of data from the Chinese learners of English.

3.1.2. *Procedures*

Pairs of speakers were seated next to each other in a quiet room in front of a laptop computer. Each speaker wore a Telex SCHF745 headset microphone and was recorded using a Telex FMR-150C wireless system and a Sony TCD-D8 Digital Audio Tape-corder (DAT). In an adaptation of the method used by Koester (1990) to elicit (dis)agreement sequences, speakers were shown a series of pictures of ten concept cars and asked to come to a mutual agreement as to their favorite car (see Appendix). The

participants controlled the laptop and viewed the cars in any order they preferred. Each conversation was transcribed verbatim and in its entirety. These transcripts were read by six native speakers of English who marked places in the transcripts where they identified (dis)agreement sequences. Instances of (dis)agreement that were marked by four out of six of the judges (i.e., more than 70% of the judges) were analyzed for pitch structure. Written transcripts were used for this identification in order to avoid a circular identification of (dis)agreement pitch patterns. Previous research suggests that speakers use multiple cues across linguistic systems to indicate pragmatic intent (Pickering, 2001, 2004; Tyler, 1992, Tyler & Bro, 1993); thus, we anticipated that sequences primarily identified by syntactic or lexical cues by our judges would also exhibit some consistency in intonational cues.

3.1.3. *Data Analysis*

DAT recordings of (dis)agreement sequences were transferred to a Kay Pentax 4500 Computerized Speech Laboratory (CSL). Fundamental frequency (F0) traces and spectrograms were generated for all the data using the relevant functions of the CSL. All data were subject to both auditory and instrumental analysis (Pickering, 2001). Analysis focused on the identification of pitch level choices in adjacent utterances by each speaker in a pair, i.e., evidence of the operation of pitch (dis)concord between interlocutors to cue (dis)agreement. Our definition of pitch concord derives from Brazil's discourse intonation model in which the final prominent pitch choice of one turn is compared to the first prominent syllable of the consecutive turn.

A comparison of pitch concord patterns across multiple voices, particularly if participants are both male and female, requires raw frequency values (Hz) to be converted to a relative scale. To achieve this we followed the procedure used by Couper-Kuhlen (1996) to analyze data on pitch matching by converting each measurement to semitone (ST) values using a formula developed by t'Hart, Collier and Cohen (1990, p. 24): "Hz values are recalculated on a semitone scale relative to each voice range and expressed as ST intervals from the lowest Hz value a given speaker is inclined to use" (p. 374).

Following Couper-Kuhlen, the baseline for each speaker was established through measurement of all their recorded utterances. Raw Hz values were converted to ST values for each speaker, and the difference in STs in consecutive utterances between speakers was recorded. Although Couper-Kuhlen (1996) does not specify an exact cut-off point for what comprises a pitch match[1], her data examples suggest that pitch values less than or equal to 1 ST constitute pitch matching between consecutive utterances by different speakers (see, for example, p. 376). She also notes, however, that there are different degrees of matching and 'modified matches' may be less precise (see, for example, p. 378). For this reason, we have also included matches that are less than or equal to 2 STs as a separate category.

4.1. Results

4.1.1. *Native Speakers of American English*

[1] It should also be noted that Couper-Kuhlen investigated quoting and mimicry rather than agreement sequences.

The transcripts of the six NS-NS pairs yielded 76 (dis)agreement sequences with a heavy bias against the dispreferred option of disagreement: 68 agreement sequences and 8 disagreement sequences. As noted earlier, (dis)agreement sequences were identified from the written transcripts of the interactions between participants; thus, there was a preference to identify sequences that could be clearly recognized based on lexical and syntactic cues. This resulted in a preference for the identification of short assessment pairs with overt lexical cues such as those shown in examples 4 & 5:

(4) Agreement

M9: Somebody has very expensive taste
M8: Yeah, no kidding

(5) Disagreement

F11: I kind of like that one
F12: Umm no, I don't really like that one

No significant differences were found between the prosodic characteristics used by male and female speakers and no further distinctions were drawn between the two groups.[2]

4.1.1.1. *Agreement Sequences*

The results of the pitch concord analysis for agreement sequences are shown in Table 2.

Transcripts	# of agreements overall	# of consecutive pitch choices less than or equal to one semitone apart	# of consecutive pitch choices less than or equal to two semitones apart	# of consecutive pitch choices more than two semitones apart

[2]See also Rees-Miller (2000) for similar findings regarding rate of disagreement and use of mitigating devices in relation to gender.

		(≤ 1 ST)	(≤ 2 STs)	(> 2 STs)
M8-M9	20	11	4	5
F10-M10	8	2	4	2
F6-M4	17	6	3	8
M11-M12	7	4	2	1
F11-F12	6	4	0	2
F2-F3	10	5	3	1
Totals	68	32	16	19

Table 2. Pitch Concord Analysis for NS-NS Agreement Sequences

With regard to agreement sequences, 48% of the sequences demonstrated matching in the form of pitch concord between consecutive utterances by two speakers at ≤ 1 ST as shown in Figure 1.

FIGURE 1 ABOUT HERE

When pitch matching between speakers was defined less strictly as ≤ 2 STs, instances of pitch concord increased to 72%. An example is shown in Figure 2.

FIGURE 2 ABOUT HERE

The remaining cases fell within the third group of >2 STs which was not considered to mark pitch concord between speakers. Examination of these 19 sequences revealed additional types of pitch matching behaviors that have also been identified in the literature as cueing agreement between speakers and which may substitute in these cases for pitch concord. The most common were instances of a high key response by the second speaker which Koester (1990, p. 86) describes as "particularly enthusiastic agreement" and is shown in Figure 3.

FIGURE 3 ABOUT HERE

Two additional sequences manifested *actual* as opposed to *relative* pitch matching, and two agreement sequences exhibited pitch contour matching as shown in Figure 4.

FIGURE 4 ABOUT HERE

Following this further analysis, only nine agreement sequences (13%) could not be shown to demonstrate any transparent relationship between consecutive utterances by separate speakers and mutual pitch choices.

4.1.1.2. *Disagreement Sequences*

The results of the pitch analysis for disagreement sequences are shown in Table 3.

Transcripts	# of disagreements overall	Distance in STs between consecutive pitch choices	Pitch of second utterance
M8-M9	1	17	higher (M)
F10-M10	1	7	higher (F)
F6-M4	1	13	lower (M)
F11-F12	2	7	lower (F)
		14.6	higher (F)
F2-F3	3	11	higher (F)
		15	higher (F)
		10.6	lower (F)
Total	8		

Table 3. Pitch Concord Analysis for NS-NS Disagreement Sequences

The disagreement sequence data revealed that interlocutors consistently signaled their lack of agreement with the previous utterance with a discordant pitch choice in addition to lexical and syntactic cues. An example is shown in Figure 5.

