Title: The substance of style: Gender, social class and interactional stance in /s/-fronting in southeast England

Abstract: This paper proposes an empirical method for the quantitative analysis of stance-taking in interaction. Building on recent conceptualisations of stance as the primary building-block of variation in language style, we describe how to implement an analysis of stance within a variationist framework via an examination of the particular speech activities within which stances are embedded (Kiesling 2009) combined with a consideration of the specific interactional goals these activities achieve (Brown & Levinson 1987). We illustrate our proposals with an investigation of variation in /s/-quality in the speech of cast members from two British reality television programmes. Examining nearly 2000 tokens of /s/ in over 6 hours of recorded speech, we demonstrate how different acoustic realisations of /s/ in the sample correlate with the level of "threat" of a given speech activity, and we argue that this interactionally-based analysis provides a better explanatory account of the patterns in our data than an analysis based on large social categories would. Through this paper, we therefore hope to contribute not only to the development of a more robust method for examining stance in quantitative sociolinguistic research, but also to help clarify the relationship between stances, speech activities and speaker identities more broadly.

Keywords: style, stance, stance accretion, language variation, /s/-fronting, southeast England

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1 Introduction

The study of stylistic variation, or patterns of intra-speaker variation in language use that are correlated with shifts in audience, topic and/or context, has a long history in sociolinguistic theorizing (e.g., Bell 1984; Bell 2001; Eckert & Rickford 2001; Coupland 2007). In this time, researchers have moved from an understanding of style as a relatively fixed attribute of speech situations (as defined by audience, formality, etc.) to one in which style is viewed as a semiotic tool with which speakers can enact dynamic representations of self within particular interactional contexts (e.g., Bucholtz 2009; Eckert 2012). The reconceptualisation of style in this manner has pushed us to move beyond treating style as an explanation for variable linguistic practice (i.e., speaker X uses style Y because she is in situation Z; Coupland 2007) to asking what function the use of a style performs for a speaker at a given moment (i.e., *why that, in that way, right now?*; Schegloff & Sacks 1973; see also Woolard 2008). Addressing this question requires us to dig beneath the surface of the different styles we observe in order to identify their component parts and, in so doing, understand how "variation is made meaningful, and embedded, in social interaction" (Coupland 2007: 178).

Kiesling (2009) has argued that this empirical goal can be achieved by couching our analyses of language style within a framework of stance-taking, or an examination of the linguistic strategies speakers use to construct orientations to the content of their talk, and to the more durable identities and activities indexed through that talk (Du Bois 2007; Jaffe 2009). Kiesling's arguments in this regard are premised on the notion that "styles" essentially represent ways of speaking associated with particular types of activities (and with the types of people who most often engage in those activities). Thus, in Kiesling's view, a "formal" or "working-class" style actually refers to the type of speech indexically associated with engaging in "formal" or "working-class" practices (see also Ochs 1992). He goes on to argue that these styles/speech activities are comprised of a regular and coordinated *repertoire of*

stances, which serve to give these styles their indexical force. In other words, Kiesling claims that the reason specific activities are associated with particular speech styles is because engaging in those activities involves adopting a specific set of coordinated stances, and that it is the adoption of these stances that the relevant speech style serves to index. Stance, for Kiesling, is thus the basic building-block of stylistic variation.

Kiesling's conceptualisation of style as stance provides us with a powerful theoretical framework for modelling how stylistic variation accrues social meaning that speakers can then subsequently recruit when making interactional moves. Nevertheless, and as Kiesling notes, this conceptualisation brings with it various methodological difficulties. Paramount among these is the issue of how to integrate an analysis of stance into the structural confines of quantitative sociolinguistics. While it is fairly straightforward to devise an exhaustive list of stylistic attributes potentially at play in a dataset, "there is no single list of stances and even one stance can be slightly different for different people" (Kiesling 2009: 173). This is a problem for a variationist stance analysis, given the method's reliance on the establishment of objective investigative parameters that are comparable across speakers. In this paper, we aim to contribute to the development of a quantitative approach to stance that balances a conceptualisation of stance as a dynamic and emergent property of interactions with the exigencies of variationist methods. We do so by building on Kiesling's (2009) own proposal to code for stance indirectly by focusing on the (relatively objective and comparable) list of *speech activities* in which speakers engage. We enhance Kiesling's suggested approach by introducing additional parameters derived from Brown and Levinson's (1987) theory of politeness so as to more fully represent the interactional dynamic at play in our data.

In the remainder of this paper, we illustrate our proposed method with an interactional analysis of /s/-fronting in the speech of cast members from two British reality television programmes. We begin in the next section with a brief summary of research on variation in

/s/-quality as a sociolinguistic feature, before introducing the details of our corpus and the results of a previous analysis that examined the distribution of /s/-fronting across broad social categories (Levon and Holmes-Elliott 2013). We then lay out the limitations of the category-based interpretations and outline our method for a more detailed interactional investigation. We conclude by presenting the results of this interactional analysis, along with a brief discussion of their wider implications.

2 Background

2.1 Sibilant variation, gender and social class

We focus in this paper on a sociophonetic study of /s/-variation as it is correlated with social class, gender and conversational context, and how these patterns can be further understood within a larger interactional framework. Previous research has demonstrated that the differences in the articulatory and acoustic properties of male and female /s/ productions are often of a degree that cannot be accounted for by physiological factors alone (Flipsen et al. 1999; Munson 2007; Fuchs & Toda 2010). These findings suggest that, in some communities, speakers make strategic use of variation in /s/ production to achieve particular sociolinguistic goals (e.g., to index gender). Recent studies have further indicated that the indexical associations of /s/ can extend beyond gender to interact with additional social categories; for instance, ethnicity (Pharao et al. 2014) and social class (Stuart-Smith 2007).

In articulatory terms, the voiceless alveolar sibilant /s/ is produced by bringing the tongue up towards the alveolar ridge, enough to impede air-flow without stopping it. The result is a strident sibilant fricative achieved through accelerated air-flow passing through the front cavity of the oral tract and over the front teeth (Heffernen 2004: 74). The articulation of /s/ is variable along a front-to-back cline: /s/ can be produced with a fronter, more dental articulation, or a backer, more post-alveolar articulation, where the resultant /s/ may be more

auditorily [ʃ]-like (Catford 1988: 86). This variation has been correlated with a range of acoustic properties and a number of different measures have been employed to examine the feature. Spectral peak and spectral moments analysis (e.g. centre of gravity; standard deviation; spectral skew; and kurtosis) are most commonly associated with the analysis of variable /s/-quality (Linville 1998; Flipsen et al. 1999; Jongman et al. 2000; Stuart-Smith 2007; Munson 2007; Körkkö 2015).

In the present analysis we adopt spectral peak as the measure of /s/-variability. Spectral peak measures represent the frequency (in Hertz) at which the /s/ frication noise exhibits the greatest energy (as measured by spectral amplitude). Hughes and Halle (1956) demonstrated that peak frequency is inversely related to the length of the front cavity, (the space in front of the point of impeded air-flow) such that shorter front cavities result in higher peak frequencies while longer front cavities result in lower peak frequencies. Degree of /s/-fronting in articulation can therefore be measured acoustically by peak frequency, with more fronted tokens of /s/ associated with higher peak frequency values (Stevens 1998; Jongman, et al. 2000). Due to the tendency for women, on average, to have smaller vocal tracts than men, it generally follows that they also have higher average peak frequencies for sibilant articulation. This phonetic generalization has been borne out by a number of studies on the acoustics of /s/ (e.g., Schwartz 1968; Johnson 1991; Flipsen et al. 1999; Jongman, Wayland and Wong 2000).

However, as touched upon previously, many studies have reported differences between male and female /s/ values that are greater than those predicted by anatomical factors alone; /s/ provides a resource through which speakers may index aspects of their gender. Research has further demonstrated that the sociophonetics of /s/ are not limited to gender and the variable patterning of /s/ has been shown to correlate with additional social categories. For example, in Stuart-Smith's (2007) analysis of /s/ in Glasgow she found that all speakers

showed consistent gender patterning, with women's peak frequency values on average 2500 Hz higher than men's. This pattern broke down, however, among younger working-class women, whose peak frequencies were significantly lower than the other women's and non-significantly differentiated from the men's. Stuart-Smith interprets this pattern as evidence of how young working-class women in Glasgow use variation in /s/ production to 'distance' themselves from their middle-class counterparts. According to this account, /s/-variation carries both gendered and class-based meaning and may therefore be recruited by speakers in the strategic construction of identity.

2.2 /s/ in Southeast England

The results of studies such as Stuart-Smith's provided the context and motivation for our initial exploration of /s/-variation in southeast England. Specifically, we sought to investigate the extent to which this variation may be constrained by gender and/or social class. To do this, we examined patterns of /s/ variation across two British reality television shows, which we use as a proxy for social class:

- *The Only Way is Essex* (TOWIE), based in Essex in the suburbs east of London. This show represents a more traditional working-class, East End, Cockney accent; and
- *Made in Chelsea* (MIC), based in the hyper-affluent district of Chelsea in west London. This show represents an upper middle-class Standard Southern British accent (not unlike Received Pronunciation).

