The Pragmatic and Prosodic Realisation of Apologies:

A Matter of Severity and Sincerity?

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Abbreviations

A	Act
CCSARP	Cross-Cultural Speech Act Realisation Project
CP	Cooperative Principle
D	Distance
DCT	Discourse Completion Task
F0	Fundamental Frequency
F0max	Maximal height of the fundamental frequency (peak)
F0max%	Deviation of F0max from F0max point of comparison in %
F0min	Minimal height of the fundamental frequency (valley)
F0min%	Deviation of F0min from F0min point of comparison in %
F0mean	Average pitch height measured in Hz
F0mean%	Deviation of F0mean from F0mean point of comparison in %
F0range	Pitch range (difference between peak and valley of fundamental frequency in Hz)
F0range%	Deviation of F0range from F0range point of comparison in %
FTA	Face Threatening Act
H	Hearer
HS	High Severity
HS-SC	Scratched Car (DCT Situation on High Severity Level)
HS-HD	Heavy Door (DCT Situation on High Severity Level)
Hz	Hertz
IFID	Illocutionary Force Indicating Device
L2	Second Language
LS	Low Severity
LS-BB	Borrowed Book (DCT Situation on Low Severity Level)
LS-NP	NewsPaper (DCT Situation on Low Severity Level)
MS	Medium Severity
MS-BD	Bus Directions (DCT Situation on Medium Severity Level)
MS-UP	UnPunctual (DCT Situation on Medium Severity Level)
ODCT	Oral Discourse Completion Task
P	Relative Power
PP	Politeness Principle
R	Pearson's R
r_s	Spearman's rho
Rx	Imposition
RG	Refusal to Acknowledge Guilt
S	Speaker
Self-D	Self-Deficiency
TTS	Text-To-Speech
W	Weight (of the FTA)

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1. Introduction

The speech act of apology is of considerable interest in pragmatics and is among those speech acts which are most often researched (Ogiermann 2009: 45); however, the effects caused to it by prosodic dimensions remain noticeably underrepresented in the scientific literature. This gap is also noted by other researchers such as Wichmann (2004: 1525), who agrees that "[t]his aspect of speech – how something is said rather than what is said – is an intrinsic, but often neglected, dimension of what speakers say and hearers hear". Politeness frameworks[1] from a more general perspective and their interplay with prosody in the literature do, however, provide some insights. A number of sources indicate the importance of intonation, especially for the conveyance of politeness and impoliteness in utterances (see, e.g., Brown, Winter, Idemaru & Grawunder 2014 for Korean honorifics; Culpeper 2011; Fivela & Bazzanella 2014: 108 for Italian; Hidalgo Navarro & Cabedo Nebot 2014). This includes impacts reported to be language universals, especially in terms of the Frequency Code (Gussenhoven 2004, 2002; Ohala 1995, 1984). Seminal work such as Austin (1962), Brown and Levinson (1987) and Leech (1983) refer to the importance of prosody when discussing the underlying meaning of speech acts and politeness conveyed via these suprasegmental features. Calls for closing this research gap are therefore common (see, e.g., Brown & Prieto 2017; Culpeper 2011 on impoliteness) and include demands for an overall more holistic investigation of speech acts that examines both linguistic and paralinguistic dimensions.

A practical reason for this gap lies in the differences between prosody and the pragmatic level of speech, presupposing knowledge in two areas with their own concepts, methodological approaches and constraints. This makes the interface itself difficult to research systematically. Further complications in the investigation of prosodic features occur because they convey more than one function in speech; this even applies to the conveyed illocution of a particular speech act. In fact, they bring across a number of nuances, emotional as well as attitudinal attributes and different speech act types (Brown & Prieto 2017: 358). Additionally, they are connected to syntax-related features and the formation of information structure (cf. Wichmann 2015). This further constrains any simultaneous claims made regarding the interconnection of pragmatic and prosodic dimensions. Moreover, shortcomings are often present in the chosen methodological approach for the investigation of speech acts and politeness which makes them unsuitable for a prosodic study, resulting in, for example, written formulations of speech acts without access to their verbal representations (e.g., Deutschmann 2003). Finally, there is the overall issue that holistic investigations of the sort attempted here generally

[1] Here primarily based on the politeness theory by Brown and Levinson (1987, 1978) as well as that of relational work by Locher & Watts (2005).

pose their own difficulties and facets which will be discussed and are often avoided by focusing only on "verbal linguistic elements on their own" (Brown & Prieto 2017: 358).

Nevertheless, the underrepresentation of apologies regarding prosodic investigations is especially striking because, as expressive speech acts (Searle 1976), successful conveyance of the underlying emotions and attitudes is vital. This is mostly, if not entirely, achieved via the prosodic level. In fact, depending on the appropriateness of the prosodic delivery of such a speech act, there is the distinct possibility for them to be perceived as less sincere or even ironic (see below). These are attitudes typically said to be delivered on the prosodic level (Raso & Rocha 2016: 5). Consequently, it is precisely the intonation as a prosodic dimension that people frequently rely on to identify the exact nuances of the underlying meaning of an illocution (Lakoff 2001: 204; Raso & Rocha 2016: 5).

This strong relation between prosody and apologies has not gone completely unnoticed in research. In fact, some publications point toward its important role – often, however, without delving deeper into the issue itself (e.g., Aijmer 2019; Deutschmann 2003; Ogiermann 2009). The few studies which explicitly investigate the intonation of apologies (Aijmer 1996; Knowles 1987; Lindström 1976) lean toward general tendencies. The most agreed-upon finding proposes that casual apologies are more likely produced with a fall-rise and non-casual apologies with a falling intonation contour, observations which have often been made in parallel with findings obtained for another expressive speech act: thanking (Aijmer 1996; Wells 2006).

In addition, manifold sources also refer to the impact of the severity of the offence on the formulation of the apology by invoking the concept of the underlying sincerity with which it has to be delivered and *vice versa* (cf., e.g., Aijmer 1996: 41; Bergman & Kasper 1993: 95; Wichmann 2015: 178). In other words, the level of severity of the offence and the underlying sincerity with which an apology is expected to be delivered are highly intertwined. Furthermore, severity is the micro-social factor known to influence the formulation of apologies most strongly (cf., e.g., Faerch & Kasper 1984; Olshtain 1989). Still, the focus of analyses of this side of the formulation (i.e., in the form of strategies) often relies heavily or exclusively on the pragmatic level without taking the paralinguistic features into account. This apparent interconnection – between prosodic and pragmatic aspects of apologies on the one side and their importance in the sincere delivery and apology formulation appropriate for the level of the severity of the offence on the other side – is exactly what lies at the heart of this study. Many of the findings made and discussed strengthen this claimed connection and expose it in more detail.

Accordingly, the aim of this study is to adopt mentioned research perspectives and contribute to the understanding of the omnipresent and, for the maintenance of social

equilibrium, imperative speech act of apology. It presents a holistic and simultaneously explorative analysis that previous literature has neglected by investigating the pragmatic and prosodic dependency of oral apologies, which vary with regard to the severity of the previously committed offence. Consequently, it explores the role of prosody (including mean pitch, pitch range, pitch contour, speech rate, intensity and the specific voice quality of 'vocal fry'[2]) in apology production. In addition to the severity of the offence, it considers further details of the exact context of apology delivery. These include factors such as the type of offence that was committed and several emotional and attitudinal attributes, especially underlying sincerity as well as urgency, embarrassment and surprise.

1.1 Material and Method

For this study, 246 apologies were elicited from 66 female native speakers of American English by employing an online questionnaire that contained six oral discourse completion tasks (ODCTs), all of which elicited apologies. The situational contexts of these tasks varied in regard to the previously committed offence (high, medium or low; n = 2 for each level). The other central micro-social variables of social distance (*D*) and relative power (*P*) were kept stable. The systematic variation in the situational description of the severity level was determined in a perceptive pre-study. In this pre-study, 15 female native speakers of American English rated the perceived severity (and naturalness) of the respective situational descriptions on 5-point Likert scales. In both the pre-study and the actual study, the informants were between 18 and 35 years of age.

To discuss the pragmatic composition of the apologies in the strategies delivered, this study is largely based on the work by Blum-Kulka and Olshtain (1984) and their widely-employed categorisation scheme published as the Cross-Cultural Speech Act Realisation Project (CCSARP) coding manual (Blum-Kulka, House & Kasper 1989b). The coded apologies illustrate the influence of the situational descriptions, especially the severity of the offence, on the selection of strategies with which the apologies were performed. After a close description of the strategic formulation on the pragmatic level, the level of suprasegmental features – the prosodics to these findings – was added.

The prosodic features of the apology were analysed as a whole as well as based on each of the individual strategies used to formulate the apology. The prosodic dimensions considered are the average fundamental frequency (F0), maximal F0, minimal F0 and the resulting F0 range with which the apologies and their strategies were produced. It also includes the intonation contours which occurred at the end of each apologetic strategy (often coinciding with the strategy's final boundary tone, cf. e.g., Szczepek Reed 2010: 32). Furthermore, the speech rate that was applied as well as the minimal,

[2] A voice quality witnessed especially in female American English speakers (Pennock 2005; Yuasa 2010).

maximal, and mean intensity and the voice quality of vocal fry were analysed and discussed. All prosodic measures, except for the vocal fry, were based on acoustic analyses using Praat (Boersma & Weenink 2020). Special focus was placed on the illocutionary force indicating device (IFID) of the apology and the produced exclamations. Exclamations were of particular interest due to their overall comparability in the prosodic attributions made and their different underlying messages.

1.2 Purpose and Areas of Contribution

Two areas were identified to which this study can offer valid contributions. The first aim is to answer the call to enhance the general knowledge of speech acts, politeness and face-saving strategies and how they intertwine with prosody. The other area is somewhat separate from the main focus of this study, that of second language (L2) teaching and learning, in which speech acts and politeness have an increasingly important role. The knowledge gained here can pose a valid starting point for the systematic investigation of the interrelation between manifold factors that can, at some point, be practically applied.

As mentioned above and further explained in Chapter 2.1, only a fraction of studies which address apologies consider prosody in their argumentation. Even fewer do so systematically (cf., e.g., Aijmer 1996; Lindström 1976). Nevertheless, a certain awareness of the impact of prosodic dimensions is certainly visible. In fact, prosodic features can even be considered to be IFIDs in their own right in some contexts (Couper-Kuhlen 2015: 84). However, one overarching question considers "[…] whether intonational strategies are used cumulatively in addition to other types of linguistic politeness strategies" (Astruc & del Mar Vanrell 2016: 95). Underlying this question is the claim that prosody is involved in bringing across the 'real' Speaker meaning (Grice 1957). This also includes underlying attitudes and emotions, such as "seriousness, joy, sadness, hostility, etc." (Hidalgo Navarro & Cabedo Nebot 2014: 7). Most centrally here and in the literature, prosody adds considerably to the Speaker's ability to convey the underlying sincerity of the speech act (Lakoff 2001). This is crucial because this attitude and its convincing delivery are manifested in the felicity conditions for this and all other speech acts, formulated as the sincerity condition by Searle (1969: 67). To date, no thorough explanation for how this attribution occurs has been achieved, although it is consistently attributed to the prosodic level, along with claims that it is difficult to judge the underlying message of an apology (e.g., Deutschmann 2003: 92). It is also undisputed that prosody can, in extreme cases, be employed to produce a sarcastic message through the delivered apology or speech acts in general (cf., e.g., Aijmer 2019; Brown & Levinson 1987: 251; Culpeper 2005; Deutschmann 2003: 19; Fivela & Bazzanella 2014; Hidalgo Navarro & Cabedo Nebot 2014). Ultimately, this study, therefore, aims to contribute to the understanding of politeness strategies and the

role of prosodic aspects in delivering a sincere apology in a manner appropriate to the situational context.

The second area of contribution identified is in the application of such knowledge in the conveyance of the Speaker's underlying meaning via prosody to the classroom. The importance of intonation in language teaching and learning has long been ignored, likely due to "the competence-performance dichotomy of the generative paradigm in linguistics" (Couper-Kuhlen 2015: 83). Intonation has been seen to be based on the layer of performance and therefore as not immediately relevant. However, the tendency to not only include textbook-focused language teaching but also audio-visual input is present in modern-day second-language didactics (cf. e.g., Limberg 2016). Furthermore, it features prominently in research regarding its effects on language learning, not least regarding the teaching of speech acts (cf. Martínez-Flor & Usó-Juan 2010a, 2010b). Yet, as an additional complication of this matter, learning the prosodic mechanisms of a second language, despite this increase in adequate input, is difficult and said to include a level of metacognitive awareness (Reed & Michaud 2015). In this regard, the ability to notice crucial differences in the prosodic features of an utterance — which are dependent not only on the syntax, but also on the contextual characteristics of a specific situation – could facilitate this learning process to a great extent. To point toward these differences, however, they first need to be clearly identified. Ultimately, their interdependence with contextual and other factors (including the underlying attitudes and emotions) must be understood in an in-depth manner.

The crucial nature of this purpose lies in the possibility that applying the prosodic dimensions in an unconventional way can lead to misunderstandings with native speakers of English. Ultimately, such deliveries of speech acts could be interpreted as either insincere or even rude so that, for example, "[…] a casual-sounding *thank you* (with a rising tone) might offend a hearer who believes that greater gratitude should be expressed" (Wichmann 2015: 178). To further stress this importance, one can even go so far as to say that "[…] if things go wrong, participants interpret prosodic 'mistakes' as intentional messages and infer meaning accordingly" (Wichmann 2015: 185). Such complications are not unlikely to arise if marked prosodic applications, opposed to those employed in one's native language, are not identified. In fact,

> [e]ach culture has a set of norms regarding the appropriateness of different types of expressions and conversational strategies, and the use of pitch, loudness, gestures, eye contact, and other nonverbal elements of communicative acts. Learning skills in these areas could enable L2 learners to communicate more effectively, without having inappropriate gestures or conversational strategies sabotage the communicative intent of their utterances. (Hurley 1992: 259)

To summarise, the outcomes of this study are an imperative next step toward the identification of contextual dependencies and patterns of the prosodic dimensions in (American) English. It poses a central vantage point toward raising awareness of exactly

these systematically applied prosodic functions and their importance in communicative interaction.

1.3 Research Questions

Having established the vantage point and purpose of the research conducted, this study aims at answering the following research questions:

1) What impact does the systematic variation of the severity of the offence (low, medium or high) have on the pragmatic and prosodic realisations of apologies?
2) Which additional contextual factors may have impacted the selection of pragmatic strategies and prosodic features applied to this speech act?
3) What is the interrelationship between the severity of the offence and the sincerity of the apology, and how does this present itself on the pragmatic and prosodic levels?

1.4 Structure and Procedure

In the Theory part, politeness theories (Chapter 2.1.1) and especially their role in the delivery of the speech act of apology (Chapter 2.1.2) are introduced. This includes the strategies this speech act can contain and the importance of the severity of the offence on the formulations selected. The subsequent sub-chapter highlights the different prosodic dimensions and their interplay with politeness (Chapter 2.1). It includes separate sections for each of the dimensions investigated: intonation and pitch, pitch range, speech rate, intensity and the voice quality of vocal fry. These sections define the dimensions individually and highlight how they are frequently measured. Additionally, the respective dimension's connection to the concept of politeness is identified. Due to the centrality of a sincere attitude in this study and the later discussion of the data, Chapter 2.3 highlights the interplay between prosody and the underlying sincerity of an apology, including how to identify the attitude of sincerity itself. The chapter also addresses the question of how severity, sincerity, and the overarching concept of politeness inform each other in the production of this speech act (Chapter 2.4). It further highlights different emotions that play a role in apologies (Chapter 2.5), including the emotional attributes conveyed by exclamations, previous findings on prosody and situational urgency and the notion of embarrassment and discomfort caused by having committed an offence.

Chapter 3, the Methodology chapter, offers a detailed explanation of the data collection instrument (Chapter 3.1). It explains the questionnaire employed and the process of data elicitation, including the advantages and disadvantages of the methodology chosen. It then introduces the demographics of the informants (Chapter 3.2) before highlighting the data processing and analysis (Chapter 3.3), explaining the pragmatic analysis before the prosodic one. The final part provides insights into the statistical measurements applied for the analysis.

The Results are displayed as a separation of the two foci of the study before the discussion brings them together. Accordingly, the results obtained on the pragmatic side of the topic are highlighted first (Chapter 4.1) before discussing the prosody-related findings (Chapter 4.2). This second sub-chapter includes sections for both the apology as one entity and the apology as consisting of different strategies and their prosodic manifestations. It is followed by a closer inspection of the IFIDs (Chapter 4.3) and the exclamations (Chapter 4.4) as well as the prosodic and pragmatic features applied to them.

The Discussion addresses the findings and research questions in the following way. Based on the findings for low-severity (LS) offences, a point of comparison for the apologies from the medium-severity (MS) and high-severity (HS) offence level is established, which is covered in Chapter 5.1. Afterward (in Chapter 5.2), those findings are discussed, which appear to be systematically impacted by the severity of the offence on the pragmatic and prosodic levels. They are further informed by those findings made in one MS situation and argued to demonstrate a difference in the underlying sincerity compared to its MS counterpart (Chapter 5.2.4). After covering exclamations (Chapter 5.3), urgency (Chapter 5.4.1) and embarrassment (Chapter 5.4.2), the chapter ends with notes on the age of the informants and the prosodic features applied (Chapter 5.4.3). The discussion closes with a reflection on the limitations of the study (Chapter 5.5) before coming to the conclusion (Chapter 6), which summarises the findings and offers a future outlook.

2. Theory – The Pragmatic and Prosodic Frameworks

To approach the interface between pragmatics and prosody, this chapter highlights these two sides separately before uniting them. It starts with the more conventional concepts for a study in pragmatics: politeness theory and speech act theory, focussing on the speech act of apology (covered in Chapter 2.1.1 and Chapter 2.1.2). In Chapter 2.1, the prosodic dimensions of pitch, pitch range, speech rate, intensity and the voice quality of vocal fry are highlighted. Their sections are accompanied by previous findings regarding the role they play in the delivery of general politeness and politeness features of speech acts. In a study that considers prosodic dimensions, emotional and attitudinal attributes need to be highlighted because of their importance to the later discussion and their connection to different markers of prosody. This begins with the most intrinsic and crucial factor: underlying sincerity (Chapter 2.3), culminating in Chapter 2.4 with a summary of the role of severity and sincerity in the delivery of apologies. It is completed with further literature on the role of exclamations, urgency and embarrassment (Chapter 2.5).

2.1 The Pragmatic Frameworks

Following a brief outline of the general frameworks of politeness theory, the speech act of apology is discussed in detail by defining the act itself. This is followed by a close account of its formulation and the importance of the severity of the offence on the exact composition of strategies chosen, which are dependent on situational appropriateness.

2.1.1 Politeness frameworks and their relevance to apologies

As one of the most researched phenomena in pragmatics, speech acts were the first choice for this explorative study. This is due to the rich basis of conceptual and empirical sources on which to draw. Speech act theory, which dates back to Austin (1962) and Searle (1969), is based on the idea that we perform certain acts by speaking, and their theoretical framework is considered an appropriate vantage point when determining the mechanisms of politeness during these performances. Politeness, as it is addressed here, is a social construct that supposedly allows us to "reduce friction in personal interaction" (Lakoff 1975: 87) or maintain harmony (Leech 1983: 104). Though not undisputed, this underlying idea is especially useful when discussing apologies, which exist precisely to maintain such harmony (cf., e.g., Goffman 1976; Leech 1983). They are the expected speech act after an offence has been committed which disturbed the social balance. Notably, this idea of reducing the risk of friction and minimising conflict in social interactions also forms the basis for Leech's politeness principle (PP; 1983, updated in Leech 2014, 2007, 2005) and the maxims it comprises (tact maxim, generosity maxim, approbation maxim, modesty maxim, agreement maxim and sympathy maxim). In short, Leech views communication as goal-oriented, while this goal can be divided into illocutionary goals and social goals. These goals can be in a competitive, convivial, collaborative or conflictive relationship with each other.

With this basis in mind, a number of different politeness theories have been constructed over the years. The politeness theory by Leech (1983) and that by Brown and Levinson (1987, 1978) notably belong to the first generation of such theories. Second-generation politeness theories, such as that of Locher and Watts (2005), which is introduced later, and the concept of im/politeness (Culpeper 2005; Culpeper 1996; Culpeper, Bousfield & Wichmann 2003; Mills 2003), are certainly of equal importance when discussing this overarching construct in social interactions. Nevertheless, despite criticism of Brown and Levinson's seminal work on this topic, their theory is in the centre of discussions in this study.[3] Henceforth, politeness theory refers solely to that of Brown and Levinson, which is summarised with relevance to the current study in the upcoming paragraphs.

