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Variation in prosodic focus of the Japanese negative *nai*

Issues of language specificity, interactive style, and social situations*

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1. Introduction

While social situations and related norms for linguistic performance influence which style or register should be chosen (i.e., the unmarked choice), it is a well-known linguistic fact that speakers' stylistic (or register) choices vary even within identical communicative situations. Beginning with such seminal work as Ferguson (1964) and Blom and Gumperz (1972), linguists have become increasingly interested in investigating this dynamic aspect of code or style alternations in actual linguistic practice – whatever may be the implicit or "metaphorical" social meanings speakers try to convey beyond what is said through their situationally marked choices of the code or style in the immediate context of use (Gumperz 1982).

Prosody is one of the most efficient means to deliver these "paralinguistic" messages, which typically consist of such interactive dimensions as solidarity and social distance, power distribution, deference and confrontation, and the speaker's current emotional state (Ladd 1996: 33). So far, the great majority of studies of stylistic variation in Japanese have been restricted to such overt morpho-syntactic characteristics as plain vs. polite (*-desu/masu*) alternations of the predicate structure and their correlation with the situational context of use. The present study is an attempt to explore the largely neglected area of prosody by shedding light on situationally marked but

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systematically variable uses of focal prominence in close linkage to interactive dimensions of style and sociolinguistic properties of social situations (i.e., register) in Japanese language practice. While prosodic prominence involves different acoustic parameters such as amplitude, duration, and pitch variation, the present analysis is mainly concerned with pitch phenomena because fundamental frequency (F0) plays the primary role in both production and perception of focal prominence in Japanese (Azuma 1992a,b; Koori 1989a,b; Sugitou 1982).

Surprisingly little attention has been paid to the analysis of focal prominence in intonational phonology. It follows that in the current state of the discipline researchers have not yet drawn any satisfactory conclusion as to why and how a speaker places prosodic focus on certain elements of the utterance (Ladd 1996). A major universalist viewpoint, which is concerned with information structure in discourse, proposes that new significant information in a discourse tends to be given prosodic focus (Brown 1983, Grosz and Sidner 1986, Nooteboom and Kruyt 1987, Prince 1981, and see particularly Cutler et al. 1997). This generalization, however, may be refuted on at least three grounds, which the present study aims to verify based on the analysis of everyday natural interactions from the Japanese speech community. These are:

1. Prior studies neglect a considerable amount of cross-linguistic variability involved in focal prominence phenomena and suffer from being English-centric (Ladd 1996; Yaeger-Dror 2002a,b).
2. Prior studies are mainly based on the reading of constructed sentences taken out of context or on monologue readings in a laboratory setting, where the dynamic interactive roles prosody plays in face-to-face exchanges are not taken into account (Couper-Kuhlen and Selting 1996).
3. Any conclusions derived predominantly from a single, non-interactive kind of social situation lead to an impoverished picture of what prosody can really do in everyday interactions that are inherently rich in both style and register (Yaeger-Dror 1996, 1997, 2001).

To investigate how dynamically (and systematically) focal prominence operates in interactive language use, the present study focuses on an aspect of face-to-face exchanges that requires highly interactive work: negation. The particular locus of analysis is the variable manifestation of focal prominence placed on the Japanese negative *nai*. It has been observed in the present data that the speaker seems to place differential degrees of focal prominence on *nai* depending upon the social meanings of negation at every moment of talk-in-interaction, while morpho-syntactic style in its conventional sense is highly consistent within the same social situation. In other words, the speaker prosodically style-shifts between the situationally unmarked or marked degrees of focal prominence placed on the potential locus of negation in order to convey certain paralinguistic messages.

The Japanese-specific mechanism of conflict management is also directly relevant to issues of register variation. There has been a cultural stereotype that interpersonal har-

mony and collective unity are highly esteemed as rigid social norms in Japanese society. In reality, however, the social norms are more flexible than the cultural stereotype, in that they are dependent upon the dimensions of interpersonal relations within the society (Befu 1980, Ishida 1984, Krauss et al. 1984).¹ Research on non-harmonious types of interactions remains relatively rare in Japanese linguistics, perhaps due to this "myth of harmony" (Jones 1990). While a few pioneering studies have dealt with a single social situation (either casual conversation or workplace discourse) (Jones 1990, 1995; Niye-kawa 1984), the present study will incorporate a comparative perspective across different communicative settings, taking into account the differential effects of social situations (i.e., register) as a variable in expressions of disagreement in Japanese interactions.

In order to reach a better understanding of how variable uses of focal prominence in everyday interactions are governed by sociolinguistic grammar,² we need to identify the matrix of potential constraints on variability and their co-occurrence restrictions (Teren 1997), which are likely to be unique to each individual language (Ladd 1996). The present study adopts the variationist framework of analysis (i.e., the variable rule approach) to detect potential constraints that simultaneously influence observed variability in focal prominence and to account for the relative significance of the constraints responsible for the variation (i.e., the hierarchy of constraints) (Preston 1991, Sankoff 1986). The types of constraints to be investigated include the structural environment (i.e., the structural principles of Japanese prosody) in which the negative *nai* is embedded, the status of information conveyed by the negative in a discourse, particular interactive work in interpersonal exchanges (Schegloff et al. 1977), the speaker's stance or footing of negation (Goffman 1981), and the informational-interactive properties of different social situations (Biber 1988, 1995).

Two diametrically distinctive types of interactive registers and one non-interactive register serve as the data. One of the interactive registers consists of four televised one-on-one *tooron* 'debates' on political issues,³ in which the formal *desu/masu*-style predicate was the sole option used, without any apparent style shifting in its conventional sense. The other interactive register consists of five casual same-sex conversations between close friends, in which the plain style predicate or fragmental utterances were predominantly used. The non-interactive register, which acts as the control, con-

1. Ishida (1984), for example, argues that interpersonal conflicts in Japanese society are accommodated or resolved efficiently by the interaction of these four socio-cultural dimensions: *uchi* ('in-group'), *soto* ('out-group'), *omote* ('surface or formal arena'), and *ura* ('backstage or informal arena').

2. "Sociolinguistic grammar" is equivalent to a performance grammar involving structured, rule-governed variability in language use. It is covariate with a composite of linguistic/discourse constraints and extra-linguistic factors (Cedergren and Sankoff 1974).

3. Japanese *tooron* is broader in its concept than "debates" in Western cultures. It includes various formats of confrontational talk such as one-on-one debates and group, panel, and roundtable discussions. See Section 4 for a detailed description of the data.

sists of news read by newscasters on televised news programs. The three types of data were transcribed, and all of the utterances involving the negative *nai* were analyzed prosodically, based roughly on the Japanese ToBI labeling scheme of prosodic transcriptions (Venditti 1995, 2005).

2. Previous work on variables in focal prominence

According to Ladd (1996), there have been two major theoretical stances that attempt to account for phenomena of focal prominence in prosody. The first stance resorts to "highlighting-based" accounts (Ladd 1996: 163), in which focal prominence plays a pragmatic role, being typically given to words or phrases of relatively heavier semantic weight than the others in an utterance. Any salient entity that has new information status in the flow of discourse tends to be pronounced with focal prominence, whereas entities that provide old, previously mentioned, or insignificant information are likely to be de-emphasized prosodically. Though this generalization is meant to establish the "universalist" principles that can apply to any human language, it can be criticized as "English-centric" in that there is abundant evidence of cross-linguistic variability (Ladd 1996: 168–97). This stance takes into serious account such pragmatic notions as discourse salience and speaker intentions, but it lacks attention to potential structural constraints (i.e., language-specific patterns of accents and intonation) on the realization of focal prominence.

The other stance centers on what Ladd (1996: 163) calls "structure-based" accounts, in which focal prominence is subject to the prosodic structure unique to each individual language, and thus is a "non-universal" phenomenon. It emphasizes the rule-governed nature or autonomy of patterns of focal prominence in natural speech. Once the focused element of the utterance is specified, the prosodic pattern of the rest is predictable by language-specific rules or structural principles. However, a variety of contextual incentives that may cause the speaker to choose certain elements of the utterance on which to place focal prominence are "at best poorly understood," and more research from interactional perspectives is needed (Ladd 1996: 164, 197–99).

In the Japanese language context, research on focal prominence has always been heavily concerned with its relationships with the phonological properties of the utterance (especially with lexical accents) (e.g., Hattori 1933; Kawakami 1957, 1965; Kindaichi 1951; Oishi 1959; Wada 1975). Recent studies have been most active in the field of laboratory phonology and have proposed non-universal principles specific to Japanese. Sugitou (1985, 1986), for example, provides empirical evidence that disproves highlighting-based accounts like Cutler's (Cutler et al. 1997 and papers cited there) and the studies summarized in Hirst and Di Cristo (1998). Sugitou found that the word providing new information in a discourse is unlikely to be produced with pitch (F0 or fundamental frequency) prominence by native Japanese speakers, whereas speakers of Western languages emphasize such words with much higher pitch than the words providing old information. Instead, in Japanese, a significant correlation has

been found between focus and its syntactic position. Pitch prominence is placed typically on whichever content words are located in the utterance-/phrase-initial position, regardless of the information status they represent in a discourse (Sugitou 1985, 1986; see also similar claims in Koori 1989a,b).⁴

In connection with this positional constraint on the realization of focal prominence in Japanese, there are also other language-specific characteristics of Japanese prosody that may be relevant to variable phenomena of focal prominence: downstep (or catathesis) (Beckman and Pierrehumbert 1986, Kubozono 1989, Pierrehumbert and Beckman 1988) and degeneration of pitch accents (Koori 1989b, Maekawa 1994). Downstep is a phonological process involving an iterative decline and narrowing of pitch range typically found in Tokyo Japanese.⁵ Within an intonation phrase (IP hereinafter), the pitch range of the succeeding accentual phrase(s) (AP hereinafter) becomes narrower when preceded by an accented AP.⁶ It is claimed that focus blocks this propagation of downstep and functions to reset the pitch range, introducing a new IP. Degeneration of lexical accents is commonly observed toward the end of an utterance (or the IP). Toward the right edge of an IP, lexical accents are likely to be weakened due to creaky phonation or amplitude lowering. Consequently, pitch movement is highly leveled, often without salient pitch accent realizations, as an IP proceeds. In fact, the IP-final degeneration of pitch accents is so prevalent and characteristic of Japanese that it has led Japanese ToBI researchers to establish an independent tier for "finality contours" (Venditti 1995: 17). It is then quite likely that prevalent downstepping of pitch and degeneration of pitch accents create an antagonistic phonetic environment for the realization of focal prominence in Japanese speech production.

Examining realizations of focal prominence in connected speech, other researchers have demonstrated that factors such as combinations of the accentual patterns of the word in focus as well as of adjacent words, and focus on postpositional particles and auxiliary verbs, interact with one another and together affect the intonational pat-

4. It should be noted that there is a study focusing on information structure at the sentence level. Equating focal prominence with such a paralinguistic dimension as the speaker's "focus of appeals" ("*uttaekake no shooten*"), Koori (1997b: 140) argues that focal prominence is likely to be placed on the word that carries significant information relative to the others in a sentence.

5. The phonological process of "downstep" is the key element of a general downtrend in Japanese intonation. The phonetic process of "declination," which is a gradual decrease in pitch toward the end of an utterance, is also identified as another element that contributes to this downtrend. The two processes differ most distinctively in the prosodic domains to which they apply (Pierrehumbert and Beckman 1988: 57–91).

6. The accentual phrase in Japanese is the smallest prosodic unit, based on lexical accents. It is tonally defined as having particular phrase-initial and terminal tones and one phrasal tone and/or pitch accent (Pierrehumbert and Beckman 1988). Every accentual phrase is either accented or unaccented. The intonation phrase in Japanese is the largest prosodic unit, typically accompanied by pitch reset, pause, decreased amplitude, pitch lowering, and segment lengthening (Venditti 1995).

terms of the utterance as a whole (Fujisaki et al. 1984, Kawakami 1965, Oishi 1959). Focal prominence not only is constrained by the local prosodic environment in which focal entities are embedded but also strongly affects the accentual patterns of the words preceding and succeeding the word in focus (Koori 1989b). There are also rhythmic issues to consider in accounting for the systematicity of focal prominence. The manipulation of pauses is found to be closely linked with focal prominence in Japanese (and perhaps in other languages as well) (Koori 1989b, Sugitou 1982). The speaker typically places pauses either immediately before or after the entity in focus so that the focal word can attract the listener's attention. The location of these emphatic pauses does not have to coincide with syntactic boundaries such as that between subject and predicate. They can be used independently for the sake of prosodic emphasis. In addition, slow tempo also typically co-occurs with prosodic focus (Koori 1989b).