Both shows are so-called "engineered reality" television programmes that follow a group of twenty-somethings in their day-to-day lives. While the scenarios on the shows are (obviously) staged, the interactions between cast members are not scripted, and the cast engage in spontaneous, naturally occurring speech. However, it is important to note that, as

with any data collected via this method, a number of caveats relating to its validity are pertinent.

Foremost among these is the issue of representativity, both in terms of the communities and social categories we make inferences about, and also in terms of the extent to which the corpora accurately reflect interactions typical of the respective communities. In reference to the issue of the communities themselves, we do not claim that the members of the cast of either TOWIE or MIC are necessarily representative of speakers from Essex or Chelsea generally, or even all Essex or Chelsea speakers of a particular age, gender, level of education or socioeconomic status, etc. However, we do suggest that analysing data from these speakers is instructive with regards to our research objectives: an investigation of class and gender in southeast England.

In both shows aspects of gender and class are not only highly visible but the central driving mechanisms of the narratives. The primary focus of both shows is relationships, both romantic and platonic, and how these dramatically intersect. The shows are vastly heterosexual (there is one openly gay male in TOWIE and one bisexual male in MIC[1], both of whom did not feature in our corpus). In this sense the shows provide good examples of the Eckert's (2011: 85) broader "heterosexual market" where "gender and sexuality are not so much individual properties as social arrangements, and the relation between either of them and sociolinguistic variation lies in the dynamics that unfold in those social arrangements".

In order to frame the interpersonal drama, both programmes rely on a series of staged activities. The specific pursuits are almost invariably stereotypes of British class-based behaviours. For instance, the Chelsea men are filmed shooting, rowing and playing polo, meanwhile the women ride horses, attend fashion premieres and shop in high-end boutiques.

[1] This is the case for the first 2 seasons of TOWIE and MIC, the cast of participants has since changed for both shows.

In contrast, the TOWIE men box, play football and manage nightclubs while the women run salons and go clubbing. Clearly, both shows have been designed in order to promote heightened gendered and class-based behaviours among the cast members. While we concede that this may reduce the generalisability of our results to the wider population, these extreme presentations would suggest that if there are in fact gender- and class-based patterns of variation to be found, this data would be a likely place to uncover them. Indeed, stereotypes such as the Chelsea based 'Sloan Ranger' or the 'Essex Girl' are evidence of the *enregisterment* of these communities (e.g. Johnstone, Andrus and Danielson 2006: 78). The availability of these stereotypes, and their associated behaviours, makes them ripe for commodification through so-called 'reality' television. The participants are equipped with the resources necessary to embody the enregistered personae, and 'perform' a stylised dialect, while the audience knows enough in order to recognise and decode these cues.

The second issue of representation relates to the nature of the actual speech data. A valid criticism of the data could be that, due to the presence of the cameras and the artificial staging of the activities, the style of speech elicited is performative, stylised and unnatural. However, as observed by Schilling-Estes (1998), to some extent speech is always self-conscious and performative. We therefore suggest that although the data may be highly performative this does not undermine its classification as naturally-occurring speech. Furthermore, the fact that all speakers were subject to the same level of artificiality helps to mitigate any interpretive problems we may encounter. While the data we analyse may not represent the full range of the speakers' sociolinguistic and stylistic repertoires, the consistent artificiality of context does at least provide a level of control.

One final issue, and one that we cannot readily discount, is how the selective editing of the show may affect the variability and the spread of types of speech acts which feature in the final cut. This issue is particularly relevant for our distributional analysis of speech

activity types (see below) as they occur across different speech contexts (i.e. mixed or single-sex talk). Crucially, this means that we cannot, for instance, make a claim that women engage in x-type of speech activity more than men, or more when they talk to men compared to when they talk to women as this could be an artefact of how the show was edited. There may, for instance, have been a conscious decision on the part of the shows' producers to include more confrontational exchanges between men and women as compared to in women-only situations. While this means we cannot necessarily make inferences about the interactional character of mixed versus single-sex talk, performing an interactional analysis will still enable us to examine how /s/-variation patterns across the unfolding discourse and the interaction types more generally.

With these caveats in mind, our analyses of /s/-variation are based on the speech of central cast members in both shows. In total, we extracted 88 usable scenes from the first two seasons of both programmes (approximately 6.5 hours of recorded speech) involving 24 different speakers (9 men and 15 women). Scenes were taken from high definition downloaded files of the programmes and were only selected if they did not contain any music or other background noise. The recordings were transcribed and then processed via automatic segmentation using the University of Pennsylvania's Forced Alignment and Vowel Extraction (FAVE) suite (Rosenfelder et al. 2011). As it has been shown to correlate well with the front-back dimension of /s/ quality (see above), acoustic measures of peak frequency were calculated automatically from time averaged spectra using Praat (a proportion were then also hand-checked). This resulted in a corpus of 1,988 /s/ tokens of for analysis. The tokens were coded for a number of both social and linguistic factors based on previous analyses of /s/. In order to control for phonetic effects, the preceding and following phonetic contexts received detailed phonetic codes which were collapsed into broader categories during the analysis. Tokens were also coded for stress (stressed or unstressed) and duration. Finally,

tokens were also coded for show (MIC or TOWIE, which we use as an approximation of social class), speaker sex (female, male) and speech context (i.e. whether the speech took place in a mixed- or single sex group).

The data were analyzed via linear mixed-effects regression models in R (with Speaker and Word included as random factors). Analyses were stepped down from full models that included all factors and interactions. The best model demonstrated that the external factors gender and show (i.e., class) were the most prominent factors to constrain /s/-variation and far out-weighed any linguistic constraints. Further, these analyses demonstrated a significant interaction between gender and show, indicating that speakers in TOWIE versus MIC treat /s/-variation somewhat differently.

Table 1. Significant constraints on /s/ variation in MIC as reported in Levon & Holmes-Elliott (2013).

Fixed Effects	Estimate	Std. Error	*t*	p-value
(Intercept)	6663.2	211.6	31.45	0.000
Sex (male)	-1232.5	301.4	-4.09	0.001
Context (single-sex)	-391.6	190.0	-2.06	0.038
Following (pause)	216.2	207.8	1.04	0.299
Following (round C)	-1557.9	341.4	-4.56	0.000
Following (V)	370.7	126.4	2.93	0.004
Sex : Context	-181.1	242.5	-0.75	0.455

Number of observations: 756; Groups: Speaker (12), Word (237); Log likelihood: -6578.23

Table 1 presents the results of our analysis of /s/-variation among MIC speakers only. There, we see that there is a significant effect of speaker sex ($p = .001$), with men predicted to have peak frequency values over 1200 Hz lower than women. A difference of 1200 Hz is comparable to differences in /s/ peak frequencies across sexes that have been reported previously in the literature, and can be taken as indicative of both physiological differences between female and male speakers and an additional "gender effect" whereby women and

men exaggerate sex-based differences in creating gendered articulations of /s/ (e.g. Fuchs and Toda 2010). Importantly, this difference of 1200 Hz among MIC speakers is consistent across single- and mixed-sex talk, as evidenced by the lack of a significant interaction between gender and speech context ($p = 0.455$). Instead, we find an independent main effect of speech context, such that all MIC speakers (i.e., both women and men) produce significantly backer articulations of /s/ in single-sex, as compared to mixed-sex, talk ($p = 0.038$).

Table 2. Significant constraints on /s/ variation in TOWIE as reported in Levon & Holmes-Elliott (2013).

Fixed Effects	Estimate	Std. Error	*t*	p-value
(Intercept)	6327.9	198.8	31.84	0.000
Sex (MALE)	-1580.5	269.4	-5.87	0.000
Context (SINGLE-SEX)	597.9	269.4	3.31	0.001
Following (PAUSE)	152.1	245.1	0.62	0.535
Following (ROUND C)	-369.3	327.8	-1.13	0.260
Following (V)	385.3	131.0	2.94	0.005
Sex : Context	-711.4	250.1	-2.85	0.005

Number of observations: 1242; Groups: Speaker (12), Word (284); Log likelihood: -11193.84

Results for /s/-variation in TOWIE are somewhat different than what we find in MIC (see Table 2). Among TOWIE speakers, we once again find a sex effect, with TOWIE men predicted to have peak frequency values nearly 1600 Hz lower than TOWIE women ($p = 0.000$). Unlike in MIC, however, the TOWIE sex effect is conditioned by a significant interaction with speech context ($p = 0.005$). Pairwise comparisons indicate that this interaction effect is driven entirely by TOWIE women. In mixed-sex talk, TOWIE women have observed average peak frequency values just over 2200 Hz higher than the TOWIE men's. In single-sex talk, in contrast, TOWIE women have observed average peak frequency values over 3300 Hz higher than those of TOWIE men, a fifty percent increase compared to

the difference among TOWIE speakers in mixed-sex talk and almost double the difference found in MIC. As already noted, this increase is driven entirely by the TOWIE women. Among TOWIE men, we find no differentiation across speech contexts, with roughly the same peak frequency values in mixed and single-sex talk (4920 Hz versus 4961 Hz, respectively). TOWIE women, in contrast, show an increase in observed average peak frequency values from 7135 Hz in mixed-sex to 8116 Hz in single-sex contexts. This increase indicates that TOWIE women produce significantly fronter articulations of /s/ when speaking to other TOWIE women, as compared to when speaking to TOWIE men.