[3] One strong criticism made against this theory regards a clear Western orientation (cf. Leech 2014: 81-89) and its roots in anglophone languages, while claiming to be a universal. Though certainly rightly criticised for this, this is not a limitation for the study at hand, which itself is based on American English data.

Different to the intuitive ideas of what it means to be polite as a layperson, the concept of politeness in pragmatics has a different quality to it, and its meaning is more strictly defined. This difference marks the line between first- and second-order politeness, a terminology coined by different researchers (Eelen 2001; Locher & Watts 2005; Watts, Ide & Ehlich 1992). In line with these notions, this study considers first-order politeness to "[…] correspond to the various ways in which polite behaviour is perceived and talked about by members of socio-cultural groups" (Watts et al. 1992: 3). Second-order politeness is defined as "[…] a theoretical construct, a term within a theory of social behaviour and language usage" (Watts et al. 1992: 3). The study at hand focusses on data and discussions from a second-order politeness perspective. It analyses different modifications of the formulation of apologies as found in orally produced utterances in terms of second-order concepts and on a meta-level.

Successful communication is assumed here to start by adhering to Gricean theory, including the cooperative principle (CP) and the corresponding maxims of quantity, quality, relations and manner (Grice 1975: 47). However, politeness is assumed not to be automatically achieved merely by presenting oneself as a cooperative communicator along these lines. With the focus of this study on Brown and Levinson's politeness theory, to quote their stance here:

> […] Grice's CP (however it is finally conceptualized) is of quite different status from that of politeness principles. The CP defines an 'unmarked' or socially neutral (indeed asocial) presumptive framework for communication; the essential assumption is 'no deviation from rational efficiency without a reason'. Politeness principles are, however, just such principled reasons for deviation. (Brown & Levinson 1987: 5)

Consequently, it is necessary to modify speech acts depending on the situational context in which they appear and a number of diverse factors beyond the goal of efficiency. This especially includes those on the micro- and macro-social levels. As for the macro-social factors, these are not at the centre of this study. In fact, only those of region and age have a minor role in the analysis and discussion, due to the findings in this study's dataset. Micro-social factors form the main focus. These are conceptualised in line with the categorisation of the micro-social factors proposed by Brown and Levinson (1987: 176) and represented by the three distinct factors of power (*P*), social distance (*D*) and the intrinsic seriousness of the imposition (*Rx*).[4] Within this framework, *Rx* is claimed to mirror "[…] the degree of imposition of the speech act on the hearer's wants of self-determination or approval" (Ogiermann 2009: 11), and it is employed as the independent variable in this study.

Note, however, that Spencer-Oatey (2008: 36-39), in her theoretical construct of rapport management, has mentioned numerous additional factors that may also have a role,

[4] Though this micro-social factor is usually abbreviated with R and not Rx, this decision was made to avoid confusion with the abbreviation of R representing the correlation value for Pearson's R in later parts of this study.

including the number of participants – whether other people are listening in on the conversation – cost-benefit considerations, social or interactional roles and the activity type. Cost-benefit considerations refer to the question of what one has to gain from the message and what costs are involved. Social or interactional roles, however, offer closer insight not only into the power and distance relationship, but also into whether the communicators, for example, act in the roles of Teacher-Student or, in the case of this study, in Friend-Friend constellations. These social or interactional roles are further bound to impact the way we formulate our message. The final factor, activity type, considers the communicative genre and its underlying rules, or as she calls it, "the type of activity that is taking place; for example, a lecture, a job interview or a court trial" (Spencer-Oatey 2008: 38).

Nevertheless, even when adding these factors to the enumeration of micro-social factors posited by Brown and Levinson (1987: 176), the reason for adapting the formulation of one's message to the situational context remains the same. Ultimately, it surrounds the aspects of our need for self-determination and approval, our self-image (i.e., our "face", as defined by Goffman 1971, referring to Durkheim 1976 [1915]) and what needs to be done in order to maintain it. Saving face is the reason that we modify our utterances according to these micro- and macro-social factors in such a way that we keep our public self-image intact – or at least as unharmed as possible. The concept of public self-image includes the well-known distinction between two different wants, which are inherent to this idea: positive and negative face. Hence, they build the basis for Brown and Levinson's (1978: 2) proposal for three main strategies for being polite: positive politeness, negative politeness and off-record politeness. Off-record politeness results in formulations which are made in such a way that they no longer qualify as the face-threatening act itself. The other two, however, attend to the corresponding face needs: positive face (the wish to be liked) and negative face (the wish to be left alone; Brown & Levinson 1987: 2). Connected to this is the idea that many speech acts are, in themselves, face-threatening acts (FTAs). Consequently, they lead to a Speaker's decisions on how to best perform the speech act in question, depending on the micro-(and macro-)social factors, making their formulation an overall complex endeavour, related to the complexity of the interplay of contextual factors surrounding the speaker's situation.

Ultimately, different strategies can be selected when one is in a situation in which the Hearer's face is threatened; the degree of face threat that these strategies lead to have been famously described by Brown and Levinson (1987: 69). To briefly summarise their idea, when faced with a situation in which a speech act is to be performed, one can decide to use strategies which are either more or less face-threatening, as ordered from 5 to 1. The least face-threatening strategy is not doing the FTA at all (Strategy 5) which is not actually an option in the study at hand (see Chapter 3.1.2). If one, however, decides

to do the FTA, then one can do it off record, as mentioned in the third politeness strategy. This would, for example, include formulations such as hints, where the actual FTA is not directly obvious from the chosen formulation (Strategy 4). Notably, these formulations would, accordingly, no longer be in line with the CP. Deciding against this level of indirectness leads to formulations in which the FTA is done on record.

This is also called *doing the FTA baldly*, and it involves no attempts to mitigate the face threat by choosing the most direct – and therefore the most face-threatening – strategy (Strategy 1). Performing the FTA with redressive action, in turn, leads back to the two forms of expressing this redress: using politeness strategies which address the positive face (Strategy 2) or the negative face (Strategy 3). Again, which strategy is chosen is determined by the face threat and the contextual factors surrounding the speech act situation in the manner as it is described in detail for the speech act at hand below.

This repeatedly evoked ability to modify one's formulations according to contextual constraints is part of what is called *pragmatic competence*, which is said to "reflect […] an individual's social competence" while notably, it is also suggested that "[s]ome of us are 'better' at this than others" (Edmondson 1981: 274). This inherent and, arguably, somewhat intuitive judgement is, in reality, quite complex. This is especially true when pointing toward differences in socio-cultural surroundings, i.e. in intercultural encounters. In fact, the application of the two principles mentioned by Brown and Levinson (i.e., the PP and the CP) differs between cultures. Some cultures value the PP higher in some situations and the CP higher in others (Leech 1983: 80). This highlights the need to base any exploration of the interface between this theoretical background and the pragmatic and prosodic dimensions on only one language; furthermore, to keep additional macro-social factors stable, it is ideal to focus on only one variety of said language.

The applicability of the strategies for doing the FTA to the speech act of apology is discussed later; however, a chapter on politeness theory is not complete without addressing made criticism on Brown and Levinson's framework at least in some detail. This includes the proposal of helpful extensions to the theory, which can form a broader basis for the later Discussion. Accordingly, the focus here is on improvements and changes that have been suggested in the past, most notably by Locher and Watts (2005: 10). They have more clearly established the line between first- and second-generation politeness, arguing that second-generation politeness is actually a theory of relational work, while not including what the layperson understands as politeness at all. Consequently, their first and predominant criticism is that politeness theory is not a theory of politeness but of facework (Locher & Watts 2005: 10). Their conceptualisation of this relational work as performed in social interactions, instead of relying solely on the concept of politeness, therefore employs the terminology of appropriateness and inappropriateness in a given situational context. They have argued

that not only does polite behaviour have a position in the management of social interactions, but that all other behaviours, including aggression and rudeness, also have a place. They have posited that there are situations in which we actively want to be impolite and in which this is situationally appropriate. They "[…] are not therefore arguing that relational work is always oriented to the maintenance of harmony, cooperation, and social equilibrium" (Locher & Watts 2005: 11). In short, they have proclaimed that being situationally polite includes polite as well as non-polite behaviour, both of which are situationally appropriate. If one behaves as expected in a specific situational context, then this supposedly unnoticed behaviour aligns with the idea of being appropriate (or, as they call it, *politic*) behaviour. Conversely, impolite and overpolite behaviour can occur as well. Here, facework is performed in such a way that it is not unnoticed within its situational context in either direction. Important here is the view of Locher and Watts of what polite behaviour denotes (as opposed to what they call *non-polite*). While being appropriate to the situation in any case, polite speech is positively marked, and "[…] polite behavior is always politic while politic behavior can also be non-polite" (Locher & Watts 2005: 12). This differentiation between polite and non-polite behaviour as well as their concept of appropriateness is of considerable importance in the later Discussion.

2.1.2 Apology as a speech act

As mentioned already, apologies are one of the most widely researched speech acts (Ogiermann 2009: 45). Therefore, and especially due to their speech act type and their formulaic nature in some parts, they are seen as ideal specimens for the discussion of the pragmatics-prosody interface. Specifically, the IFID introduced is highly formulaic. This, together with the ability to intensify its message, for example, by adding adverbials, make them suitable for a direct comparison with one another on the prosodic level. Further, within the framework of speech act theory, apologies are considered to be expressives (Searle 1976). The Speaker (S) expresses an emotion toward the Hearer (H) in the form of "[…] sorrow or regret for some state of affairs that the speaker is responsible for" (cf. Searle & Vanderveken 1985: 211). Prosody is especially important in conveying such mentioned underlying emotions, thus lending it a particularly high importance for this speech act type.

In addition to these intriguing features for a prosodic analysis, an important general characteristic of apologies is that they are post-event acts and are considered to be convivial, because "the illocutionary goal coincides with the social goal" (Leech 1983: 104). This causes some complications with the idea of the strategies for doing FTAs proposed by Brown and Levinson. Here, the threat to the Speaker's face caused by the apology itself is not the only factor which needs to be navigated. The relational work necessary is also, if not mostly, dependent on the offence which led to the apology. It needs to be appropriately addressed by the formulation chosen to balance out the face

threat that occurred. Accordingly, Goffman (1971: 140) has referred to apologies as part of a remedial interchange, and it is often noted that their aim is to re-establish social equilibrium and harmony (see also Goffman 1976: 68; Leech 1983: 125).

Furthermore, for a speech act to qualify as an example of an apology, it needs to adhere to the felicity conditions (Searle 1969: 67), of which two sets are mentioned here for apologies. The first was proposed by Owen (1983), who has based them on the general description of felicity conditions compiled by Searle (1969) and his later works (Searle 1976, 1975). Owen (1983: 117-118) has named three preparatory rules. The first demands that "[t]he act [(A)] specified in the propositional content is an offence against the addressee H", and the second stipulates that "H would have preferred S's not doing A to S's doing A and S believes H would have preferred S's not doing A to his doing A". The final preparatory rule specifies that "A does not benefit H and S believes A does not benefit H". In addition to the preparatory rule, the sincerity rule demands that "S regrets (is sorry for) having done A", while the essential rule denotes that the apology "[c]ounts as an expression of regret by S for having done A". Ogiermann (2009: 46) has formulated these felicity conditions for apologies for her own research and has chosen similar wording. However, she has employed a less detailed and more condensed style, especially for the propositional content condition. By equally using the categories for felicity conditions proposed by Searle (1969: 67), she has described them as follows:

- Propositional content: Past act A done by S
- Preparatory condition: S believes that A (sic!) is an offence against H
- Sincerity condition: S regrets act A
- Essential condition: Counts as an apology for act A

This formulation of the felicity conditions is arguably sufficient for an unambiguous identification and definition of this speech act; the first propositional content condition proposed by Owen already includes the word *offence*, which makes it somewhat superfluous to stress that the offended person does not benefit from the offence and would have preferred that it did not happen.

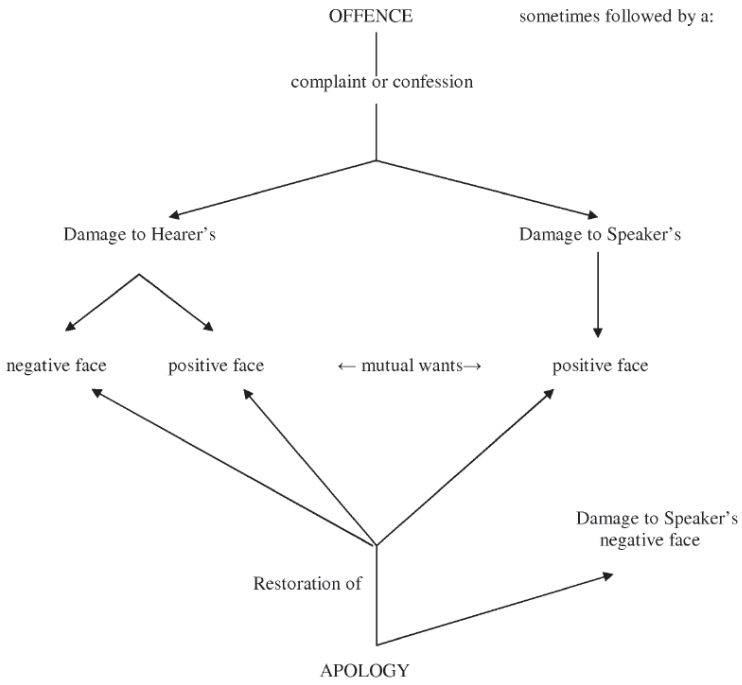
An additional note must be made regarding directness and its importance in mitigating FTAs. Due to the face-saving attributes of apologies, in Brown and Levinson's framework, apologies – along with other speech acts which do not pose an immediate threat to the Hearer, such as thanking – are cast aside (cf. Ogiermann 2009: 14). In fact, the determination of the weight of the face threat that happened in the situational context behaves differently from instances in which the speech act itself is the main and often only face threat to the Hearer. In these speech acts, which pose the FTA themselves and as mentioned before, the act is frequently mitigated by lowering the level of directness even to the degree of only hinting at the matter. This is far less likely

to occur in the performance of apologies. In fact, apologies are expected to be performed on record (Ogiermann 2009: 14), and it is fully acceptable to formulate an apology without any redressive action (cf. Ogiermann 2009: 50). Consequently, failure to commit to this expectation may lead to further damage to the Speaker's face (cf. Ogiermann 2009: 50). This tendency for directness can be seen in the fact that, commonly, apologies are formulated using the most direct strategy of an IFID, ensuring that the intention to apologise is immediately clear to the Hearer. This is additionally ensured by a tendency to increase the illocutionary force further (cf. Holmes 1984) by, for example, adding intensification on the lexical level (e.g., *I'm very sorry*).

In summary, due to their actual status as face-saving acts (FSAs) and their ability to restore social harmony, the face threat that determines the amount of aggravation needed in the formulation of apologies is typically defined by the previously committed offence itself and the situational circumstances surrounding it. The reason for both upgrading and downgrading strategies being at the Speaker's disposal is that performing an apology is, ultimately, both face-saving and face-threatening, with the latter applying to the Speaker rather than the Hearer. Desiring to restore social balance and depending on the severity of the face threat caused by the offence, the more the Speaker of the apology damages their own (mostly positive) face. This is based on the fact that "[b]y apologising we admit that we are at fault and somehow responsible for a transgression. This is arguably why we sometimes feel reluctant to apologise" (Deutschmann 2003: 40).

It is necessary at this point to offer additional detail regarding the idea of two different points in time at which these respective face threats occur and how they work together. Figure 1, which is directly adopted from Ogiermann (2009: 54), provides a coherent overview of the complexity of the face-damaging and -saving qualities of apologies. These two perspectives are highlighted one after the other, starting with the face threat caused by the offence itself. Offences, visualised at the top of this figure, can be caused by and in many different situational contexts. Wolfson, Marmor and Jones (1989: 178-179) distinguish three kinds of offences: those with a VIOLATION AGAINST A SOCIAL OR WORK-RELATED COMMITMENT OR AGREEMENT, those which were made AGAINST THE PROPERTY OF OTHERS, and the overarching category of violating THE OBLIGATION NOT TO CAUSE DAMAGE OR DISCOMFORT TO OTHERS. Aijmer (1996) has chosen another way of differentiating between offences, which may intuitively correlate with the severity of the committed offences, although she has not made this explicit.

Figure 1. Face Considerations Involved in Remedial Interchanges (Ogiermann 2009: 54).[5]



These violations fall into the categories of TALK, TIME, SPACE, SOCIAL GAFFES and INCONVENIENCE OR IMPOLITENESS TO ANOTHER PERSON AND POSSESSION. This last category comprises the second-largest portion of her data (41.6%). It is second only to the amount of TALK offences (45.6%) and appears to be somewhat at odds in this list, given that it is based on two theoretical concepts: almost any type of offence against the person or possession. She offers some examples of what she considers to be a part of this category, namely "mistaking [somebody's] identity, leaving the room before the conversation is finished, interrupting the conversation in order to answer the telephone etc., non-compliance with a request, invitation, proposal, etc." (Aijmer 1996: 109). Therefore, this category appears to encompass the majority of instances which do not fall into any of the other categories.

Finally, Deutschmann (2003) has employed a relatively similar approach. He has categorised the offences he encountered in his corpus-based data according to whether the offences were ACCIDENTS, MISTAKES AND MISUNDERSTANDINGS, BREACH OF EXPECTATIONS, LACK OF CONSIDERATION, TALK OFFENCES, SOCIAL GAFFES, REQUESTS, HEARING OFFENCES or those INVOLVING BREACH OF CONSENSUS. Aligned with Aijmer's findings, Deutschmann (2003) has posited that LACK OF CONSIDERATION typically holds more serious offences. After HEARING OFFENCES with twice as many apologies, LACK OF CONSIDERATION is the category found most often in his data (Deutschmann 2003: 54). Notably,

[5] From Ogiermann (2009: 54). © John Benjamins. Reprinted with permission.

generated through her field note data, Holmes (1995: 167) has proposed very similar offence categories and has distributed the apologies obtained into the categories of SPACE OFFENCES, TALK OFFENCES, TIME OFFENCES, POSSESSION OFFENCES, SOCIAL GAFFES and INCONVENIENCE.

Depending on these different types of offences and their overall natures, Figure 1 reveals that they can cause damage to the faces of the Hearer, the Speaker, or both. For the Hearer, the face damage can occur to their positive face, for example, in cases in which the Speaker insulted the Hearer or caused emotional harm, which made the Hearer feel less liked. Depending on the offence, it can, however, also cause harm to the Hearer's negative face, such as when bumping into them, being late for a meeting or forgetting to return their book. In all of these cases, the Hearer's need to be left alone and freely reign over their personal time, space, possessions and health, among others, is violated. Changing the perspective to that of the Speaker, by violating any of the two faces of the Hearer with the offence itself, the Speaker risks being liked less, suffering damage to their positive self-image and, therefore, to their own positive face.

Moving on to the apology which is prompted by the offence, the type of offence and the face damaged by it have a particular influence on the formulations chosen. This selection is made with the intention to balance out the actual face threats caused by the offence. From the perspective of the Speaker, the first manner in which this speech act attends to the restoration of face – here the positive face – is the Speaker's willingness to harm their own face by apologising, hence the indication of mutual face wants in Figure 1. Due to the self-humiliation one feels when apologising, the Hearer may like the Speaker more after they have indicated their acknowledgement of the social rule they violated. This restorative function can balance out the damage that the offence caused to the Speaker's positive face.

Additionally, due to the obligation to perform an apology, which is dictated by social conventions, the negative face of the Speaker is damaged. However, this negative face damage in itself does not yet bring relief to the previous damage caused by the offence. The mutual wants are the restoration of the positive face of the Speaker and the positive and negative faces of the Hearer. The negative face threat of the apology itself on the Speaker is separated from this idea. Notably, Olshtain (1989: 156) has strictly defined an apology as a speech act that aims to offer support for the Hearer who actually or potentially suffered from a violation of their face needs. Many of the strategies with which apologies can be performed aim for this goal. The next section addresses how these face violations and ultimately, restorations are addressed by the different strategies at a Speaker's disposal.

2.1.2.1 Forms and functions of strategies for performing apologies

Given the nature of the strategies with which apologies can be performed, this speech act is generally considered to be a speech act set (Olshtain & Cohen 1983), an assumption that is based on the diversity of "semantic formulas i.e., the various verbal realizations of an apology" (Olshtain & Cohen 1990: 46). The different parts of the speech act set, especially the IFID, are highly routinised (Coulmas 1981: 69). For a study on prosody, this characteristic simplifies pattern detection, compared to less routinised speech acts, such as complaints (cf., e.g., Ogden 2011). For meaningful pragmatic and prosodic analyses, it is essential to separate the formulation of the entire apology into these different sub-parts by assigning them to the discrete categories, based on the underlying functions they fulfil, which are displayed in the following.