What has been reviewed so far clearly suggests that patterns of focal prominence in Japanese are constrained by the language-specific structural environment in which it takes place. As Terken (1997) states, one of the vital questions that needs to be addressed in studies of focal prominence is understanding this complex matrix of structural constraints on its systematicity. The present study attempts to accomplish this.

3. Prosodic focus on negation and issues of style and register

The data analyzed in past studies of focal prominence are derived predominantly from speech produced in non-interactive contexts (i.e., the reading of sentences in isolation or monologues). In a wide variety of studies that show how dynamic the roles of prosody are in talk-in-interaction (e.g., Couper-Kuhlen and Selting 1996, Gumperz 1982), the main unsolved problems in intonational phonology are consistently seen as arising from the examination of "citation forms" (i.e., socially de-contextualized sentences) to try to determine how sentences are accented (Ladd 1996: 198).

The first robust attempt to account for these interactive aspects of prosodic focus in natural speech is a series of variationist studies conducted by Yaeger-Dror (1985, 1996, 1997, 2002a,b). Studying the great variability in focal prominence of the English negative "not" in everyday language use, the author claims that two particular principles provide a useful yardstick for understanding the observed variation. Yaeger-Dror (1997) calls the first principle the "Cognitive Prominence Principle" (CPP hereinafter), which has been put forth by a number of studies (e.g., Brown 1983, Cutler et al. 1997, Hirschberg 1990, Hirst and Di Cristo 1998, Nooteboom and Krut 1987, O'Shaughnessy and Allen 1983, Prince 1981). This conception captures the variation in focal prominence based on the speaker's cognitive judgment of the information structure: new information in a discourse is given more focal prominence than other information. The other principle, which Yaeger-Dror (1997) calls the "Social Agreement Principle" (SAP hereinafter) and which was originally proposed by conversational analysts (e.g., Schegloff et al. 1977), states that there is a "universal" preference for speakers engaged in conversation to em-

phasize signs of their agreement with co-participants. A corresponding dispreference for disagreement is manifested by minimizing the extent of disagreement when it arises. Yaeger-Dror's series of studies demonstrate that the variable degrees of focal prominence on English negation are highly rule-governed in terms of the extent to which speakers are subject to those principles, and that the effects of the principles on the speaker's performance vary systematically based on the following two types of factors: (1) the informational-interactive properties of social situations, and (2) the interactive meanings of negation at every moment of talk-in-interaction even within a single social situation.

As for the communicative properties of social situations, Biber's studies (1988, 1995) show that the registers one manipulates in one's everyday life involve differential degrees of orientation toward informativeness and interactiveness, which compose a continuum. For example, casual conversations are considered to be a typical interaction-oriented register at the most interactive end of the continuum. In this type of register, the SAP is likely to prevail over the CPP. Interpersonal rapport and solidarity are highly esteemed over the exchange of information. In highly information-oriented registers such as discussion or debate, on the other hand, the CPP is likely to prevail over the SAP in that successful transmission of information is given the first priority over affective dimensions of interaction. Yaeger-Dror's theory predicts that the variable uses of focal prominence in expressing disagreement should quantitatively reflect the types of social situations in which the speaker is engaged, and that they will also likely be affected by the sociocultural norms the speaker is expected to meet as a successful interactant in a given social situation in a given culture (Yaeger-Dror 2002a, b).

Even within a single social situation, both the CPP and the SAP have to be dynamically "tuned in" to every moment of talk-in-interaction. In expressing his or her disagreement through negation, the speaker is obliged to determine the interactional meanings of the negatives and to control the stylistic parameters of their utterance depending upon the degree of social impact on the co-participant(s) (and others not present) in conversations.

To illustrate, some major types of interactional meanings of negatives (the Japanese *nai*) have been extracted from my dataset, based on Yaeger-Dror's (1997: 6–8) classification. In Excerpt (1) from a political debate, one of the participants (Speaker D3b), a male congressman, uses the negative *nai* twice (see the lines indicated by the arrow) in providing new information useful for the other participants in further pursuing their co-activity (political debate).

(1) Negatives as "informative" (neutral) interactive meaning⁷

Speaker D3b: *sorekara amerika demo desu ne, (.)ano::*

7. Broad transcriptions are based on the Sacks et al. (1974) system with some additions. Major symbols include: [] (speech overlap); underlining (emphasis); underlining and CAPS (more emphasis); (.) (short interval); (2.0) (timed interval); :: (lengthening); ? (full raise); period (fall to low); comma (fall not to low); / / (slow tempo); (laughter); <@ >@ (laugh quality). ! (appeal); x (indecipherable syllable).

- *noosu dakota mitai na, hito no toora-nai yoona* (0.5) *to yuu to* (.) *okorareru keredomo, hotondo jinkoo INAI yoona chiiki no desu ne, toko ni mo migotona ano:: haiuei dekitemasu ne.*

'Besides, also in America, um, somewhere like in North Dakota, where no one passes through, though someone may be offended if I say this. In regions that have almost NO population, splendid, um, freeways are constructed.'

The theory predicts that in highly information-oriented social situations such as this televised political debate, the negatives that provide new significant information are more likely to receive focal prominence than those in other social situations (e.g., casual conversation). Notice, however, that the first token of the negatives (*toora-nai*) is not given prosodic emphasis. I assume this prosodic choice would be linked to the speaker's hesitant, self-acknowledged tone of apology when uttering the remark that his words might possibly offend the inhabitants of North Dakota (*noosu dakota mitai na hito no toora-nai yoona* [0.5] *to yuu to* [.] *okorareru keredomo* 'somewhere like in North Dakota, where no one passes through, though someone may be offended if I say this'). The speaker then rephrased what he had just said using a more generalized, anonymous term ("*hotondo jinkoo INAI chiiki* 'in regions that have almost NO population'), but this time with the negative highly prominent (*INAI*). Here, the CPP came back in, as is required in this type of social situation.

Excerpt (2) comes from the same debate between Speakers D3a and D3b, who are the representatives of opposing political parties.

(2) Negatives as "face-threatening" interactive meaning
(Brown and Levinson 1987)

- Speaker D3a: *ironna sono:: e:: fukushi ya nanka no bubun de, kyuuchoo-en suiageta. /sore ga/ ne* (.) *yappari ano::* (.) *keiki ga warukunatta kore ookina genin desho!* [xxx]
'Various, um, social welfare and others spent 9 trillion yen. That is, um, still the very reason why the economy went down, isn't it?'
- Speaker D3b: [*iya aru*] *teido genin aru kedo, (.) ano sore ga ano:: sengo desu ne, ano nanjuunen rai to yuu yoo na, sonna fukeiki no genin dewa NAI to omoimasu.*
→ 'Well, it is a cause to some extent, but, um, I, um, I think that is NOT the cause of this economic recession, which has been the most serious in the decades since the War.'

Speaker D3b, using the negative *nai* (see the line with the arrow), directly expresses his disagreement with Speaker D3a, negating D3a's preceding claim about a potential

cause of the recent economic recession. Here, he employs a highly prominent prosodic focus on the very locus of the negation (*NAI*) to express his opposing stance.

Notice also that Speaker D3b makes a concession remark (*aru teido genin aru kedo* 'it is a cause to some extent, but') before issuing his very overt disagreement, with the negative being highly prominent. This seemingly contradictory sequence is characteristic of Japanese interactions in conflict (Honda 2002, Jones 1995). The preceding concession can be regarded as an essential constituent of Japanese disagreement, which is motivated by the interpersonal desire to save the face of the opponent, whereas the subsequent overt disagreement is driven by the institutional context of this televised debate, in which the participants are expected to meet the communicative requirement of expressing their opposing views clearly to the audience (Honda 2002). Obviously, Speaker D3b chose the CPP over the SAP when issuing the negative as his stance in order to meet the communicative requirement of this particular social situation as a competent member of the culture.

Excerpt (3) comes from a social situation, in which the SAP is highly esteemed – a casual conversation between college classmates (Speaker C2a and C2b).

(3) Negatives as "supportive" interactive meaning

Speaker C2b: *nani minna no wa kara hazusareru no?*
'What? Are you gonna kick me out?'

Speaker C2a: @@@@[@@@]

Speaker C2b: [*naze?*] @@@ [*nanka warui <@koto shita?@>*]
'Why?' @@@ Have I done anything wrong?'

Speaker C2a: [@@@@@@@@] (0.5) *sooyuu wake ja na::i tte sa::.*
@@@@@@@@ 'That is not the case! (of course, you've done nothing wrong.)'

Discussing room assignments for their class trip to a hot spring town, Speaker C2b jokingly reacts to Speaker C2a's preceding tease that Speaker C2b will have to stay in a room with other classmates with whom she is not close. When Speaker C2b playfully pursues the issue, Speaker C2a finally provides a supportive statement with the focused negative with heavy lengthening (*na::i*) to maintain Speaker C2b's positive face, implying that she has not been cast out of their social circle. While Speaker C2a's prosodic emphasis on the negative strongly denies the propositional content of Speaker C2b's preceding utterance (*nanka warui koto shita?*), it reconfirms interactive meanings of in-group rapport and solidarity, with the result that the principle of social agreement ("disagreements preferred") is satisfied (Pomerantz 1984).

It has been demonstrated that the speaker systematically controls the degree of focal prominence on negation, depending upon the type of social meaning a particular token of negation creates at a specific moment in talk-in-interaction (Takano 2001,

Yaeger-Dror 1996, 1997). Putting aside the differential properties of social situations mentioned above for the moment, the theory predicts that focal prominence on the face-threatening *nai* in Excerpt (2) is likely to be minimized and that the supportive *nai* in Excerpt (3) is likely to be maximized in accordance with the SAP. The informative (thus, neutral to the interlocutor's face wants) *nai* in Excerpt (1), on the other hand, is likely to be prominent because the efficient delivery of information is a major concern for the speaker, in accordance with the CPP. Close examination, however, shows that social situations of language use intervene in the activation of these principles. As legitimate members of a culture, the participants need to activate those principles properly by evaluating their interactive impact on the other participants in a given social situation and the communicative requirements of the situation.

Thus, once highly interactive data are closely examined, the status of information conveyed by negatives in a discourse is not the sole determinant of focal prominence (which is in discord with the universalist paradigm). Rather, the negatives with or without prosodic focus carry significant paralinguistic messages that are dynamically adjusted from moment to moment even within a single interaction. It is already evident from these sample exchanges that the choice mechanism of prosodic styles is indeed multi-layered, in that moment-to-moment mappings of interactive principles such as the CPP or the SAP interact in some principled ways with social situations of language use as the overall normative framework. This is why systematic accounts of social situations (i.e., style and register) should be integrated into the process of building theories about language use as one of the essential considerations.

4. Data

The data for the present study come from three social situations – two diametrically contrastive situations in terms of the informational-interactive continuum and one non-interactive situation as the control. The first social situation, at the most interactive end of the spectrum, consists of five informal, dyadic, same-sex conversations between close friends, and the second social situation, more highly informational, consists of four televised *tooron* ('debates') between male politicians. Two of the *tooron* are one-on-one debates, and the remaining two are more like one-on-one panel discussions with the moderators being present. The control data set consists of broadcast news read by several newscasters on televised news programs in Japan.

Table 1 describes the number of the negative *nai* tokens analyzed and each speaker's demographic background.

All of the participants in the five informal conversations (C1a through C5b) are speakers of the Hokkaido dialect, which is considered to be relatively similar to Tokyo Japanese in its accentual system. The four televised debates involved leading figures of major opposition parties (D1a through D4b).