FIGURE 5 ABOUT HERE

As Table 3 shows, pitch choices were either significantly lower or higher in the second utterance, and choice was not dictated by the gender of the speaker. In all cases, consecutive pitch choices between speakers were separated by large distances in terms of STs (mean = 11.9 STs) which were far greater than those found between agreement sequences.

In sum, pitch concordance analysis across consecutive utterances between two NSs revealed that while pitch concord may be used as a cue to signal agreement between interlocutors, it is not a consistent feature of agreement sequences. In disagreement sequences, however, the second NS interlocutor consistently signaled disagreement with a discordant pitch choice suggesting that this may be a considerably stronger discourse cue.

4.2.1. *Chinese Learners of English*

Ratings of the six NNS-NNS transcripts of Chinese learners of English (CLsE) produced 69 (dis)agreement sequences: 56 agreement sequences and 13 disagreement sequences. These results were highly consistent with the NS data both in terms of numbers of instances and in the nature of (dis)agreement sequences. As with the NS-NS transcripts, raters tended to agree most often on short assessment pairs as shown in Examples 6 and 7:

(6) Agreement

F4: Not good
F5: Yeah, not good

(7) Disagreement

M7: I like the color
F7: I don't really like the color

4.2.1.1. *Agreement Sequences*

The results of the pitch concord analysis for agreement sequences are shown in Table 4.

Transcripts	# of agreements overall	# of consecutive pitch choices less than or equal to one semitone apart (≤ 1 ST)	# of consecutive pitch choices less than or equal to two semitones apart (≤ 2 STs)	# of consecutive pitch choices more than two semitones apart (> 2 STs)
M5-M6	7	1	4	2
F7-M7	10	4	1	4
F8-F9	9	6	4	0
F4-F5	10	5	5	0
M2-M3	8	3	4	1
M1-F1	12	4	2	6
Totals	56	23	20	13

Table 4. Pitch Concord Analysis for the CLsE Agreement Sequences

Forty-one per cent of agreement sequences in the CLsE data exhibited pitch matching at ≤ 1 ST; when extended to ≤ 2 STs, this accounted for 77% of sequences and is directly comparable to the findings for the NS data. The remaining 13 cases were again examined for evidence of additional pitch devices. Six instances of similar kinds of pitch matching to that found in the NS data were found comprising two examples of enthusiastic agreement, two examples of matching pitch contours and lexis (see Figure 6); and two examples of absolute pitch matching. Following this additional analysis, seven cases (12%) of agreements could not be accounted for by any pitch related phenomena.

FIGURE 6 ABOUT HERE

4.2.1.2. *Disagreement Sequences*

The results of the pitch analysis for disagreement sequences are shown in Table 5.

Transcripts	# of Disagreements overall	Distance in STs between consecutive pitch choices	Pitch of second utterance
M5-M6	1	10	higher (M)
F7-M7	2	4.2	lower (F)
		9.1	higher (F)
F8-F9	1	2	higher (F)
		14.6	higher (F)
F2-F3	3	11	higher (F)
		15	higher (F)
		10.6	lower (F)
F4-F5	2	3.5	lower (F)
		5	higher (F)
F2-F3	1	2	lower (F)
M1-F1	3	12.5	lower (F)
		13	higher (M)
		11.8	higher (M)
Totals	13		

Table 5. Pitch Concord Analysis for CLsE Disagreement Sequences

These data exhibited considerably less consistency with regard to pitch discord in comparison to the NS data. Most notably, disagreements were not uniformly signaled by CLsE with discordant pitch choices in second utterances. Unlike NS data, second utterances in disagreement sequences varied in distance from 2 STs to 15 STs. This is illustrated in Figures 7 and 8 in which both second utterances, one in agreement and one in disagreement with the previous utterances show similar variability in terms of distance in pitch from the first utterance.

FIGURES 7 & 8 ABOUT HERE

5.1 Discussion

In an investigation of the role of prosodic cues in (dis)agreement sequences in L1 and L2 spoken discourse we examined evidence of pitch concord in both NS-NS and NNS-NNS interactions. In the majority of cases, both NSs and NNSs manifested pitch concord in agreement sequences; that is, a relationship of ≤ 2 semitones pertained between the speakers' utterances. Instances that did not show pitch concord often demonstrated additional types of prosodic matching such as matching pitch contours.

Neither group, however, showed uniform use of pitch matching in agreement sequences; thus it was not a necessary condition. This is anticipated under a discourse intonation model. As Brazil points out, there is no absolute requirement that a speaker obey constraints such as the concord principle. Rather, the intonation system operates on the Gricean co-operative principle (Grice, 1989) that generally speaking, speakers' contributions are designed to be understood. If pitch matching is a conventional cue for agreement, a preference for pitch concord would be expected, and this is what these data show.

The most consistent finding in the NS data was the use of discordant pitch choices (either significantly lower or higher) in disagreement sequences. This suggests that discordant pitch may be a very robust discourse cue in native speaker interaction. Szczepek Reed (2006, p.77) proposes that prosodic non-matching in this case is "an iconic representation of the non-matching of opinions between two participants." This finding did not hold in the NNS data, and this could be a possible area for pedagogical

intervention. Previous research has demonstrated that NNSs may display an overall narrower pitch range regardless of L1 (Mennen, 1998; Pickering, 2004) thus this is not necessarily a feature of L1 transfer (note that the literature cited in 2.1.1. suggests that CLsE use pitch register raising and pitch contour fluctuations in their L1) but rather L2 development.[3]

The analyses also raised a number of important methodological questions that need to be addressed; most crucially, how pitch concord should be operationalized. No absolute value for what qualifies as pitch matching is given in the earlier studies that we draw from. In addition, while we chose to consider only prominent syllables as salient cues for pitch measurement, previous work has also included non-prominent pitch matching (e.g. Couper-Kuhlen, 1996). While it is clearly important to establish relative pitch ranges in order to plot pitch matching, baselines are estimated and there is the possibility of measurement error.[4] Largely for this reason, we noted pitch concord patterns up to and including two semitones as possible pitch matches.