The most popular categorisation scheme proposed for the speech act at hand is the CCSARP coding manual (Blum-Kulka et al. 1989b). It was established as part of a large-scale research project, the CCSARP (see also Blum-Kulka, House & Kasper 1989a; Blum-Kulka & Olshtain 1984; Faerch & Kasper 1984), that focussed on a cross-cultural, cross-variational and interlanguage-related description of the strategies employed in requests and apologies. The proposed categories that originated from this project and are related to apologies are introduced in detail here. They are further highlighted regarding their application for the study at hand in the Methodology chapter (Chapter 3.3.1). Unlike other coding schemes, such as the one by Fraser (1981),[6] who built his data sample on a combination of field notes, anecdotes and intuited data, the CCSARP coding scheme is based on data elicited via written discourse completion task (DCT) items. Just as it was established as one of the basic notions for the necessity of PPs, the set of apology strategies found in the CCSARP data is considered to be universal but contextually dependent. This includes the cultural context in which the apology was uttered (Blum-Kulka & Olshtain 1984).

The central and most direct part of an apology is 1) an expression of apology, called the IFID. According to Blum-Kulka and Olshtain (1984: 206), it contains all forms of apologies which are routinised and formulaic. As a further intensification of an IFID and in addition to adverbials (e.g., in the formulation *I'm very sorry*), EXCLAMATIONS are of special importance to this study. Particularly when they occur

[6] Fraser (1981: 263-264) suggests a categorisation of nine strategies, with combinations of them possible, namely 1. ANNOUNCING THAT ONE IS APOLOGISING, 2. STATING ONE'S OBLIGATION TO APOLOGISE, 3. OFFERING TO APOLOGISE, 4. REQUESTING THE HEARER ACCEPT AN APOLOGY, 5. EXPRESSING REGRET FOR THE OFFENCE, 6. REQUESTING FORGIVENESS FOR THE OFFENCE, 7. ACKNOWLEDGING RESPONSIBILITY FOR THE OFFENDING ACT, 8. PROMISING FORBEARANCE FROM A SIMILAR OFFENDING ACT, 9. OFFERING REDRESS. A tenth one, RECANTATION, he quickly discarded. Fraser says that the first four should be seen as direct strategies, while not actually admitting to the offence, but that this can be seen as included in *apologise* and *apology*. Strategies 5-9 are less direct, without actually using the word 'apology' in any form.

at the beginning of an apology, these emotional expressions are seen as an "[i]nternal modification of an IFID" (Vollmer & Olshtain 1989: 212).

The second possible strategy with which an apology can be performed is that of an expression in which the Speaker addresses their willingness for 2) TAKING ON THE RESPONSIBILITY for their action. In addition to the IFID, this has been said to be not situation-specific but a general strategy (Olshtain 1989: 157). Formulations falling under this strategy can be further divided into six sub-categories (Blum-Kulka et al. 1989b: 291-292), which are presented in Table 1. The order in which these strategies are presented can be seen as taxonomical, with a decreasing level of willingness to accept responsibility for the offence. This willingness "may be placed on a continuum from strong self-humbling on the S's part to a complete and blunt denial of responsibility" (Blum-Kulka & Olshtain 1984: 207). In addition to these sub-strategies, the category of expressing SELF-DEFICIENCY can be identified (cf. Blum-Kulka & Olshtain 1984; Olshtain 1989). This can be classified as a strategy between EXPLICIT SELF-BLAME and LACK OF INTENT (Cohen, Olshtain & Rosenstein 1986: 53) or simply seen as ACCEPTING RESPONSIBILITY in general (Blum-Kulka & Olshtain 1984: 207).

Table 1. CCSARP Coding Categories for TAKING ON RESPONSIBILITY (with fabricated examples).

Strategy	Examples
EXPLICIT SELF-BLAME	*My mistake.*
LACK OF INTENT	*I didn't mean to upset you.*
JUSTIFY HEARER	*You're right to be angry.*
EXPRESSION OF EMBARRASSMENT	*I feel awful about it.*
ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY	*I missed the bus. / I forgot about it.*
REFUSAL TO ACKNOWLEDGE GUILT	*It wasn't my fault.*

Other researchers have used different schemes to categorise formulations with the illocution of TAKING ON RESPONSIBILITY. Deutschmann (2003: 84) has chosen an approach in which he has distinguished between strategies which either express TAKING ON RESPONSIBILITY or MINIMISING RESPONSIBILITY. In this proposed categorisation, TAKING ON RESPONSIBILITY includes such expressions which denote an EXPLICIT or IMPLICIT ACKNOWLEDGEMENT (in which IMPLICIT ACKNOWLEDGEMENT includes SELF-DEPRECATION and OFFER OF REPAIR) and PROMISE OF FORBEARANCE. MINIMISING RESPONSIBILITY is instead performed via EXPLANATIONS, SCAPEGOATING, EXCUSES, JUSTIFICATIONS and claiming LACK OF INTENT. Accordingly, some align with the CCSARP strategies included previously or mentioned in the following.

Although the following strategies can also fulfil the illocution of an apology, 3) EXPLANATION OR ACCOUNT, 4) OFFER OF RESTORATION and 5) PROMISE

OF FORBEARANCE are explicitly referred to as being situation-specific in the CCSARP (Olshtain 1989: 157). Utterances which are an EXPLANATION for the apology are expected to downgrade the face loss that the apology causes to the Speaker. This is achieved by blaming external factors for having caused the offence. Therefore, they are face-saving strategies for the Speaker rather than the Hearer. Combining this with the severity of the offence, the Speaker may actively apply strategies which make the offence seem less severe by concealing or minimising the offence that led to the apology. Consequently, "the respondents reduced its severity and the corresponding damage to the hearer's and the speaker's positive face" (Ogiermann 2009: 164).

This has also been expressed in Deutschmann's (2003) categorisation for MINIMISING THE OFFENCE, in which EXCUSES and JUSTIFICATIONS were included. The strategy of MINIMISING THE DEGREE OF THE OFFENCE (as well as EXPLANATIONS OR ACCOUNTS in their function of placing blame on a third party) may mitigate the severity and/or deflect from the responsibility of the Hearer. Apologies which contain downgraders of such kind may, consequently, involve fewer intensifications or other upgraders. A similar function can be ascribed to EXPLANATIONS OR ACCOUNTS, which has been further confirmed by Fraser (1981: 260). He notes that "[…] the 'goodness' of an account rests on the degree to which the defender can transfer the responsibility of the offence to another party or source". Note, though, that ACCOUNTS can also serve a different function, where, instead of denying responsibility, the Speaker accepts it in the ACCOUNT itself. This is not face saving for the Speaker but face threatening and therefore upgrades the apology (Ogiermann 2009: 59). The function fulfilled by the ACCOUNT and whether it attends to the positive or the negative face can only be gathered from its exact formulation.

The final two strategies mentioned in the CCSARP, OFFER OF RESTORATION (here referred to as OFFER OF REPAIR) and PROMISE OF FORBEARANCE, both have commissive characteristics. They commit the Speaker to a future act or a specific way of behaviour. Strategies categorised as an OFFER OF REPAIR are produced "[i]f the damage or inconvenience which affected the hearer can be compensated for [...]; this offer must be directly related to the offence perpetrated: in other words, you can only repair a reparable" (Blum-Kulka et al. 1989b: 293). Finally, PROMISE OF FORBEARANCE has been defined by Blum-Kulka et al. (1989b: 293) as "[w]henever the speaker's sense of guilt is strong enough, he or she may feel the need to promise that the offensive act will never occur again".

Additionally, other strategies are found in apologies which do not directly perform the illocution of the apology. These are here referred to as *OTHER STRATEGIES* as opposed to *STRATEGIES PROPER*, the latter denoting the five strategies previously explained. They should be seen as modifications which either upgrade or downgrade the apology or adhere directly to positive or negative politeness needs. The first is

expressing CONCERN FOR THE HEARER, which does not appear as a coding category in the CCSARP coding manual itself. It can be seen as an external modifier which intensifies the apology by showing additional support for the Hearer (Olshtain 1989: 158), which is one of the main tasks an apology is supposed to fulfil.[7] Vollmer and Olshtain (1989: 213) additionally note that this demonstration of concern seems to be routinised behaviour in some situations, which then impacts the intensifying function. Nevertheless, they conclude that "[…] the use of this strategy reveals more sympathy than its absence within an apology, independent of how sincere the speaker has meant his or her utterance" (Vollmer & Olshtain 1989: 213). Another strategy with somewhat similar intentions to EXPLANATIONS OR ACCOUNTS is DISTRACTING FROM THE OFFENCE. This strategy can be performed in different ways, which leads to a number of sub-categories (QUERY PRECONDITION, ACT INNOCENTLY or PRETEND NOT TO NOTICE THE OFFENCE, FUTURE OR TASK-ORIENTED REMARK, HUMOUR, APPEASER, LEXICAL AND PHRASAL DOWNGRADERS). According to Blum-Kulka et al. (1989b: 293-294), these pose further options to mitigate the apology and the offence.

Finally, it must be acknowledged that "[a]lthough it may be impossible to enumerate a finite number of apology strategies, one can specify the strategies people seem to prefer" (Aijmer 1996: 82). One tendency that was found across all previous studies on apologies covered in this Theory part is the overwhelming number of IFIDs that apologies involve. A remarkable number are present in the majority of apologies elicited, be it in DCT studies (Salehi 2014; Olshtain et al. 1986), corpus data (Aijmer 2019, 1996; Deutschmann 2003), ethnographic data (Holmes 1995, 1990, 1989) or role plays (Trosborg 1987; Cohen & Olshtain 1981). In all other strategies, however, noticeable differences were found regarding Speakers' preferences in different contextual situations and with different interlocutors.

Cohen & Olshtain (1981) elicited their data with DCTs with a focus on various micro-social factors. Due to their situations' similarity to the situations employed here, three are of immediate importance: a forgotten meeting, backing into someone else's car and bumping into an old lady and hurting her, knocking over packages. While the strategy of EXPLANATION OR ACCOUNT has not been coded in their scheme, the frequencies they have uncovered reveal that the usage of the other strategies differ between these situations in interesting ways. In their American English native speaker group, the apologies across all situations contain the exact same proportion of IFIDs, with 83% of apologies containing this strategy. The number of TAKING ON RESPONSIBILITY, however, decreases from the first to the third situation mentioned (forgotten meeting with a friend: 75%; backing into someone else's car: 58%; hurting

[7] Ogiermann (2009) describes it as a positive politeness strategy but not as upgrading the apology.

an old lady: 33%). The amount of OFFER OF REPAIR demonstrates the opposite tendencies, with values of 33%, 66% and 100%, respectively.

In another study by Olshtain (1989), she again elicited data based on DCTs. However, this time, the data stems from Canadian and Australian English speakers (and speakers of other non-English languages) and in slightly different situations. Again, three are comparable to situations utilised here: forgetting a borrowed book (in her study, the book belongs to a professor), being late to a meeting with a friend and backing into someone else's car. Closer insights are revealed across all seven situations she created: 66% of the Canadian and 75% of the Australian apologies contained an IFID. Additionally, 65% of the Canadian and 71% of the Australian apologies contained instances of TAKING ON RESPONSIBILITY, with only 13% and 12%, respectively, including an OFFER OF REPAIR. Additionally, for the Australian English speakers, the sub-strategies for TAKING ON RESPONSIBILITY that were employed in the forgotten book situation were 95% JUSTIFY HEARER. This category was only present for 62% of the cases of TAKING ON RESPONSIBILITY in arriving late for a meeting and 63% for apologies for damaging a car. In the damaged car situation, however, 27% of the informants claimed SELF-DEFICIENCY when TAKING ON RESPONSIBILITY for the offence (Olshtain 1989: 170).

Finally, Holmes (1995, 1989) has performed multiple studies which all operate with the same data based on New Zealand English speakers (with a focus on gender differences). She has found few cases in which the informants assumed responsibility, offered repair or promised forbearance. She has, however, found a remarkable number of EXPLANATIONS OR ACCOUNTS, occurring in almost one-quarter of all apologies. Here, it stands to reason that this difference from the other findings may, at least partially, have been caused by the data collection instrument (i.e., the usage of ethnographic data in the form of field notes). An additional influence could be that the majority of the apologies she elicited were female-to-female apologies; more importantly, the apologies occurred in light to medium severity situations. However, this does not explain the small numbers she obtained for TAKING ON RESPONSIBILITY, the numbers by Olshtain et al. (1986) have suggested a tendency to assume responsibility for light to medium severity offences. In any case, many of these findings provide initial insights into the impact that differences in the severity of the offence have on the realisation of apologies. This effect is discussed in the next chapter in light of the literature that addresses the overall concept of severity and its role in the speech act at hand.

2.1.2.2 Apologies and the severity of the offence

Apologies' inherently polite nature and its complex combination of the characteristics of FTAs and FSAs have been noted. Despite these issues, what can be adopted directly

from politeness theory is the measurement of the weight of the face threat established by the situational context that needs to be balanced out by the apology. As mentioned, these are assumed to be especially determined by the micro-social factors of DISTANCE, POWER and IMPOSITION (*Rx*). The weight itself can be expressed using the formula $Wx = D(S, H) + P(S, H) + Rx$ (Brown and Levinson 1987: 76). The weight (*W*) of the FTA is determined by the social distance between the Speaker and the Hearer, in addition to the relative power relations between the Speaker and the Hearer and the Imposition that is caused by the FTA. As highlighted for this last micro-social factor in this formula, IMPOSITION here refers to the severity of the offence that was committed. This severity must be judged based on "'objective' criteria such as to what extent it violates norms of behaviour in the given sociocultural structure, and how seriously it affects the interlocutors' role-relationship in terms of their relative status and positional roles" (Faerch and Kasper 1984: 220). In other words, although the focus in this study is solely on the severity of the offence, measuring how severe the offence is does take into account the relationship between the interlocutors (in terms of distance and power) to some extent.

The reason why IMPOSITION was chosen as this study's independent variable, and thus systematically varied in the situational descriptions, is because it is assumed to be the one factor with the strongest effect on the formulation of the apology and by Olshtain (1989) it was even chosen as the "representative contextual factor in the socio-pragmatic set of the apology" (Olshtain 1989: 160; cf. also Maeshiba, Yoshinage, Kasper & Ross 2006). This was based on her finding that the ratings obtained from her informants for the severity of the offence and the obligation of the Speaker to apologise to the Hearer showed patterns that were very similar (though this finding was again based on the results from the Hebrew informants in her study). The fact that severity of the offence does not exclude additional influences caused by the other two micro-social factors in the measurement of the severity itself is likely what produces this status. Coulmas (1981: 76), who calls it *the gravity of the object of regret*, states that our choice of formula depends on this (and the nature of the offence), thus naming yet another important variable in the formulation of apology: the type of offence, as mentioned above. He directly refers to the different IFIDs at one's disposal and their selection in accordance with this factor, including different intensification strategies.

Furthermore, the centrality of this factor can be seen in a study conducted by Bergman and Kasper (1993: 92). They have established a direct connection between severity and the perception of the highest face loss suffered in a situation for their Thai and American informants. They have stressed, however, that this is only a tendency and have referred to possible complications regarding the concept of face between these two cultures. To conclude, one of the main functions of apologies is to remedy the offence and to attend to the Hearer's negative (and the Speaker's positive) face; therefore, the

question of the offence and the degree of damage (social, physical or otherwise) caused to the Hearer is essential for the selection of strategies by the Speaker.

Determining the severity of an offence can be approached in different ways, starting by using existing taxonomies of offences, as previously mentioned. For the different offences identified in Aijmer's (1996: 109) work, the order in which she has named those offences may provide an idea regarding their underlying severity. One could possibly argue that her enumeration starts with light offences that belong in the category of TALK, followed by offences against TIME AND SPACE. At the end of her list of offences is the category of INCONVENIENCE OR IMPOLITENESS TO ANOTHER PERSON AND POSSESSION, which is the broadest category. In the categories of offences posited by Deutschmann (2003) or Wolfson et al. (1989), no such order of offences can be identified. It is, arguably, a complicated endeavour to determine the actual severity of an offence beyond a taxonomical establishment of the categories based on almost intuitive ideas. Furthermore, these categories themselves can contain manifestations of the offence that differ in severity.

However, Holmes (1995) in her data on New Zealand English has, indeed, proposed a categorical distinction between heavy offences, medium offences and light offences. Into the category of heavy offences, she has counted the offences of "e.g. knocked someone over so they were hurt, inflicted serious damage on someone's car, insulted someone publicly" (Holmes 1995: 171). The category of medium offences incorporates such situations like "e.g. broke someone's stapler, kept someone waiting so they were late for a film" (Holmes 1995: 171) and, finally, light offences have been identified by her as "e.g. bumped into someone accidentally, forgot to return a library book on time" (Holmes 1955: 171). This further shows that it is not as simple as identifying one offence type as representing one severity level. The same offence type (e.g., an offence against the property of the Hearer) can be more or less severe, depending on the combination of contextual factors surrounding it.

One solution has been proposed by Bardovi-Harlig, Rose and Nickels (2008), who have performed a study based on data from native speakers of Arabic, Chinese, Korean and Japanese in their L2 English. They have discovered a way to systematically vary the severity of the offence in their apology situations with maximal comparability and differentiation. In the description of their apology-eliciting scenario, they have consistently employed the context of a person being late for a meeting. Within these descriptions, they have, however, increased the length of time that the Speaker of the apology was late, varying it between 5 minutes and 25 minutes. Concurrently, the rest of the situational description remained stable.

Interestingly, in their study, Cohen and Olshtain (1981) have also varied some of the situations they used to elicit apologies further in line with a continuum from formal to

informal, while keeping the essence of these contexts the same. Though they have expressed their interest in this impact of formality on apology formulation, some parallels with severity can certainly be argued for. For example, the situation which involves bumping into an old lady mentioned above differs between bumping into the old lady without this being avoidable (because she was in the way), bumping into her and shaking her up a little and the, arguably, most severe case for which the results were mentioned above, in which the lady is actually hurt and packages are knocked out of her hands. The results they have obtained for their native speakers of English are as follows: the frequency of expression of apology has been highest in the situation in which bumping into the old lady was unavoidable (92%), the lowest frequency was found in the apology in which the old lady is slightly shaken up (75%) and the arguably most severe one obtained a frequency in-between (83%). Interestingly, while almost no cases of TAKING ON RESPONSIBILITY have been granted for the first situation (8%), 58% of the informants have acknowledged responsibility when shaking up the old lady as compared to the 33% who admitted their responsibility for the offence which caused physical harm. While the situation in which the collision was unavoidable logically leads to only small numbers of this strategy, the results they have obtained for the other two situations is intriguing and suggest a decrease in the Speaker's willingness to admit their part in the wrongdoing with increasing severity of the offence. Similarly low was the occurrence of an OFFER OF REPAIR in the situation in which bumping into the old lady was unavoidable, while 25% offered repair for the situation argued here to display a slightly more severe circumstance. Note again, though, that all of the informants in Cohen and Olshtain's (1981) study offered repair when knocking the lady over. While it has to be noted that these results were based on a number of only 12 informants, it gives interesting insights into the impact which this increased severity had on the realisation of the apology.

In any case, it is helpful to determine severity on a continuum between end points (the end points being high severity and low severity) and with a middle point called *moderate or medium* severity (cf. Holmes 1990; Wouk 2006). Incidentally, descriptions of medium-severity scenarios in DCT-based studies are frequently chosen to elicit apologies in research. These situations depicting offences of supposedly moderate severity are said to be, on the one hand, frequently encountered, and on the other hand, not so light that they would not warrant an apology in the first place (Jones & Adrefiza 2017: 97). As an example, Jones and Adrefiza (2017) have used three situations which, they have argued, are of moderate severity: missing a close friend's birthday party, revealing a close friend's secret about a job application and breaking a promise to return a close friend's book.