Table 1. Number of the Japanese Negative -NAI Analyzed and Speaker's Background

REGISTER	SPEAKER	NO. OF TOKENS	SPEAKER'S BACKGROUND
Casual Conversations	C1a	72	female, mid 20s, office worker
	C1b	20	female, late 20s, housewife
	C2a	51	female, early 20s, college student
	C2b	35	female, early 20s, college student
	C3a	51	female, early 20s, college student
	C3b	39	female, early 20s, college student
	C4a/C5a	190	female, late 60s, housewife
	C4b	66	female, early 70s, housewife
	C5b	53	female, late 60s, housewife
	Total:	577	
Debates	D1a/D2a	58	male, late 50s, politician
	D1b	32	male, late 50s, politician
	D2b	46	male, late 50s, politician
	D3a	25	male, late 50s, politician
	D3b	22	male, late 50s, politician
	D4a	45	male, late 60s, politician
	D4b	59	male, late 50s, politician
	Total:	287	
News	6 Newscasters	161	3 male, late 30s-late 40s, 3 female, late 20s to late 30s
Grand Total:		1025	

Notes: The speaker symbol [C4a/C5a] means that this particular speaker participates in Casual Conversations No.4 and No.5.

The speaker symbol [D1a/D2a] means that the speaker participates in Debates No.1 and No.2.

It is unknown, however, which specific dialect each participant in the debates and the news broadcasts speaks as his or her vernacular and how variable the prosodic patterns are among the speakers of different dialects. With regard to the current database, my impression is that all of the participants spoke a common or nearly common variety of Japanese (*kyootsuu-go*), which is appropriate for formal communicative settings such as these nationally televised programs.

A total of 1025 occurrences of the Japanese negative *nai* were analyzed in terms of prosodic prominence.⁸

8. The following specific types of utterances were excluded from analysis: frozen/idiomatic expressions (e.g., *-sezaru o enai*, *-nakereba naranai*, *-kamo shirenai*, etc.), contracted forms (e.g., *-nakereba --> nakya*), archaic forms (e.g., *yomauu*, *kozu*, etc.), interrogative utterances (e.g., *nomanai no?*) and imperatives (e.g., *iwanaide*).

5. Analytical approach

5.1 The domain and criteria for prosodic prominence

For my analysis of focal prominence on *nai* to be as consistent and objective as possible, I tonally transcribed the present corpus, roughly adopting the Japanese ToBI labeling scheme of prosodic transcriptions (Venditti 1995, 2005)⁹. In addition to tonal events, my transcription was also focused on the identification of disjunctures between adjacent words and the assignment of an appropriate value of the Break Index (BI hereinafter) – BI 3 for the IP and BI 2 for the AP.¹⁰ An IP can be identified by the most strongly perceived disjuncture (BI 3), and the perceived strength of this disjuncture is based on a number of prosodic factors and their combinations. IP final disjunctures typically consist of F0 lowering, decreased amplitude, segmental lengthening and pause, and IP initial junctures are typically marked by pitch range reset.¹¹

An IP in Japanese consists of one or more APs (BI 2), which is a prosodic unit above the word. The Japanese AP is identified by a medium degree of disjuncture, which is generally characterized by particular tonal events (H*+L, H-, or both) as well as falling tonal movement (L%), but it lacks such prosodic cues as the IP markers (e.g., F0 lowering, decreased amplitude, etc.). Every AP is either accented or unaccented, depending upon the words involved, and it is perceptually a larger unit than a word (BI 1) but smaller than (or equal to) an IP (BI 3).

Whether the negative *nai* is prominent can be judged from several specific criteria. Based on past studies that regard pitch as playing the primary role and intensity and duration as playing secondary roles in phenomena of Japanese focus (Azuma 1992a,b;

9. The Japanese ToBI labeling scheme is designed to transcribe Tokyo Japanese, elicited mainly from read speech, although it is meant to be continuously revised to accommodate other styles of spontaneous speech. Therefore, I must say that due to a number of technical problems such as the difficulty in obtaining clear pitch tracks, etc., I have “roughly” taken advantage of only certain portions of the scheme to transcribe naturally occurring spontaneous speech in the current study. In addition, most of the speakers transcribed are speakers of either the Hokkaido dialect or some unknown regional variety, although all of them seem to command a nearly common variety of Japanese (*kyootsuu-go*).

10. In the ToBI labeling scheme, “disjuncture” means the degree of prosodic association between two sequential words, and the “break index” represents the subjective values based on the measures of perceived disjuncture between adjacent words (Venditti 1995). The Break Index in Japanese ToBI ranges from 0 to 3, but I omitted the Break Indices 0 and 1 in my transcriptions because of the analytical objectives.

11. Other criteria for determining an intonation unit come from Cruttenden’s notion of “intonation group boundaries” (1986: 37) and Chafe’s discourse notion of “intonation unit” (1994: 57). In the former, a unit is based on an identification of such markers as pause, anacrusis, final syllable lengthening, and pitch level change, whereas the latter includes a wider repertoire of devices such as pre- and post-pauses, acceleration/deceleration in syllable duration, overall pitch declination, and voice quality (e.g., creaky voice at the end).

Koori 1989a,b), I directed my analyses primarily toward pitch contours (i.e., tonal events) given to the negative *nai* and the identification of an IP in which the negative *nai* was embedded, while paying attention to any marked use of intensity or duration as well. If a negative *nai* was recognized as being tonally a part of an AP in which it was embedded within a single IP, that particular token was coded as receiving “no focal prominence.” If a negative *nai* tonally initiated a brand-new IP, typically along with pitch range reset, that particular token was coded as receiving “focal prominence.” I conducted these coding processes using the speech analysis software program PitchWorks, which permits analysis of pitch movement (F0), intensity (loudness), and duration among others. To illustrate the actual coding procedures in more detail, I discuss Figures 1 through 3 below.

In Figure 1,¹² three IPs can be marked by BI 3 (see the 4th BI tier from the top): the 1st IP, *Irena’i?* (Speaker C2a asks Speaker C2b, ‘Don’t you tuck it [your shirt] in [your pants]?’), which is also a single AP; the 2nd IP, *Pa’jama no ue wa irenai kedo* (Speaker C2b responds to C2a’s question, saying ‘I do not tuck in my pajama shirt, but,’), consisting of three APs (*/pa’jama/, /ue wa/, /irenai kedo/*); and the initial portion of the 3rd IP (*pa’jama no na’ka ni kiru ...*) is also seen (Speaker C2b continues, ‘[what] I wear inside my pajamas ...’). Though the negative *nai* is involved, the 1st IP (*irena’i?*) has been excluded from analysis because it is an interrogative utterance. As

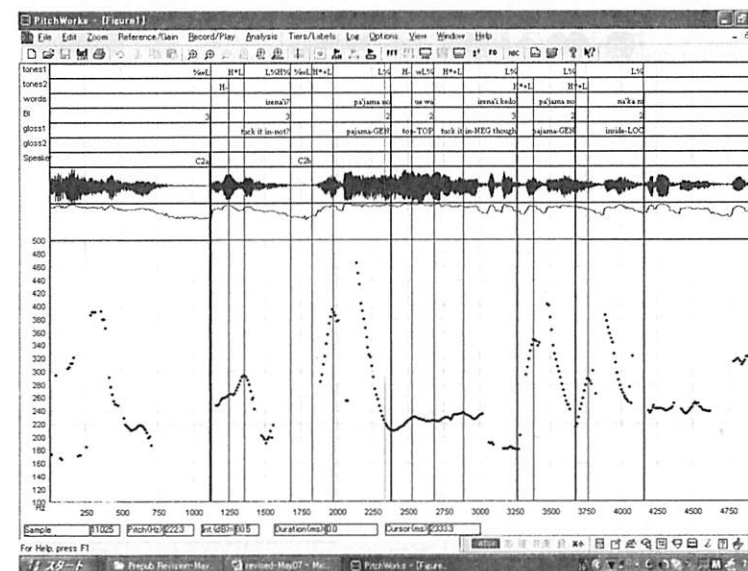


Figure 1. Sample Analysis 1

12. In the word tier in the transcriptions, /x/ indicates the location of pitch accents.

can be seen, C2b's response (*pa'jama no ue wa irenai kedo pa'jama no na'ka ni kiru ...*) is divided into two separate IPs in that at the beginning of the second clause (*pa'jama no na'ka ni kiru ...*) the pitch contour is reset, which signals the start of a new IP. Thus, the domain of analysis of *nai* prominence in this particular file is the 2nd IP (*Pa'jama no ue wa irenai kedo*), and so this particular token was coded as non-prominent due to the fact that the negative can be regarded as tonally a part of the AP in which it is embedded (*irena'i kedo* '[I] do not tuck [it] in, but') within the single IP.

In Figure 2, C3a's utterance (*Kyooshitsu idoo toka anma NA'I jan shooga'kkoo nande*, 'There aren't many classroom changes, right, because it's an elementary school') was divided into two IPs, but a crucial difference from Figure 1 concerns the fact that it is the negative (*NA'I* 'none') that initiates a brand-new IP, along with pitch range reset derived from prosodic focus (BI 3).¹³ This particular token was coded as prominent.

Japanese is a lexically accented language. Depending upon the accentual type of the lexical item to which *nai* is attached as the negative suffix, as well as the prosodic environment that immediately follows, the negative *-nai* itself should be either

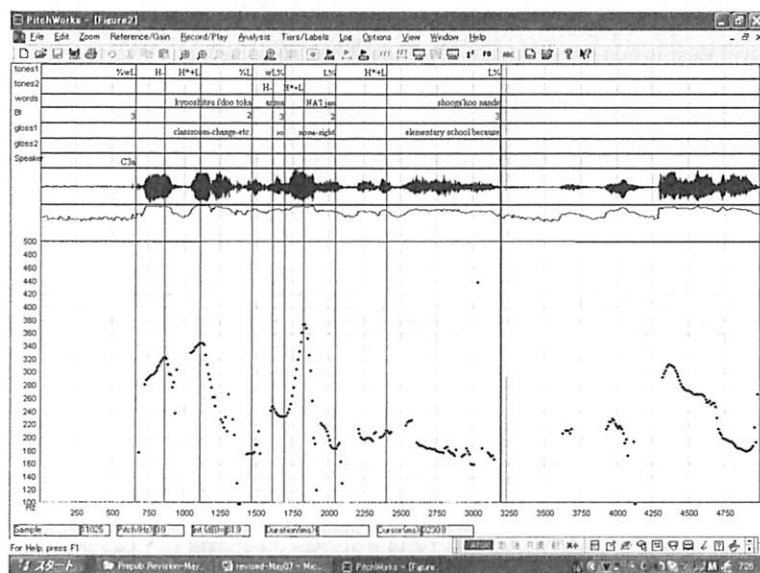


Figure 2. Sample Analysis 2

13. This particular BI could be identified as 2m (2 mismatch) rather than 3, in that the perceived disjuncture between the former AP (*anma*) and the latter AP (*na'i jan*) is not as strong as a normal IP boundary (BI 3), although the tonal pattern clearly indicates the beginning of a new IP.