6.1. Pedagogical Implications:

Davis (2004) states that the ability to successfully perform pragmatic functions such as (dis)agreement sequences is crucial for the development of interactional competence and has broad practical implications for second language teaching. Incorrect use or interpretation of a speech act in an unfamiliar culture will not only cause communication breakdowns but may also intensify misunderstandings between two cultures (Zhang, 2001). In particular, if L1 hearers perceive an L2 speaker to have a high

[3] Although see Mennen (2007) for further discussion of L1 transfer

[4] Note that a speaker's baseline cannot be calculated automatically as an average of the lowest produced frequencies as this will include instances of creaky voice among other voice quality issues.

linguistic proficiency, misuse of a speech act is frequently not interpreted as a lack of communicative competence but a sign of an unpleasant personality (e.g. Tannen, 1986). This is particularly true of a contributing linguistic system as tacit as prosody where our impressions of speakers are likely to suffer based on "misperceptions and misplaced stereotypes" deriving from inappropriate use of intonation (Mennen, 2007).

Yet, as Wrembel (2007) notes, despite a consensus regarding the significance of prosodic features for successful communication "prosody still appears to be the 'problem child' from the pedagogical perspective" (p. 189). Certainly, a cursory review of ESL/EFL textbooks shows limited if any discussion of the role of prosodic features in face-threatening speech acts such as disagreement sequences. A reluctance to address the role of intonation in particular may have been hampered by its traditional representation as a "half tamed savage"[5], lying on the edge of language and more appropriate for paralinguistic investigation. Current research trends may also prioritize intelligibility in English as a Lingua Franca (ELF) interaction in which the value of pitch movement as a feature of effective interaction has also been challenged (Jenkins, 2000, 2002). However, such sentiments do not aid the NNS who interacts with NSs on a regular basis such as the population of CLsE investigated here. In this situation, prosody contributes significantly to interactional competence and serves to establish a crucial collegial bond between speakers. Intonational features are necessary for successful communication, and systematic attention to prosody in the English language classroom is key.

Jilka (2007) suggests that we might teach learners "conscious control" of features such as pitch range and also suggests the use of speech technology to facilitate this. This

[5] From Bolinger (1978), cited in Vaissiere (1995).

has also been proposed in applications of speech visualization technology to the teaching of ESL/EFL by Chun (1998) and Levis & Pickering (2004).

Acton (2010) has developed a haptic method for teaching intonation in which learners use both movement and touch to coordinate the body with prosodic and segmental features with the intention of producing fluent and intelligible speech.

Davies (2004, p. 225-7) also proposes a pedagogical plan to develop awareness of cross-cultural pragmatics which includes the role of prosody and is grounded in four central principles: (1) a teaching focus on discourse as opposed to isolated acts; (2) developing learners' ability to identify patterns through discourse analysis; (3) an understanding of the unique cultural context of social norms; (4) an understanding of the uniqueness of each interaction as it emerges moment to moment. If each of these principles is applied directly to teaching intonation in the classroom, learners will have access to the information they need to successfully navigate the kind of pragmatic function we have focused on here.

APPENDIX

Pictures of Concept Cars

BIBLIOGRAPHY

Acton, W. (2010). *Full-bodied, systemic, multiple modality pronunciation instruction.* Workshop given at the 44th Annual TESOL Convention, Boston, MA.

Akker, E., & Cutler, A. (2003). Prosodic cues to semantic structure in native and nonnative listening. *Bilingualism: Language and Cognition, 6*(2), 81-96.

Anderson, L. (1990). Intonation, turn-taking and dysfluency: Non-natives conversing. In M. Hewings (Ed.), *Papers in Discourse Intonation. Discourse Analysis Monograph 16* (pp. 102-113). University of Birmingham: English Language Research.

Bolinger, D. (1978). Intonation across languages. In (Ed.). J. Greenberg. *Universals of Human Language: Phonology*. Stanford: Stanford University Press.

Brazil, D. (1997). *The communicative value of intonation in English*. Cambridge: Cambridge University Press.

Cauldwell, R. (2001). *Streaming Speech*. Speech in Action: UK

Chafe, W. (1994). *Discourse, Consciousness and Time*. Chicago: University of Chicago Press.

Chen, F., Li, A., Wang, H., Wang, T., & Fang, Q. (2004). *Acoustic analysis of friendly speech*: Phonetics Laboratory, Institute of Linguistics, Chinese Academy of Social Sciences.

Chun, D. (1988). The neglected role of intonation in communicative competence and proficiency. *Modern Language Journal* 72: 295-303.

Chun, D. (1998). Signal analysis software for teaching discourse intonation. *Language Learning and Technology* 2: 61-77.

Couper-Kuhlen, E. (1996). The prosody of repetition: On quoting and mimicry. In E. Couper-Kuhlen & M. Selting (Eds.), *Prosody in conversation* (pp. 366-405). Cambridge: Cambridge University Press.

Couper-Kuhlen, E. & Selting, M. (Eds). (1996). *Prosody in Conversation*. Cambridge: Cambridge University Press

Cutler, A., Dahan, D., & van Donselaar, W. (1997). Prosody in the comprehension of spoken language: A literature review. *Language and Speech, 40*, 141-201.

Davidson, J. (1984). Subsequent versions of invitations, offers, requests, and proposals dealing with potential or actual rejection. In J. M. Atkinson & J. Heritage (Eds.), *Structures of social action* (pp. 102-128). Cambridge: Cambridge University Press.

Davis, C. (2004). Developing awareness of crosscultural pragmatics: The case of American/German sociable interaction. *Multilingua* 23: 207-231.

French, P. & Local, J. (1983). Turn-competitive incomings. Journal of Pragmatics 7:17-38.

Grice, P. H. (1989). *Studies in the way of words*. Cambridge, Mass: Harvard University Press.

Gumperz, J. J. (1982). *Discourse strategies*. Cambridge: Cambridge University Press.

Gunthner, S. (1996). The prosodic contextualization of moral work: An analysis of reproaches in 'why'-formats. In E. Couper-Kuhlen & M. Selting (Eds.), *Prosody in conversation* (pp. 271-302). Cambridge: Cambridge University Press.

Hart't, J., Collier, R. & Cohen, A. (1990). A perceptual study of intonation: An experimental-phonetic approach to speech melody. Cambridge: Cambridge University Press.

Hewings, M. (1995). Tone choice in the English intonation of non-native speakers. *IRAL, 33*(3), 251-265.

Hu, F. (2005). *A phonetic study of prosody of Wh-words in Standard Chinese*: Phonetics Laboratory, Institute of Linguistics, Chinese Academy of Social Sciences.

Jenkins, J. (2000). *The phonology of English as an international language*. Oxford: Oxford University Press.