As mentioned, this minimises the risk posed by creating situations which are closer to either end of the severity continuum. On the one hand, there is the risk of creating

situations which depict a severity level that is overly light to prompt an apology. On the other hand, a severity level toward the high severity end point on the continuum runs the risk of being seen as 'beyond apology' and requires compensation or even leads to legal repercussions (Jones & Adrefiza 2017: 97). These high-severity offences can be defined as having

> major real-life consequences rather than involving easily repairable inconveniences. They may constitute illegal action [...], high material costs [...], potential or real obstruction of regular procedures and negligence of professional obligations [...] or violations of a person's physical integrity without this being an accepted job or task risk. (Bergman & Kasper 1993: 90)

The risk of being liable for an offence that causes legal issues is prone to impact the way in which we apologise. Scott and Lyman (1968), for example, in their categorisation of ACCOUNTS built on legal examples, have highlighted that there is a difference between an EXCUSE and a JUSTIFICATION for one's actions. Accordingly, "excuses are accounts in which the speaker admits that the committed act was wrong, but does not accept full responsibility, and justifications accept responsibility for the act, but deny that it was wrongful" (Ogiermann 2015: para. 4). Note that the first category, EXCUSES, is in parallel with a sub-categorisation for TAKING ON RESPONSIBILITY that was proposed by Blum-Kulka et al. (1989b) called *ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY* as well as, to some extent, LACK OF INTENT. These would accordingly be seen as more of an EXCUSE in a legal context than a JUSTIFICATION of one's actions. Both were mentioned in the categorisation by Deutschmann (2003) as strategies that minimise the offence. Regarding the functional strategies applied, Goffman (1971) has also discussed ACCOUNTS in apologies in legal contexts, differentiating between "GOOD" ACCOUNTS and "BAD" ACCOUNTS. The former successfully diverts some of the weight of the offence from the Speaker. One could even argue that these "GOOD" ACCOUNTS are exactly what the CCSARP established as the underlying function of EXPLANATION OR ACCOUNT; objective reasons without using the first-person pronoun during the utterance of this strategy (Blum-Kulka et al. 1989b: 293). Employing the sub-strategy of LACK OF INTENT, however, which has been estimated to be an EXCUSE more than a JUSTIFICATION, would, accordingly, be seen as a "BAD" ACCOUNT in such a legally challenging situation of harmful wrongdoing. Notably, when discussing the presentation of public figures in newspaper articles, Ancarno (2015: 146) states that "apologizers who are observed trying to avoid a full-blown apology (e.g., to save face or avoid legal liability) […] are often portrayed negatively". This circumstance illustrates the complex and somewhat risky nature of formulating EXPLANATIONS OR ACCOUNTS in apologies, as they can well endanger the success of this speech act itself. To sum up, such ACCOUNTS gain a certain centrality in the performance of apologies for offences severe enough that they are accompanied by potential legal consequences.

Returning to the question of how to determine and systematically apply different levels of severity in apology research, in some circumstances, it is methodologically necessary to build the data sample on such a maximally controlled situational description, as operationalised by Bardovi-Harlig et al. (2008), or the simplified idea of certain offence types being more severe than others. However, it generally makes sense to rely not only on the researcher's perception of severity of the offence, but also to allow others to quantify the offence on rating scales (see Hellbernd & Sammler 2016 for information on acoustic cues that are important in speech act perception). Often, this is done by a native speaker of the same demographics as in the actual study or the study's informants themselves. This approach was chosen by Olshtain (1989: 160); the scale used in her study ranged from 1 to 2, with 1 equalling low and 2 equalling high severity. As mentioned previously, some of her situations were similar to those created for this study. The values she has obtained for the situation of the forgotten book of a professor, for example, was judged as a 1.9 on average; being late for the meeting with a friend was rated with a 1.4. Damaging another person's car earned the highest ratings of these three situations, with an average severity value of 1.95. Note, however, that these numbers are only applicable for her Hebrew informants, as they are the only numbers for the judged severity of the offence disclosed in detail in her study.

Finally, it has been established that severity as well as the determination of its weight are crucial for studies of apologies, due to their impact on the chosen apology formulation. This deserves additional attention. Despite the impacts previously mentioned, one general effect that the severity of the offence has on the formulation of apologies regards their overall complexity and elaboration. Holmes (1995: 164-165) has noted that apologies for more weighty face threats were more elaborate, while in her study, the micro-social factors of social distance and relative power were also elevated. Regarding this elaboration of apology formulations, Holmes (1990) points to a similar direction: for her New Zealand English speakers, situations with a lower severity led to simple, explicit apologies. Those for medium severity situations were more likely to include an EXPLANATION and an ACKNOWLEDGEMENT (combined with an explicit apologetic formula). She has described them as simple but more formal and stresses that these apologies were produced with a variety of additional strategies, including TAKING ON RESPONSIBILITY[8] and PROMISE OF FORBEARANCE (Holmes 1990: 184). Consequently, the situations with higher severity led to more diverse and elaborate apologies. Finally, Fraser (1981: 267-268) has argued that the simple form of *excuse me* was, in more severe offences, often accompanied by an ACCOUNT. In high-severity offences, however, the formulation changed from including an ACCOUNT to an apology which included an OFFER OF REDRESS.

[8] She calls them ACKNOWLEDGEMENT OF RESPONSIBILITY and includes a number of sub-strategies (cf. Holmes 1990: 167).

Along the lines of necessary elaborations with increasing severity, claims have been made that the factor of severity of the offence may not have a direct connection to the likelihood of a Speaker to TAKE ON RESPONSIBILITY (Bergman & Kasper 1993: 97). Instead, it has been suggested that higher severity situations may call for an apology which is more elaborate than the simple act of TAKING ON RESPONSIBILITY. A reason for this is that "[…] where the offender is prepared to assume responsibility, an all-purpose apologetic formula, which is also used for ritualistic apology [*sic*], might not be felt to adequately convey a substantive apology, for a major offence" (Bergman & Kasper 1993: 95). Instead, a less formulaic, personalised apology which is specific to the offence that was committed may be in order and may be more likely to convince the Hearer of the sincerity underlying the apology (Bergman & Kasper 1993: 95). This includes the possibility to deliver an apology that is "propositionally related to the specific offence" (Bergman & Kasper 1993: 95).

This section not only introduced the idea of severity of the offence, but it also frequently referred to the second factor of high importance for this speech act: the underlying sincerity. Discussing the one without at least mentioning the other is barely possible – and not expedient – which is clear evidence for a connection between them. Their interrelation becomes clear in the fact that, if the Speaker perceives their wrongdoing as less severe than the Hearer, then the resulting apology may seem less sincere, no longer mirroring the actual severity of the offence as perceived by the Hearer. As Trosborg (1987) states,

> [The Speaker's] own perception of the degree of the severity of the offence is often decisive, but he may also take into consideration the recipient's point of view, his perception of the degree of offence, the extent of the expected reprimand, etc. (Trosborg 1987: 148)

Due to this complex relationship between severity and sincerity, this attitude, its characteristics and its impact on the apology deserve their own sub-chapter. Sincerity is therefore highlighted in detail in Chapter 2.3. Before this, however, it is necessary to introduce the dimension of prosody. It is later included in the discussion of sincerity, for which this paralinguistic level is critical.

2.2 Prosody and Its Interplay with Politeness

The dimensions presented in the following are inherent to the prosody of speech. They fulfil a number of functions, many of which are only of minor importance for this study. These functions of peripheral interest include marking the modality of the utterance, information structuring (e.g., adding emphasis, marking what is relevant and articulating parenthetical meaning) and turn taking (cf. e.g., Vaissiere 2008; Wichmann 2015). However, in addition to these syntactic and discoursal aspects, prosodic dimensions also fulfil overarching purposes. These include, for example, their ability to

"[…] disambiguate the interpretation of utterances" (Nilsenová 2006: 24). How this disambiguation is reached is explained in later sections and highlights the importance of prosody for identifying underlying nuances of meaning; however, it is primarily addressed for its role in the delivery of politeness and the appropriate performance of speech acts.

In the seminal work by Brown and Levinson (1987), the authors have at least mentioned that intonation is key in conveying the underlying message in a speech act performance. This can be found in different places in their study; however, the concept receives only vague claims regarding its role, such as noting its part in the delivery of the strategy called *EXAGGERATE (interest, approval, sympathy with H)*, which is presumably "often done with exaggerated intonation, stress, and other aspects of prosodics […]" (Brown & Levinson 1987: 104). Additionally, they have named it for its potential to bring across sarcasm (Brown & Levinson 1987: 251). Other renowned research publications, including Leech (1983), Searle (1969) and Austin (1962), have further referred to this connection. Leech (1983: 81) has done so when discussing how the PP can rescue a Speaker in violation of the CP (Grice 1975); an utterance which violates these principles on the formal level can be understood differently, and in line with the CP, depending on the intonation applied. Searle (1969: 30) has referred to the importance of intonation when listing it as part of the devices in English that imply illocutionary force (which also include word order, stress, punctuation and mood of the performative verb).

Finally, Austin (1962: 96) has confirmed the impact of intonation as well as gestural features on pragmatic interpretations when referring to its importance in the phatic act. He offers the illustrative example that "[o]ne can mimic not merely the statement in quotation marks 'She has lovely hair', but also the more complex fact that he said it like this: 'She has lovely hair' (shrugs)". Along these lines, many pragmatic expressions, including speech acts, backchannels and deixis, are often described as ambiguous when deprived of their prosodic information (e.g., Culpeper 2005). Ultimately, intonation can, in some cases, enable us to decide whether something we are confronted with is polite or impolite; ironic utterances, including ironic or sarcastic apologies, appear at the end of this continuum (cf. Aijmer 2019; Culpeper 2005; Deutschmann 2003: 19; Fivela & Bazzanella 2014; Hidalgo Navarro & Cabedo Nebot 2014).

As stated previously, prosody includes different dimensions, all of which are at the disposal of a Speaker when verbalising speech. Four dimensions are at the core of prosody: pitch-related dimensions (intonation contours, average pitch and pitch range), loudness, speech rate and voice quality. However, there are certainly researchers who count different or additional elements into this category of suprasegmental features, such as tonemes and pauses (Hidalgo Navarro & Cabedo Nebot 2014: 12-3), thus further complicating the matter. Crystal (1969: 131), for example, has differentiated

between prosodic systems, paralinguistic systems and non-linguistic features, which he lists in a taxonomical order from most to least linguistic. Prosodic systems include pitch direction, pitch range, pauses, loudness, tempo, rhythmicality and tension. Tension, however, also belongs in the second category: paralinguistic systems, which additionally includes voice qualifiers and voice qualifications. Finally, Crystal has named further non-linguistic systems, including voice quality and vocal reflexes. However, in this study, the four core dimensions mentioned previously are at the centre, while the others are disregarded. Such a selection of core elements was necessary to focus on those prosodic features which have been highlighted in the past as the most vital in the delivery of politeness-related meanings.

The analysis of these dimensions in a descriptive approach can be conducted auditorily, acoustically by "using instruments to represent the physical properties of the sound" (Culpeper 2011: 61) or articulatorily. In articulatory approaches, the focus is on the mechanics that are involved in the actual production of speech from the perspective of the Speaker (Culpeper 2011: 61). Here, a combination of the first two was employed. While an articulatory approach was not considered for this study, combining the other two was essential for some aspects investigated, because a purely auditory analysis is "often criticised as too impressionistic" (Wichmann 2004: 1527). However, such auditory analyses can certainly be used to further inform findings that are made with the help of an acoustic analysis (i.e., utilising acoustic spectra, as done here). This combination has been confirmed to be beneficial in the past (cf. Nilsenová 2006). Notably, strictly speaking, the exact terminology used when referring to each of the core dimensions is different, depending on these diverse approaches.

To clarify this distinction, Table 2 presents an overview of the terminology that may be used for each respective angle. The exact take on the terminology in this study is disclosed in the following sub-section.

Table 2. Prosodic Features in the Terminology of Different Phonetic Subdisciplines (Nilsenová 2006: 9).[9]

Articulation	Acoustics	Audition
Frequency of the Vocal Cords	Frequency of the Fundamental	Pitch
Force of Articulation	Intensity	Loudness
Form of the Vocal Tract	Spectrum	Voice Quality
Duration	Duration (here, the focus is on speech rate)	Length

Although Table 2, as presented, raises the impression of a short list of items that can be studied and analysed separately, this is not the case in reality. In fact,

> […] a one-to-one mapping is impossible (for example, stress can be realized by changes in fundamental frequency, loudness and duration; conversely, not every change in, e.g., fundamental frequency is related to stress). (Nilsenová 2006: 6)

[9] From Nilsenová (2006: 9), used with permission, my own formatting.

In other words, all four dimensions are deeply intertwined, and it is often impossible to state which of them causes a specific impact on an utterance or the perception of an utterance. Further complicating a study of these dimensions in the conveyance of politeness is that any patterns can only be satisfactorily explained by an interplay between a "[…] set of phonological cues and a specific politeness interpretation. This is because speakers do not rely on a single politeness strategy, but rather use a combination of strategies" (Astruc & del Mar Vanrell 2016: 95). This statement is important throughout the entire study. Employing any prosodic aspect is not effective in isolation but only in combination with other prosodic cues and strategic devices on the pragmatic and prosodic levels of the apology; ultimately, they are likely used in a cumulative fashion.

An example for these complex interrelations can be observed in a multimodal study of New Zealand and German participants, which investigates disagreement and includes the inherent prosodic cues. In this study, Fivela and Bazzanella (2014: 108) make an almost encompassing enumeration of prosodic dimensions which may be a factor in the upgrading and downgrading of politeness for this speech act. They name the pitch contour of pitch accents, boundary tones, volume, rhythm and tempo, among others, as important. Furthermore, Winter and Grawunder (2011) in their study with Korean participants have concluded from their study that a whole range of dimensions (i.e., those of intensity, pitch, speech rate, voice quality, speech pauses and fillers) influenced perceived politeness. Finally, as a more concrete example, Culpeper (2005) has summarised that the usually polite farewell *goodbye* can sound impolite and convey frustration and anger if it is produced with a marked prosodic delivery, such as "slightly faster tempo, tense articulation and […] much higher pitch average" (Culpeper 2005: 53). This multitude of intertwined factors indicates that no clear-cut outcomes are to be expected from a study working with entire speech acts and a high number of internal and external factors. Instead, the aim here is to find tendencies for a systematic application in relation to the variation of factors in the situational description. It aims to reveal a patterned usage of one or several of these dimensions, despite their complex interplay. A promising approach implemented in this study to elucidate this complexity is to highlight marked instances as well as correlations between different factors and dimensions, while combining them under specific focal points in the discussion.

Along this line, as a further note on the methodological handling of prosodic data, Szczepek Reed (2010: 12) has stressed that "[…] we can only describe and interpret prosodic patterns in relation to the linguistic and other interactional events co-occurring with them at a given moment in time". This, for example, includes the sequence in which the event occurs and where in the utterance itself the feature under investigation is located. Essentially, the interpretation of one prosodic event is perpetually relative to a stylistically unobtrusive point of comparison. This then enables researchers to stress

the differences between the example and this unmarked baseline.[10] While this refers to the immediate context of an utterance in purely linguistic and paralinguistic fashions, the same argument can be made for a much broader understanding of contexts which may not be speaker-inherent, such as gender, age and language variety, as well as the situational context of the utterance (see the discussion of micro-social factors and Szczepek Reed's 2010 study for further insights). For these, a comparative angle is often inevitable to obtain meaningful results.

In the following, the mentioned core dimensions of intonation or pitch, intensity or loudness, speech rate or duration and voice quality (especially vocal fry) are further highlighted in their respective sub-sections, with a special focus on the dimension of pitch contour. This is combined with previous findings on their role in conveying the underlying Speaker meaning, which focusses on politeness. As stated previously, studies in politeness research with a focus on prosodic aspects are, generally, considerably underrepresented (cf., e.g., Culpeper 2011: 58). However, a number of exceptions and claims for tendencies have been advanced, some of which are listed here. In fact, in the past decade, a research direction started forming, which their founders call *phonopoliteness* or rather, in Spanish, *Fonocortesia*. It

> […] aims to shed light on how politeness strategies are expressed by different prosodic patterns and, reversely, how modulating prosodic patterns might eventually affect the im/polite intention of a given utterance. (Hidalgo Navarro & Cabedo Nebot 2014: 9)

Originating in Valencia, Spain, this project has concentrated on Romance languages. Furthermore, it deals primarily with colloquial conversations; as such, in many regards, its findings are not directly applicable to the study at hand. Still, interesting results have been generated for these Romance languages (cf. Hidalgo Navarro and Cabedo Nebot 2014: 14 and Escandell-Vidal & Prieto 2021 for an overview), and some of them are incorporated in this study's theoretical background. Notably, these phonopoliteness studies frequently have in common the dimensions they consider. These align with the aforementioned core dimensions as well as those described in detail in the upcoming sections, starting with intonation (henceforth interchangeably referred to as *pitch*).[11]

2.2.1 Intonation

The intonation or pitch with which a person produces a particular utterance is acoustically measured in Hertz (Hz) and denoted by the so-called F0; the higher the pitch in Hz, the higher the tone produced and perceived auditorily. The acoustic measurement of Hz represents the number of times the vocal folds in the larynx open

[10] cf., e.g., Reed & Michaud (2015) for the importance of contrasting marked and unmarked intonation in the classroom context and Chapter 2.3.3 and Chapter 5.1 for the introduction of such a baseline for apologies on the pragmatic and prosodic level.

[11] Looking back at the table by Nilsenová (2006) above, this study mostly relies on acoustic analyses. Nevertheless, it will use the term intonation and pitch interchangeably.

and close within 1 second; in other words, "[…] 1 Hz is defined as one cycle of the signal amplitude per second" (Gibbon 2017: 11; also see Table 2). Humans are physically able to perceive amplitudes between 60 Hz and 20 kHz, although this differs depending on the age and gender of the Hearer (Gibbon 2017: 11). Gender differences exist not only in the pitch range physically perceived, but also in pitch production. Male speakers are said to utilise pitch heights between 70 Hz and 250 Hz on average and female speakers between 120 Hz and 350 Hz on average (Gibbon 2017: 11). Furthermore, there is a common conception that pitch changes with age and throughout the course of our lifetime (cf. Stathopoulos, Huber & Sussman 2011), especially in early childhood and during puberty. Specifically, changes are said to be detected in loudness, breathiness and pitch height, which "in women and men generally decrease over a 50-year period. Toward the end of that period, F0 decrease[s] more in women and increase[s] slightly in men" (cf. Stathopoulos et al. 2011: 1012).

Having established the terminology, there are two ways of considering this F0, one being the previously mentioned average pitch height at which a Speaker produces speech (expressed in Hz). The other refers to the audible and – in an acoustic spectrum in the form of the intonation contour – visible changes of the F0 throughout the utterance time. An important concept when analysing intonation from both perspectives, but especially in terms of the intonation contours, is that of the intonation phrase. It represents an abstract interval that embodies one intonation contour, i.e., "a stretch of speech uttered under a single coherent intonation contour" (Du Bois, Schuetze-Coburn, Cumming & Paolino 1992: 17, as cited by Couper-Kuhlen 2015: 86). Generally, "[t]he onset of an intonation phrase in English is defined as the first pitch accent in the phrase" (Couper-Kuhlen 2015: 87). Possible boundary signals for intonation phrases are, among others, changes in pitch, reduction in loudness on the final word or syllable, final syllable lengthening, changes in intensity and voice quality and pauses (see Szczepek Reed 2010: 44; Nilsenová 2006: 7; Truckenbrodt 2015: 1). The intonation phrase is important because it carries what is called *the intonational meaning* (cf. Prieto 2015 for a detailed discussion of intonational meaning in relation to the semantics and pragmatics of intonation). Therefore, intonation phrases are the entities frequently studied when examining global pitch. Every utterance is said to be "expressed with a global melody" (Hidalgo Navarro & Cabedo Nebot 2014: 12). The opposing concept of local pitch is associated with grammatical and discoursal functions (Culpeper et al. 2003: 1568). For each intonation phrase, the contour of the boundary tone (i.e., the "pitch movement on a stressed syllable", otherwise known as pitch accent [Szczepek Reed 2010: 32]), is of considerable importance for the perception of politeness, because

its intonation can change the perceived level of politeness (Ofuka, McKeown, Waterman & Roach 2000: 199).[12]

Next, found evidence is summarised for the interplay of average pitch and intonation contours with underlying speaker meaning and politeness. The upcoming overview of the effect of intonation on message perception in the pragmatic sense starts with the most general assumption, which is frequently considered a universal in language. It draws on associations made with high and rising and low and falling pitch. First, the presence of high and rising pitch is said to be deeply ingrained in our grammar (Gussenhoven 2002: Grammatical meaning section, para. 1). Gussenhoven has posited that some cultures have different variations of this pattern, and an estimated 70% of world languages generally show a rising intonation pattern.[13] The basic function of this contour and its counterpart (i.e., falling intonation) corresponds with the notion of delivering a sense of finality or closure of the ongoing argument when going down with one's voice, whereas a rising intonation consequently leads to the opposite perception (Cruttenden 1981).

A manifestation of these general tendencies in the interpretation of the underlying Speaker meaning in speech acts can, for example, be seen for greetings and farewells. It has been argued that, when the greeting *good morning* is used to indicate to another person that they are recognised, it is appropriate to employ a rising intonation. However, *good morning* can also carry other meanings, which can be conveyed using intonation patterns such as a falling intonation for a more serious interpretation or some manifestation of rise when used as an attention getter (Knowles 1987: 196).[14] For farewells, however, a falling intonation suggests a more dramatic exit (Knowles 1987: 196), connected clearly to the perception of finality inherent to this contour.