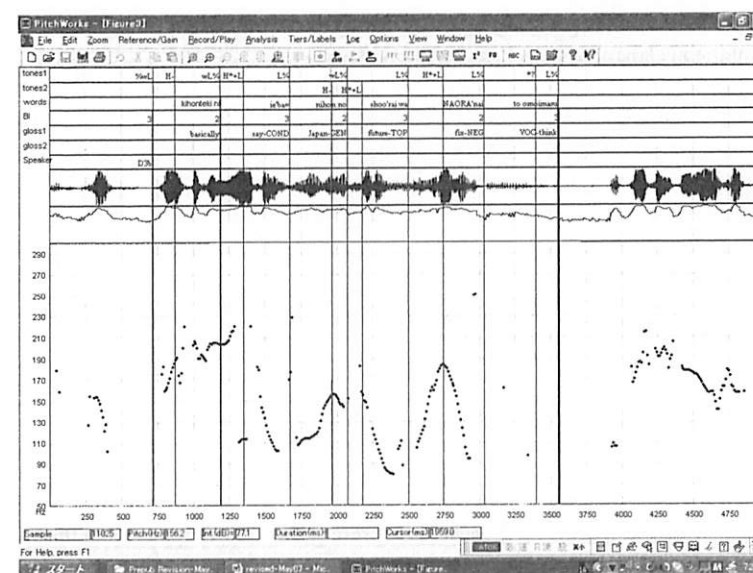


Figure 3. Sample Analysis 3

accent-bearing or unaccented.¹⁴ Because of these restrictions, when *nai* is unaccented based on the prosodic environment in which it is embedded (i.e., *nai* itself cannot bear its accented pitch), the presence or absence of focal prominence was judged on the basis of the tonal patterns given to the lexical item to which *nai* is suffixed. Figure 3 illustrates this point. In this utterance by D3b (*Kihonteki ni ie'ba nihon no shoora'i wa NAORA'nai to omoimasu*, 'Basically [speaking], I think that Japan's [economic] future will not recover'), the negative *nai* is a suffix to the accented verb, *nao'ru* ('recover'), the lexical accent of which is transformed to the accentual pattern *naora'nai* ('recover-NEG') – i.e., the negative *nai* cannot bear its own pitch accent. While it is obvious that the pitch placed on this unaccented *nai* itself shows a falling contour, this token was coded on the basis of the pitch contour directly assigned to the entire phrase *naora'nai*. As is evident in Figure 3, the AP *naora'nai* initiates a brand-new IP with pitch range reset due to focal prominence. Notice also that the final AP (*to omoimasu*, 'I think that') is greatly reduced in pitch and intensity because of the lowered amplitude and

14. The grammatical status of the Japanese negative *nai* is twofold: (1) the auxiliary verb suffixed to verbs and other auxiliaries, or (2) the negative adjective that predicates nouns, other adjectives, adjectival nouns, and nominalized phrases, often with postpositional particles (*wa*, *de*, *dewa*) intervening (Nihongo Kyouiku Gakkai 1993). Unaccented *nai* tokens are most likely to occur when *nai* is suffixed to accented verbs.

creaky phonation. This prosodic weakening toward the end of the IP is characteristic of spontaneous Japanese speech, as mentioned earlier.

In addition to these primary criteria, the following cases were also coded as receiving focal prominence, even if no pitch reset was observed: (1) *nai* itself or the lexical item to which *nai* is suffixed is given a highly marked degree of loudness or duration (though this was rarely observed), and (2) a preceding lexical accent is moved to an inherently unaccented *nai*, which contributes to its perceptual saliency (e.g., *tabe'ru* 'eat' → *tabena'i* rather than a standard pattern *tabe'nai* 'don't eat'). Based on the criteria discussed so far, every coded token of *nai* was double-checked by another native speaker of Japanese. If the judgments did not match, the token in question was discussed until agreement was reached.

5.2 Hypothesis of potential constraints and the analytical program

A predominant majority of prior studies have investigated one-on-one correlations between prosodic focus and some potential constraint (e.g., information structure). To investigate variable grammars, however, it is prerequisite to presuppose that the speaker's decision to place prosodic prominence on the negative *nai* is affected by a variety of factors simultaneously (Sankoff and Labov 1979). Based on previous studies of Japanese focal prominence and on preliminary investigation of my own, Figure 4 describes my hypothetical model that accounts for systematic variability in Japanese focal prominence. The model consists of a wide variety of constraints at different levels of linguistic practice: the internal structure of the IP in which the negative *nai* is embedded, the status of information conveyed by the negative, interactive dimensions, and social situations.

To examine the model, I adopted the variable rule approach, which is specifically designed to handle the inevitably skewed sociolinguistic data elicited from natural communicative settings (Sankoff 1985, 1986, 1988).¹⁵ Specifically, I used GoldVarb (Rand and Sankoff 1990), the Macintosh application of the variable-rule-based statistical model developed by Cedergren and Sankoff (1974). The program conducts a multivariate analysis of data using the maximum-likelihood technique, which allows one to measure the relative effectiveness among the intersecting factors as potential constraints and yields a probability estimate of the effect of each constraint on the application of the rule in question (i.e., focal prominence on *nai*) in relation to the other remaining constraints. Because of the skewedness of sociolinguistic data and the

15. A similar statistical program is ANOVA. Algorithms for calculating ANOVA, however, normally require balanced numbers of tokens in each cell, which would be possible only with data from controlled experimentation (Young and Bayley 1996). Therefore, VARBRUL is the only alternative for successfully handling the extremely skewed sociolinguistic data derived from naturally occurring speech (see Young and Bayley 1996 for further discussion of the validity and implementation of VARBRUL for sociolinguistic research).

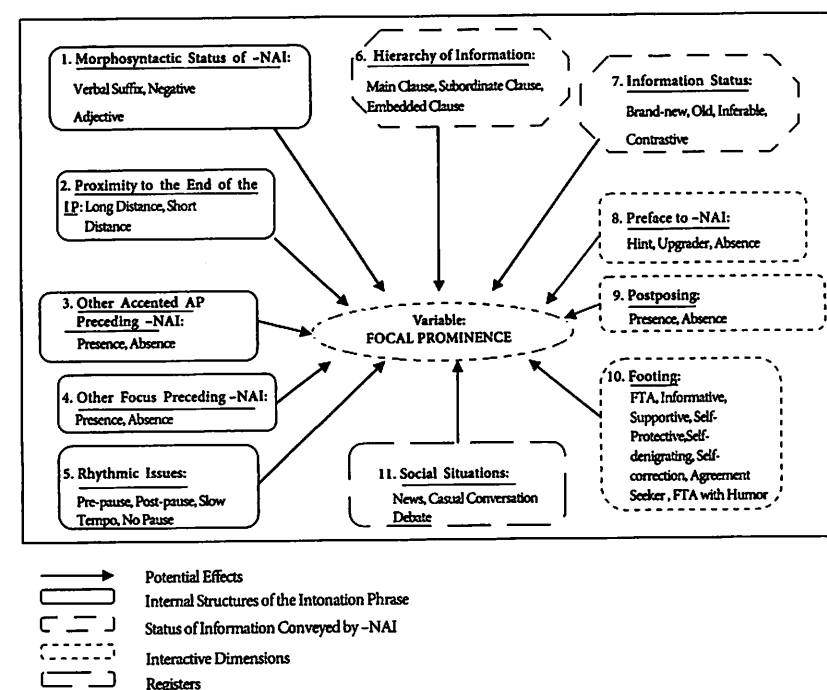


Figure 4. Simultaneous effects of hypothesized independent variables on focal prominence

necessity of identifying the complex intersecting relationships among a number of potential factors, probabilistic accounts of occurrences or non-occurrences of a variable in question have proven to be superior to the use of bare percentages (Sankoff 1985, 1986, 1988). The program also allows us to conduct a stepwise regression analysis, which goes through multiple permutations of factor groups and sorts out the groups of variables with statistically significant distributions of factor weights as the optimal set of predictors of the dependent variable.

The results obtained can be considered to describe the sociolinguistic grammar of Japanese focal prominence, "predicting" the effect of each of the constraints for the use or non-use of focal prominence on *nai* based on the present dataset as a representative sample of the speech community (Preston 1989).

Here is a brief description of each potential constraint that is hypothesized to be responsible for systematic variability in Japanese focal prominence. Prior research relevant to the constraints is listed in parentheses.

Internal Structures of the Intonation Phrase

1. Morpho-syntactic status of the negative *nai*: verbal suffix, independent negative adjective.

The Japanese negation marker *nai* has two distinct morpho-syntactic statuses, as follows: (1) *-nai* as a verbal suffix (e.g., *hana'su* 'talk' → *hanasa'-nai* 'don't talk'; *iku* 'go' → *ika-na'i* 'don't go'),¹⁶ in which *-nai* is prosodically part of the preceding verb. Thus, whether *-nai* itself carries its lexical accent depends upon the lexical accent types of preceding verbs as well as on the succeeding prosodic environment in natural speech production. (2) The word *nai*, as a negative adjective, that is preceded by nouns (e.g., *kane ga/wa na'i* '(I) have no money'), adjectives (e.g., *oishiku [wa] na'i* 'not delicious'), or adjectival nouns (e.g., *kirei de[wa] na'i* 'not beautiful') with or without postpositional particles, carries its independent lexical accent.¹⁷ It can be assumed that the morpho-syntactically independent use of *nai* (Type 2) has a differential status as a constraint from the morphologically more dependent verbal suffix *-nai* (Type 1), in that the former *-nai* should be perceptually more salient than the latter in delivery of new information and paralinguistic messages.

2. Proximity of the *nai* token to the end of the IP (BI 3 boundary) (Sugitou 1985, 1986; Koori 1989a,b): long (6 or more morae), short (5 or fewer morae).
I measured the distance of *nai* from the end of the IP, counting the number of morae. In Figure 3 (...*NORA'nai to omoimasu*), for example, the distance is eight morae including the two morae of *nai* itself to the end of the IP.
3. Other accented AP(s) preceding the *nai* token within the same IP (Fujisaki et al. 1984, Kawakami 1965, Koori 1989b, Oishi 1959, Pierrehumbert and Beckman 1988): presence, absence.
Past studies of connected speech data from read materials show that preceding lexical accents dynamically affect the shape of other lexical accents in the succeeding prosodic environment. The IP in Figure 1, for example, involves an accented AP preceding the negative *nai*: *pa'jama* ('pajama').
4. Other focused element(s) preceding the *nai* token in the same IP (Fujisaki et al. 1984, Pierrehumbert and Beckman 1988): presence, absence.
For example, in the single IP *Zettai sensoo ni'wa nara'nai to iitsuzu'keta n desu yo*. ('I kept saying [it] will absolutely not result in war.'), the adverb *zettai* ('absolutely') is given prosodic focus preceding the negative *nara'nai* ('become-Neg'). Previous literature shows that the prosody of the segments following focal prominence is heavily reduced within a single IP.

5. Rhythmic issues – pause and tempo (Koori 1989b, Sugitou 1982): pause preceding *nai*, pause immediately following *nai*, slow tempo (often along with some hedges) (e.g., *anoo* 'well'), no pause.
Pauses may be used at any one of the following places: before the lexical item negated by *nai*, right before *nai* itself (very rarely), or right after the *nai* in the same IP. Speech production involving the negative token occasionally becomes slower.

Information Status

6. Hierarchy of information (Azuma 1992b, Koori 1997b): main clause, subordinate clause, embedded clause.
In terms of the hierarchy of information, the main clause generally delivers the primary information of the utterance as a whole, which would be more likely to receive focal prominence according to the universalist claim. The subordinate clause generally delivers the secondary information that would be less likely to be given focal prominence. For analytical purposes, the category of main clauses includes utterances that either share some hierarchical relations with other clauses (*shusetsu* 'main clauses' in *fukubun* 'complex sentences') or stand alone without such relations (*tanbun* 'simple sentences,' including fragmental/inconclusive utterances as well as juxtaposed sentences in *juubun* 'compound sentences'). The category of subordinate clauses is further divided into two groups: subordinate clauses (typically with conjunctions), which are subordinate to a main clause in a complex sentence, and embedded clauses, which are typically quotative utterances, clausal nominals, or modifying clauses.
7. Information status of *nai* in discourse (Prince 1992): brand-new information, contrastive information, inferable information, old information.
As reviewed earlier, a number of studies (mainly of English intonation) in interactively impoverished communicative settings regard the informational content of the word or phrase in relation to the prior context of discourse as the impetus for focal prominence – i.e., new significant information in the flow of discourse tends to become prominent. The theory predicts that negation, which inherently adds new or contrastive propositional content to an ongoing discourse, will be a good candidate for focal prominence. Close examination of information status in the context of discourse in the present data shows that while many of the *nai* tokens provide new information, there are a number of *nai* occurrences in which information can be inferred by the listener from the preceding context of discourse or through interactants' shared knowledge. Repetitive *nai* tokens can also be considered to represent old information.

16. "x'x" indicates the location of a lexical accent.