In an earlier discussion of these aggregate findings (Levon and Holmes-Elliott 2013), we argued that the results suggest that /s/-variation is used strategically by both MIC and TOWIE speakers, though in decidedly different ways. In the MIC data, we find two independent patterns: a consistent differentiation of /s/ quality by speech context, whereby single-sex talk is associated with backer articulations of /s/ than mixed-sex talk; and a significant differentiation by speaker sex, where MIC men produce backer articulations of /s/ than MIC women. While we have no direct evidence for it, we are inclined to argue that both of these patterns are indicative of strategic uses of /s/-variation. In the case of the context effect, we hypothesize that there is something about the framing of single-sex talk in MIC that encourages both women and men to produce backer articulations of /s/, though based on the aggregate analyses discussed thus far, we are unable to comment on what that framing may be. In terms of the sex effect, we follow previous research (e.g., Strand 1999; Fuchs and Toda 2010) in arguing that the difference in peak frequency observed is greater than would be expected from a purely anatomically-based account, and thus lends initial support for the notion that MIC speakers use /s/ to help construct gendered presentations of self. That /s/ can do such gendered work is more strongly supported by our findings among TOWIE speakers, where we find a significant interaction between gender and speech context. We have argued

previously (Levon and Holmes-Elliott 2013) that the TOWIE women's use of significantly fronter articulations of /s/ in single-sex talk is part of the way in which they construct class-based formulations of femininity. While this interpretation allows us to account for the findings presented in Table 2, it does not provide with a complete understanding of why it is that /s/-variation can fulfil this function. Overall then, the broad categorical analysis of /s/ among MIC and TOWIE speakers summarized above allows us to identify potentially interesting patterns, but falls short of providing us with the empirical information necessary for coming to a robust interpretation. For this reason, in this paper we augment our earlier analysis with one that examines /s/-variation within the specific discourse in which it occurs. Put simply, our goal is to investigate what speakers are doing at a conversational level in relation to their variable productions of /s/ so as to enable us to better understand how /s/-variation participates in achieving those interactional aims, and ultimately *why* we find the category-linked patterns described above.

3 Methodology for an Interactional Approach to /s/

3.1 Stance and speech activities

To help us achieve an interactional analysis of /s/-variation in our data, we adapt Kiesling's approach to coding for stance and style since it provides a clear method for operationalizing stance in a replicable and objective fashion. According to Kiesling's original formulation, utterances are coded based on the type of speech activity they are being used to achieve. Stance is not directly coded for, but is instead implicit in the speech activity coding, thus helping to preserve the replicability of the schema. For example, in a series of multiparty conversations recorded among a group of female co-workers in Pittsburgh, Kiesling and a collaborator identify a range of distinct speech activities in which the women engage. These included "commiserating", or "alignment with other speakers but expertise not asserted";

"questioning", or "alignment of other as expert, requests for advice, and admissions of uncertainty"; and "gossiping", or "evaluative talk about non-present others" (Kiesling 2009:182-3). Kiesling finds that these different activities are indeed associated with different patterns of language use (e.g., variable /aw/-monophthongization and /l/-vocalization) and argues that the reason for this is grounded in the different sets of stances each of these activities is associated with. Ultimately, Kiesling identified too many different speech activities to allow for a robust quantitative examination across all of them. He therefore collapses these activities into larger "activity type" categories, where each activity type represents the basic ends (or goals; e.g., Hymes 1974) of the activities in question (see Figure 1). Kiesling identifies three basic speech activity types: *social activities,* which include "commiserating", "gossiping" and "joking"; *information activities,* which include "questioning" and "information sharing"; and *discourse management activities*, which including (speech) facilitation and discussion of the local speech context. Like the speech activities he identified previously, Kiesling also finds strong correlations between these activity types and patterns of variable language use.

[INSERT FIGURE 1 HERE]

Figure 1. Kiesling's (2009) interactional coding scheme for speech activities

Like Kiesling, we also use "speech activity" as our primary methodological construct, and code all 1,988 tokens of /s/ in our dataset according to the speech activity type in which they occur. Due to the interactional nature of our data, we were forced to modify Kiesling's schema in two ways. First, we created additional categories of speech activities in order to accommodate certain elements of conflict/confrontation and elevated levels of personal disclosure in the interactions we examine. These new activities include "expert direction", for

situations in which speakers instruct interlocutors how to perform a particular action of activity; "alignment", or talk that simply serves to build social solidarity in a given interaction; and two activity categories for speech during situations of interactional conflict or confrontation: "challenge/confrontation", to represent the behaviour of the challenger, and "hedging" for a speaker's attempts to justify prior behaviour in response to a challenge. After having added these additional speech activity categories, we also came to realise that we needed a more nuanced division between the large activity types, i.e., one that went beyond Kiesling's original three-way split between discourse management, informational and social activities. We therefore also added an extra pragmatic aspect to the schema, which ranks speech activities along two pragmatic dimensions based on Brown and Levinson's (1987: 61) theory of "face-threat". Our modifications to Kiesling's schema are represented schematically in Figure 2 and described in more detail below.

[INSERT FIGURE 2 HERE]

Figure 2. Schematic representation of our interactional coding scheme. Modifications to Kiesling's (2009) original schema are in boldface.

3.2 Details of the Modified Scheme: Face-Threat

Apart from the addition of four new speech activity categories, our main modification to Kiesling's approach is the introduction of the pragmatic dimension of face-threat to our approach. *Face* refers to a person's presentation of self: "the public self-image that every member wants to claim for himself, consisting of two related aspects, *negative face*: the basic claim to territories, personal preserves, rights to non-distraction i.e. freedom from imposition … [and] *positive face*: the positive consistent self-image or 'personality'" (Brown & Levinson 1987: 61). Face-threat, therefore, involves the potential for a speech act to damage

an interlocutor's preservation of a positive public image. In order to calculate the force or "weightiness" of potential face-threat, Brown and Levinson (1987:74-7) identify three crucial factors: (1) social distance between interlocutors, (2) relative pragmatic power, and (3) ranking of the imposition implied by the speech act. For our data, as all the interlocutors are well-acquainted and the interactions casual and informal, social distance was not relevant. However, we incorporate the other two factors, *degree of imposition* and *relative power*, in our coding.

So that it was possible to generate statistically robust measures, we aggregated the fully articulated speech activity categories (i.e., the 18 categories listed in Figure 2) into a three-way distinction by broader activity type. Borrowing from Kiesling, we used a *discourse management* versus *informational* versus *social* speech activity distinction. This distinction correlates with Brown and Levinson's (1987: 77) notion of degrees of imposition: as face is a social construct, it follows that speech activities with primarily social goals pose a higher threat to face than an informational exchange, which in turn poses more threat than the relatively neutral discourse management category. The second, related, modification in our scheme allows us to incorporate Brown and Levinson's (1987) *pragmatic power* factor. In order to understand what this dimension captures, it is necessary to return to the new speech activity categories we identified at work in our data. As mentioned already, due to the nature of the shows in our corpus, we needed to devise a number of new speech activity codes to cover disagreements of various types. However, we realised that new categories became masked once the more detailed coding categories were collapsed into the broader three-way split. For example, maintaining Kiesling's original three-way distinction would have meant that exchanges which involved *challenges and confrontations* as in (1) and (2), would have been coded as possessing the same degree of potential face-threat as Rosie's *alignment*, and Amber's *personal evaluation* in (3).

(1) *Well you're obviously seeing someone so just leave me alone don't talk to me again and when I'm out talking to people don't start giving it to me* (Amy, TOWIE:3)

(2) *Hate you so much James, just fucked up my life so much* (Lydia, TOWIE:27)

(3) Amber: *I love this Mimi coat*

Rosie: *oh it's so nice*

Amber: *so cute isn't it?*

Rosie: *yeah I love the detail* (Rosie & Amber, MIC:1)

From a pragmatic perspective, the different speech activities in (1)-(3) involve different levels of face-threat. Here, challenges and confrontations possess a high level of potential threat, while alignment and personal evaluation possess a relatively low level. However, in the original coding scheme with just a three-way distinction between activity type, this pragmatic difference is lost. The distinct levels of pragmatic power at work in our data can be further illustrated through a comparison of a *gossip* activity in (4) with a *personal disclosure* in (5).

(4) *It was so funny right, he was like "I love this girl so much" and everyone was like "aw" and I was like "oh my gosh, Mark is being really emotional" and he was like "I really love her, I've shagged glamour models in Miami" and I was like "oh Mark's back in the room"* (Lydia, TOWIE:32)

(5) *They turned round and they said, erm, we've heard that, that James has got with another girl* (Lydia, TOWIE:34)

The operative difference between (4) and (5) is that in gossip, the interlocutors are revealing something about, or discussing, a non-present third party, as (4) shows when Lydia is talking about Mark. During personal disclosure, however, what is revealed is about the speaker herself and often relates to something they do not necessarily want to divulge. This is the case in (5), for example, where Lydia is confiding to her mother that she has heard rumours that her boyfriend, James, has been unfaithful. In order to capture the distinction between these different types of activities (e.g., confrontation as compared to alignment or gossip as compared to personal disclosure), we implement an additional two-way distinction between those activity types in which pragmatic "power" is immediately at issue in the interactional context and those where it is not (or is to a lesser degree). We refer to those speech activities in which power differentials play an important role as "threatening" activities and those for which it does not as "non-threatening". With the introduction of the threatening/non-threatening divide, our modified coding scheme identifies five different activities types for analysis, as depicted in Figure 2. (See the Appendix for examples of the fully articulated model).