The following arguments bring intonation closer to the notion of politeness, while maintaining this general notion of finality at their cores. To begin with, the general connection between politeness and prosody repeatedly noted in the literature appears to be a correlation between higher or rising pitch and polite utterances (cf. Brown & Prieto 2017: 363). This tendency and the idea of a certain universality of this role of pitch movement in speech has been explicitly expressed by Ohala (1995, 1984) and later by Gussenhoven (2004, 2002), who has called this the *Frequency Code*. It is proposed to be a biological code, along with the Effort Code and the Production Code (Gussenhoven 2002). The Production Code posits that higher pitch is associated with the beginning of

[12] Yet, instead of exclusively focussing on boundary tones, this study systematically analyses the intonation contours at the end of each of the strategies which were pragmatically coded for the apologies. In the majority of cases, these do, however, coincide with a boundary tone.
[13] On the basis of this estimate of 70%, it was rejected by Ladd (1981) as a language universal.
[14] However, it is also noted that a greeting which is made with a falling tone would, e.g., be appropriate if dealing with someone who is higher up in the social hierarchy or "it might be used to start a conversation" (Knowles 1987: 196).

a speech event and lower pitch with the ending of such an event. The Effort Code describes that, if the situation warrants, one can employ more energy – or effort – into the speech production, which would consequently "not just lead to more precise articulatory movements, but also to more canonical and more numerous pitch movements" (Gussenhoven 2002: Introduction section, para. 5).

The most central code of these three for the study at hand is, however, the mentioned Frequency Code, which is the only one clearly connected to politeness concepts. Ohala (1995: 327) has claimed "that high or rising pitch is universally associated with a range of social messages, including deference, politeness, submission and lack of confidence" (Brown & Prieto 2017: 360). Ohala, however, also made claims about the opposite intonation tendencies, where "[l]ow or falling pitch, on the other hand, is associated with opposing social messages such as assertiveness, authority, aggression, confidence and threat" (Brown & Prieto 2017: 360). This finding and the interpretation made on its basis is connected to biological circumstances (hence its denotation as a biological code): If a person (e.g., a child as compared to an adult) or an animal (e.g., a mouse as compared to an elephant) is smaller, then it naturally has a shorter larynx, making the vocal folds vibrate faster. This inevitably leads to higher pitch. A connection between high pitch and politeness as well as Ohala's (1984) leap connecting this to biological traits associated with high voices has also been mentioned by Brown and Levinson (1987: 268). They have noted that "[…] high pitch has natural associations with the voice quality of children: for an adult then to use such a feature to another adult may implicate self-humbling and thus deference".[15] Similarly, Hidalgo Navarro (2006: 975), as stated by Hidalgo Navarro and Cabedo Nebot (2014: 16-17), has found that what he calls *a circumflex melody* (high-low) is often used in baby-talk.[16] If delivered in other situational contexts, this makes the Speaker less responsible for what they said and functions as "polite mitigation".

It seems almost obvious to argue that the connection between high and rising pitch contours and negative politeness (e.g., deference) is also a part of its syntactic function in marking interrogative constructions. In a request, for example, interrogatives are considered a negative politeness marker. Notably, Wichmann (2004: 1522), in an empirically-based study of the intonation of *please* in *please*-requests, has stated that "[i]t does not necessarily echo, or simply further mitigate, what is communicated by the words, but interacts in a complex way with requestive form and situational context". She has found a number of patterns in her corpus data, such as that requests that are posed in a public setting tend to be spoken with a final falling contour. The opposite intonation contour has been found in situations with a lower asymmetry between

[15] They refer to their findings in Tzeltal, where this tendency proved to be true (Brown & Levinson 1987: 187).
[16] This is in line with claims made first by Waltereit (2005).

informants and in private settings. Accordingly, she has referred to these patterns of falling and rising intonation and the association of closeness and openness (of the topic of the conversation). In other words, in a private setting, refusing a request is less sanctioned than in many public settings, and this strategy for indicating negative politeness is more likely to occur.

Furthermore, in DCT-elicited data for offers and requests in Central Catalan speakers, Astruc-Aguilera, del Mar Vanrell and Prieto (2016) have discovered that when there was a high imposition involved (i.e., high cost to the Speaker or the Hearer), these were made more often with a rising pitch pattern. Again, his strategy adheres to the negative face of the Hearer to mitigate the face threat. Finally, regarding the importance of intonation in requests, Aijmer (1996: 145) has noted the ambiguity in requests when they are formulated in an indirect manner and the important role of intonation in these situations. She has stated that the intonation contour of fall-rise when it is applied to indirect requests has two functions: it signals the illocution and tones down the request's threat to the Hearer's negative face, showing once again clearly that this fall-rise is intertwined with the strategy of formulating a request as an interrogative to save negative face; it can be performed on the syntactic and prosodic levels or on the prosodic level alone.

This effect of deference and its importance in managing politeness has also been confirmed by LaPolla (1994: 140) for Mandarin Chinese speakers and for intonation in terms of pitch height next to the intonation contour. The results propose that the Speaker via the deference expressed by higher pitch "in a sense admit[s] that the other party is stronger, at least as regards the situation or topic of conversation. The other party's answer is in a falling-pitch pattern, again, to reflect this power relationship". He has further stated that high-frequency patterns are common when trying to convey friendliness because they imply that the Speaker is not a threat to the Hearer (LaPolla 1994: 140).

Therefore, a rising and high tone does indeed seem to convey deference and politeness and has been evidenced to be a universal in human language; however, it should be mentioned that some cultural differences have been found, after all. As Chen, Gussenhoven and Rietveld (2004: 311) have stated after they compared British English and Dutch listeners,

> [c]ontrary to the traditional view that the paralinguistic usage of intonation is similar across languages, it was found that British English and Dutch listeners differed considerably in the perception of "confident," "friendly," "emphatic," and "surprised". The present findings support a theory of paralinguistic meaning based on the universality of biological codes, which however acknowledges a language specific component in the implementation of these codes.

Moreover, Loveday (1981) has found differences in the way in which politeness was conveyed via pitch between male and female speakers of Japanese and English. Female

Japanese participants used substantially higher pitch compared to their male counterparts, but the difference between male and female English speakers was less significant. He has concluded that "[…] Japanese high pitch is typically reserved for the enactment of female roles while English high pitch is adopted by both sexes to express politeness" (Loveday 1981: 71). It is also worth noting that in the context of political discourse, higher-pitched speech from female and male speakers alike is associated with the speaker being less trustworthy and competent than speakers who use a lower pitch (Klofstad, Anderson & Peters 2012). It has been further established that lower pitch causes the Speaker to be perceived as more dominant and that female informants in a perception study have been found to be more sensitive to the lowering of pitch in female voices than male Hearers (Borkowska & Pawlowski 2011; Jones, Feinberg, Debruine, Little & Vucovic 2008). Similarly to what this overview suggests, Brown and Prieto (2017: 366) have concluded that "[…] the relationship between pitch and politeness is far more complex than originally suggested by the Frequency Code".

2.2.2 Pitch range

For this second prosodic dimension, strictly speaking, a differentiation can be made between pitch range and pitch register. Pitch register concerns a smaller portion of speech, whereas pitch range examines a more global one, similar to the previous proposal for pitch. The term that is employed here is that of *pitch range*, defined as "the range of pitch values produced by a speaker during a tone unit, utterance, speech event, etc." (Culpeper 2011: 59). Often, including in this study, pitch range is measured by subtracting the informant's minimal pitch height in the utterance or part of the utterance from their maximum pitch height, also called the *valley* and *peak*, respectively (Nadeu & Prieto 2011). Thus, it is measured in Hz and based on values that can be deduced from the pitch values measured for the (part of the) F0 investigated. Note, though, that the entire pitch range of a person is usually larger than the range employed in speech, including the speech elicited for this study. Wider spans of the pitch range are only applied under special circumstances, such as when singing (cf. Hollien 1972).

When combining pitch range with politeness, one can first refer to the note by Brown and Levinson (1987: 104) regarding exaggerated intonation. According to the authors, an increase in pitch range can be perceived as an increase in politeness, a tendency that has also been confirmed in other contexts (e.g., by Chen et al. 2004 for British English and Dutch speakers). Additionally, a wider pitch range can theoretically also demonstrate stronger emotions (Lindsey 1981: 17-18). These connections noted are, however, not considered a universal tendency: for *yes-no* questions, for example, Nadeu and Prieto (2011: 841) have found the opposite case – a decrease in perceived politeness with a wider pitch range toward the end of these questions. Due to the impact of context on the perception of politeness, they have concluded that "[t]here is nothing intrinsically polite about using an increased pitch range, unless it is accompanied by consistent

contextual information". In fact, an increased pitch range can simply refer to an increase in effort in the speech production in cases in which the circumstances require it (i.e., a behaviour in line with the Effort Code). This greater effort manifests itself in a number of features in addition to higher intensity and wider pitch range, such as greater precision in the articulation and an increase of F0 (Gussenhoven 2002; Smiljanic & Bradlow 2008; Smiljanic & Bradlow 2005, as cited by Winter & Grawunder 2012: 809). In pitch range, the effect that this effort is generally said to have on the output and its perception by the Hearer is that

> […] he believes the contents of his message are important, an informational meaning. Narrow range may be used to signal negation, a withdrawal of information. In addition to the more obvious meanings of 'surprise' and 'agitation', affective meanings include 'obligingness': the speaker is here concerned to help the listener to understand what he is saying. (Gussenhoven 2002: The Effort Code section, para. 1)

A point that is discussed in considerable depth in a later chapter is the emotions intrinsic to some situations that elicit apologies and their impact on this dimension. This includes surprise, which is explicitly mentioned in this quote. Surprise can be conveyed by specific prosodic modifications to pitch and the general employment of the functional strategy of an EXCLAMATION.

2.2.3 Speech rate

Speech rate is intertwined with duration (especially of vowel sounds) and the two concepts are sometimes used interchangeably. Here, it is defined as "how fast a speaker utters his/her intervention" (Hidalgo Navarro & Cabedo Nebot 2014: 12). To be more precise, any utterance has a global duration – the time it took the speaker to perform the utterance. Simultaneously, any utterance also has a relative duration, which is measured in relation to its global duration, such as the number of syllables per second; this is the value of speech rate used in this study. Furthermore, it is possible to measure the rate in milliseconds or the milliseconds taken per unit (Brown & Prieto 2017: 359). In line with the speech-rate-inherent nature of duration, one can additionally examine the length of each syllable in seconds (with and without pauses) and the mean length of the pauses produced by an informant (e.g., Grawunder & Winter 2010).[17]

To date, connections between speech rate and politeness have predominantly been advanced for Asian languages with a focus on duration. It has been, for example, found that correlations exist with expressions of politeness and impoliteness and the

[17] To avoid confusion, the terminology used here deviates slightly from Nilsenová's (2006). Here, the terms *length* and *duration* do not refer to the speed with which an articulation is made, although they are highlighted for some aspects of the apology. The term *speech rate* is, however, employed exclusively when measuring the utterance speed in number of syllables produced per second of either the apology or individual strategies.

lengthening of a single vowel in Korean (Grawunder and Winter 2010). Similarly, Ofuka et al. (2000) have suggested that the duration of a final vowel in a sentence (combined with additional prosodic information) can change the underlying Speaker meaning in dramatic ways (Ofuka et al. 2000: 214). Although rare, comparable findings have been made in other languages, including Spanish, in which a shorter or longer vowel produced in an utterance had an effect on the perceived politeness (cf. Hidalgo Navarro & Cabedo Nebot 2014). In addition to the vowel lengthening, in Korean, the overall speech rate has been found to be used systematically in interactions with a person of higher relative power in this language. In such interactions, Speakers used a slower speech rate as well as lower pitch and a breathier sound of voice (Winter & Grawunder 2011). Thus, there seems to be a tendency for lower speech rate to correlate with politeness in some respects, while this relationship is not entirely straightforward or without exceptions. In Taiwan Mandarin, female speakers indicated a habit of modulating phrase-final length according to the degree of familiarity with their conversational partner, thus demonstrating an accommodation effect (Lin, Tse & Fon 2006: 176). Similarly, there is evidence that when assessing perceived politeness via speech rate, politeness ratings are influenced by the rater's own speech rate; higher ratings may be achieved by those speech rates that mirror one's own, as Hearers tend to prefer speech rates which are closer to the speech rate they would use in an utterance (Ofuka et al. 2000: 199).

Finally, regarding general associations with speech rate beyond politeness, studies have found that people tend to favour faster speech rates, associating them with attributes such as higher competence (Brown 1980; Smith, Brown, Strong & Rencher 1975) and attractiveness (Street, Brady & Putman 1983). Additionally, it has been detected that, among other factors, how charismatically a person is perceived equally correlates with faster speech rate and related attributes of duration of tokens in words, seconds and number of internal phrases (Rosenberg and Hirschberg 2005).

2.2.4 Intensity

This study discusses, on the one hand, intensity in the prosodic dimension, and on the other hand, the intensification of some of the apologetic strategies, especially the IFID, by the use of intensifying adverbials. This denotes its function as intensification by upgrading or downgrading a speech act semantically (cf. Holmes 1984; Labov 1984). To avoid confusion, whenever the term *intensity* is used, this refers to prosodic intensity or loudness as the auditory or acoustic perspective on this feature. The terms *intensification* and *intensifier* are, however, hereafter employed to express an enhancement of pragmatic intensity.

Specifically, intensity refers to this prosodic dimension when viewed on the production side and loudness, measured in decibels (dB), on the perception side of the utterance

(see Table 2). Intensity is produced on the same channel as pitch and is therefore difficult to distinguish from this dimension (Culpeper et al. 2003: 1568): an increase in pitch often involves an increase in loudness and *vice versa*. Additionally, this dimension shows complicated dual functions and roles on the discoursal and grammatical levels. It is generally used to mark stressed syllables (Navarro 1974; Quilis 1988), but it also serves a turn-taking function, in that "[…] drops in loudness and pitch are turn relinquishing signals in English […]" (Hurley 1992: 272).

In reference to its usage in the Effort Code, intensity is employed when a person wants to ensure that what they say is comprehensible. The Effort Code stipulates that speech that is produced with more effort is articulated with a higher level of energy, which can change the prosodic characteristics profoundly (Gussenhoven 2002). This consequently results in more pronounced pitch changes and a higher intensity in articulation. In fact, intensity's role in ensuring the overall ability to acoustically understand an utterance is central. It interferes with interpretations of intensity's other functions, including those connected to politeness, to a significant extent. As an example, for their findings that Korean males and females spoke with lower pitch and intensity in formal speech, Winter and Grawunder (2012) have questioned whether these findings should be interpreted based on claims made by the Frequency Code. Instead, they have highlighted that the Effort Code could just as easily be the reason for their findings, as formal speech is planned with additional care and employs less excitement in the voice. They have, however, stressed that any effect on this dimension was noticeably small.

In line with this and the need to employ more effort in speech, intensity is important when external circumstances necessitate speaking louder or even yelling. This can be the case if one needs to address someone who is further away (Culpeper et al. 2003: 1572-1573) or someone who is hard of hearing. Overall, situational appropriateness is critical for the dimension of intensity. An excessive level of intensity for the situational circumstances can be perceived as impolite and as a direct attack on the Hearer's negative face, as it invades that person's auditory space (Culpeper et al. 2003: 1572-1573). It can even be associated (alongside pitch and tone) to define what is perceived as aggressive or rude (Briz 2007, as cited in Hidalgo Navarro & Cabedo Nebot 2014: 14).[18] Consequently, findings regarding intensity have to be interpreted based on their context, while considering that the application of intensity can also be traced to social and emotional factors (Labov 1984: 43).

[18] This can also be a concern in intercultural encounters, where Stadler (2006) found that Germans tend to use a louder voice in disagreements than in neutral speech, whereas there was no such difference between both speech situations for her New Zealand informants.

2.2.5 The voice quality of vocal fry

As the final aspect of prosody relevant to this study, this section addresses voice quality, which encompasses all "characteristic auditory colouring of a speaker's voice" (Brown & Prieto 2017: 359). Examples of such voice qualities include breathy, whispery, harsh and creaky voices (cf. Couper-Kuhlen 2015: 100). The quality of creaky voice, the only one investigated here, is also referred to as vocal fry, pulse register, *strohbass* or glottal fry (Hollien 1972: 2). For male speakers, vocal fry can be found in pitch ranges between 7 Hz and 78 Hz, while female speakers produce this voice quality in pitch ranges between 2 Hz and 78 Hz (Blomgren, Chen, Ng & Gilbert 1998; Michel & Hollien 1968). As mentioned, the usual pitch ranges for male and female speakers show great differences between the values typical in general speech. Therefore, it is notable that the ranges are almost similar in this phenomenon. Consequently, the fry can be seen as the lowest register a person is able to physically achieve (Hollien, Moore, Wendahl & Michel 1966) and has been found to be below the modal register usually used by the speaker, with little to no overlap (McGlone & Shipp 1971; Michel & Hollien 1968). This marked characteristic makes it easy to detect auditorily, and it has been found in previous research that "[…] listeners can perceptually detect the presence of vocal fry with relative ease and a high degree of accuracy" (Borrie & Delfino 2017: 25). Additionally, it is visible in the acoustic spectrum, with no actual intonation contour to discern. Instead, it is associated with other non-linear visualisations (Borrie & Delfino 2017: 25). Importantly, this voice quality can be found particularly often at the end of an utterance, at the boundaries of fully-intonated phrases and at the intermediate intonation of phrases (Redi & Shattuck-Hufnagel 2001). Furthermore, it occurs more often at the end of a sentence than in the middle or beginning (Redi & Shattuck-Hufnagel 2001; Surana & Slifka 2006; Wolk, Abdelli-Beruh & Slavin 2012).[19]

In the past, vocal fry was associated with pathological speech disorders (Hollien et al. 1966). It only became apparent over time that it can also be produced voluntarily and for specific purposes (Anderson, Kolfstad, Mayew & Venkatachalam 2014). More recently, researchers have suggested that vocal fry can also be used as an inside community marker (e.g., Catford 1977; Laver 1980; Trudgill 1974; Wells 1982). It is certainly connected to this status that research notes that the application of this feature is highly individual and therefore especially used by some speakers and not at all by others. A number of findings validate the assumption of high general individuality in the application of this feature. In conversational data, Gottliebson, Lee, Weinrich and Sanders (2007: Discussion section, para. 2) have found that 14% of their American informants, of whom 94% were female and 6% male, employed some type of abnormal

[19] These attributes further contributed to the analysis of the data elicited, in which only instances of creaky voice at the end of a pragmatic strategy were analysed systematically.

voice, most of which was attributed to vocal fry. However, a noticeable number of speakers did not use this quality at all. Accordingly, for their Standard American English speakers between 18 and 25 years of age, Wolk et al. (2012) have found that two-thirds of their sample used creaky voice. Given that one-third of their speakers did not use this voice quality, however, again highlights the degree of interspeaker difference that exists in its usage. Similarly, Redi and Shattuck-Hufnagel (2001) have demonstrated that some American English speakers employed this feature frequently while others did so rarely, again signalling its function as an ingroup marker and in speaker identification.

More specifically, despite the similarity in the vocal-fry-related pitch ranges of males and females, there is a significant difference in frequency of usage of vocal fry depending on the speaker's gender. For example, regarding the American English speakers important here (i.e., English as spoken in the North-western US), women were indeed found to use vocal fry more often than men (Yuasa 2010). Additionally, though, it was also utilised more often by female American English speakers than by Yuasa's reference group of Japanese females living in California (in the US). Finally, Pennock (2005) has studied the performances of American female actors, illustrating that they use creaky voice more often when portraying American than British characters in their movies. This points toward a variational difference, in addition to a language- and gender-specific one. Another issue that should not be disregarded is the ability to accommodate the interlocutor in prosodic aspects, which has been noted for other dimensions already. As confirmed by Borrie and Delfino (2017), this is equally true for vocal fry and the ability to align usage of vocal fry with a conversational partner: communicative success is more likely to be achieved – or at least communication more enjoyable – when the interlocutors display a similar usage of this feature in their conversations.

Regarding its role in signalling politeness, different claims do exist. On the one hand, Brown and Levinson (1987: 268) have mentioned an association with positive politeness: "[…] having as a natural source low speech energy, [creaky voice] can implicate calmness and assurance and thence comfort and commiseration, attitudes not suitably expressed in negative-politeness circumstances".[20] Brown and Levinson (1987: 119) have further stated that female speakers may employ "creaky voice where the prosodics of giving comfort is the same as (or metaphor for) the prosodics of asking for sympathy", which suggests at least a certain upgrading function.