17. It is still debatable whether the grammatical status of *nai* co-occurring with adjectives (e.g., *oishiku-wa-nai*), for example, should be considered as a verbal suffix type (*ika-nai*) or as an independent negative adjective (*kane wa nai*) (Nihongo Kyooiku Gakkai 1993: 383).

Interactive Dimensions

8. Preface to the *nai* negative (Jones 1990, Levinson 1983, Mori 1999, Pomerantz 1984, Schegloff 1980, Yamada 1992):¹⁸ discourse marker as an upgrading preface, discourse marker as a hint preface, straight negation without any preface. Three types of prefaces are identified in the present study. The first consists of the clause-initial uses of: (1) discourse markers which “upgrade” or “assert” the upcoming negatives (e.g., *datte* ‘because,’ *dakara/desukara* ‘so,’ [*sore*]*de* ‘then,’ *shita-gatte* ‘therefore,’ or combinations of these), (2) those which “hint” that a negative is on the way (e.g., *demo* ‘but,’ *shikashi[nagara]* ‘but/however,’ *dake[re]do[mo]* ‘though,’ *kedo* ‘though,’ *tokoroga* ‘but,’ [*i*]*ya* ‘nah/no,’ or combinations of these), and (3) straight negation without any such discourse markers. It has been pointed out in studies of disagreeing turns in both Japanese and English that certain linguistic materials are exploited as markers of opposition to preface (or contextualize) upcoming disagreements. The present analysis explores the possibility of any meaningful interplay between those devices and prosodic parameters.
9. Concurrence with the shift of linguistic elements to the post-predicate position (i.e., dislocation/postposition) (Fujii 1995, Hinds 1982, Ono and Suzuki 1992): presence, absence. The dislocation of linguistic elements to the post-predicate position in Japanese, an SOV language, has to do with the speaker’s emphasis of information in a discourse. How prosodic emphasis interacts with this syntactic alternative will be investigated.
10. Footing (Goffman 1981; Yeager-Dror 1996, 1997): informative (or neutral to the interlocutor’s face wants) (see Excerpt [1] above), face-threatening (e.g., Excerpt [2] above), supportive (see Excerpt [3] above), self-protective (or making excuses) (e.g., Speaker C3b, making an excuse for her recent poor performance and disinterest in a school subject: *Aru to omou kara benkyoo-shinaishi sa*. ‘Because I know that I possess [the copies of previous exams to refer to], I don’t study hard [for the exam].’), self-denigrating (e.g., Speaker C3a, responding to Interlocutor C3b’s previous statement that she has succeeded in losing some weight: *Yaserenai* ‘I can’t lose weight.’), self-correction (e.g., Speaker C3a, talking about a former teacher of hers in junior high school: *Kibishii desho, Naguru desho, (.) Naguri wa shinaika*. ‘He WAS strict, and HIT [his students]. He didn’t hit, exactly.’), agreement seeker (e.g., Speaker C1a to Speaker C1b: *Ichichi hiyakedome nante nutterarenai sso*. ‘You cannot apply the lotion to prevent sunburn every time [you go out].’), face-threatening with humor (only in casual conversation data) (e.g., Speaker C3a, responding to Interlocutor C3b’s preceding joke that C3b’s mother, who is going to visit her, may follow her around on campus, even to the students’ cafeteria, but the

¹⁸ The scope of analysis of prefaces extends beyond the intonation phrase, which is the basic unit of analysis as discussed in Section 5.1.

mother is not permitted to enter the cafeteria without a student pass: *Sonna kimari naitte*. ‘There is no such rule.’).

In the act of negation, the speaker not only negates the propositional content but also creates a particular footing, considering the negation’s social meanings and impact on the listener at every moment during interaction. In the present dataset, the negative *nai* is also used to fulfill a wide variety of interactive meanings as well as to directly express the speaker’s disagreement with the listener.

Social Situations

11. Social Situations: casual conversations, political debates, news broadcast. It is assumed that prosodic variation is motivated by the speaker’s sensitivity to the interactional norms for particular communicative settings in terms of the degree of informativeness and interactiveness and the communicative requirements.

6. Sociolinguistic grammar of prosodic focus on the negative *nai*

6.1 Variability linked to social situations

Among the outputs of several GoldVarb runs of stepwise regression analysis,¹⁹ Table 2 shows the variability linked to the three social situations in terms of the frequencies of prosodic focus on the negative *nai* and their corresponding probability estimates (VR weights).

As mentioned earlier with regard to Figure 4, VR weights indicate the predicted relative effectiveness among all of the intersecting factors that are hypothesized to

Table 2. Variation Specific to Three Social Situations in Prosodic Prominence on -NAI

SOCIAL SITUATIONS	RATES OF PROMINENCE	VR WEIGHTS
Casual Conversations	33% (190/577)	0.40
Debates	48% (137/287)	0.64
News Broadcast	39% (62/161)	0.59
TOTAL: 38% (389/1025)		p < .05
Input Value = 0.366, Chi-square per cell = 1.0250		

¹⁹ These GoldVarb runs were conducted with all of the independent variables listed in Section 5.2 involved. I needed to perform multiple runs of the program because of possible interactions among the independent variables. See the explanation in more detail in Note 22 in the next section (6.2).

simultaneously affect variable uses of focal prominence. A weight of 0.50 indicates that the factor has no effect on the production of the dependent variable (i.e., prosodic focus on *nai*). The closer the weight is to 0, the more strongly the factor inhibits the dependent variable. The closer the weight is to 1, the more strongly the factor promotes it. At the bottom row of the table, the average "chi-square per cell" indicates the degree to which the independent variables considered (i.e., the hypotheses constructed) account for the data. The smaller this figure is, the surer we can be that it is not necessary to consider additional variables. Values below 1.5 (conservatively, 1.0) indicate that the fit between the hypothesized model and the data is good (Preston 1989: 15–6), and the present value (1.0250) is within that secure range. The "input value" (0.366) indicates the likelihood value for the dependent variable (focal prominence on the negative *nai*) to be used regardless of the effects of independent variables.

The independent variable "social situations" was identified as being statistically significant by stepwise regression analysis ($p < .05$). The results demonstrate that prosodic focus on Japanese negatives is sensitive to social situations. In accord with Yaeger-Dror's (1997) predictions with regard to English negatives, Japanese focal prominence is also governed by the universalistic SAP and CPP, and the degree to which it is affected by the principles depends upon the differential orientations of social situations to the continuum of interactiveness/informativeness. In a highly interaction-oriented situation such as casual conversations (CC hereinafter), prosodic focus on the negative is generally inhibited due to the importance of the SAP over the CPP (0.40).²⁰ In contrast, in two highly information-oriented social situations such as political debates (PD hereinafter) and news broadcasting (NB hereinafter), focal prominence on the negative is generally promoted due to the CPP at 0.64 and 0.59, respectively. The higher probability weight for PD quite likely comes from the adversary nature of the social situations, in which negation as the key element of disagreement is more likely to be emphasized for the achievement of the communicative goals required by these particular social situations. Thus, variability in Japanese prosody, at least in negative statements, is systematically linked to social situations, and we should be careful not to overgeneralize the outcome of prior investigations based on a single register (i.e., read speech, conversations) as representing the whole range of communicative settings in the Japanese speech community (cf. Takano 2001).²¹

20. Some readers might find this particular weight (0.40) higher than expected. Possible reasons for this will be presented in Section 6.4.

21. My prior work (Takano 2001) on the same variable (i.e., prosodic prominence on *nai*) reveals that this situation-dependent systematicity also holds true in workplace interactions. This workplace corpus displayed a gradient shift in uses of focal prominence, with different footings based on different properties of settings across the informativeness/interactiveness continuum. Business meetings, where informativeness is highly required, involved the highest rate of occurrences of focal prominence on face-threatening *nai* (52%), and business-linked interactions outside of meetings involved focal prominence on the same footing 43% of the time. Casual chats unrelated to business, where interactiveness is highly esteemed, involved it only 29% of the time,

6.2 Internal structures of the intonation phrase as the constraint

Table 3 shows all of the remaining results of variable rule analysis obtained from the runs of GoldVarb with the three social situations considered separately.²²

The average "chi-square per cell" shows that the hypothesized models account for the data well in each of the social situations, in that all of the values (1.0373 for CC, 0.9651 for PD, 0.8183 for NB) are within the secure range (i.e., below 1.5).²³ Stepwise regression analyses have selected six out of ten factor groups as being responsible for systematic variability in prosodic focus on the Japanese negative *nai* in CC, four factor groups in PD, and three factor groups in NB, all at a $p < .05$ level.

Among the factor groups (FG hereinafter) that are concerned with the internal structure of the IP (FG-1, 2, 3, 4, 5), the robust effects of the position of the negative *nai* within an IP (FG-2) are found in all of the social situations. When the *nai* token is located further than 6 or more morae from the end of the IP (including the 2 morae of *nai* itself), it is more likely to receive focal prominence (long distance: 0.56 for CC, 0.58 for PD, 0.64 for NB). When it is located closer than 5 or fewer morae (including the 2 morae of *nai* itself) to the end, focal prominence on *nai* is likely to be inhibited (short distance: 0.44 for CC, 0.42 for PD, 0.27 for NB). I based my decision of either "short" or "long" distance on an observation of a major break existing between 5 and 6 morae from the end of the IP in terms of the frequency of *nai* prominence (approximately a 15% gap). While such lexical items as final particles, the extended predicate, or utterance-final connectives are typically accommodated with the negative *nai* within 5 or fewer morae that follow, the cases in which *nai* was 6 or more morae from the end of the IP tended to involve another clause or phrase following *nai*.

while involving the highest rate of *nai* prominence on the supportive footing (75%). Also, the rates of focal prominence were linked to power relationships among the speakers – with speakers of higher occupational ranks using *nai* prominence with both face-threatening and supportive footings more frequently than lower-ranked speakers across the settings (cf. Pearson 1988, 1989; Takano 1997, 2005).

22. Algorithms for VARBRUL do not allow for any interaction among the independent variables. Therefore, I conducted several Goldvarb runs so as not to include the factors that appear to interact with one another in a single run. Those factors groups are FG-2 and FG-6, FG-2 and FG-9, and FG-7 and FG-8. Since I obtained different versions of the results from several Goldvarb runs, the VR weight for each independent variable reported in Table 3 is the one derived from a run yielding the lowest average chi-square per cell, which indicates the goodness of fit between the present model and the data.

23. Each value represents the worst (i.e., highest) chi-square per cell value among all of the GoldVarb runs from each social situation.