Jenkins, J. (2002). A sociolinguistically based, empirically researched pronunciation syllabus for English as an international language. *Applied Linguistics, 23*(1), 83-103.

Jilka, M. (2007). . Different manifestations and perceptions of foreign accent in intonation. In J. Trouvain & U. Gut (Eds). *Non-native prosody: Phonetic description & Teaching Practice.* (pp.77-96). Berlin: Mouton de Gruyter.

Kasper, G. (2000). Data collection in pragmatics. In H. Spencer-Oatey (Ed.), *Culturally speaking* (pp. 316-341). London & New York: Continuum

Koester, A. (1990). The Intonation of agreeing and disagreeing in English and German. In M. Hewings (Ed.), *Papers in Discourse Intonation. Discourse Analysis Monograph 16* (pp. 83-101). University of Birmingham: English Language Research.

Levis, J. (1999). Intonation in theory and practice, revisited. *TESOL Quarterly* 33:37-64.

Levis, J. & Pickering, L. (2004). Teaching intonation in discourse using speech visualization technology. *System* 32: 505-524.

Li, A., Chen, F., Wang, H., & Wang, T. (2004). *Perception on Synthesized Friendly Standard Chinese Speech*: Phonetics Laboratory, Institute of Linguistics, Chinese Academy of Social Sciences.

Li, A., & Wang, H. (2004). *Friendly speech analysis and perception in standard Chinese*: Phonetics Laboratory, Institute of Linguistics, Chinese Academy of Social Sciences.

Liang, G., & Jing, H. (2005). A contrastive study on disagreement strategies for politeness between American English & Mandarin Chinese. *Asian EFL Journal*, *7*(1), 1-12.

Mennen, I. (1998). Can second language learners ever acquire the intonation of a second language? *Proceedings of the ESCA Workshop on Speech Technology in Language Learning. Marholmen: Sweden.*

Mennen, I. (2007). Phonological and phonetic influences in non-native intonation. In J. Trouvain & U. Gut (Eds). *Non-native prosody: Phonetic description & Teaching Practice.* (pp. 53-76). Berlin: Mouton de Gruyter.

Muller, F. (1996). Affiliating and disaffiliating with continuers: Prosodic aspects of recipiency. In E. Couper-Kuhlen & M. Selting (Eds.), *Prosody in conversation* (pp. 131-176). Cambridge: Cambridge University Press.

Ogden, R. (2006). Phonetics and social action in agreements and disagreements. *Journal of Pragmatics*

Pickering, L. (1999). *The analysis of prosodic systems in the classroom discourse of NS and NNS teaching assistants.* Unpublished doctoral dissertation, University of Florida, Gainesvill, FL.

Pickering, L. (2001). The role of tone choice in improving ITA communication in the classroom. *TESOL Quarterly* 35: 233-253.

Pickering, L. (2002). Patterns if intonation in cross-cultural communication: Exchange structure in NS TA and ITA classroom interaction. *Crossroads of Language, Interaction, and Culture Proceedings* 4: 1-18.

Pickering, L. (2004). The structure and function of intonational paragraphs in native and nonnative speaker instructional discourse. *English for Specific Purposes, 23,* 19-43.

Pickering, L. (2009). Intonation as a pragmatic resource in ELF interaction. *Intercultural Pragmatics* 6: 235-255.

Pomerantz, A. (1984). Agreeing and disagreeing with assessments: some features of preferred/dispreferred turn shapes. In J. M. A. J. Heritage (Ed.), *Structures of Social Action. Studies in conversational analysis.* (pp. 57-101). Cambridge: Cambridge University Press.

Ramírez Verdugo, D. (2005). Nature and patterning of native and non-native intonation in the expression of certainty and uncertainty: pragmatic effects. *The Journal of Pragmatics, 37* (12), 2086- 2115.

Rees-Miller, J. (2000). Power, severity and context in disagreement. *Journal of Pragmatics* 32: 1087-1111.

Sacks, H. (1987). On the preference for agreement and contiguity in sequences in conversation. In G. Button & J.R.E.Lee (Eds.), *In Talk and Social Organization* (pp. 54-69). Philadelphia: Multilingual Matters.

Schegloff, E. (1998). Reflections on studying prosody in talk-in-interaction. Language and Speech 41:235-263.

Selting, E. (1996). Prosody as an activity-type distinctive cue in conversation: The case of so-called 'astonished' questions in repair initiation. In E. Couper-Kuhlen & M. Selting (Eds.), *Prosody in conversation* (pp. 231-270). Cambridge: Cambridge University Press.

Szczepek Reed, B. (2006). *Prosodic orientation in English conversation*. New York: Palgrave Macmillan.

Tannen, D. (1986). Cross-cultural Communication. In T. van Dijk (Ed.), *Handbook of Discourse Analysis, vol. 4, Discourse Analysis in Society* (pp. 203-215). London & Orlando: Academic Press.

Tyler, A. (1992). Discourse structure and the perception of incoherence in ITAs' spoken discourse. *TESOL Quarterly* 26: 713-729.

Tyler, A. & Bro, J. (1993). Discourse processing effort and perceptions of comprehensibility in nonnative discourse: The effect of ordering and interpretive cues revisited. *Studies in Second Language Acquisition* 15: 507-522.

Vaissere, J. (1995). Phonetic explanations for cross-linguistic prosodic similarities. *Phonetica* 52: 123-130.

Wennerstrom, A. (2001). *The music of everyday speech*. Oxford: Oxford University Press.

Wrembel, M. (2007). Metacompetence-based approach to the teaching of L2 prosody: Practical implications. In J. Trouvain & U. Gut (Eds). *Non-native prosody: Phonetic description & Teaching Practice.* (pp. 189-210). Berlin: Mouton de Gruyter.

Yuan, J., Shen, L., & Chen, F. (2002). *The acoustic realization of anger, fear, joy and sadness in Chinese*. Paper presented at the ICSLP.

Zhang, H. (2001). Culture and apology: the Hainan Island incident. *World Englishes, 20*(3), 383-391.