4 Interactional Findings

The 1,988 tokens of /s/ analyzed previously were coded according to the speech activity based coding scheme described above. New linear mixed-effects regression models were then built (in R) to examine the effect, if any, of speech activity on observe peak frequency values. As before, these models were stepped down from full models that included all interactions of both preceding and following phonological environment, Show (MIC or TOWIE) and Sex, with Speaker and Word as random effects. An initial examination of the data revealed that tokens of individual speech activities were not evenly distributed across speech contexts, thus precluding our ability to include both Speech Activity (Discourse Management; Information

Non-Threatening, Information Threatening, Social Non-Threatening and Social Threatening) and Speech Context (Mixed-Sex, Single-Sex) as predictors in the same model. To overcome this, we chose to include Speech Activity in our regression analyses, and to then verify our findings by replicating our analyses on mixed-sex and single-sex tokens separately. In all cases, regression results were perfectly replicated in both speech contexts. For this reason, we describe our results for both speech contexts together. We return to the issue of the uneven distribution of speech activity types across contexts in our discussion below.

Table 3. Interactional analysis of /s/ variation in MIC.

Fixed Effects	Estimate	Std. Error	*t*	p-value
(Intercept)	7382.01	550.94	13.35	0.000
Sex (MALE)	-2504.2	664.19	-3.74	0.000
Activity (INFO.NT)	-48.07	622.39	-0.07	0.946
Activity (INFO.T)	-1141.3	611.49	-1.86	0.064
Activity (SOCIAL.NT)	-933.83	529.28	-1.76	0.079
Activity (SOCIAL.T)	-917.17	539.36	-1.69	0.091
Following (PAUSE)	245.84	207.97	1.27	0.201
Following (ROUND C)	-1607.98	341.45	-4.702	0.000
Following (V)	373.25	123.58	3.02	0.000
Sex : Activity (INFO.NT)	562.13	741.2	0.754	0.451
Sex : Activity (INFO.T)	1688.05	761.31	2.217	0.027
Sex : Activity (SOCIAL.NT)	1242.26	642.65	1.955	0.043
Sex : Activity (SOCIAL.T)	1205.91	645.35	1.968	0.042

Number of observations: 756; Groups: Speaker (12), Word (237); Log likelihood: -6535.81

As in the aggregate, group-based findings outlined above (see Tables 1 and 2; see also Levon and Holmes-Elliott 2013), the results of the interactional analysis reveal that variation in /s/ peak frequency values is primarily conditioned by external, social factors. Specifically, analyses demonstrate that /s/-variation is constrained by a complex three-way interaction between show, sex and speech activity. For ease of presentation, we consider the results for each show separately before turning to a more general discussion of all of our findings. Table 3 presents regression results for the interactional analysis of /s/-variation in MIC. There we

see that, as before, men have significantly backer articulations of /s/ across-the-board ($F_{(1, 14.38)} = 22.36$, $p < 0.000$). We also find an additional significant interaction between speaker sex and speech activity ($F_{(4, 738.73)} = 2.51$, $p = 0.04$). This interaction is depicted graphically in Figure 3, with black bars representing average peak frequency values for women and grey bars for men. We see in Figure 3 that men do not vary /s/ peak frequencies greatly across speech activities, with average peak values of between 5000-5500 Hz across speech types. Women, in contrast, show a wider range, with average peak values going from a high of nearly 8000 Hz when engaged in discourse management speech, to a low of 6400 Hz when engaged in social speech activities. This observation is confirmed by within-group analyses of the effect of speech activity among women and men separately, which demonstrate that speech activity is not a significant constraint on men's peak frequency values ($F_{(4,315.84)} = 0.771$, $p = 0.545$) though it is for the women's ($F_{(4,403.68)} = 2.679$, $p = 0.031$).

[INSERT FIGURE 3 HERE]

Figure 3. /s/ peak frequencies in MIC across speech activities.

Subsequent pairwise comparisons of the MIC women's data, moreover, indicate that the operative difference among speech activities (indicated by the dashed line in Figure 3) is between discourse management and non-threatening information activities, on one hand, and threatening information and both threatening and non-threatening social activities, on the other. In other words, there is no significant difference in /s/ peak frequency values for MIC women when they are engaged in discourse management as compared to when they are transmitting non-threatening information (with average values of 7996 Hz and 7218 Hz, respectively). In contrast, MIC women produce significantly backer articulations of /s/ when transmitting threatening information (6309 Hz), and when engaged in both non-threatening (6515 Hz) and threatening (6449 Hz) social activities. This finding is important because it

appears to indicate that MIC women associate different /s/ qualities with distinct interactional goals or "ends". When their aim in an interaction is to engage in activities like discourse management or the transmission of non-threatening information, a more fronted /s/ is used. Conversely, when their goal is instead to engage in more personal and/or "threatening" behaviour (see discussion above), a backer /s/ is used. This seems to suggest that variation in /s/ quality is itself associated with a particular indexical value, arranged primarily along a continuum from less threatening (fronter /s/) to more threatening (backer /s/) speech. It may also suggest that, on some level, MIC women are aware of this indexical meaning, and thus recruit /s/-variation to help them achieve specific interactional goals.

[INSERT FIGURE 4 HERE]

Figure 4. Distribution of speech activities across contexts for MIC women.

We mention above that the occurrence of the different types of speech activities was not evenly distributed across mixed- versus single-sex contexts. It is instructive to return to this point here, and see how it relates to the findings for speech activity. Recall from the brief description of our earlier aggregate findings that, in MIC, talk in single-sex contexts was associated with significantly backer articulations of /s/ than talk in mixed-sex contexts. Both in previous discussions of this finding (e.g., Levon and Holmes-Elliott 2013) and above, we offer no interpretation of this result other than to say that it may form part of a "mixed-sex" or "single-sex" style among MIC speakers. This is not a particularly satisfying interpretation, as it provides no explanatory mechanism for why single-sex speech would be associated with backer articulations of /s/, for example. When, however, we examine the distribution of speech activities across contexts, a potential interpretation of this earlier finding emerges. Figure 4 presents the distribution of speech activities (in different shades of grey) across speech contexts (mixed-sex talk on the left of the plot, and single-sex talk on the right) for the

MIC women. In Figure 4, we see that in mixed-sex contexts 89% of the /s/ tokens we analyse occur when speakers are engaged in threatening information, threatening social and non-threatening social activities. In single-sex talk, in contrast, the proportion of tokens in these activities increases to over 96%. What this means is that, at least in the current sample, the MIC women engage in a greater proportion of "threatening" speech activities in single-sex talk than they do in mixed-sex talk ($\chi^2 = 7.93$, $p = 0.007$). Since we know that these more "threatening" speech activities are associated with significantly backer articulations of /s/ (cf. Figure 3), the fact that these activities occur more frequently overall in single-sex talk allows us to account for the earlier finding with respect to /s/-variation across contexts. Put another way, the speech context effect that we identified previously falls out directly from the pattern of variation across speech activities, and thus provides us with a principled explanation for why it is that we find a difference in /s/ quality across mixed- versus single-sex contexts. In short, that difference can be reduced to a distinction between "threatening" versus "non-threatening" activities and the uneven distribution of these activities types across contexts.

Table 4. Interactional analysis of /s/ variation in TOWIE.

Fixed Effects	Estimate	Std. Error	*t*	p-value
(Intercept)	7141.48	269.83	26.47	0.000
Sex (MALE)	-2495.24	372.03	-6.71	0.000
Activity (INFO.NT)	425.99	436.09	0.98	0.323
Activity (INFO.T)	-11.11	430.00	-0.026	0.979
Activity (SOCIAL.NT)	-389.44	252.65	1.541	0.123
Activity (SOCIAL.T)	-881.96	264.3	-3.34	0.001
Following (PAUSE)	23.32	256.15	0.09	0.928
Following (ROUND C)	-297.89	335.91	-0.89	0.376
Following (V)	423.51	132.19	3.21	0.003
Sex : Activity (INFO.NT)	-480.04	609.83	-0.79	0.431
Sex : Activity (INFO.T)	160.02	543.09	0.295	0.768
Sex : Activity (SOCIAL.NT)	561.17	340.12	1.65	0.089
Sex : Activity (SOCIAL.T)	899.72	347.17	2.59	0.009

Number of observations: 1242; Groups: Speaker (12), Word (284); Log likelihood: -10557.1

Turning to /s/ variation in TOWIE (see Table 4 and Figure 5), we once again find a significant interaction between speech activity and sex ($F_{(4, 1159.81)} = 2.465$, $p = 0.043$). As we can see in Figure 3, this interaction is a result of the fact that men's /s/ peak frequency values show no significant differentiation across speech activities ($F_{(4, 607.3)} = 0.746$, $p = 0.561$) whereas women's do ($F_{(4, 600.31)} = 2.615$, $p = 0.031$), with women's values ranging from an average of just over 6300 Hz for threatening social activities up to an average of over 7200 Hz for threatening information activities. Subsequent pairwise comparisons within the sample of TOWIE women's speech indicate that the five speech activities cluster into three significantly different groups (as indicated by the dashed grey lines in Figure 3): discourse management and both threatening and non-threatening information activities (with an average peak frequency value of 7190 Hz), non-threatening social activities (6861 Hz) and threatening social activities (6376 Hz). This pattern echoes our findings among MIC women - TOWIE women make use of progressively backer articulations of /s/ as speech activities become more inherently "threatening". Though these findings point to a slightly different subdivision of the pragmatic space than was evident among the MIC women, the observed pattern of /s/ variation among TOWIE women broadly replicates the earlier result and can be taken as indicative of a more general association between "threatening" speech and a more backed /s/ quality.