On the other hand, given its production on the lowest pitch register possible, the effect that vocal fry has on the perception of the speaker producing it is in many ways in tune

[20] Culpeper (2011: 61) calls for caution regarding this claim, stressing the choice of their words as "can implicate" and suggesting that more research needs to be done to decide, on an empirical basis, whether creaky voice is actually a feature of positive politeness.

with previous points made for low and falling intonation via the Frequency Code (Gussenhoven 2002; Ohala 1984). Here, notably, it is not directly associated with positive politeness, as with Brown and Levinson. Instead, it conveys that the speaker is being genuine and serious and the use of vocal fry could also be connected to a certain level of authority (cf. Yuasa 2010: 317). Some additionally speak of a marker of masculinity, suggesting that females who adopt creaky voice are trying to be perceived as more masculine and males as hyper-masculine (Dilley, Shattuck-Hufnagel & Ostendorf 1996; Henton 1996, as cited in Yuasa 2010). This further stresses an assumed connection with biological traits.

Finally, apart from its connection to the attitude of politeness, general associations with vocal fry deserve to be mentioned. Anderson et al. (2014) have performed an experimental study with American English-speaking adults using read-out stimuli (i.e., non-interactional speech, different than what is at least partially suggested for DCT situations). They have found that

> […] vocal fry is interpreted negatively relative to a normal speaking voice. Young adult female voices exhibiting vocal fry are perceived as less competent, less educated, less trustworthy, less attractive, and less hirable. The negative perceptions of women who use vocal fry are stronger when the listener is also a woman (Anderson et al. 2014: 5).

Others have seen a connection between creaky voice and boredom felt by the speaker (e.g., Gobl & Ní Chasaide 2003: 202). However, at least one other study points in the opposite direction. Yuasa (2010: 316) has found that her young subjects responded positively to this quality in a perception study on female creaky voice, perceiving them as "sounding fundamentally more 'educated,' 'professional' or 'upwardly mobile,' and 'urban,' as well as more 'hesitant,' 'nonaggressive,' and 'informal' than noncreaky modal voice".

Therefore, there are many – seemingly diverse – points to be made which call for a more rounded perspective. Parker and Borrie (2018) have conducted a study measuring perceived likeability and intelligence while considering speech rate and pitch (as they have correctly stated that a prosodic dimension does not occur on its own but is undoubtedly intertwined with related dimensions). They have found that

> [i]n conclusion, listener judgments of young American women based on information afforded in their speech behaviors are not solely based on the presence or absence of vocal fry, but rather a combination of speech features that interact with one another in unique ways. For example, when the speaker had a low pitch and a fast rate, the presence of vocal fry reduced listener ratings, but when the speaker had a high pitch and a fast rate, the presence of vocal fry elevated listener ratings. (Parker & Borrie 2018: 544)

This is yet another call for a holistic view on the matter at hand.

2.3 Sincerity in Apologies

So far, sincerity was mentioned because of its interrelation with the severity of the offence. However, because of its crucial nature for the speech act of apology and its overall complexity as a second-order concept, a detailed introduction is necessary. This includes information on what it means to be sincere, how this can be observed on the pragmatic and the prosodic levels and especially who establishes whether an apology is sincere or not. Furthermore, it must be determined whether sincerity is a binary concept or whether one can grade sincerity on a continuum, similar to the suggestion for severity made above. Additionally, this section includes a detailed overview of the interplay between sincerity, severity and prosodic dimensions proposed in previous literature (Chapter 2.3.2). This overview is used as a basis to propose neutral and marked prosodic and pragmatic formulations of the IFID, in which marked formulations can be assumed to, for example, stress the sincerity involved or produce an apology in alignment with a severe offence (Chapter 2.3.3).

2.3.1 Sincerity as an attitude

This section initially highlights that sincerity is an attitude rather than an emotion. Between the two, attitude is more strongly connected to the idea of the implied or inferred Speaker meaning (Wichmann 2002). In addition to this implied meaning, the Speaker can be in a specific emotional state while speaking, which can then be witnessed based on a further specific colouring of the prosody applied to the speech (Mozziconacci & Hermes 1999: 2003). It needs to be stressed, though, that distinguishing emotion and attitude is often difficult, if not impossible. The inferred meanings of an utterance, “particularly those suggestive of attitude or interpersonal stance, may, of course, arise in part from a perceived affective colouring of the voice such as sadness or anger” (Wichmann 2002: Abstract, para. 1).

Furthermore, Raso and Rocha (2016: 12) have stressed that "[i]n the literature, the terms 'illocution', 'attitude' as well as 'modality' and 'mood' can be used to refer to the same category or aspects of the same category". Due to this complication, they have stressed the need to provide a clear definition of what an attitude constitutes. They consider attitude to be "the way an illocution is performed", in which when "performing a given illocution, say, an Order, we can be polite or aggressive, seductive, irritated, urgent, etc." (Raso and Rocha 2016: 12). Ideally, then, one would differentiate between the illocution that is performed and the attitude with which it is performed. The overall range of attitudes also includes the underlying sincerity of a speech act, which is in focus here.

Consequently, for this study, sincerity is seen as the attitude with which the apology is expected to be delivered. The overall importance of underlying sincerity as an attitude for apologies was previously presented, particularly in the felicity conditions for this

speech act. The sincerity condition – though criticised – states explicitly that that the Speaker must actually regret the previously committed offence for the speech act to qualify as an apology (Ogiermann 2009: 46). Sincerity is thus generally seen as an attitude that the Speaker of an apology must successfully convey via their speech act performance. Furthermore, a distinction exists between positive and negative sincerity:

> Sincerity is positive or negative depending on the attitude expressed in the message itself. An insincere apology or compliment may be insulting or ironic, while an insincere insult amounts to friendly banter. Since attitude itself is such a complex matter, we are unlikely to find a simple relationship between attitude and the way it is conveyed in speech. (Knowles 1987: 205)

This quote notes both the preference to hear a sincere apology and the difficulty to establish the sincerity in the formulation. Ultimately, sincerity is relative and lies in the ears of the Hearer of the utterance (cf. Raso & Rocha 2016). This causes complications if the level of sincerity perceived by the Hearer of the apology does not match the Hearer's expectations of what would be situationally appropriate (Wichmann 2002: Polite requests and conventionalised contours section, para. 9). A mismatch between these two can lead the Hearer to infer a negative attitude, such as insincerity, on the side of the Speaker (cf. Wichmann 2015: 185), regardless of whether the Speaker meant to convey this. For this study, this insight into the role of the Hearer implies particular limitations: one can certainly interpret the utterances in terms of possible underlying attitude based on aspects in the context or production. Concurrently, without a perception study which captures the attitude actually perceived by the Hearer of the apology, only limited conclusions can be drawn.

To approach this topic further, two broad preconditions can determine the sincerity of the Speaker already on the contextual level. A Speaker is perceived to be sincere about the apology only if they apologise at their own will. If the Speaker would normally not have apologised but only does so because they were explicitly requested (i.e., by a third or the offended party rather than by general social conventions) to do so, then the regret is not perceived as genuine and the apology as not felicitous; true remorse, as requested by the felicity conditions, is not present. Notably, a study by Risen and Gilovich (2007) has led to a surprising result in this regard. Apologies were made either spontaneously or only after the Speaker had been coerced to do so by a third person. Contrary to expectations, the researchers have found that the Hearers did not treat these forced apologies differently than spontaneous apologies, while unaffected observers did (e.g., they applied lower ratings in friendliness; Risen & Gilovich 2007: 419-420).

As the second means of sincerity identification on the contextual level, Davies, Merrison and Goddard (2007: 48) connect sincerity to the hypothetical ability of the Speaker to have avoided the offence. If the apology was prompted by an avoidable offence, whether past or future, then the apology may not be perceived as sincerely as if the opposite was the case. Hence, this is also true for apologies made before the actual

offence occurs, such as in the case of an expression of apology made immediately before disagreeing with the Hearer on some matter. Interestingly, and in line with this assumption, Deutschmann (2003) has not qualified these as 'real' apologies but rather as FACE ATTACK apologies, which actually function as disarmers for the offences to follow. Indeed, with apologies known to be post-event acts, as defined in the propositional content condition, the status of an apology made before the actual offence occurs is unclear. It is arguable that, if one truly felt regret, one would not perform the offence (cf. Lakoff 2001: 203-204). To broaden this assumption, a sincere apology presupposes that the Speaker does not expect that they will commit the same wrongdoing again in the immediate future and "[i]n this respect apologies seem to take on a 'commissive' aspect and to relate to future acts, not just past ones" (Owen 1983: 119) – but only if meant sincerely.

In summary, the feeling of actual remorse on the Speaker's side is crucial for the production (and perception) of sincere apologies. In fact, while it is certainly possible to produce an utterance that resembles an apology on the surface level (i.e., assuming it contains linguistic features that are typical for apologies), it still must be verified that this utterance does not serve a function different than expressing remorse. These additional functions of utterances that consist for formulations such as *I'm sorry*

> […] range from abject abasement for wrongdoing, to conventional greasing of the social wheels, to expressions of sympathy, advance mollification for intended bad behaviour, and formal public displays of currently 'appropriate' feelings. (Lakoff 2001: 201)

Advance mollification aligns with the FACE ATTACK apologies indicated by Deutschmann (2003), while an expression of sympathy does not adhere to the felicity conditions in a number of ways. Especially notable in this quote for the ongoing argument is the differentiation made between "abject abasement for wrongdoing" and "greasing of the social wheels". Here, Lakoff has agreed with a frequent distinction between apologies that express actual remorse and CASUAL or RITUALISTIC APOLOGIES (Aijmer 1996: 84; Fraser 1981). While both generally qualify as apologies, in the second category, "the speaker [merely] fulfils what is expected of him" (Fraser 1981: 266). This raises, once again, the question of whether these qualify as sincere apologies or at least to what degree they qualify. Consequently, identifying the level of sincerity of an apology on the contextual level seems to generally depend on three factors: 1) determining whether the Speaker was coerced into apologising or 2) plans to commit the offence (again) and 3) distinguishing between a substantial and a ritualistic apology, which may not express actual remorse – or at least not to the same extent.

While sincerity is an issue when the first two factors are identified in an apology, the matter of the third factor is complex. Regarding RITUALISTIC or HEARTFELT apologies, Fraser (1981) has further stressed that it is not easy to clearly differentiate

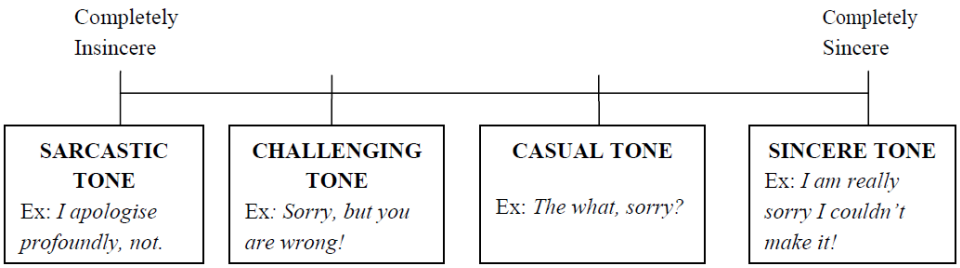
these two and that "[…] in fact, an apology may often be motivated from both perspectives". Arguing comparably, Owen (1983: 119) has distinguished between ROUTINE and HEARTFELT apologies. She has linked these two directly to the complications of insincerity in apologies and has referred to Schiffer (1972) and Austin (1962) when saying that "there are social conventions that require us on occasions to 'go through the motions' of thanking, apologising, or congratulating […]" (Owen 1983: 120). This has prompted her to include a detailed discussion of how to solve this issue by possibly modifying the felicity conditions themselves. Ultimately, Owen has considered it beneficial to have conditions in which sincerity is not intrinsic for an utterance to qualify as an apology.[21] Accordingly, she has identified the current status of sincerity as one of the shortcomings of speech act theory (cf. Owen 1983: 120-121). Leech (2014: 122) has agreed that, for the speech act at hand, "the condition that is most likely to be waived is the sincerity condition, since, as we know, people sometimes speak insincerely: Violations of the Maxim of Quality do occur". In their view then, such ritualistic apologies should still be counted as fully-fledged examples of this speech act category. Similar positions were previously expressed in this study in Chapter 2.1.2, in which the different types of offences which can lead to an apology were introduced. Many of them seem to prompt RITUALISTIC apologies rather than actual remorse but were still included in these studies (cf. Aijmer 1996; Deutschmann 2003). Consequently, in agreement with this line of argumentation, this study does not inherently deem RITUALISTIC apologies to be infelicitous but rather a commonly encountered nature of this speech act. Nevertheless, it can be argued that actual remorse may warrant different markers for underlying sincerity than those found in apologies that display a ritualistic character, suggesting that sincerity itself can have different qualities to it.

Stepping away from sincerity as identifiable on the contextual level, when attempting to identify the underlying sincerity of an apology based on its formulation, "[m]ost analyses of the apology speech act have focused on its felicity from the speaker's perspective, in particular the assessment of the speaker's state of mind (sincerity as manifested by signs of contrition)" (Lakoff 2001: 203). Deutschmann (2003) has presumed this focus on signs of contrition detected in the formulation of the apology as the approach and has chosen a practical perspective on addressing sincerity. Calling it the *apparent sincerity level,* he has categorised the apologies he identified in his corpus data on a continuum between COMPLETELY INSINCERE and COMPLETELY SINCERE (see Figure 2). On the left-hand side, the most insincere apology is the apology made with a SARCASTIC TONE, followed by an apology delivered with a CHALLENGING TONE. These two categories are followed by expressing a CASUAL apology and, at the end of the continuum, demonstrating complete sincerity in an

[21] This argument can certainly be extended to other speech acts, as well.

apology, are those which were deemed to be produced with a SINCERE TONE. These last two categories align with the previously presented statements regarding the distinction between ROUTINE and HEARTFELT APOLOGIES. The way in which Deutschmann (2003) has visualised these levels of sincerity in Figure 2 is helpful to further the current argument. Again, when seeing sincerity as a continuum rather than a binary distinction between sincerity or insincerity, the idea of CASUAL apologies, though based on the expectation of one being less than heartfelt, can be accepted as expressing sincerity, although to a lesser degree.

Figure 2. Apparent Sincerity Levels (Deutschmann 2003: 93).[22]



To offer a more detailed account of his approach for this categorisation of sincerity in the apologies he analysed, Deutschmann (2003) had no access to prosodic information, as he worked with transcripts of spoken language. Nevertheless, the formulations he has chosen for this strategy strongly suggest at least some impact of the prosodic dimension with which these utterances were potentially produced. Stating regret that he did not have access to these important suprasegmental features (Deutschmann 2003: 62), he has vigorously stressed the problem of the distinctions of apparent sincerity when based only on the (written) product. The important concept behind the apparent sincerity when gathered purely from the formulation of the apology is therefore the basic assumption that the Hearer (or rather the Reader, in his case) has a certain intuitive idea of the underlying sincerity they are faced with. In his words, when faced with an apology that we believe to be sincere on the surface level alone, "we can assume that the speaker wants the audience to interpret this statement as a genuine apology. Whether s/he feels real remorse and guilt, however, is a different matter and beyond the scope of this study" (Deutschmann 2003: 92). This approach is similar to the analysis of sincerity based on found signs of contrition, as mentioned previously.

Finally, some details must be highlighted regarding surface-level features which illustrate these signs of contrition and can potentially lead to the interpretation of a sincere apology, as noted by Deutschmann. These features presuppose the assumption

[22] From Deutschmann (2003: 93), reprinted with permission.

that apparent sincerity can, at least partially, be based on the pragmatic formulation. Several features were reported which can support the conveyance of a SINCERE TONE and therefore, in Deutschmann's terms, that of a completely sincere apology. Again, the clear relation between sincerity and severity is illustrated here and aligns with statements regarding the impact of severity on the apology formulation. In addition to the role of EXPLANATION OR ACCOUNTS to stress the unavoidability of an offence (Davies et al. 2007: 48), related claims can be made about the importance of the strategy of OFFER OF REPAIR and those of TAKING ON RESPONSIBILITY. Their addition to an apologetic utterance "increases the strength of the apology act and intensifies sincerity" (Vollmer & Olshtain 1989: 211). Similarly, in Deutschmann's (2003) study, it has been found for sincere apologies that

> [t]he syntactic frames of these were generally more complicated than 'Casual' apologies. Politeness markers such as exclamatory interjections and intensifiers, as well as additional strategies such as explanations and acknowledgements of responsibility often accompanied the IFIDs. (Deutschmann 2003: 97)

In summary, sincerity can be conveyed in all strategies that one can utilise *de facto* to produce an apology, in one way or another. Their general ability to convey or stress sincere remorse is presumably why they can be used to perform this speech act to begin with. Based on this categorisation and approach, Deutschmann (2003: 94) has revealed that the vast majority of the apologies in his study (47.9%) suggested a CASUAL TONE, which was followed by a SINCERE TONE (37.8%); few CHALLENGING TONE apologies (8%) and SARCASTIC TONE apologies (2.8%) were expressed. Additionally, the sincerity level could not be identified for 3.5% of his data points.

While, so far, insights were provided which focussed on the pragmatic modifications of apologies in relation to the sincerity (and severity of the offence), the focus of the impact of sincerity on apologies now shifts to the prosodic level and its role in the conveyance of the attitude in focus.

2.3.2 Sincerity and prosodic dimensions of apologies

Approaching the manifestation of sincerity – or lack thereof – on the prosodic level, this section highlights previous findings which indicate a systematic interplay. As stated previously, it is almost impossible to systematically explain what exactly it is that attitudes such as sincerity do to the intonation itself (see, e.g., Wichmann 2004: 1522). When focussing on this connection between prosody, sincerity and the overall illocution conveyed not only on the level of pragmatics but also prosody, this complication becomes increasingly evident because

> [...] prosody has a double function in conveying illocutions. The first one is to mark the illocutionary status of an intonation unit, in opposition to other non-illocutionary units. The second one is to strongly contribute to the identification of a specific illocutionary value (calling, order, assertion, polar and partial question, warning, etc.). Nevertheless, we argue that prosody marks also the category of attitude, which interacts with that of illocution, changing

> the prosodic perception and contour of the illocution sometimes to a great extent. (Raso & Rocha 2016: 5)

In short, prosody fulfils several functions simultaneously; consequently, the effects caused by each of these functions on the final manifestation of the prosodic patterns employed are difficult to establish. Overall, a Speaker's attitude seems to change the prosodic features that are dependent on the illocution in noticeable ways. In fact, Lakoff (2001: 204) has stated that these features form "the basis for hearers' judgements about the apologizer's sincerity and sufficiency of 'remorse', since we see them as beyond a speaker's control and therefore more likely to be truthful than the verbal utterance". The ability to judge this truthfulness from the Hearer's perspective has been demonstrated for the perceived underlying sincerity of compliments (Rigoulot, Fish & Pell 2014), to name but one example.

In the following, findings are presented that indicate the implications of sincerity for the prosody of expressive speech acts. Though this order may seem surprising, the focus is initially on the speech act of thanking followed by that on apologies. The speech act of thanking is in many regards comparable to that of an apology, not only because it belongs to the same speech act class, but also because it presents similarities in the way it is commonly expressed, which is equally highly routinised and formulaic. Consequently, it works at least partially parallel to the IFID of an apology. Additionally, thanking can similarly be intensified on the lexical level by using intensifying adverbials. Intensified versions of *thank you* have often been found to be used in situations in which the neutral formulation (*thank you* without an intensification) was insufficient (Aijmer 1996). Finally, similar to an apology, thanking has been demonstrated to have nuances of meaning and can, in addition to expressing genuine gratitude, be employed in situations in which it is said to be dismissive (i.e., telling someone that their help is not needed) and can appear in ironic contexts (Aijmer 1996: 37).

Aijmer (1996) has only systematically analysed the intonation contours applied to the formulations of *thank you* and *thanks*[23]*;* however, both tended to be produced with a falling intonation (Aijmer 1996: 43). She has found this to be the case in 64% of all occurrences of thanking, while *thanks* was used slightly more often with a falling intonation than *thank you* (73.9% compared to 61.2%). Also, there was a roughly equally low amount for both in terms of rising intonation (*thank you*: 14.7%, *thanks*: 13%) and the level intonation variant (*thank you*: 3.4%, *thanks*: 4.3%).[24] In addition to the mentioned slight variance in the exact frequency of falling intonation, the only true

[23] The first variant, *thank you*, was found markedly more often (116 occurrences compared to 23 occurrences).