FIGURES

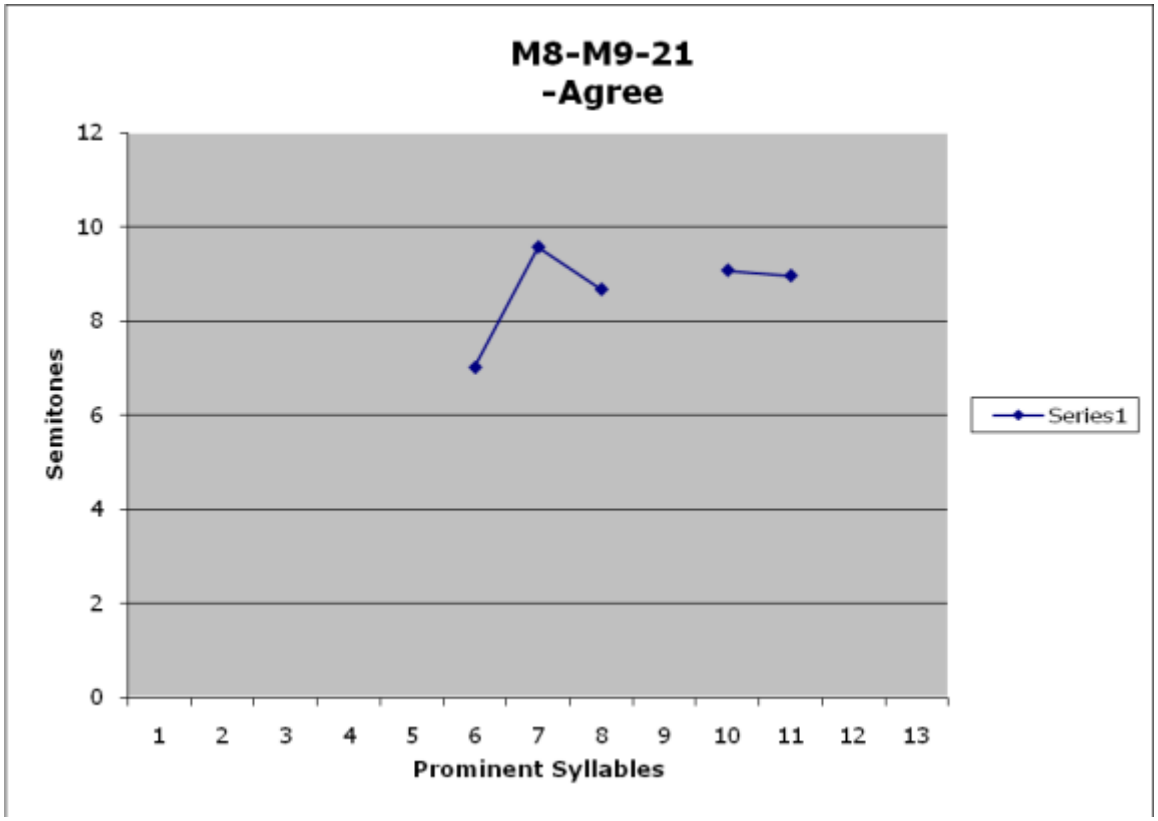

Figure 1. M8: //YEAH //i MEAN it's the OPposite//
M9: //YEAH// it's TRUE//

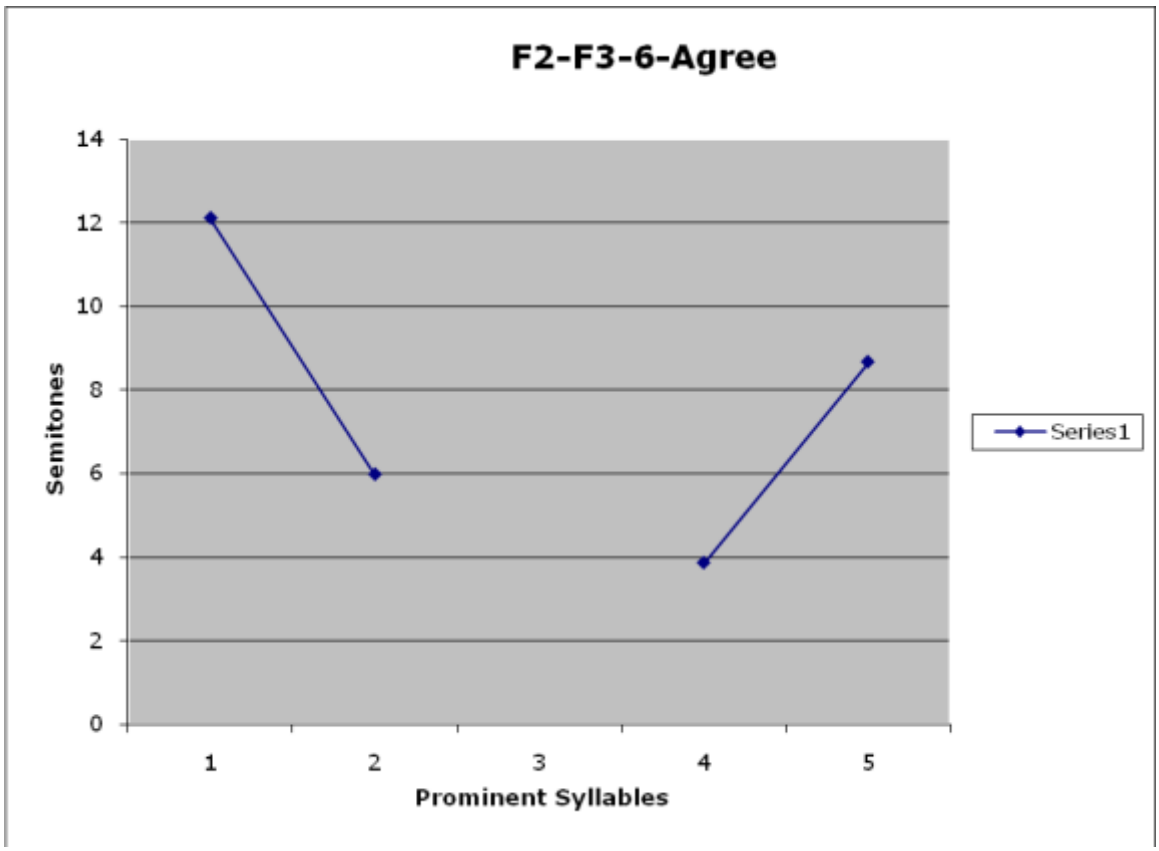

Figure 2. F2: //that's like a car tom CRUISE would DRIVE//
F3: //in that MOVie// YEAH//