[INSERT FIGURE 5 HERE]

Figure 5. /s/ peak frequencies in TOWIE across speech activities.

As before, it is useful to consider whether this speech activity finding can help elucidate the results of our earlier aggregate analysis, in which TOWIE women were found to

use significantly fronter articulations of /s/ in single-sex contexts. Figure 6 presents the distribution of TOWIE's women speech activities across mixed- and single-sex talk. There, we see that in mixed-sex talk, the least "threatening" activities (discourse management and information transmission) comprise 20% of tokens, whereas in single-sex talk that proportion increases to 30%. Conversely, the most "threatening" activity (threatening social speech) is involved in 54% of tokens in mixed-sex contexts, but in only 18% of tokens in single-sex speech. In fact, the majority of tokens in mixed-sex conversations are of the most threatening variety, whereas the same activity represents a minority of tokens in TOWIE women's single-sex speech. Overall, the general pattern is one in which TOWIE women engage in more "threatening" speech in mixed-sex environments than they do in single-sex ones ($\chi^2 = 89.5$, $p < 0.000$). It is therefore the case that, once again, the speech activity results provide us with an explanatory mechanism for the previously observed context effect. In short, the reason that we find higher average peak frequency values among TOWIE women in single-sex contexts is because there are proportionally fewer "threatening" speech activities in those contexts than in mixed-sex talk, and these less "threatening" activities are themselves associated with significantly higher /s/ peak frequencies. Consequently, in both TOWIE and MIC, our prior suggestion that /s/ variation is linked to different contextual norms at work in single- versus mixed-sex talk (Levon and Holmes-Elliott 2013; see also Takano 1998; D'Arcy & Tagliamonte 2010) can now be recast in a more robust explanatory framework of variation across speech activities (cf. Kiesling 2009).

[INSERT FIGURE 6 HERE]

Figure 6. Distribution of speech activities across contexts for TOWIE women.

5 Discussion

The primary goal of this paper has been to provide a more robust account of the indexical properties of variation in /s/ quality for MIC and TOWIE speakers. We were motivated to explore this issue in an effort to achieve a better understanding of the findings of our previous aggregate analyses (Levon and Holmes-Elliott 2013). In that earlier work, we demonstrated that /s/ quality is significantly constrained by speech context (in MIC) and by the interaction of sex and speech context (in TOWIE). We were unable, however, to provide an explanation for that pattern beyond claiming that fronted versus retracted /s/ may form part of a contextual style, such that the norms of single-sex contexts encourage the use of backer articulation of /s/ for MIC speakers and fronter articulations of /s/ for TOWIE women. While it succeeds in capturing the observed patterns of variation, this interpretation does not posit a theory of *why* the feature patterns as it does, nor is it able to account for the observed differences between MIC and TOWIE women. We argue that in order to fill in these gaps in our understanding, we need to move below the level of aggregate, group-wide patterns, and explore how /s/ variation is embedded in discourse. To achieve this, we adapt Kiesling's (2009) schema for the quantitative analysis of variation as a function of speech activity. We suggest that this interactionally-focused analysis allows us to uncover the indexical "missing link" in our previous study, and ultimately to come to a better and more comprehensive understanding of what /s/ means for our speakers and, hence, why it patterns in the way it does.

The principal finding of our interactional analyses is that, in MIC and TOWIE, variation in /s/ quality is strongly correlated with the level of "threat" in a given utterance. As we note above, we define levels of interactional threat according to Brown and Levinson's concept of what they term the "weightiness" of a face-threatening act. For Brown and Levinson, the relative amount of threat associated with a given speech act is the product of

three culturally-specified factors: the *social distance*, in terms of familiarity versus unfamiliarity between individuals involved in the interaction; the *power relations* between the individuals - whether the relations are more or less symmetrical; and the *degree of imposition* of a given face-threatening act. Since social distance is not at issue in the sample we examine here (all interactants are well-acquainted with one another and all recorded interactions are familiar and informal), our coding schema focuses on differences in the power relations and degree of imposition of individual speech activities. The three-way division (which we borrow from Kiesling 2009) between discourse management activities, information activities and social activities correlates with the relative degree of imposition of different speech acts under the assumption that each of these categories represents a successively more intimate or interpersonally "imposing" type of talk. Our further division between threatening and non-threatening information and social activities then attempts to capture Brown and Levinson's power dimension, and to reflect the fact that certain types of information/social activities are potentially "weightier" than others.

Overall, the results of the interactional analysis serve to validate our interpretation of Brown and Levinson's model. We demonstrate above how more threatening activities are associated with backer articulations of /s/ for both MIC and TOWIE women, and show that defining the level of threat of an activity requires consideration of both power relations and the degree of imposition involved. We further identify differences in the way MIC versus TOWIE women sub-divide the pragmatic space, with each group appearing to "weight" the relative threat of speech activities somewhat differently. In MIC, women appear to divide the pragmatic space into two primary types of activities: those that involve both little imposition on a speaker's face and symmetrical power relations (i.e., discourse management and non-threatening social activities) versus all others. The former (less threatening) activities are associated with significantly higher /s/ peak frequencies, whereas the latter (more

threatening) activities are associated with lower ones. For TOWIE women, the same general correlation between threat and /s/ quality holds, with the only difference being the location of the boundary between perceived levels of interactional threat. In comparison to the MIC women, the TOWIE women's pragmatic space is more articulated and reflects a three-way divide between activity types that generally involve little to no social imposition (discourse management and information), those that involve social imposition but are not associated with differential power relations (non-threatening social) and those that involve both social imposition and asymmetric power relations (threatening social). Taken together, the results for MIC and TOWIE therefore demonstrate a consistent indexical correlate for variation in /s/ quality across all speakers (i.e., level of threat of the speech activity) while simultaneously illustrating the way in which this broader indexical pattern is implemented differently across the two communities of speakers, such that what counts as a more "threatening" type of speech (and hence what gets associated with backer articulations of /s/) is determined at the local, culturally-specific level.

Our introduction of Brown and Levinson's model of threat and our focus on variation across speech activities thus allows us to address the unanswered questions of our prior analysis of /s/ variation in this dataset. In particular, we have shown that the reason that we find significantly different /s/ qualities in mixed- versus single-sex speech is because of the different distributions of the speech activity types across these contexts. For MIC women, who have backer articulations of /s/ in single-sex talk, we discover that they engage in significantly more threatening speech activities when speaking with other women than when speaking with men. TOWIE women, in contrast, who have fronter articulations of /s/ in single-sex talk, engage in fewer threatening activities with other women and significantly more when speaking to other men. In both cases then, the context effect and the differences in /s/ quality between MIC and TOWIE women are shown to be the direct result of similar

patterns of variation across speech activities. This result is important not only because it provides us with a more nuanced and principled analysis of the current dataset, but also because it serves to underscore the importance of examining patterns of variation beyond the level of the group in order to develop an understanding of the indexical meanings of variable forms. As Kiesling (2009: 172) claims, "stance is the main interactional meaning being created and it is a precursor, or primitive, in sociolinguistic variation." Our analysis of variation across speech activities (which we define, following Kiesling, as fixed repertoires of stances) lends support to this claim, and points to the need to scrutinise the function that variation plays as it unfolds in discourse.

At the same time, we would caution against an overly strong conceptualization of variation as stance-taking, or a focus on socially meaningful language as a series of necessarily intentional moves made by a speaker. While it is clear that stances and activities are the ultimate locus of sociolinguistic meaning, we would also argue that particular stances "calcify" into more enduring styles (Bucholtz 2009) and that it is these enregistered styles that speakers draw on in interaction. In the context of our dataset, for example, we are not arguing that TOWIE women make an intentional decision to produce backer articulations of /s/ in order to help materialise a more "threatening" persona. Rather, we suggest that, via a process of stance accretion (Du Bois 2002; Rauniomaa 2003; Eckert 2012), a backer /s/ has become an enregistered part of the TOWIE women's "threatening" style and that it is this style that speakers choose to deploy in particular contexts. In a certain respect then, we find ourselves returning to our previous argument that the variation in /s/ quality that we find is indeed due to differences in language style. The key distinction between that argument and the current one, however, is that we now have an explanation for why those stylistic differences exist, and a principled account of where they come from in the first place.