Table 3. Variable Rule Analysis of Potential Constraints on Focal Prominence on the Negative -NAI: Three Social Situations

SOCIAL SITUATIONS		Casual Conversations			Political Debates			News (Control Sample)		
Factor Groups	Factors	% -nai Prominence	VR Weight	Signif.	% -nai Prominence	VR Weight	Signif.	% -nai Prominence	VR Weight	Signif.
1) Morphosyntactic Status	Verbal Suffix	31% (128/412)	0.51		53% (92/173)	0.56		48% (48/101)	0.58	
	Negative Adjective	38% (62/165)	0.48	Not Signif.	39% (45/114)	0.41	*p <.05	23% (14/60)	0.36	*p <.05
2) Proximity to the End of the IP	Long (6 or more morae)	38% (107/284)	0.56		54% (78/145)	0.58		50% (52/104)	0.64	
	Short (5 or fewer morae)	28% (83/293)	0.44	*p <.05	42% (59/142)	0.42	*p <.05	18% (10/57)	0.27	*p <.05
3) Other Accented AP Preceding -Nai	Absence	44% (91/209)	0.62		59% (53/90)	0.57		56% (27/48)	0.66	
	Presence	27% (99/368)	0.43	*p <.05	43% (84/197)	0.47	Not Signif.	31% (35/113)	0.43	*p <.05
4) Other Focus Preceding -Nai	Absence	34% (126/370)	0.52		52% (85/165)	0.56		40% (45/113)	0.51	
	Presence	31% (64/207)	0.47	Not Signif.	43% (52/122)	0.42	*p <.05	35% (17/48)	0.47	Not Signif.
5) Rhythmic Issues	Following Pause	69% (9/13)	0.73		71% (24/34)	0.76		25% (3/12)	0.51	
	None	32% (174/540)	0.50		42% (97/229)	0.44		40% (59/149)	0.50	
	Preceding Pause	29% (7/24)	0.45		67% (12/18)	0.65		NONE	-	
	Slow Tempo	NONE	-	Not Signif.	67% (4/6)	0.73	*p <.05	NONE	-	Not Signif.
6) Hierarchy of Information	Main Clause	35% (117/333)	0.52		44% (61/140)	0.48		33% (8/24)	0.57	
	Subordinate Clause	30% (34/113)	0.47		41% (24/58)	0.43		26% (7/27)	0.48	
	Embedded Clause	30% (39/131)	0.47	Not Signif.	58% (52/89)	0.58	Not Signif.	43% (47/110)	0.49	Not Signif.
7) Information Status	Inferred	36% (93/193)	0.56		54% (56/104)	0.56		43% (26/60)	0.53	
	Brand-new	32% (61/193)	0.50		45% (50/112)	0.46		32% (19/60)	0.45	
	Contrastive	33% (16/48)	0.47		49% (18/37)	0.58		36% (10/28)	0.51	
	Old	25% (20/81)	0.35	*p <.05	38% (13/34)	0.41	Not Signif.	54% (7/13)	0.59	Not Signif.
8) Preface	Discourse Marker as Hint	48% (23/48)	0.68		65% (11/17)	0.79		50% (3/6)	0.63	
	Discourse Marker as Upgrader	38% (18/48)	0.59		44% (12/27)	0.55		NONE	-	
	No Preface	31% (149/481)	0.47	*p <.05	47% (114/243)	0.47	Not Signif.	38% (59/155)	0.50	Not Signif.

SOCIAL SITUATIONS		Casual Conversations			Political Debates			News (Control Sample)		
Factor Groups	Factors	% -nai Prominence	VR Weight	Signif.	% -nai Prominence	VR Weight	Signif.	% -nai Prominence	VR Weight	Signif.
9) Dislocation/Postposing	Yes	55% (27/49)	0.65		40% (2/5)	0.28		NONE	-	
	No	31% (163/528)	0.49	*p <.05	48% (135/282)	0.50	Not Signif.	NONE	-	-
10) Footing	Supportive	59% (23/39)	0.79		NONE	-		NONE	-	
	FTA with Humor (Teasing)	70% (7/10)	0.79		NONE	-		NONE	-	
	Agreement Seeker	45% (40/88)	0.67		33% (1/3)	0.40		NONE	-	
	Self-Protective/Excuses	38% (17/45)	0.57		63% (15/24)	0.69		NONE	-	
	Self-denigrating	40% (18/45)	0.55		NONE	-		NONE	-	
	FTA	33% (11/33)	0.52		48% (63/130)	0.55		NONE	-	
	Informative/Neutral	23% (74/317)	0.38	*p <.05	45% (58/130)	0.42	Not Signif.	39% (62/161)	-	-
TOTAL		33% (190/577)			48% (137/287)			39% (62/161)		
		* = Factor group selected by stepwise regression analysis Input Value = 0.309 Chi-square per cell = 1.0373			* = Factor group selected by stepwise regression analysis Input Value = 0.477 Chi-square per cell = 0.9651			* = Factor group selected by stepwise regression analysis Input Value = 0.353 Chi-square per cell = 0.8183		

As a general phonetic fact, Japanese tonal events are likely to involve "declination," a slope-like pitch decline toward the end of an utterance. Furthermore, a Japanese-specific phonological principle of "downstep" predicts that pitch range tends to become narrower after any preceding accented APs toward the end of the IP (Azuma 1993, Beckman and Pierrehumbert 1986, Kubozono 1989, Pierrehumbert and Beckman 1988). Thus, in these prosodic environments tonal events are likely to be lower in their momentum, which is also substantiated by a general phenomenon of accent degeneration to the end of the IP (Koori 1989b, Maekawa 1994, Venditti 2005). It was assumed in the present study that these general principles are counter-productive to the realization of focal prominence on the negative *nai*, which occurs mostly at the predicate-final position in canonical Japanese utterances. The present results clearly demonstrate that focal prominence on the negative is also heavily subject to these structural principles in Japanese intonational phonology. Furthermore, the effects of this positional constraint are indeed greatest in read speech (i.e., in news broadcasts, long: 0.64, short: 0.27), which is equivalent to the data elicitation task generally adopted in prior studies of Japanese intonational phonology (cf. Umeda 1982).

Another constraint that is found to exert rather robust effects on focal prominence on the negative *nai* is FG-3 (the presence or absence of other accented APs preceding the negative *nai*), and this constraint is directly relevant to the phonological principle of Japanese downstep mentioned above. In accord with the principle, our results also demonstrate that the absence of preceding accented APs is likely to promote prosodic focus (0.62 for CC, 0.66 for NB), whereas their presence inhibits prosodic focus (0.43 for CC, 0.43 for NB). While this directionality is also maintained in PD, the magnitude of the effects is smaller (0.57, 0.47) than the other social situations and turns out not to be statistically significant.

These results demonstrate that the variable realization of focal prominence is based on rather mechanical operations relative to tonal events in the preceding prosodic environment. The issue that remains to be discussed, however, concerns the fact that these mechanical principles do not seem to apply for PD to a statistically significant extent (presence 0.47, absence 0.57; $p > .05$). In PD, instead of FG-3, a statistically significant degree of effects is found with respect to other focuses in the prosodic environment preceding the negative *nai* (FG-4 in Table 3):²⁴ the absence of preceding focuses promotes focal prominence (0.56) and their presence inhibits it (0.42). This differentiation, however, is not meaningful for CC and NB (CC: 0.52, 0.47; NB: 0.51, 0.47, respectively).

Further analysis reveals that while the overall ratios of prosodic focuses preceding the negative *nai* do not involve so much difference, especially between PD and CC (42.5% [122 uses of other focuses/287 total tokens of the negative *nai*] in PD; 35.9% [207/577] in CC; cf., 29.8% [48/161] in NB), this marked use of extra focuses in the preceding prosodic environment has a considerable amount to do with the types of

footings the negative conveys to the interlocutor in the immediate context of use. In PD, 50% (61/122) of such focuses "co-occur" with a face-threatening footing relevant to the interactional goals of that social situation. A sample discourse segment is given in Excerpt (4), a short narrative by Speaker D2b who participated in a televised debate as the representative of one of the opposition parties who criticized a manifesto issued by the government (Liberal Democratic Party [LDP]).

- (4) Concurrence of focal prominence on the negative and other prosodic focus.

→ Speaker D2b: *Keiki no koto mattaku haitte-inai. KOYOO no koto mo mattaku haitte-inai. Sore ga jimintoo no seisaku nan desu.*

'(The LDP's manifesto) does not include policies on (the recession in) the economy at all. (It) does not include policies on (the decline in) EMPLOYMENT at all. That is the LDP manifesto.'

Notice that the negative *nai* was used in each of the first two consecutive utterances, but neither token was judged as being prosodically prominent. Instead, the speaker placed focal prominence on another element (*KOYOO* 'employment') at the beginning of the utterance.

Placing marked emphasis relatively early in the IP is a typical prosodic move for reinforcing a confrontational footing in Japanese language usage in general. Koori (1997a: 197) characterizes *kanjoo shuchoo-choo* ('emotionally appealing tone') in Japanese as the combination of emphatic pitch in the initial part of an utterance and weakened pitch in the predicate (i.e., the final part of the utterance). Furthermore, as past studies point out, the presence of focus greatly restrains or weakens the dynamics of tones in the succeeding prosodic environment (Pierrehumbert and Beckman 1988), which would even more strongly highlight such an appealing tone. It is then quite plausible to assume that because of the nature of the social situation, the participants in PD take advantage of such prosodic moves as a strategy to strengthen their confrontational stances.

Thus, given the two types of potential constraints (FG-3 [preceding accented AP] and FG-4 [preceding extra focus]) that restrain or promote focal prominence in the succeeding prosodic environment, the present results show interestingly that the effects are differentiated between different social situations. Variability in focal prominence in CC and NB is more likely to be subject to the "unmarked" principles of Japanese intonational phonology. In PD, on the other hand, focal prominence is pragmatically either favored or disfavored by the preceding prosodic focus over the structural principle of Japanese prosody. This paralinguistic manipulation seems to be taken advantage of as a prosodic strategy by the speaker, who aims to achieve specific communicative goals required by that particular social situation.

The remaining two factor groups concerning the internal structures of the intonation phrase (FG-5 and FG-1) are also differentiated among the social situations. The results for FG-5 (rhythmic issues), which is specific to PD, demonstrate that a pause immediately following *nai* strongly promotes focal prominence (0.76) and that slow

24. For an illustration, see the fourth item in the list of potential constraints in Section 5.2.

tempo also promotes it to an almost equal extent (0.73). The pause occurring either before the phrase involving *nai* or (very rarely) right before *nai* itself is also found to exert quite a strong positive effect (0.65). This quantitative evidence shows that the uses of pauses and slow tempo are simply not part of CC or NB registers but can be the strategic components of highly information-oriented, interactive registers like PD, in that a predominant majority of the tokens from these social situations do not co-occur with those parameters (a total of 2.8% use [16/577] in CC; 1.9% use [3/161] in NB) as compared with their distribution in PD (a total of 13.9% use [40/287]) ($p < .001$). Manipulating rhythmic parameters of interactions has a great deal to do with the hearer's perception of the element in focus (Koori 1989b, Sugitou 1982). For the sake of their communicative goals, the participants in PD seem to take advantage of these parameters as a prosodic strategy to draw the hearer's (and the larger audience's) attention toward the element in focus and to develop persuasive arguments.²⁵

The last structural constraint (FG-1) is concerned with the morpho-syntactic status of the negative *nai*, which is also found to be differentiated among social situations (see FG-1 in Section 5.2 for illustrations). Our results demonstrate that this factor is meaningful only for highly information-oriented social situations such as PD and NB (verbal suffix: 0.56, 0.58; negative adjective: 0.41, 0.36, respectively; $p < .05$), whereas its effects are neutralized in an interaction-oriented social situation such as CC (0.51, 0.48).

I interpret these results as stemming from the interplay between the degree of perceptual saliency conveyed by different morpho-syntactic structures and different orientations toward informativeness/interactiveness required for particular social situations. The negative *nai* suffixed to the verb (e.g., *hana'su* 'speak' → *hanasa'-nai* 'do not speak'; *iku* 'go' → *ika-na'i* 'do not go') is perceptually less salient than *nai* as the negative adjective (e.g., *kane wa/ga na'i* '(I) have no money'; *oishiku wa na'i* '[it] is not delicious'), which is morpho-syntactically independent, with its own lexical accent generally given. In highly information-oriented social situations (PD and NB), where successful transmission of information is given the first priority, the present results seem to demonstrate that the speakers compensate for the scarcity of perceptual saliency of the verbal suffix *-nai* by exploiting prosodic focus (0.56, 0.58, respectively), whereas they tend to moderate a higher degree of saliency of the negative adjective *nai* by resorting to prosodic focus to a lesser extent (0.41, 0.36, respectively). In a highly interactive social situation such as CC, on the other hand, the analysis of relative effectiveness among a number of intersecting constraints indicates that this particular structural constraint is not as significant as interaction-related constraints (FG-7, FG-8, FG-9, FG-10).

25. This claim that the use of pauses is specific to certain social situations for communicative purposes is also substantiated by other studies. For example, Silverman et al. (1992), who compared the use of pauses between read speech and spontaneous speech, found that the use of pauses is both quantitatively and qualitatively different. In spontaneous speech in particular, pauses tended to be longer and occurred more often, and the authors attributed this register-linked difference to the speaker's lexical access delay as well as the pragmatic marker for the listener to wait for unpredictable information on its way.