[24] When on the other hand thanking is expressed due to social conventions, it is said to be produced with what is sometimes referred to as the calling contour (rise-fall) (Ladd 1978).

difference between the intonation contours applied to *thank you* and *thanks* was therefore detected in the contours of fall-rise, which occurred in 12.9% of the instances of *thank you*, and the opposite, rise-fall, which occurred in 6% of the instances of *thank you*, while neither of these two contours was found for *thanks.*

Furthermore, a number of different studies have referred to or empirically investigated the intonation contour of thanking, and these contours of falling and fall-rise intonation are frequently the centre of attention. As presented in the following, these two tendencies in both the intonation contour of thanking and the speech act of apology frequently align with the previous statements regarding intonation contours and the Frequency Code. According to Aijmer (1996), when an expression of thanking is meant to convey actual gratitude, differences are found on the formal as well as on the intonational levels, depending on the size of the favour. Aijmer (1996: 41) has further stated that "[t]he rise or fall-plus-rise tone sounds casual or non-committal and is compatible with […] routinized situations […]. It could not be used in situations which require 'serious' thanking such as thanking for an expensive gift". Note that, once again, sincerity is intertwined with severity. This finding for fall or fall-rise intonation is consistent with Wells' (2006: 66) view, who has claimed that the difference between employing a rising or falling tone is the difference between "routine acknowledgment (*/thank you*)" and "genuine gratitude (*\thank you*)" (Wichmann 2015: 177; emphasis added). The forward slash symbol, "/", refers to rising and "\" to falling intonations. In line with this assumption, situations in which thanking functions as a discourse marker rather than expressing real gratitude, such as when closing a telephone call, are those in which the majority of instances of rising intonation are found (Aijmer 1996). Importantly however, the form chosen to produce thanking and the prosodic contour applied must match. This is demonstrated in cases where a rising or fall-rise contour is used with the form of *thank you very much,* which may even "[…] sound sarcastic or amused" (Aijmer 1996: 47) or impolite and ironic (cf. Knowles 1987: 195).

Moving on to the speech act of apology and its underlying sincerity, the argument follows the tendencies for thanking observed previously. Indeed, similar suggestions have been made in the past, where the fall-rise pattern in apologies has been found most frequently in situations that could be argued to be casual. In her study, Aijmer (1996: 89) has found that 35% of IFIDs in her data (n = 81) came with a falling nuclear tone on *sorry*, while another 35% came with the typical fall-rise and 28% with a rising intonation. Rise-fall and level intonation were not found. Note that rising intonation was accordingly detected almost as often as fall and fall-rise intonations in Aijmer's (1996) study. This is unexpected, because it has previously been stated that this pattern, when in the form of the so-called *high rise*, "tends to sound perfunctory" (Lindström 1976:

177) and contradictory.[25] Similar to the previous example for thanking, it is, however, stressed again that the fall-rise intonation can be utilised to explicitly express that the speaker is not producing a heartfelt apology but sees it as a "ritual act" (Lindström 1976: 193)[26] with parallels to the notions of SINCERE TONE and CASUAL TONE, as proposed by Deutschmann (2003) in Figure 2.

Notably, Lindström (1976) has claimed that a Speaker is not necessarily entirely sincere about an apology if they decide to use a falling intonation nor is the opposite true. In addition to the casualness implied by fall-rise and rising intonation contours, Lindström (1976: 194) has connected rising intonation and politeness in specific situations. He has stated that "the rising *sorry* amounts to a polite refusal" or is employed to ask the interlocutor to repeat what they said (cf. Lindström 1976: 176). Again, this aligns with the tendency of politeness to be associated with high and rising pitch, as suggested by the Frequency Code but also the syntactic form of interrogatives and their ability to function as politeness markers.

Ultimately, the overall context is the determining factor of the appropriateness of either of these contours. While Lindström (1976) has agreed that falling intonation is the expected intonation to express a serious apology (Lindström 1976: 194), he has also stressed the potential for it to be perceived as ironic if a falling intonation is used in a situation in which it is considered "inappropriate" (Lindström 1976: 195). This aligns with Aijmer (2019: 261), who has further mentioned the so-called exclamatory *sorry!*, in addition to the interrogative *sorry*?, which are pronounced with what she has called "a special tone". She has stated that if *sorry* is used with such an intonation in circumstances in which the situational context does not warrant it, then it may be perceived as sarcastic (Aijmer 2019: 268). Equally intuitive statements about the effect of intonation on an utterance and the appropriateness depending on contextual factors can be found in Ladd's (1978: 524) study.

As a final note for this section, there is a second connection between sincerity and a prosodic dimension in addition to the most crucial one of the intonation contour. Lakoff (2001: 204) has stated that apologies made overly quickly or with a static intonation convey disadvantageous characteristics. They may be perceived as "scripted, nonspontaneous, and not so deeply felt". Conversely, she has mentioned the feature of

[25] Although this is the case, reclamatory questions can very well occur with a falling pitch contour and, when applying such an intonation pattern, the Speaker does not actually feel responsible for the situation (Lindström 1976: 237).

[26] Edmondson (1981: 284), in his detailed analysis of intuited data on apologies, also gives the 'imagined' intonation, stating that "[t]he function of intonation in discourse is a highly complex issue, such that I do not feel competent to go into this phenomenon in any detail". However, he does make the point that the satisfaction caused by an apology can be affected by intonation with the example of a situation in which one asks the Speaker to lend the Hearer money and the Speaker responds with *sorry* either with a falling or a rising intonation.

breaking voice (which belongs to the prosodic dimension of voice quality and is not investigated in this study), which can lead to an increase in perceived sincerity (Lakoff 2001: 204).

In summary, it must be stressed that appropriateness of an utterance for a given contextual circumstance is essential not only on the level of pragmatic strategies employed, but also on that of prosody. Overall, many of the points presented further confirm that the focus is not exclusively on being appropriate for the given severity level of the offence, but also on determining the corresponding markers of underlying sincerity.

2.3.3. Neutral and marked prosodic and pragmatic forms of the IFID

For the following analysis, the apologies elicited via the situations with low severity offences are a point of comparison for the apologies produced in the situations of medium and high severity circumstances. As previously highlighted, a point of comparison is often established as a default which helps to identify marked instances in a study. This approach is well-known when working with a prosodic angle in which, as Culpeper (2011: 62) has stated, "[t]he key question, then, for understanding the role of prosody is: what is the norm (or norms) against which prosodic features are marked?"

Generally, establishing a default on the level of intonation can be witnessed through a primary modal function and a secondary modal function of prosody (Hidalgo Navarro 2009: 168-169). The first and overarching function of prosody is the distinction between assertive statements, interrogatives and imperatives (Arndt & Janney 1985; Bolinger 1978; Waltereit 2005). These are considered to be "objective and stable meanings" (Hidalgo Navarro & Cabedo Nebot 2014: 8). The exact features of such defaults are frequently established, for example, by analysing the intonation that is displayed "in formal records, such as texts read aloud, speeches or lectures, and generally in any oral statement in which the speaker and the listener relationship becomes formal or distant" (Hidalgo Navarro & Cabedo Nebot 2014: 8-9). However, in data such as of the kind used in this study, speech is more spontaneous and diverse; in these situations, the secondary modal function comes to the forefront (Hidalgo Navarro & Cabedo Nebot 2014: 9). This is also called the *expressive function of intonation*. Here, the intonation does not have to be applied in such a way that it is "understood by an unknown audience, or to address a listener in a formal situation" (Hidalgo Navarro & Cabedo Nebot 2014: 9). The differences between the intonation as it is applied in the circumstances that induce the primary as compared to the secondary modal functions can provide valid insights into the application of intonation in conveying the expressive function of speech, which is then marked.

On the pragmatic level, so-called frame-based approaches come close to the determination of a default in a comparable sense. In frame-based approaches

(Terkourafi 2005, 2001), the assumption is that, based on the micro- and macro-social attributes of a specific situational context, there is a default interpretation of the perlocution. In other words, "[…] because [social categories] are so important in interaction, people make default assumptions about them as soon as possible, in order to even initiate interaction" (Terkourafi 2005: 247). Along these lines, a default interpretation is certainly possible for underlying attitudes such as sincerity and appropriateness from the Hearer's perception. Marked instances would then occur in situations in which "[…] these interpretations [are] overridden by situational factors such as the speaker's emotional state" (Vergis and Terkourafi 2015: 319). This brings the argument back to the importance of the secondary modal function mentioned previously for marked instances in terms of the expressive function introduced above.

With such a frame-based approach in mind, Aijmer (1996: 120) has combined the prosodic and pragmatic sides in a relatively simplified manner, establishing such frames for different formulations of apologies. Consequently, she has referred to them as the apology expressions which "are appropriate in standard situations". She has constructed a number of different frames, among them a frame for IFIDs formulated as a simple *sorry* and a frame for the formulation of *I am* (intensifier) *sorry*. Both of these frames are presented in Table 3, although the one proposed for the apology *I am* (intensifier) *sorry* on the right-hand side is more relevant to the current study. Many of the points made by Aijmer in her frames align with previously presented arguments that are further described in the upcoming paragraphs. The simple *sorry* would be found in disarming apologies and expressed with a rising tone, while the intensified (and overall, more elaborate) version expresses the remedial function of an apology for past events. It is expected to occur with different participants and more diverse types of offences than the non-intensified version. Based on this table, one may expect that the occurrences of *I'm* (adverbial) *sorry* would, by default, be produced with a falling intonation contour.

Table 3. Frames Suggested by Aijmer (1996: 120-121) for Two Apology Types (my own formatting).

Level	Feature	*Sorry*	*I Am* (Intensifier) *Sorry*
Formal Features	Function	Mainly Disarming	Remedial
	Intonation	**Rising Tone** **Stereotypic Tone**	**Falling Tone**
	Continuation	*It's okay, that's all right*	*It's okay*, etc.
	Discourse-Specific Features	Occurrence in the Opening and Closing of Telephone Calls	Face-to-Face Conversation, Discussion, Telephone Calls
Situational Features	Setting	At Home, at Work	At Home, at Work
	Time	(Mainly) Anticipatory	Past Events
	Participants	Friends, Family, Strangers, Operator/Caller, Caller-Answerer	Friends, Family, Strangers
	Types of Offence	Most Frequent in Talk Offences	Inconvenience, Talk, Time

Along the lines of Aijmer's approach here with a focus on only the IFID, more detailed information is provided for the possibility of a default formulation of the IFID from the pragmatic as well as the prosodic standpoints. Starting with the pragmatic perspective, the most often expressed formulation of the IFID in numerous studies is that of *(be) sorry* with variants (Aijmer 1996; Deutschmann 2003; Holmes 1995). Ogiermann (2009) has also found that the vast majority of IFIDs in her study (98%) were produced by the form *I'm sorry* or *sorry*, with *sorry* being slightly more frequent. Other expressions of this IFID were, in fact, relatively rare, followed, with some distance, by expressions such as *pardon* and *excuse me* (Aijmer 2019: 260; Deutschmann 2003: 51). In addition to these low tendencies with which other formulations have been found to occur, there seems to be some connection with the kind of offence for which the apology was made. This aligns with further claims made by Aijmer (1996: 121), who has proposed additional frames to those presented in Table 3 for the formulations of *excuse me* and *(I beg your) pardon*. Deutschmann (2003: 78) has equally stated that for real apologies (i.e., for LACK OF CONSIDERATION, MISTAKES AND MISUNDERSTANDINGS, BREACH OF EXPECTATION and ACCIDENTS), the vast majority of apologies accompanied this most often used form of the IFID by including the item *sorry* (80.2%, 86.4%, 76.6%, 92.2%, respectively), followed by *pardon* and *excuse me*. Apologies for BREACH OF CONSENSUS were, however, produced with a relatively high percentage of *afraid* as the apology term (16%). Finally, as previously stated, Fraser (1981: 267-268) has argued that a frequent form of apologies for minor social violations are composed of a simple *excuse me*.

Consequently, there appears to be ample evidence to regard the IFID of the form *(be) sorry* as the neutral formulation for "real" apologies (Deutschmann 2003: 78), with other strategies seemingly marked in comparison.[27] Agreeing with this claim, Aijmer (1996: 82) has stated that "[s]tripped of intensifiers, *(I am) sorry* is a neutral apology".[28] Hence, this neutral formulation can be further intensified with the usage of a range of adverbials that can be added to it. They have been argued to be instances of positive politeness (cf. Leech 2014: 118; Leech 1983: 213) and to be able to emphasise emotional or other factors (see, e.g., Vollmer and Olshtain 1989: 213). In the formulation of such an intensification, different possibilities exist, while again, some forms are more frequently found than others. Ogiermann (2009: 123) has found for her native speaker informants that the intensifier far most often used was *really*, followed by *so*, *very* and *terribly*. Aijmer (1996: 85) has found that the most often utilised

[27] Importantly, IFIDs can of course also consist of this expression of regret combined with a sentence or a complement (e.g. (*I'm*) *sorry but* + sentence, (*I'm*) *sorry if* + sentence, (*I'm*) *sorry about* + NP (Noun Phrase)), as stressed by Ogiermann (2009: 114) and does not have to be as short as the above-mentioned form of *(be) sorry* may suggest.

[28] Austin (1962: 66) makes out the IFID in the form of *I apologize* as the "normal form".

intensification (while finding few intensified IFIDs altogether) was by addition of the adverbial *so*, followed by *very* and *terribly*.

Finally, arguing for a default and marked intonation contour for the IFID, some researchers have declared the fall-rise to be the neutral intonation, in line with what has been called a *stylised intonation contour* (Ladd 1978). As noted previously, this is the intonation pattern expected to be used in situations which demand a more casual apology (Aijmer 1996: 89). Distancing oneself from this default would then signal that this neutral variant is not appropriate in the given context but that different prosodic means are in order. However, Lindström (1976: 237) has argued that "the fall-rise can hardly be considered the normal tone with apologies in general". Instead, in his data from two audio plays, he has found that only 51% of apologies were actually produced with such a contour (cf. Lindström 1976: 247), which, though high, may not warrant this label. Therefore, while he has disagreed on calling the fall-rise the default, it has been acknowledged that

> [t]hese "default" realizations can, of course, be used strategically regardless of the context: a falling tone might be used to sound "assertive", while the more tentative rising tone might be used to express politeness by suggesting that the hearer has an option to refuse even if it is not actually the case. (as delivered by Wichmann 2015: 178)

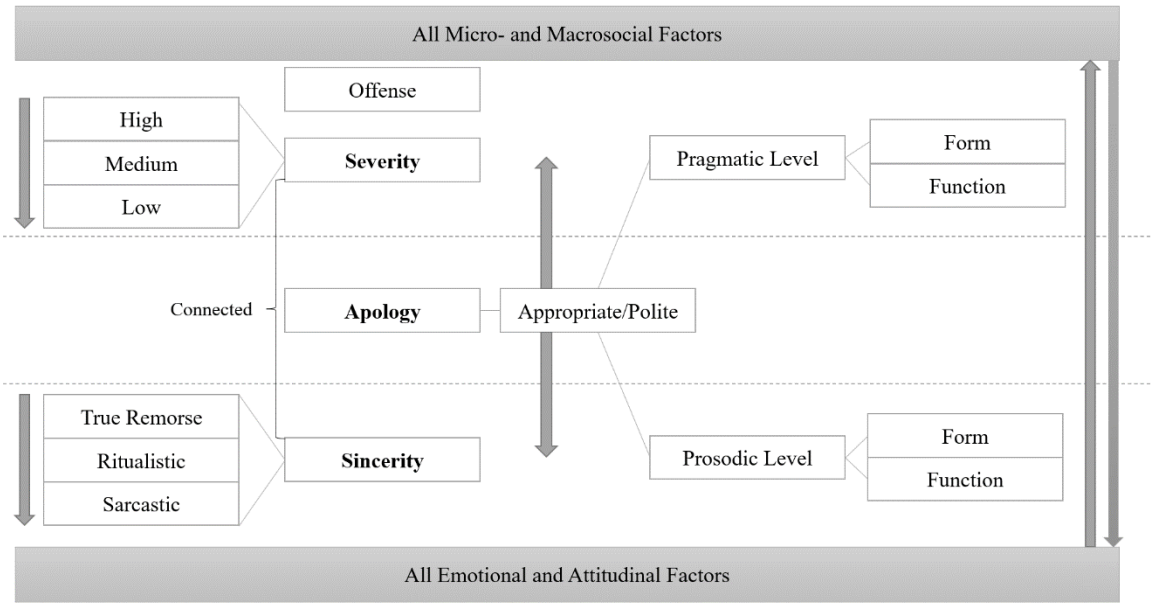
Overall, this study therefore establishes that there is convincing evidence for a default contour for the IFID frame in CASUAL apologies (fall-rise) and a default for apologies meant to express true remorse (fall). Moreover, those apologies belonging to the first frame are formulated with the default *(be) sorry* rather than its intensified version. These are, however, end points on a continuum, as stated previously. The focus in this study lies in discussing which contours and forms were preferred by the informants for each of the severity levels incorporated in this study. This study then deliberates how far they differ from the apology formulation chosen in the apologies for low severity offences; it is not meant to establish any unwavering defaults.

2.4 Reviewing the Role of Severity and Sincerity in Appropriate Apologies

Based on the accounts thus far, prosody seems to enable the expression of all kinds of underlying messages that are crucial in the delivery of apologies, culminating in the statement that "[p]rosody can […] signal if the apology is disarming (anticipatory) or remedial (retrospective) and the degree of politeness or emotionality associated with the apology" (Aijmer 1996: 89). This requires that one produces an apology with the "[…] appropriate verbal expressions […] [but] also to deliver the utterance in an appropriate tone of voice […]" (Brown & Prieto 2017: 357). Ultimately, perceived sincerity is based on a congruence between what is felt (by the Speaker and Hearer alike) and what is said (Gosztolya, Grósz, Szaszák & Tóth 2016: 2026).

This complex picture, the different dimensions, apparent effects and appropriateness of formulation in regard to the severity of the offence as well as the underlying sincerity are visualised in Figure 3.

Figure 3. Model: The Role of Sincerity and Severity in the Delivery of Apologies.



As this figure presents, based on the points thus far, it is argued that the severity – along with the other micro-social factors disregarded here – constantly form the basis for the judgement of which apology formulation is situationally appropriate, at least in the scientific literature. Additionally, the appropriateness of the apology formulation for a given situation is determined by the level of sincerity with which the apology is produced. This is featured at the bottom of this model. As noted in the literature, it is essentially possible that an apology is based on sincerity of different degrees, ranging from true remorse over RITUALISTIC apologies to sarcastic deliveries of this speech act, all of which can be situationally appropriate.[29] The bottom level of the figure presents not only the attitude of sincerity, but also the additional emotional and attitudinal factors highlighted further in Chapter 2.5; however, sincerity is arguably the most crucial because it is, in many regards, a required attitude and intrinsic to the felicity conditions. Appropriateness appears in the middle of the model, and its centrality has been stated in the previous two paragraphs. It can now be stressed that it overlaps with or even represents politeness in a similar sense as Locher and Watts (2005) proposed.

[29] The fourth category highlighted on Deutschmann's (2003) continuum of apparent sincerity, that of CHALLENGING TONE, was disregarded here as it is the category with the fuzziest boundaries and one that did not appear in any of the other sources presented in this study, making it reasonable to simplify the matter slightly at this point.

While an overlap between politeness and appropriateness may seem obvious, it is further claimed that politeness and sincerity also appear to be intertwined. This can be gathered from the following argument, in which Aijmer (2019: 260) has stated that modifications of apologies can "convey meanings on a continuum between polite and impolite (sincere and non-sincere) apologies". This view has been seconded by Haugh and Chang (2019), who have found a correlation between politeness and sincerity in their study.[30] They have stated that apologies judged as "good" and "very polite" were also considered to be sincere. Consequently, they have noted that "the form of the apology should match the severity of the offence" (Haugh & Chang 2019: 214).[31] Overall, it therefore seems that the degree of (appropriate) sincerity determines appropriateness on the level of prosody, just as the severity of the offence affects which formulations are appropriate on the pragmatic level. A high degree of interconnection between these concepts and a *de facto* inability to completely distinguish them or their effects is generally accepted in this study.

The model established here is based on previous literature; however, it still raises at least two questions: 1) How much does the ultimate appropriateness result from applying specific pragmatic strategies for specific situations? and 2) How detectable is a cumulation of all parts of an apology, pragmatic and prosodic, as well as in terms of the different forms and functions? It seems possible that the initial prerequisite for appropriateness is based on the pragmatic level, which ultimately governs its success. This reduces the role of prosody to that of an additional layer employed if necessary, in which "[t]he resulting utterance seeks to stress the force of the regret, making the apology appear more sincere" (Cohen, Olshtain, & Rosenstein 1986, as mentioned in Limberg 2016: 702). This argument is not unreasonable *per se*, given that a written apology, void of any prosody, can still convey actual remorse – although there is some risk for ambiguity, which could potentially be prevented by the addition of vocal dimensions. Nevertheless, when intonation is present, one should not think of it as a level that serves only a secondary function, with the primary function situated on the level of the pragmatic composition. In fact, it is completely conceivable that, when the surrounding context and the intonation applied do not fit, the Hearer is "likely to interpret the whole [utterance] according to the intonation, and disregard the wording" (Knowles 1987: 195-196).

[30] Surprisingly, in their article that deals entirely with the perception of in/sincerity and im/politeness, Haugh & Chang (2019) do not mention prosodic aspects at all.