As Brown and Levinson (1987: 281) note, "language usages are tied to strategies rather than relationships, although relationships will be characterized by the continued use of certain strategies." We argue that, at its core, the meaning of /s/ variation in our dataset is essentially strategic in nature – it is a signal of different levels of interactional threat. We do not say this to imply that MIC and TOWIE women actively select specific articulations of /s/ in interaction. Instead, we suggest that MIC and TOWIE women design their speech at the level of inter-personal relationships, recruiting speech styles that they consider appropriate for more versus less threatening encounters. Variation in /s/ quality, and the level of threat it can index, is certainly a part of these styles. But we argue that rather than representing a recognized resource that MIC and TOWIE women actively draw upon to present interactional threat, /s/ variation is better conceived of as a "semiotic hitchhiker" (Mendoza-Denton 2011), part of a broader style that MIC and TOWIE women deploy in culturally-specific ways.

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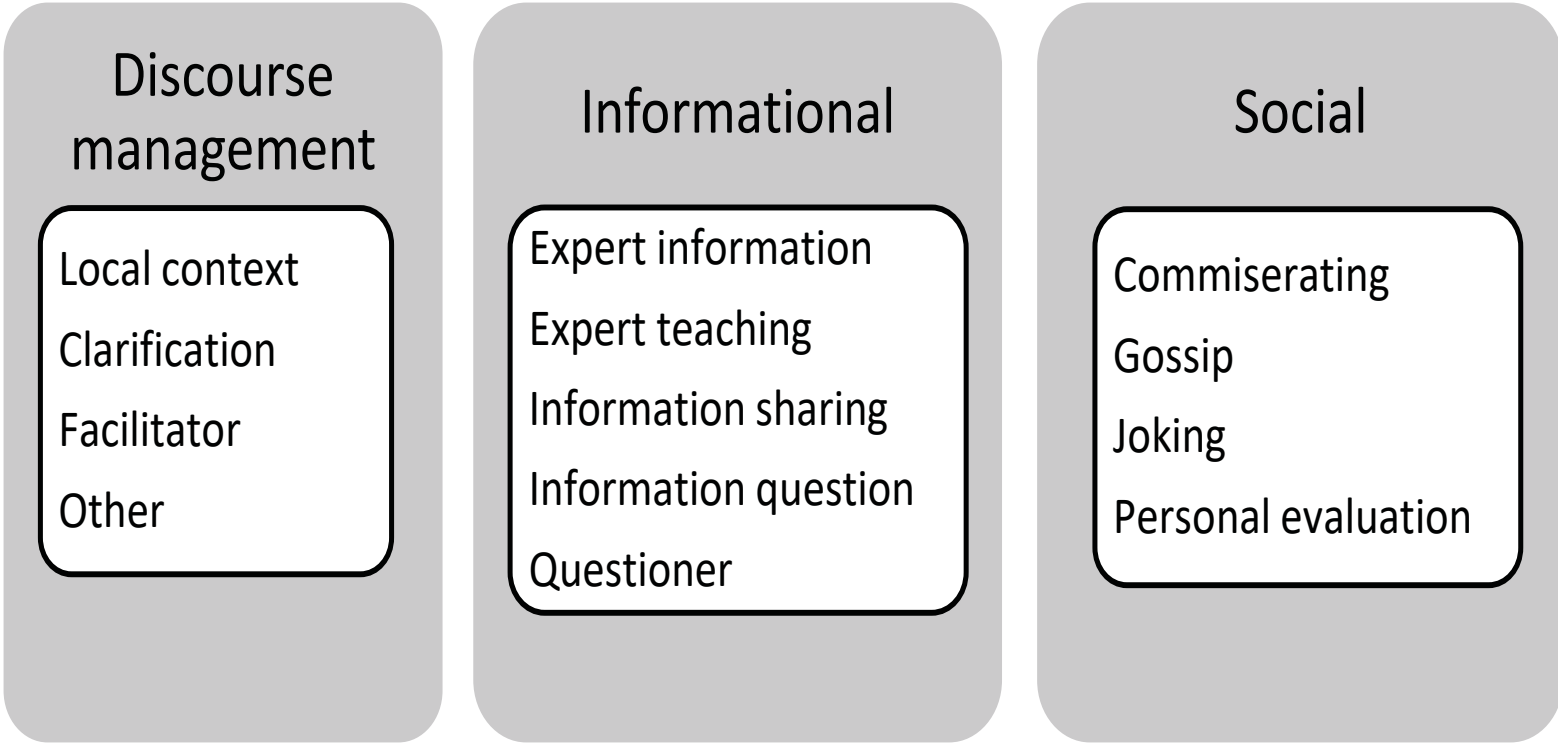
1 Appendix

Activity Category	Level of threat	Speech Activity	Example
Social	No threat	Commiserating/ alignment	Were you upset? (Millie, MIC:30)
			well I reckon as soon as the bar's up and running and you've sorted things up with Lucy I reckon we should go on holiday (Arg, TOWIE:37)
		Gossip	Mark's gonna be there isn't he? He'll be there with his new girlfriend Lucy (Amy and Sam, TOWIE:6)
			So earlier when I went to give the books to Francis, he was in a meeting and I kind of ended up telling Agne about Francis and Fred sharing her (Rosie, MIC:21)
		Joking	You look like something out the Godfather! (Mark, TOWIE:39)
			How's the white jeans crew going? (Spencer, MIC:27)
		Personal evaluation	Francis could be good for this because essentially he doesn't make any jewellery (Mark Francis, MIC:4)
			You look nice (Kirk, MIC:3)
	Threat	Personal disclosure	I think kinda when I knew that I was feeling guilty about it I knew that it was because I really like you (Hugo, MIC:25)
			When I'd gone, he messaged me being like "I'm really confused I don't know what's going on" (Caggie, MIC:24)
		Challenge/ confrontation	What you doing? I've been calling you all day and you've not answered your phone (Lydia, TOWIE:10)
			That's true, but why beat around the bush? (Francis, MIC:2)
			That's very honest of you but also very selfish (Caggie, MIC:11)

		Hedging	This is what it is. I wanted her to DJ in my club. Yeah? (Kirk, MIC:3)
			If you're implying this is a date (Amber, MIC:2)
Informational	No threat	Expert information	Mark it's a sixties night, Frank Sinatra, Rat Pack, it's that sort of era (Arg, TOWIE:39)
		Expert teaching	you're better to shower than you are to bath but don't exfoliate cos you're gonna get it all off but for your birthday the tan'll be brilliant. (Amy, TOWIE:4)
		Expert direction	Obviously I won't need you on the actual event cos I'll be looking after everything so you can go back home and get your dresses when it's done (Lauren, TOWIE:25)
			Tell me what happened (Caggie, MIC:30)
		Information sharing	I think I'm gonna go out in it tonight (Cheska, MIC:7)
	Threat	Information question	So, what you right handed? (Kirk, TOWIE:46)
		Questioner/ request	So how do you know Spencer? (Millie, MIC:32)
			You know I've done it, I could have done it a lot earlier but I didn't want to be out of order, what do you reckon? (Mark, TOWIE:39)
		Information sharing	So honey, Paloma's my new assistant so I'm gonna let her be in charge today (Amy, TOWIE:16)
			Like, he dropped me home (Millie, MIC:8)
			Then drove across Pamplona, ran with the bulls (Jamie, MIC:29)
Discourse Management	No threat	Local context	It's opening in a couple of days (Arg, TOWIE:12)

			Lovely Maria here who's pinning me in (Amber, MIC:36)
		Clarification	(Spencer's coming with a friend – Hugo) Friend? (Millie, MIC:32)
		Facilitator	Evening evening you guys, how are you? (Spencer, MIC:32)
		Other	Yeah, yeah (Caggie, MIC:30)