Table 4. Frequencies of Focal Prominence on *-Nai* and Morphosyntactic Structures

	Verbal Suffix " <i>-Nai</i> "	Negative Adjective " <i>Nai</i> " without Particles	Negative Adjective " <i>Nai</i> " with Particles
	e.g. <i>ika-na'i</i> 'don't go'	e.g. <i>oishiku (wa) na'i</i> 'not delicious'	e.g. <i>oishiku wa na'i</i> 'not delicious'
PD	53% (92/173)	43% (12/28)	38% (33/86)
NB	48% (48/101)	20% (1/5)	24% (13/55)
CC	31% (128/412)	45% (24/53)	34% (38/112)

Further evidence that substantiates these interpretations comes from the ratios of focal prominence in relation to the shifts in prosodic saliency derived from different morpho-syntactic structures of the negative *nai*. In the above-mentioned examples, *kane ga/wa na'i* ([I] have no money.) and *oishiku wa na'i* ([it] is not delicious.), in which *nai* is generally granted its own independent lexical accent, the postpositional particles such as *ga* and *wa* are often omitted with the propositional meaning being unchanged in spoken Japanese. This omission causes some change in the degree of perceptual saliency, in that *nai* prosodically becomes more like a part of the immediately preceding nouns (*kane na'i*) and adjectives (*oishiku nai*).

In Table 4, the quantitative evidence shows that there is a continuum formulated in uses of focal prominence in accord with the degree of saliency of the negative *nai* as determined by those morpho-syntactic makeups as far as the information-oriented social situations (PD and NB) are concerned.

As the degree of morpho-syntactic independence of the negative *nai* increases (from left to right), the ratios of prosodic focus decrease, particularly in PD (PD: 53% → 43% → 38%).²⁶ While particle omission is very unlikely to occur in formal communicative settings like televised news programs (NB), which yielded a skewed result (NB, 20% [1/5]), the same directionality of change is observed in the ratios of focal prominence (NB: 48% → 20% → 24%). However, such a gradient of systematicity is not observed in the highly interaction-oriented social situation of conversation (CC: 31% → 45% → 34%).

Notice also in Table 4 that in CC the ratio for focal prominence on the negative adjective *nai* without postpositional particles (middle column) is strikingly high (45% [24/53]) as compared with those in the other morpho-syntactic structures (31% for verbal suffix; 34% for negative adjective with particles). I argue that this ratio is likely the byproduct of the series of effects of various footings favoring focal prominence to a statistically significant extent (see FG-10 in Table 3). Among the total of 24 occur-

26. This three-way distinction of the morpho-syntactic status of the negative *nai* did not produce any statistically significant results by GoldVarb analysis. Consequently, the two-way distinction (i.e., verbal suffix and negative adjective) was adopted as the potential morpho-syntactic constraint on *nai* prominence because of its statistical significance (FG-1 in Table 3).

rences of prosodically prominent tokens with postpositional particles omitted, 17 tokens (70.8 %) carry specific pragmatic meanings such as agreement seeking (6 prominent out of 6 tokens, 100%), supportive (4 prominent out of 4, 100%), self-denigrating (1 prominent out of 4, 25%), self-protective (2 prominent out of 4, 50%), face-threatening with humor (teasing) (3 prominent out of 3, 100%), and face-threatening (1 prominent out of 1, 100%). Furthermore, high frequencies of concurrence of Japanese particle ellipsis and the use of pragmatic force has been documented repeatedly in past variationist studies (e.g., Matsuda 1992, Takano 1998), which demonstrate that the ellipsis of Japanese postpositional particles is promoted by the pragmatic force of the utterance. These findings seem to suggest that, as far as CC is concerned, the remarkably high ratio of focal prominence on the negative in this particular morpho-syntactic structure is likely to be motivated by interactional factors rather than by the speaker's control of perceptual saliency. Here again, the nature of the social situation figures systematically in speakers' decision-making processes for the mappings of potential intersecting factors into sociolinguistic grammar.

6.3 Information structure and focal prominence

The results in FG-6 and 7 (Table 3) demonstrate that variability in Japanese focal prominence is not heavily subject to information structures of discourse (e.g., newness or significance of information conveyed by the variable in question), which is discordant with the aforementioned "highlighting-based" universalist view of focal prominence based on "non-interactive" read speech in Western languages. Our statistically insignificant results even from identical "non-interactive" social situations like NB (i.e., read speech) and highly information-oriented PD demonstrate that neither information-linked factor group (FG-6 or 7) exerts critical effects on variability in Japanese prosodic focus.

In fact, this outcome coincides with Sugitou's (1985, 1986) argument for language specificity in focal prominence phenomena in Japanese. Both the finding for FG-2 (i.e., the farther *nai* is located from the end of the IP, the more likely it is to obtain prominence) and these results (FG-6 and 7) substantiate Sugitou's finding that linguistic elements in the clause-/phrase-initial position tend to receive prosodic prominence, regardless of the information status they may represent in the flow of discourse. In addition, the statistically significant results of FG-3 discussed above further justify the superiority of this "structure-based" account over the "information-based" account, in that the internal prosodic structures of the IP (i.e., the presence/absence of preceding lexical accents) play a definitive role in variable uses of Japanese focal prominence.

The statistically significant results (FG-7) for CC also show that the "highlighting-based" accounts of prosodic focus cannot be substantiated because of such probability weights as 0.50 (i.e., no effect) for "brand-new" information and a weak negative effect (0.47) for "contrastive" information. The statistical significance of this particular factor group stems primarily from the strong effect of "old" information status disfavoring

nai prominence (0.35). Although I cannot offer any empirical interpretation regarding this particular finding at this point, I suspect that high degrees of common knowledge shared between the participants (i.e., close friends) might be a factor inhibiting the use of prosodic focus for old, already-familiar information.

Note also that the results indicate a weak positive effect of "inferred information" (0.56) on *nai* prominence. In fact, this is closely linked to consistent positive effects of "preface" on *-nai* prominence (FG-8). The results of this interactive constraint, which will be discussed in detail in the next section, show that the use of discourse markers as "prefaces" to upcoming negatives consistently favors the use of focal prominence to a statistically significant extent. These interactive devices clearly help the listener to "infer" the information conveyed by the upcoming negative in the flow of discourse. Thus, once "interactive" social situations (i.e., casual conversations) are accommodated in the scope of research, this new dimension of information status comes in as another possible constraint to be considered.

6.4 Interactive parameters

As pointed out earlier, past studies on prosodic focus, which have been done predominantly with laboratory phonology, have critically neglected the impact of interactive dimensions on the phenomena because of the use of non-interactive registers as analytical data. A major thrust of the present study is to shed light on the dynamic systems of prosody that are generally highly susceptible to the interpersonal dimensions of everyday language use in various social settings.

FG-10 in Table 3 (see Section 5.2 for discourse examples) shows that the types of footing of the negative *nai* have been found to exert robust effects on the phenomena in CC, whereas the effects are found not to be statistically significant in PD. This latter outcome is due to the mapping of independent variables sensitive to the communicative goals of this particular social situation, in which the participants choose to resort to this prosodic means to consistently maintain their confrontational stance as well as the communicative efficiency over moment-to-moment changes in interactive meanings and their impact on the listener.

The two social situations are very contrastive with respect to the overall distribution of the *nai* tokens. While about the half of the negatives are used to create informative (neutral) type of footing both in CC and PD (54.9% [317/577]; 45.3% [130/287], respectively), face-threatening uses of *nai* constitute almost half of the tokens in PD (45.3% [130/287]). In contrast, only 5.7% (33/577) of the tokens in CC are used to express direct disagreement with co-participants in accordance with the SAP – i.e., the signs of disagreement are minimized for the sake of the universal preference for agreement in conversations.²⁷ The remaining tokens of CC display a much wider range of distribution across various types of footings, as compared with those of PD that are

27. This difference between the social situations is statistically highly significant ($p < .001$).

mainly the type relevant to the interactional purposes such as protecting one's own stance (self-protection: 8.4% [24/287]). Thus, contrary to the "myth" of interpersonal harmony in Japanese culture, Japanese people openly disagree with one another as long as the social situations (such as PD) and related sociocultural expectations for communicative appropriateness allow them to do so (Honda 2002, Ishida 1984, Jones 1990). The results show that prosody can be one of the parameters useful for systematically expressing or reinforcing the speaker's confrontational stance. Future work on how Japanese people disagree with one another should take into serious account the communicative properties of different social situations and their sociocultural functions in everyday language use.

The statistically significant results of CC (FG-10) reveal that tangible principles underlie the speakers' apparently chaotic behaviors in exploiting focal prominence – i.e., the speaker's decision-making processes are subject to the interactive meanings of negation at every moment of its use. The participants in CC whose interactional goal is to maintain or promote interpersonal rapport and solidarity appear to resort to focal prominence for paralinguistic messages of positive politeness, as shown in those high-probability tokens for supportive interactive meaning (0.79) (see Excerpt [3] above), face threatening with humor (teasing) (0.79) (Excerpt [5] below), and agreement seeking (0.67) (Excerpt [6] below).²⁸

In Excerpt 5, speakers C3a and C3b are college classmates who are wondering whether they can bring parents to an event at which students are supposed to pick their attire to wear for an upcoming graduation ceremony. Speaker C3b (Masako) feels uneasy about making her own decision. She wonders about the possibility of bringing her mother to help with her decision making, but she thinks that a college student being accompanied by his or her parent would look strange to other people. Speaker C3a playfully pursues C3b's thoughts.

(5) Face threatening with humor (teasing)

Speaker C3a: *gakusei no furi sureba <@ iin da ne.@> [@@@@@]*
'It would work if she pretends to be a student, wouldn't it?'

Speaker C3b: [@@@@@]

Speaker C3a: *<@ sore ga ichiban da.@>*
'That's the best (way).'

Speaker C3b: @@@[@@@@]

28. The relatively high probability for the "self-protection" footing (0.57 [38%, 17/45]) in Table 3 is largely due to the speaker's emotional responses (often along with humor and jokes) to the interlocutor's challenge regarding personal topics (e.g., a former boyfriend, makeup, job hunting, etc.).

Speaker C3a: [@@@] *futsuuni jibun mo <@ kiruyoona kanji de.@> @@@ <@ doomo Masako tokatte.@> @@@@*
'Just like a regular student, she also wears (an attire), and like, she says "Hello, Masako."

(A few more utterances of a similar kind by Speaker C3a are omitted here. After interacting with C3a's series of jokes with agreeable laughter, Speaker C3b finally responds with humor, clearly negating the possibilities suggested by C3a with the prominent *nai*.)

→ Speaker C3b: *usso:: anna gakusei ina:i ssho hansoku desho.*
'No way. There is no student like that. (That's) against the rules.'

In Excerpt (6), Speakers C4a and C4b, female friends in their late 60s to early 70s, are talking about uncomfortable experiences they have had at the hospital. C4a tells a short story about the difficulties she experienced in receiving an injection in a blood vessel.

(6) Agreement seeking

Speaker C4a: *iya: ano: tsukisoi-san ga ne, moo yamete kudasai tte yuu hodo ne,*
'Well, so, as much as my attendant said, "please don't do it anymore,"

Speaker C4b: *un.*
'Yeah.'

Speaker C4a: *ano: sasaretan da yo [(0.5) hari.]*
'I was stung with needles (so many times).'

Speaker C4b: [*maa:]*
'Really.'

→ Speaker C4a: *tsumetai tokoro wa kekkan denai desho.*
'The blood vessel doesn't stand out under the cold part (of the skin), does it?'

Speaker C4b: *aa tsumetai kara:.*
'Yeah, because (the skin) is cold.'

The observed patterns of variability also provide empirical evidence of discordance with another cultural stereotype, which is that Japanese language use is heavily oriented toward negative politeness and deference to others. As can be seen in this example, positive polite norms of interaction are equally stressed and heavily exploited as the core elements for building interpersonal relations in this kind of social situation, in which in-group rapport and solidarity are highly valued. This is also one of the reasons why we have found a relatively higher probability weight (0.40) for the prominent *nai* tokens in CC (Table 2) relative to the other social situations (see Note 20 in Section

6.1). Future research on Japanese language usage should include work on this relatively neglected aspect of Japanese linguistic behavior.