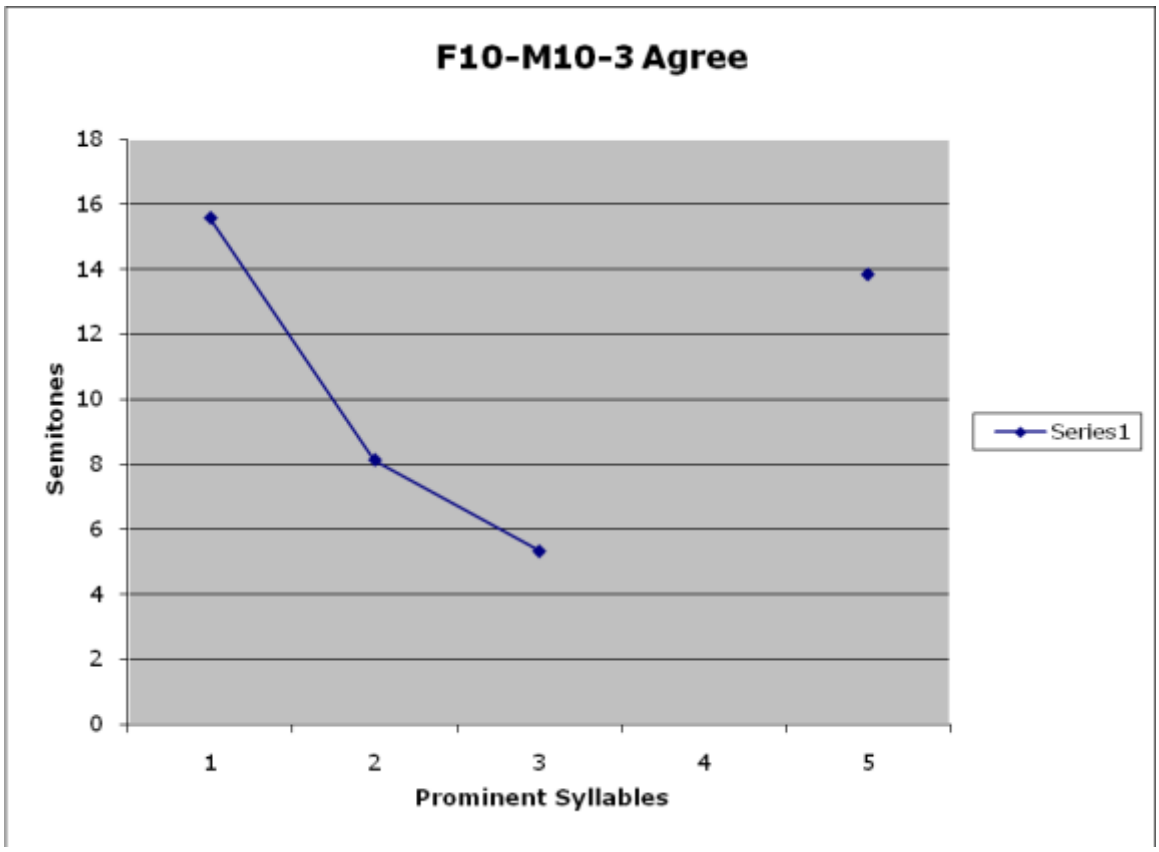

Figure 3. F10: //THAT looks like a PEAnut on WHEELS!//
M10: //YEAH!//

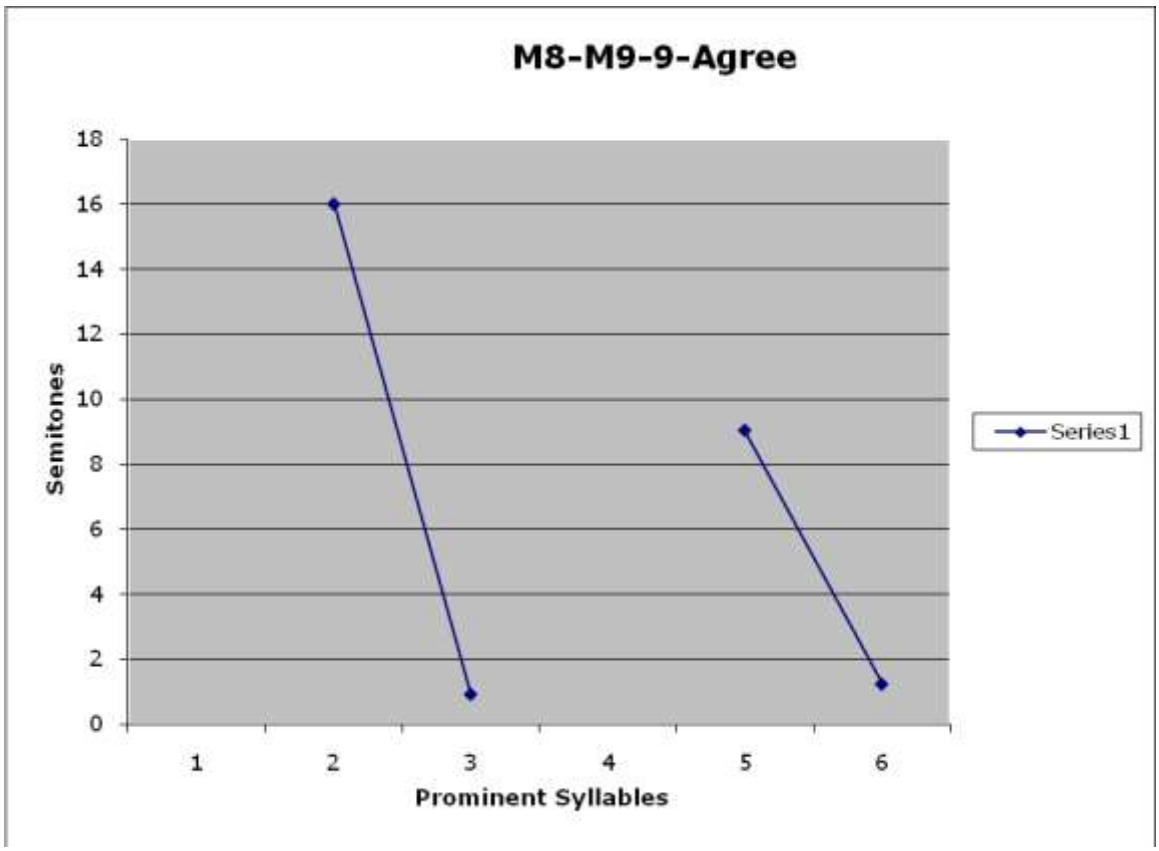

Figure 4. : M8: //ALL of these are pretty high-end CARS//
M9: //they're ALL very high end AREN'T they//