1


Discourse management
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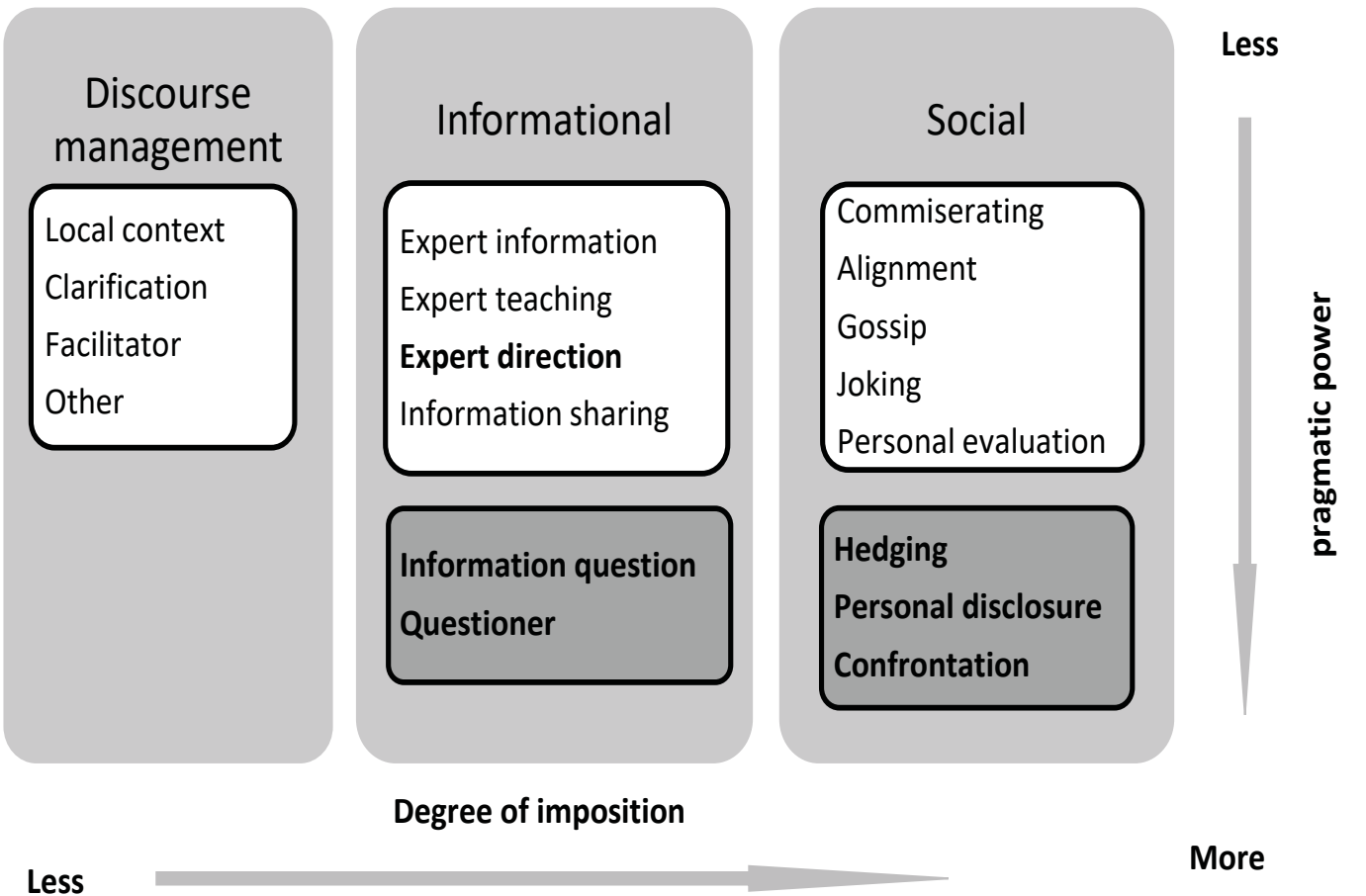
Personal evaluation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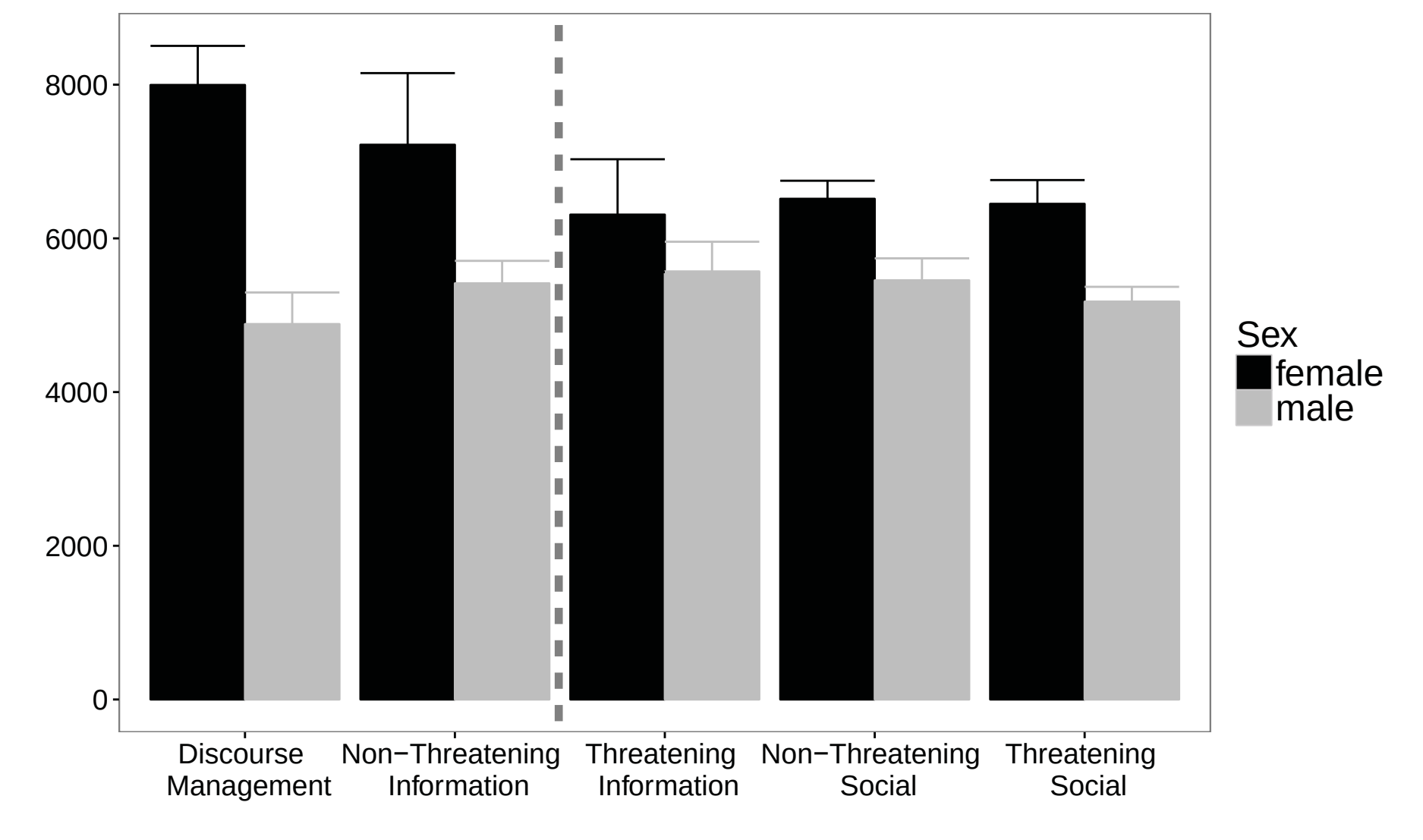
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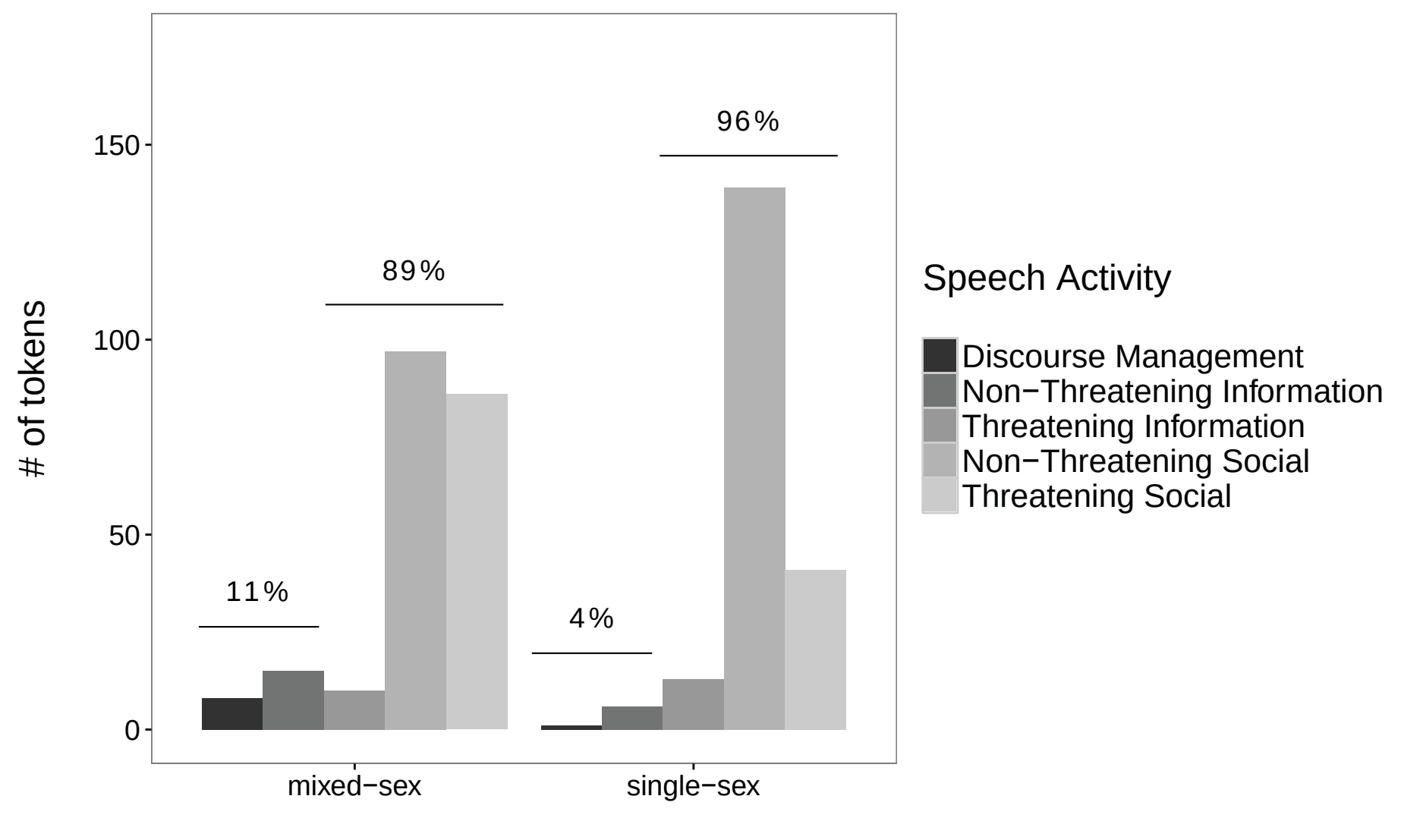
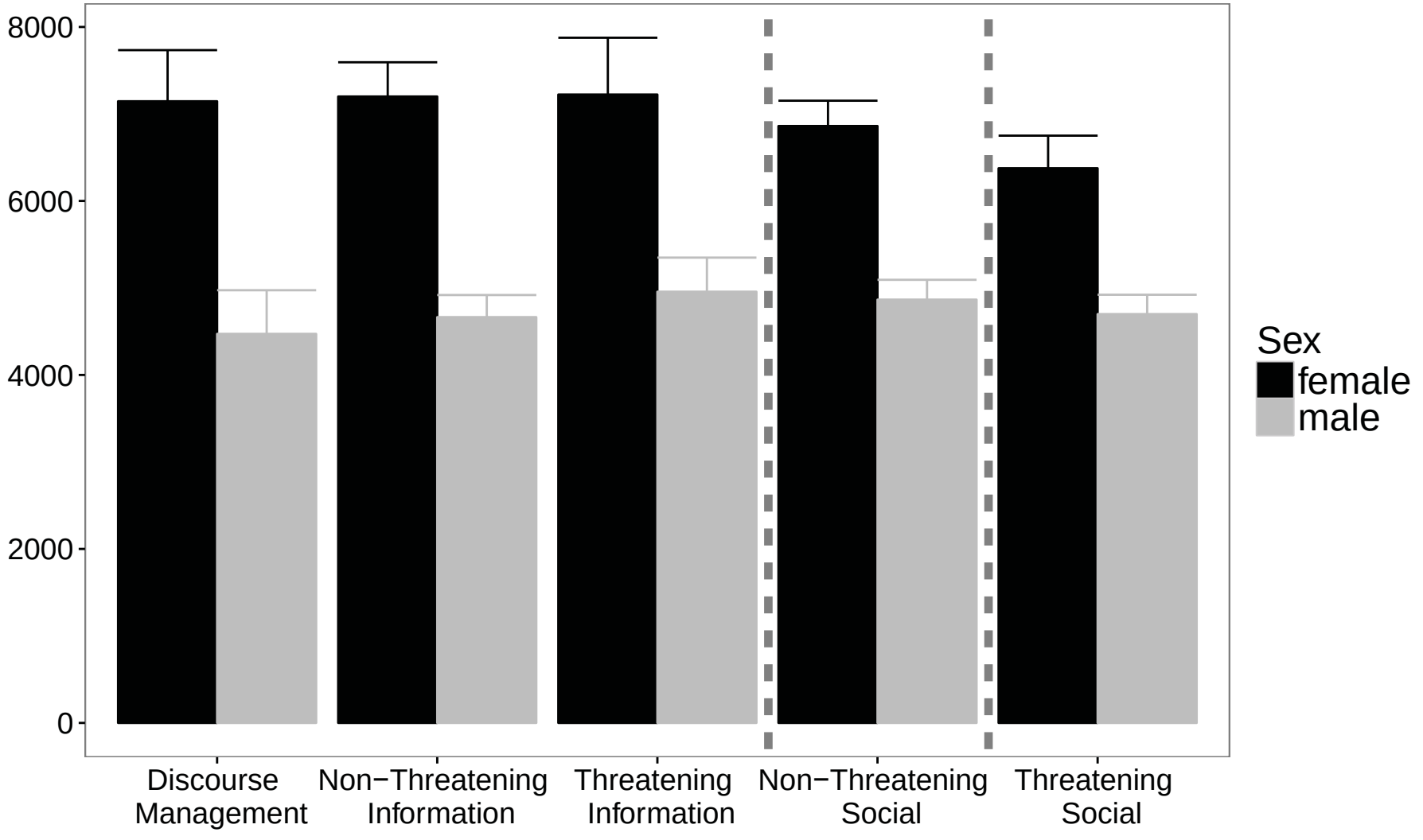
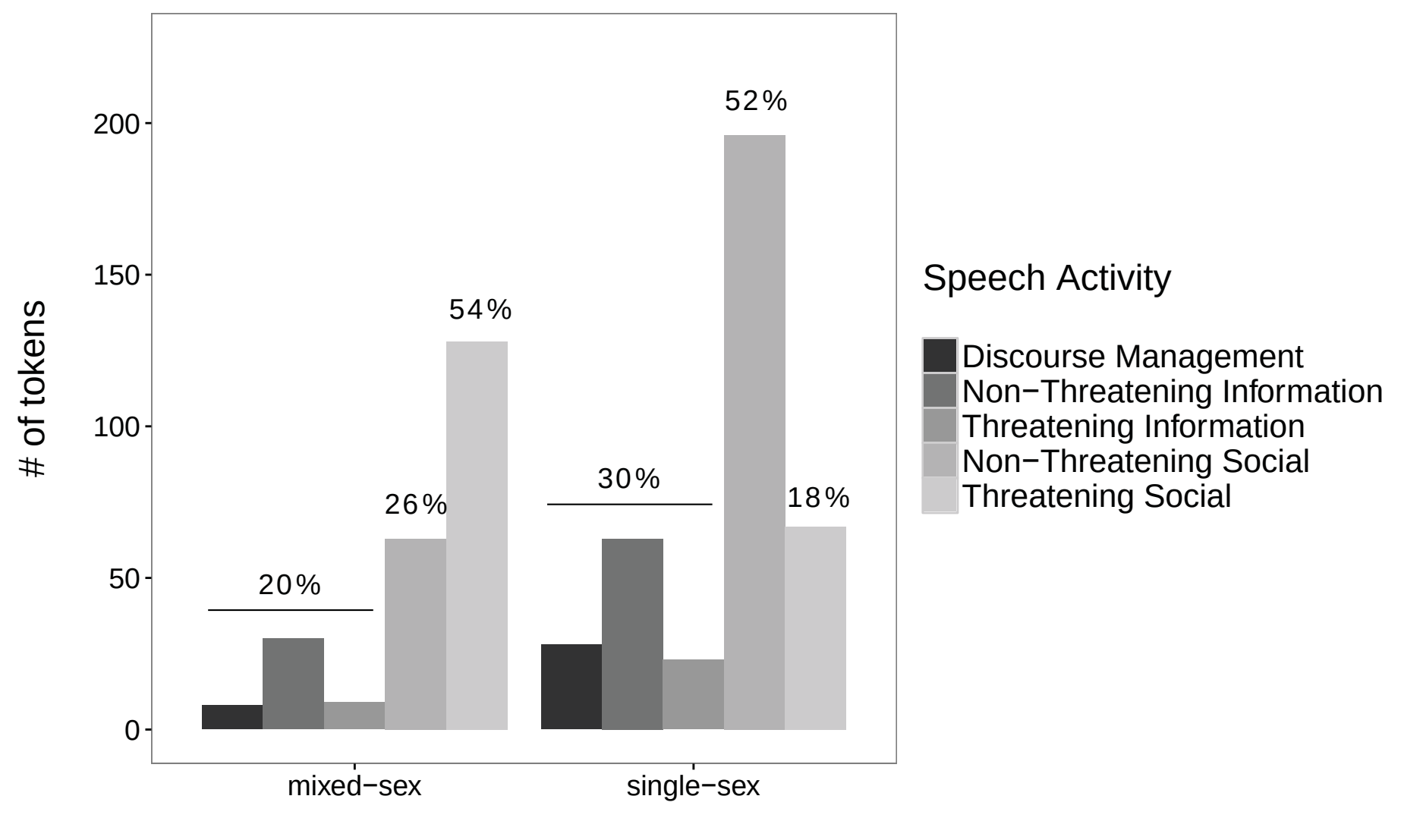
female
male


150
100
50
0
# of tokens
11%
89%
4%
96%
mixed−sex
single−sex
Speech Activity
Discourse Management
Non−Threatening Information
Threatening Information
Non−Threatening Social
Threatening Social


8000
6000
4000
2000
0
Discourse Management
Non−Threatening Information
Threatening Information
Non−Threatening Social
Threatening Social
Sex
female
male


200
150
100
50
0
# of tokens
52%
54%
30%
26%
20%
18%
mixed−sex
single−sex
Speech Activity
Discourse Management
Non−Threatening Information
Threatening Information
Non−Threatening Social
Threatening Social