The shift of linguistic elements to the post-predicate position also favors focal prominence in CC to a statistically significant extent (FG-9 in Table 3) – i.e., postposition strongly favors focal prominence (0.65), whereas canonical word order has almost no effect (0.49) (see Excerpt [7] for an illustration).

- (7) Postposing (Speakers C2a and C2b, college classmates, are talking about C2a's past boyfriend having head lice.)

Speaker C2a: *mita koto nai?*

'You haven't seen (lice)?'

→ Speaker C2b: *shiranai mita koto nai yo sonna no.*

'I don't know. I've never seen such a thing.'

Speaker C2b's response would be *sonna no mita koto nai yo* if it followed canonical word order in Japanese, but instead the noun phrase was dislocated to the post-verbal position. A striking contrast with PD and NB lies in its frequency of occurrence. While postpositions co-occurred with negation 8.5% of the time in CC (49/577), they co-occurred only 1.7% of the time in PD (5/287) and never co-occurred in NB. This difference is statistically highly significant ($p < .001$).

Ono and Suzuki (1992) argue that, in contrast to postpositions in which a break in intonation contour or a pause intervenes between the predicate and the postposed element, postpositions expressed throughout a single intonation contour without any break evoke emotive overtones, enhance discourse cohesiveness with the preceding context, and strengthen the speaker's stance toward the proposition, referent, or topic being discussed in the preceding context.²⁹ Fujii (1995), though not referring to intonational characteristics, also makes a similar generalization that postpositions function to highlight the propositional content of the preceding clause. The patterns of variability in focal prominence detected here precisely represent these characteristics – i.e., postposed elements contribute to highlighting the locus of negation in the preceding clause by prosodic means (0.65). It should also be noted that postpositions are linked to the positional factor discussed in FG-2: the farther the negative *-nai* is located from the end of the intonation phrase, the more likely it is to receive focal prominence. It is evident that syntactic dislocation creates this favorable prosodic environment for focal prominence and that the speaker seems capable of manipulating both syntactic and prosodic means of focus in a synergistic fashion. This is one of the examples of meaningful collaboration between syntax and prosody found in the present study.

The last interactive parameter to be discussed concerns another pattern of syntax-prosody collaboration – i.e., focal prominence on the negative *nai* is promoted by the

syntactic markers of preface (FG-8 in Table 3). Excerpts (8) and (9) illustrate the two types of markers under analysis. In (8), Speaker C4a, a woman in her late 60s, is talking to her friend (early 70s) about a mutual friend with whom they have not been in contact for a long time. Speaker C4a tells a short narrative about what was talked about over the phone when she finally decided to give her a call.

- (8) Preface as a hint (in boldface)

Speaker C4a: *ara soo datta no shiranaide tte soo itte,*

→ *mimai ni ikitai n dakedo ttara, iya ima chotto aitakunai tte yuu n da yone...*

'ah, is that so? (I) didn't know that,' (I) said, then '(I) want to go and see you,' (I) said.

But (she) said, 'Nah, (I) kind of do not want to see (people).' So.'

The utterance-initial *iya* ([negatively implied] 'well') hints to the listener the negative *aitakunai* that is on its way.

In (9), Speaker C3b (Masako) has a strong desire to live in a rural town like the one Speaker C3a is from. Speaker C3a is strongly against the idea and tries to persuade Masako to give it up.

- (9) Preface as an upgrader (in boldface).

Speaker C3a: *iya:: Masako zettai muri da wa.*

'No, it's totally impossible for you (to live there).'

Speaker C3b: @@@

→ Speaker C3a: *datte honto nanmo nai n da yo asobu mono ga.*

'Because there is really nothing to do for fun around (there).'

A connective *datte* ('because') upgrades the upcoming negative *nanmo nai* ('nothing') as a preface.

The results show that the use of such preface markers exerts consistent effects favoring focal prominence on *nai* in all of the social situations, although the relative effectiveness is found not to be statistically significant in PD and NB. Past studies of syntactic operations in Japanese disagreement (e.g., Honda 2002, Jones 1990, Mori 1999, Watanabe 1993, Yamada 1992) commonly demonstrate that Japanese ways of delivering direct disagreement are characteristic of what precedes the locus of disagreement, taking advantage of various interactive devices (e.g., connectives, hedges, intensifiers, discourse framing) as the markers of opposition moves or as cues to contextualize such moves (Gumperz 1982). While the present study concerns not only direct disagreement (i.e., the face-threatening footing of *nai*) but also other types of footings as expressed by negation, our findings are parallel to those of the prior studies in that the preceding syntactic elements interact with the upcoming locus of negation, "feeding" its prosodic focus in order to convey certain paralinguistic messages to the listener.

29. Postposed elements analyzed in the present study belong to this latter type because the intonation phrase as the domain of analysis is based on a single intonation contour without a major prosodic break.

The degree of this interactive linkage between the preface and prosodic focus on negation, on the other hand, seems to be differentiated between the two types – i.e., hints (0.68 in CC; 0.79 in PD; 0.63 in NB) and upgraders (0.59 in CC; 0.55 in PD; no token in NB). The upgrading prefices (e.g., *datte* ‘because,’ *dakara/desukara* ‘so,’ *sorede* ‘then,’ *shitagatte* ‘therefore,’ etc.) play the pragmatic role of conjoining the immediately preceding clause (or phrase), which sets up a context relevant to the upcoming negation, with the following locus of negation (as in Excerpt [9]) in a wider stretch of discourse. The hint prefices (*demo* ‘but,’ *dakedo* ‘though,’ *iya* ‘no,’ etc.), on the other hand, seem to involve more local operations within a single clause, which contributes directly to the shift from the immediately preceding clause (or phrase) to the clause in which they are embedded in terms of propositional meanings (see Excerpt [8]). Although these interpretations are all still speculative at this point, it seems that these “localized” hint prefices are more heavily integrated into the interactive operations of Japanese negation than previously acknowledged and reinforce the speaker’s upcoming message, as is shown by the observed patterns of systematicity in prosodic focus.³⁰

7. Summary and conclusion

Focal prominence in natural speech is such a variable phenomenon that capturing its underlying principles is extremely difficult. Adopting a variationist approach to linguistic variation, the present study has attempted to detect the “orderly heterogeneity” (Weinreich et al. 1968) involved in the phenomenon, taking into account a variety of constraints from a wide range of domains: language-specific prosodic principles, informational parameters in a discourse, interactive parameters manipulated by the speaker at every moment of talk-in-interaction, and the sociolinguistic properties of social situations in the speech community. Based on the sociolinguistic grammar that has been described so far, we can make good predictions about whether the negative *nai* will receive or not receive prosodic focus in a given utterance in a given social situation, and we can also account for why observed variability is obtained in particular utterances.

The present analysis of the relative effects of the wide variety of intersecting constraints has empirically shown that in the case of Japanese focal prominence, language-specific, “structure-based” accounts should contribute to the formation of a more legitimate theory than universalistic “highlighting-based” accounts. Focal prominence

phenomena in any of the social situations we have investigated are consistently subject to the unmarked application of prosodic principles specific to the language, regardless of the informational status that a given element in focus has in a discourse, and this aspect of language specificity has been shown most eloquently in highly “information-oriented” social situations such as NB and PD. Our results demonstrate that it is the internal prosodic environment of the intonation phrase in which the focused element is embedded that heavily governs observed variability (FG-2, 3) rather than informational parameters in a given discourse (FG-6, 7), which a number of prior studies of Western languages have postulated as the primary constraint on prosodic focus. Furthermore, the results also show that Japanese speakers in highly information-oriented social situations such as PD and NB seem to know how to resort to this prosodic means for conveying information efficiently to the hearer, based on the communicative requirements of the social situation. In so doing, they estimate the degree of perceptual saliency of the negatives in terms of their morpho-syntactic status (rather than the informational significance of the negatives in the flow of discourse) and exploit prosodic focus based on that estimate (FG-1).

The present study has also attempted to fill a critical gap in prior research, which has neglected the highly interactive aspects of prosody in natural face-to-face exchanges. My goal was to obtain supporting evidence for a general sociolinguistic principle that the social situation systematically influences language use, not merely by influencing word choice or syntactic positioning but also by influencing even the prosodic realization of what is said. The results obtained from a highly interaction-oriented social situation such as CC demonstrate that variability in focal prominence on the negatives is also constrained systematically by a variety of interactive meanings negotiated between the co-participants at every moment of talk-in-interaction (FG-10). Moreover, the patterns of systematicity vary in response to the communicative properties and interactional goals of particular social situations. Japanese speakers in PD are found to take advantage of prosodic strategies to reinforce confrontational stances (FG-4) or to appeal to both the opponent and a larger audience (FG-5), according to the communicative requirements of the activity.

Our results have empirically demonstrated that the speaker’s mapping of meaningful constraints into sociolinguistic grammar is also closely linked to the sociolinguistic properties of social situations. In other words, the communicative properties of social situations exert decisive effects on the sociolinguistic grammar Japanese speakers rely on in exploiting prosodic focus in particular social situations. In highly interaction-oriented social situations such as CC, the majority of powerful constraints that “promote” prosodic focus stem from interactive parameters as well as internal structures of the intonation phrase (i.e., FG-10, 8, 9, 3, 2 in descending order of effectiveness), whereas influential constraints that “inhibit” focal prominence are derived primarily from the structural principles of prosody specific to the Japanese language (i.e., FG-3, 2). As a notable dimension of the sociolinguistic grammar I have described, the results revealed the significant interplay between syntax and prosody – the participants

30. The higher probability for hint prefices than for upgrade prefices coincides with the results (0.77 for hints, 0.51 for upgraders) of my preliminary work (Takano 2002), which is based on a much smaller-scale sample of casual friendly conversations (a total of 264 tokens). In this preliminary study, the clauses preceding the clause with the negative *nai* were also entered as a separate preface category into GoldVarb analyses. The results, however, were that the entire factor group of “preface” was statistically not significant, which urged me to focus in the present study only on those conjunctive preface markers that represented potential variables.

in highly interactive social situations such as CC manipulate the syntactic means to feed or compensate for prosodic distinctions (FG-8, 9). In highly informative social situations such as PD, on the other hand, many of the interactive parameters become less influential in promoting focal prominence. Instead, register-specific dimensions of prosody begin to prevail in favor of focal prominence in response to the communicative requirements of the activity (FG-5, 4, 1), while the disfavoring effects of structural principles of prosody remain powerful (FG-2). In the non-interactive social situation studied (NB), both the positive and negative effects of those structural principles of Japanese prosody are more conspicuous than in the interactive social situations.

These findings provide us with some new insights into which approach is truly valid for investigating language use that is inherently highly variable. Approaches to interactional dimensions alone, on which a great majority of prior studies of language use have focused as the driving force of variable linguistic behaviors, may not necessarily be successful in explicating the entire picture of such complex phenomena. The present study demonstrates that the structural principles specific to Japanese prosody play critical roles in exerting robust effects "disfavoring" prosodic focus, and it suggests the importance of paying much closer attention to rather mechanical, surface-level conditioning derived from the language-specific makeup of prosodic structures. Moreover, the mapping of constraints that governs systematic variability in natural speech has also been found to depend upon the interactive-informative orientations appropriate to given social situations. These observations signify the necessity of a "multi-stylistic (or -register)" approach to the study of language use beyond a single social situation, with casual conversations as the fundamental site.

This research project was initially motivated by the perceived need to supplement the dichotomy of styles acknowledged for Japanese surface morpho-syntactic characteristics (i.e., direct-casual or distal-polite). Systematic analysis of paralinguistic aspects of language use—prosodic style shift—suggests that Japanese style shifting should be accounted for as a multi-layered mechanism involving prosodic parameters as one component. While surface morpho-syntactic styles may be overt ways for speakers to conform to the sociocultural norms for interaction in particular social settings or participant frameworks (Befu 1980, Bell 1984), prosodic styles provide the speaker with a rich repertoire of rather covert, non-transparent, strategic choices for representing his or her actual stance, thoughts, and feelings that dynamically respond to every moment of talk-in-interaction in a given social situation. It is hoped that exploring this neglected area of sociolinguistic variation further will eventually lead to a more legitimate picture of style in Japanese language use.

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