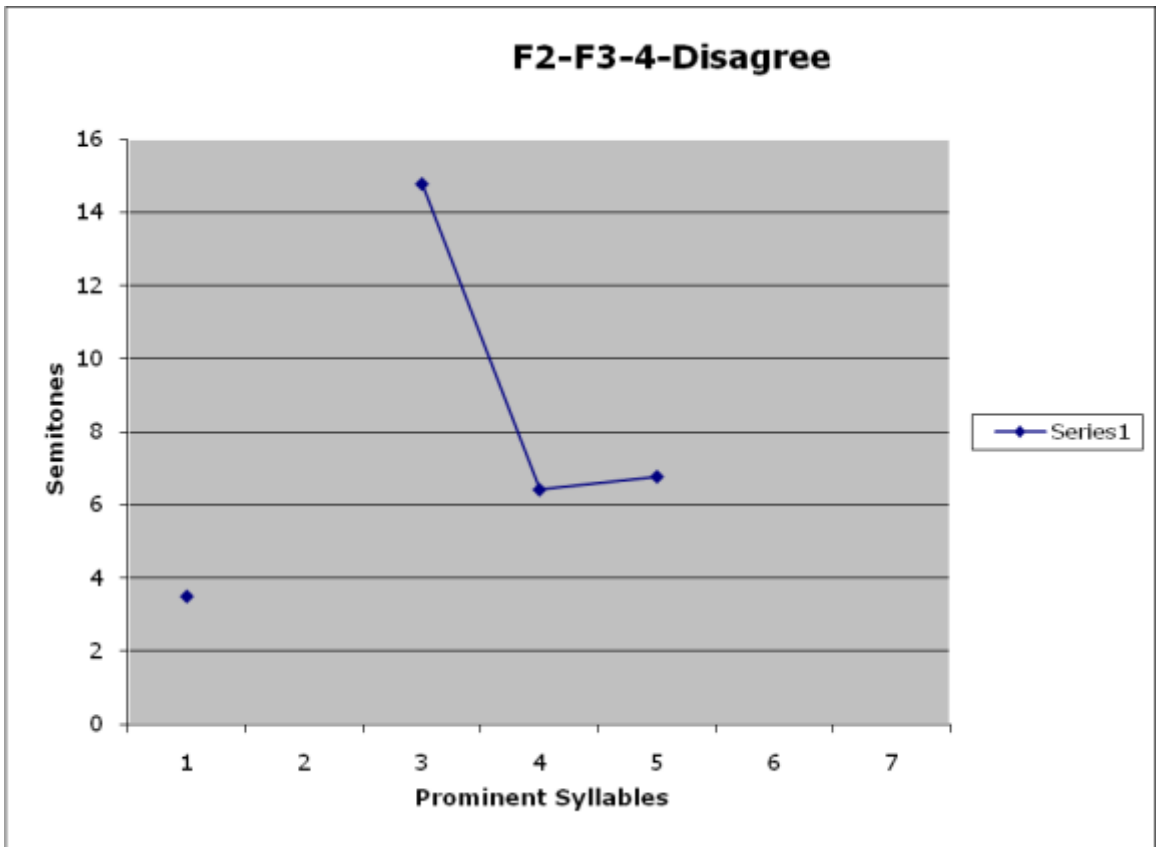

Figure 5. F2: //That's oK//
F3: //WELL// YEAH// that's BETter//

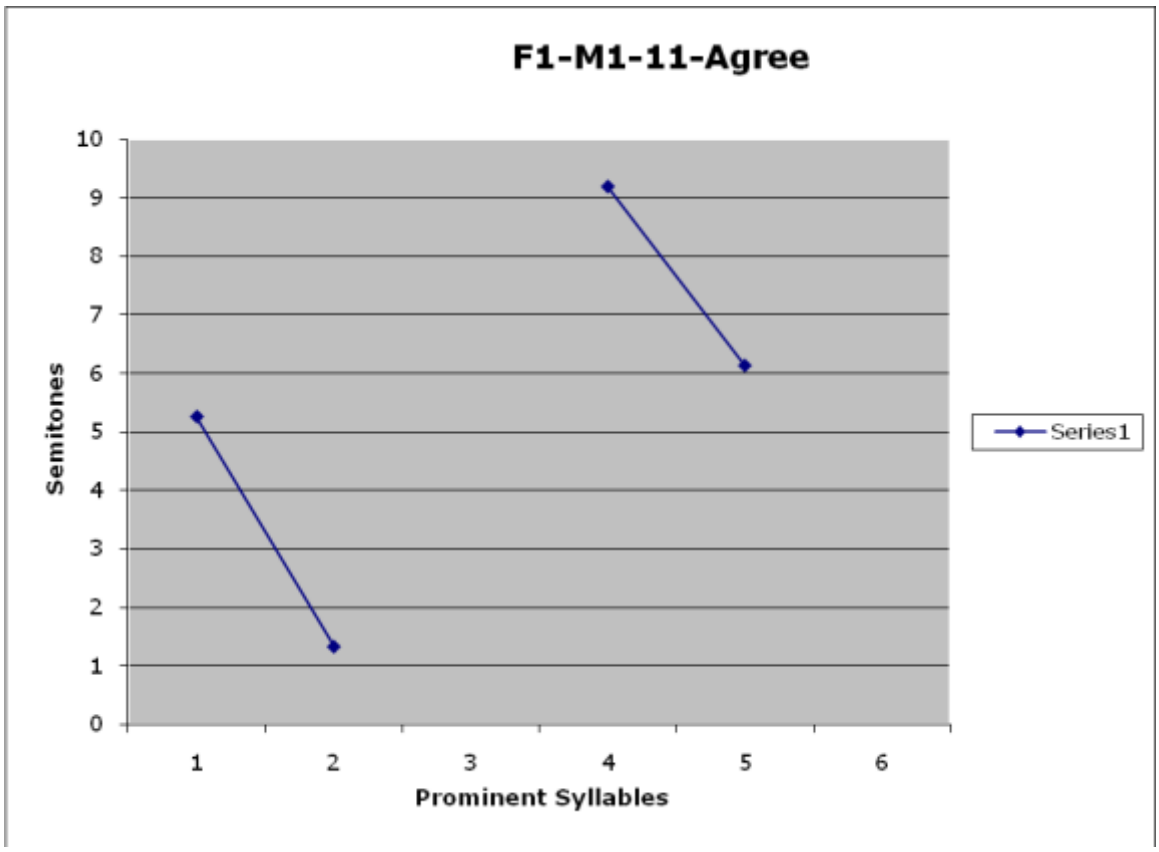

Figure 6. F1: //this CAR is ELegant//
M1: //ummm this CAR is ELegant//

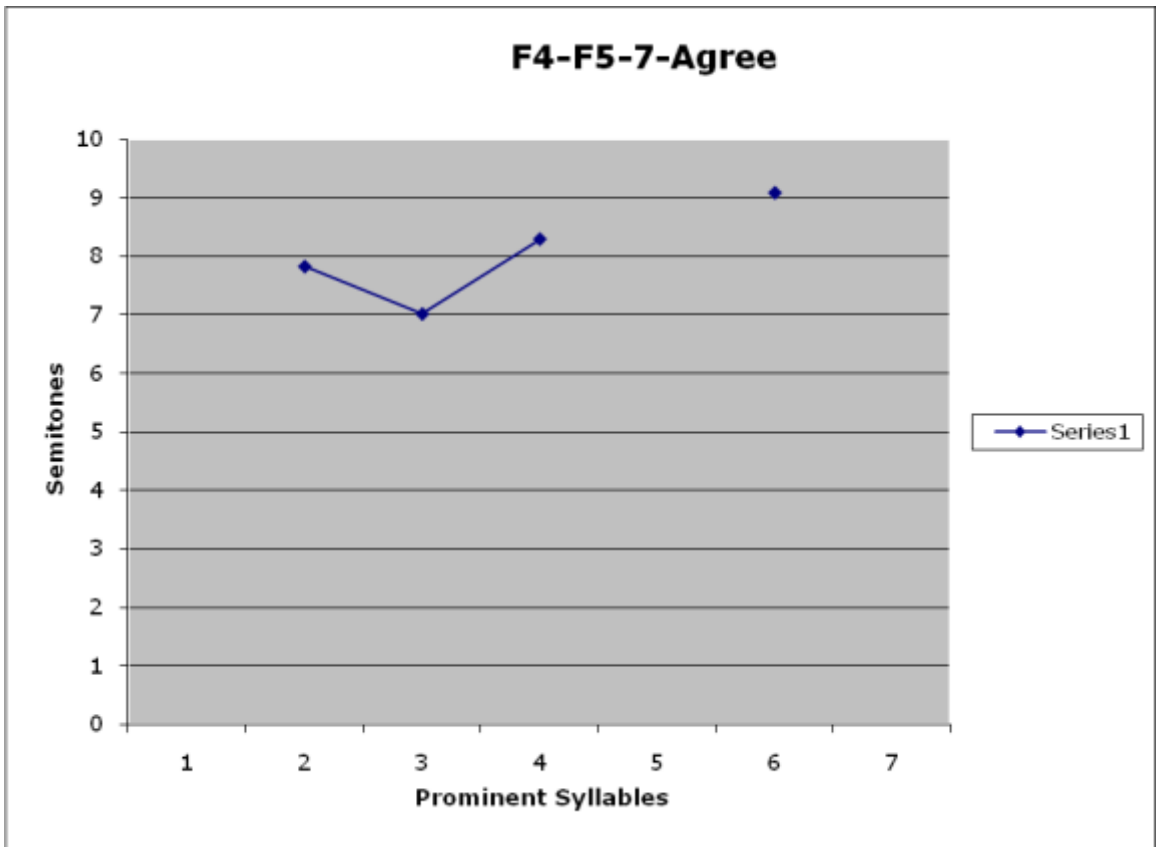

Figure 7. F4: //SOMEthing WEIRD RIGHT//
F5: //YEAH//

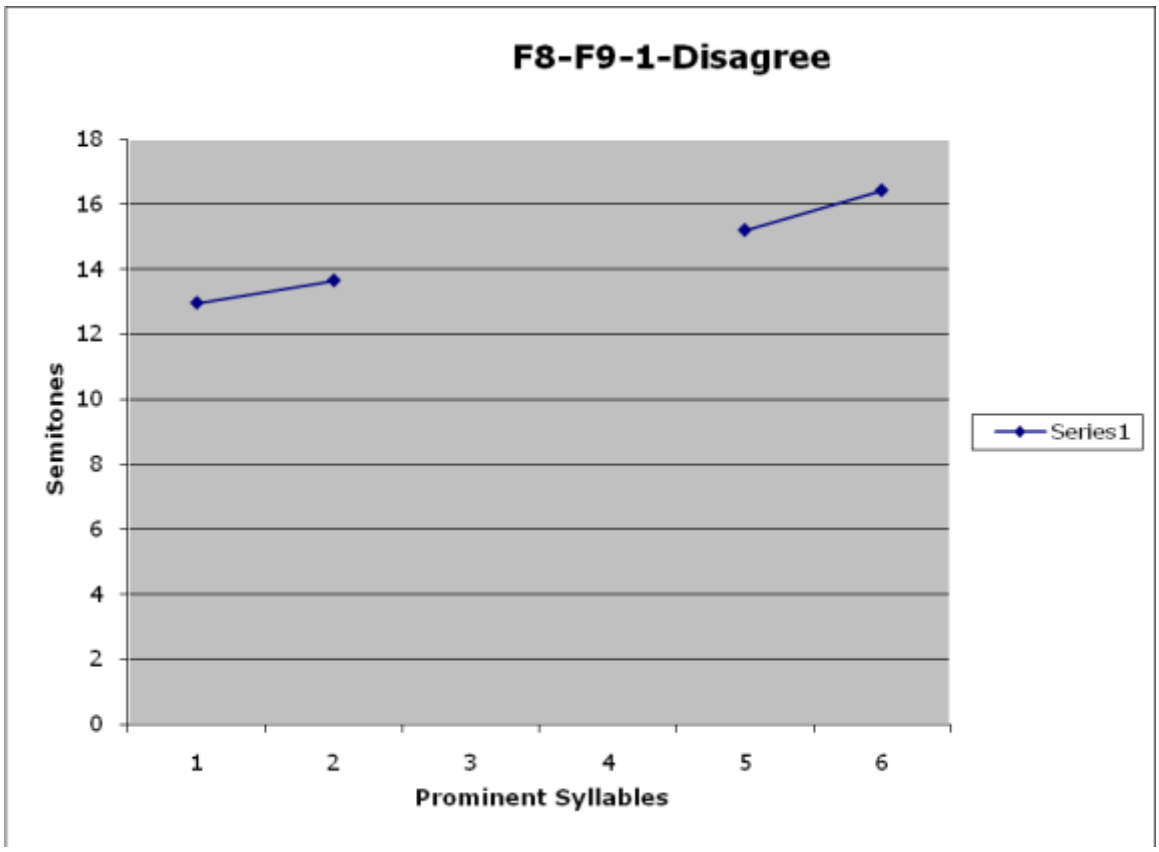

Figure 8. F8: //THIS pretty COOL//
F9: //BUT I prefer the SILver//