[31] The reasons given by the informants for lower sincerity (or politeness) ratings were (1) did not target the main offence, (2) was not produced in a timely manner, (3) the account given was seen as inadequate (4) the offender did not show the expected amount of interest in the Hearer's feelings (Haugh & Chang 2019: 215).

2.5 Additional Emotions and Attitudes that Impact the Prosody of Apologies

The focus thus far has been the attitude of sincerity; however, some additional words on the impact and importance of emotions are necessary at this point. Apologies are known to be emotionally charged (see Cohen & Olshtain 1981: 115). The prosodic delivery of emotions as a factor belongs to those attributes conveyed by the Speaker's voice and used by the Hearer to interpret the utterance, in which "[a]ny emotional colouring in the voice is an important cue to interpretation [...]" (Wichmann 2002: Links between prosody and affect section, para. 4).

It has frequently been stated that the prosodic dimensions are intertwined, in which "[…] emotional overtones are clearly context-dependent and are easy to override with other factors such as voice quality, loudness and duration" (Lindsey 1981: 12). These emotional overtones, delivered via the prosody applied, can provide the utterance with the necessary sense of markedness compared to their form in a context that does not have this additional layer of specific emotion. This was already noted in regard to the concept of the expressive function, i.e., the secondary modal function of intonation, above. However, while some researchers have noted a systematic connection between, for example, pitch height and specific emotions, others have advised caution. They have described prosodic dimensions as "continuously, rather than categorically, affected by emotions and/or emotional arousal" (cf. Bänziger & Scherer 2005: 252). No exact details can be offered for patterns which clearly represent a certain emotional state, although studies have indicated that informants were able to identify specific states based only on manipulated F0 contours, regardless of lexical forms (cf. Bänziger & Scherer 2005 for a summary of findings).

The centrality of emotions in the study of apologies, even when the focus is not on prosody, is presented in the coding scheme for this speech act that has been developed by Aijmer (1996: 83). She strictly differentiated between EXPLICIT and IMPLICIT APOLOGY strategies, which are either EMOTIONAL or NON-EMOTIONAL in nature.[32] A number of additional factors for this important aspect in the determination of the appropriateness of a chosen formulation relative to the emotional factors involved were discovered in literature and this study's data. Some findings for tendencies are therefore advanced in the following. These are the underlying messages conveyed by the emotive of EXCLAMATIONS, the question of the impact of urgency on the apology's attributes and the delivery of a sense of embarrassment as well as its importance for this speech act.

[32] Based on those utterances which she would categorise as NON-EMOTIONAL, which would be the majority of instances found in this study's data, this coding scheme was deemed to not be applicable here.

2.5.1 The prosodic characteristics of EXCLAMATIONS and surprise

Due to its centrality in later discussions, the emotional functions of EXCLAMATIONS are highlighted here, along with the prosodic attributes that have previously been found for this strategy. Generally, for this strategy's formulation, a differentiation is made in this study between the EXCLAMATION PARTICLE (*oh*) and the EXCLAMATION TERM (e.g., *god*, *gosh*, *no*). EXCLAMATIONS are, strictly speaking, external modifiers of the apology, while "[...] they can still contribute to the politeness of the speech event, by adding attitudinal or emotive meaning" (Leech 2014: 116). As mentioned, the CCSARP refers to EXCLAMATIONS as emotional expressions (Blum-Kulka et al. 1989b: 290) and qualifies them as intensifications of the IFID. Furthermore, Aijmer's (1996) categorisation refers to EXCLAMATIONS as one of those strategies that explicitly expresses emotions in an apology.

In the following, it is argued that EXCLAMATIONS fulfil two different but overlapping functions: 1) They can intensify the apology by stressing the emotionality involved. This has also been argued by Selting (1994: 376-377), who has stated that emotives demonstrate that one is involved more noticeably. The chosen formulation of this fact is prominent because she has expressed that, in any case, "[…] [emotives] refer to speech activities that speakers perform, and recipients interpret, as particular, noticeable, and for this reason, marked, activities, on the basis of particular linguistic cues" (Selting 1994: 376-377). This form of an emotional involvement that one may want to convey via the usage of EXCLAMATIONS can, for example, be emphasised by producing them with a longer vowel sound in the *oh*, almost as a sort of "exaggeration" (Aijmer 2019: 261). At least in part, this also aligns with the second function of this strategy in which EXCLAMATIONS can 2) act as a marker of surprise and, via this emotion, tone down the level of responsibility for the offence itself (Deutschmann 2003: 54). Mozziconacci and Hermes (1999: 2003) have declared the emotion of surprise to be one of the typical labels that is reflected in the way in which people speak; they have called this *emotional speech*. This sense of surprise has also been mentioned and identified as part of the underlying message of EXCLAMATIONS by Aijmer (2019: 261). She has found *oh sorry* to be one of the most commonly used apology formulations in her data (in addition to the simple *sorry*) and has described this as an apology mixed with surprise. Note that, due to the down-toning function regarding responsibility, this underlying message of EXCLAMATIONS is similar to the sub-category introduced for the strategy of TAKING ON RESPONSIBILITY, called *LACK OF INTENT*.

Different findings have been revealed for the prosodic articulation of EXCLAMATIONS and the different prosodic dimensions investigated in this study. These findings also detail the average pitch height in utterances that transmit the notion of surprise. In news deliveries, high pitch is common in news that is meant to express

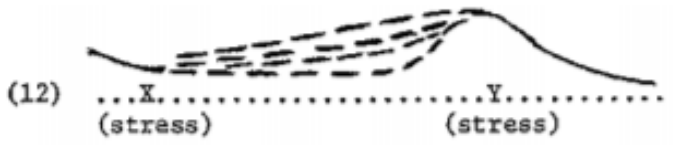
surprise about the situation being reported but only if it is good news (Freese & Maynard 1998). This is, arguably, not the case here. However, the same research has suggested that bad news is delivered with a low pitch level, narrow pitch range, stretched vowels with markedly falling pitch, slower pace and often breathy or creaky voice quality (Freese & Maynard 1998: 198). Furthermore, the speech rate is said to be slow and even decreasing from beginning to the end of the utterance (Freese & Maynard 1998: 198). Simply said, in these situations, the opposite tendencies of those in good news occur. In a similar respect, Syrdal and Jun Kim (2008) have found that, in addition to high inter-speaker variability, negative EXCLAMATIONS[33] were identified as speech acts in their own right and were among those utterances with the lowest average F0 in Hz.

The employed intonation contour is, yet again, a feature said to be notably under-researched for EXCLAMATIONS, especially given its importance in this emotive (cf. Sturman & Rett 2018). A 1920s study has noted that EXCLAMATIONS, together with statements, questions, interrogative words and commands, are produced with a "falling tune" (Armstrong and Ward 1926, as mentioned by Cruttenden 1981: 78). Moreover, the aforementioned possible function of EXCLAMATIONS to generally channel emotionality as well as specifically express surprise invokes the concept of the so-called *surprise/redundancy intonation contour* (Sag & Liberman 1975). This contour starts low in the pitch range (near the beginning of the utterance) in a way that it is associated with a stressed syllable. This correlation with stress is expected, as stressed syllables usually determine the direction of intonation (see above). It is followed by a (low) rise and then an abrupt fall at the final stress in the utterance. The rise can assume numerous different manifestations, in which an "[…] 'upstepping head'[34] has the effect of reinforcing the fact that the final fall is heard as higher than the preceding accent" (Hirst 2005: 344). A drawing of a stylised surprise/redundancy contour is presented in Figure 4. It illustrates the falling contour starting on a high pitch accent on the final stressed syllable in the utterance. Leading to this are a number of different degrees of rising intonation "without any significant stretches of negative frequency/time slope" (Sag & Liberman 1975: 491). Sag and Liberman (1975: 491) have further demonstrated this contour with *wh*-questions as well as general outbursts due to surprise.

[33] In their study, EXCLAMATIONS are distinguished into EXCLAMATION-POSITIVE and EXCLAMATION-NEGATIVE; EXCLAMATION-NEGATIVE is different to positive exclamations like, e.g., *Wonderful!*. These negative EXCLAMATIONS are instead the ones expected to be found in the data of the current study because they are a reaction to the offence, which, in itself, should not invoke positive emotions in the person apologising.

[34] A steep rise in intonation

Figure 4. Stylised Intonation Contour for Surprise/Redundancy (Sag & Libermann 1975: 491).[35]



Notably, they have stressed that the same intonation contour would be used if the sentence was redundant, similar to rhetorical questions; leading to its label as the surprise/redundancy contour.[36] While surprise and redundancy initially seem to be unrelated, especially in terms of the emotions that underlie their utterances, it has been argued that they are, indeed, overlapping. This is conceivable because, in cases in which an utterance is clearly redundant, one may not expect that the need to produce this utterance still exists because of its superfluous character. In a similar argument, it has also been noted that sarcasm and surprise/astonishment can have common prosodic features, with stronger stress on the beginning of the phrase as well as restrained tempo and breathy voice (cf. Culpeper 2005: 61). In fact, in the literature on emotion and prosody, it is posited that "sarcasm is a secondary emotion" which "feeds off of other emotions such as surprise" (Culpeper 2005: 61). This explains why surprise and sarcasm and, by extension, surprise and redundancy have intonational characteristics, among them this contour, in common. However, the conclusion needs to be stressed that "[w]hatever the correct account may be, it will surely treat the redundancy cases and the surprise cases as a single phenomenon" (Sag & Libermann 1975: 497).

As a finding somewhat opposed to what Figure 4 and the idea of the surprise/redundancy contour present, Scherer (1979) has developed a rising contour and fast tempo as well as a high pitch level to correlate with surprise. It has been mentioned that fear is a possible cause for this intonation (cf. Bänziger & Scherer 2005 for accounts on the impact of fear on the F0). This further stresses the benefit of differentiating between EXCLAMATIONS regarding their underlying message, both positive and negative. More recently, Sturman and Rett (2018) have found that a number of EXCLAMATIONS, when read aloud by an American English actor, had the characteristic of a pitch accent of the L+H* nature, that is, a rising peak accent. Additionally, they had an extra-high pitch target and furthermore, "more intermediate phrase boundaries than default declarative prosody" (Sturman & Rett 2018: para. 3). Note that this rising peak accent refers to the accented syllable within the intonation phrase and not the boundary tone. Consequently, it aligns with the initial rise that has

[35] From Sag & Libermann (1975: 491), reprinted with permission.
[36] They also suggest that it can be found in imperatives and give a direct request as an example (Sag & Libermann 1975: 492).

been proposed by Sag and Liberman (1975) before the abrupt fall on the final stress in the intonation phrase.

Delving further into the prosodic attributions made to EXCLAMATIONS, the Effort Code by Gussenhoven (2002) has advocated that the force one places into surprise notions leads to a wider pitch range. To support this view, Chen et al. (2004) have used surprise as one of the emotions in their perception task. They have claimed that it was, among other emotional attributes, included because of its affective interpretation of this Effort Code "[…] and readily interpretable for speakers with different language backgrounds" (Chen et al. 2004: 316). They have further confirmed that, in English, a wider pitch range and a higher peak are associated with more surprise than a narrower pitch range or a lower peak, which is a tendency also supported by others (e.g., Selting 1994).

Finally, Bostanov and Kotchoubey (2004: 260) have suggested that voice quality is important here as well because EXCLAMATIONS of the sort investigated here are short utterances meant to convey emotions with less possibility to vary the overall prosodic dimensions. They have argued that "it is reasonable to hypothesize that short exclamations convey emotion predominantly through voice quality". According to the authors, voice quality is the key to the differentiation of emotions in affective speech (Bostanov and Kotchoubey 2004: 260). This inevitably makes it interesting to pay closer attention to the voice quality of vocal fry in EXCLAMATIONS in the later analysis and discussion.

2.5.2 Embarrassment and apologies

Another underlying emotion intrinsic to the situational context of apologies is identified in the possible sense of embarrassment felt after committing an offence. The potential for an offence to cause embarrassment to the Speaker is traced back to Goffman (1956). He has defined embarrassment as occurring "whenever an individual is felt to have projected incompatible definitions of himself before those present" (Goffman 1956: 264). This is closely connected to a perceived face threat to the Speaker's public image and the ability to respect and adhere to social norms (Goffman 1956: 268).[37] The idea is therefore intertwined with what was later defined as positive face in politeness theory (Brown and Levinson 1987, 1978). It has been further stressed by Spencer-Oatey (2011: 3572) that "[t]he emotions of embarrassment, shame and discomfort occurred when there were explicit arguments [...], direct criticism […] or when an individual felt inadequate in some way [...]". Others, including Miller (1992), have also counted "abashed harmdoing" in the form of being "embarrassed by harming others" and conspicuousness in "suffering *[sic]* the attention by others when one is not deficient", as

[37] Note that Goffman (1956) here is referring to the embarrassment felt when having to perform a linguistic repair.

well as "cognitive shortcomings" as three categories that cause embarrassment (Miller 1992: 193). This line of argument can include some offences that may warrant an apology, especially situations in which one has wronged another person by one's own failure, inadequacy (e.g., to manage time) or lack of skill (e.g., scratching a car while parking).[38]

The potential for a feeling of embarrassment when performing an apology and its identification as a strategy becomes clear also in the CCSARP coding scheme. As mentioned, one way of TAKING ON RESPONSIBILITY is to use an EXPRESSION OF EMBARRASSMENT (Blum-Kulka & Olshtain 1989b: 292). Moreover, embarrassment can also be demonstrated without explicitly expressing this emotion in the form identified in the CCSARP coding scheme. In fact, this emotion has been noted as one of the causes for creaky voice in Ishi, Ishiguro and Hagita (2006). Furthermore, in addition to more obvious reactions when feeling embarrassment (e.g., blushing, stuttering) Goffman has mentioned noteworthy features that are investigated systematically in the present study: vocal pitch changes and hesitation (Goffman 1956: 265-266; also see Chang & Haugh 2011) as well as unusually high or low pitch and breaking of the voice (Goffman 1956: 264).

2.5.3 Prosody and situational urgency

Urgency is another underlying nuance which can impact the prosody and its role in the delivery of the intended illocution of this speech act. Previously, it was placed in the attitude category rather than that of emotion. However, the urgency displayed in the situation in this study may be intertwined with fear (see discussion below).

A criticism of politeness theory is that it fails to stress the impact of attitudes on politeness norms. As Locher and Watts (2005: 10) have stated, politeness theory "does not account for situations in which face-threat mitigation is not a priority, e.g., aggressive, abusive and rude behaviour". However, Brown and Levinson (1987) have mentioned urgency as one contributing factor when discussing the circumstances under which the most direct formulation of an FTA, bald on record, can be appropriate. They have noted that this direct formulation holds a relatively low risk for retribution from the addressee when "[…] S and H both tacitly agree that the relevance of face demands may be suspended in the interests of urgency or efficiency […]" (Brown & Levinson 1987: 69). They have explicitly mentioned the example of calling for help as one such situation (Brown & Levinson 1987: 96).

[38] Generally, it needs to be stressed though that, in addition to the elicitation of perception data, Goffman (1956) has not revealed how to measure the degree of embarrassment felt in a situation, nor has this been addressed by any of the other sources that refer to embarrassment in this expressive speech act. The previously established channel for this layer of emotion has been situated on the level of prosody; however, corresponding features in the production of apologies can indicate this emotional status.

The prosody in urgent and non-urgent Japanese speech has revealed that urgent speech is correlated with a higher F0, intensity and speech rate, as well as a high variability in the speech rhythm, which was often different than normal (Kamiyama, Ando, Masumura, Kobashikawa & Aono 2019: 917). Additionally, a study has asked actors to produce signal words in a way that they believed conveyed urgency, as opposed to a non-urgent and monotone delivery; researchers have performed an acoustic analysis of these signal words, which conveyed warnings and demonstrated that those produced as urgent had a "higher frequency with a broader pitch range and were louder than the nonurgent or monotone words", along with a higher speech rate (Hellier, Edworthy, Weedon, Walters & Adams 2002: 1). Furthermore, these differences were perceived by informants in a later study, in which they correctly identified the increase in urgency in corresponding versions of the utterance. Finally, further results from the *Fonocortesia* project have revealed that, when compared to the standard pitch patterns for strong commands in Catalan, urgency was stressed by deviating from the standard imperative utterances. This was achieved by using an "expanded pitch range of the focalized pitch accents and the fast speech rate of the whole utterance, which expresses the urgency of this speech act" (Prieto & Rigau 2012: 37 on Catalan). Notably, this is a finding which also restores the Effort Code (Gussenhoven 2002) to the picture as well as the need to express oneself as clearly as possible, especially in urgent situations.

3. Methodology

This chapter establishes how the data was gathered and why certain methodological decisions were made. It starts with details on the data collection instrument (Chapter 3.1), followed by information on the informants in the study (Chapter 3.2). Finally, it highlights details on how the data was analysed (Chapter 3.3). This includes specifics about the different coding schemes (pragmatic and prosodic) applied and the statistical measurements taken.

3.1 Data Collection Instrument and Process

The data collection instrument used for this study was an online questionnaire, which included written demographic questions as well as ODCTs. In the following, insights are shared on the technical details of this online questionnaire, the DCTs and additional information regarding the basis on which these situations were selected through a perception-based pre-study.

The online questionnaire was created using the platform LimeSurvey Professional (LimeSurvey GmbH 2019), which was the only online platform that enabled oral answers to be performed and recorded online, directly in the browser. This meant that the informants could complete the questionnaire remotely without the researcher

present. The recordings were manually started by the informants before the production of each apology and manually stopped once the speech act was completed. The questionnaire was distributed online using the platform Prolific (Prolific 2019 [2014]).

The main body of the questionnaire included six DCT items, with two representing the same level of severity for each high, medium or low. Each informant was presented with four DCT situations. The selection of DCT situations was based on a two-step randomisation process programmed into the questionnaire. The first randomisation cycle selected one DCT from each of the three severity levels. Afterward, a second cycle randomly selected an additional situation of the remaining, previously unchosen three situations. Accordingly, the fourth situation presented either the second high, medium or low severity level DCT item. A selection of four instead of all six DCTs was meant to reduce fatigue effects. It was expected that completing a similar task repeatedly held the risk for a significant impact on the prosodic dimensions in particular. Based on all questionnaires, 246 apologies were elicited from 66 informants.

3.1.1 DCTs and their advantages and disadvantages

The main body of the questionnaire consisted of the six DCT items that elicited the necessary apologies. These items presented the informant with a situational description and a prompt "to which the participants [were] asked to react" (Ogiermann 2018: 232; see below). A detailed overview of the feasibility of this method in prosodic research has been presented by del Mar Vanrell, Feldhausen and Astruc (2018). They have discussed the applicability of DCTs in research of the prosody of Romance languages beyond what can be offered here. One advantage of DCTs, however, is that, as often mentioned in DCT-based studies, they facilitate a quick collection of data. Additionally, they grant the ability to systematically vary the situations and the inherent variables (especially micro- and macro-social factors) according to the researcher's and research questions' needs (cf., e.g., Kasper 2008; Ogiermann 2018; Roever 2013). This was especially necessary here, as it enabled an increased comparability between the utterances produced by different informants for the exact same situation. As stated previously, comparability is essential if one wants to make any assumptions about phenomena on the pragmatics-prosody interface (cf. e.g., Ogden 2006: 1754; Waltereit 2005).

The form of oral DCTs as the data collection instrument was crucial for the study at hand because prosody is absent in written data. With the elicitation of oral data, the study has the potential not only to investigate the central prosodic features, but also to examine hesitations and repetitions, which are additional aspects of spoken language that are lost in writing. In addition to the fact that this mode essentially has no alternative for a study such as the one at hand, it decimated another frequent point of criticism of written DCTs. This point involves the disadvantage of written DCTs asking

the participant to write what would frequently be spoken in the situations created, while "completing a written task involves different cognitive processes than speaking" (Ogiermann 2018: 233). This can impact the outcome of a study by mirroring written rather than spoken language. Finally, for technical reasons, the instructions were offered in writing instead of adopting an aural-oral design.

A number of limitations connected to this study design need to be addressed. Because of the data consisting of audio recordings only, the equally important facial expressions and gestures had to be disregarded completely (cf. Brown & Prieto 2017 for a discussion of the importance of these two features in verbal and non-verbal interaction). Furthermore, the aforementioned process of having the informants start and stop their recordings themselves as well as the fact that uploading times differed between informants make it impossible to analyse planning time involved before the production of the actual utterance. However, the instructions at the beginning of the questionnaire clearly stated that the informants should answer spontaneously, as is often the case in these kinds of studies (cf. Ogiermann 2018: 232). This, to some extent, also addresses the issue of prosody being claimed to be unobservable in elicited data in its role as a communicative function, while this would be observable in spontaneous speech (cf. Vaissiere 2008: 237)[39]. Still, this disadvantage remains true to some degree, despite inserting instructions which assured the informants that there were no wrong or right answers and asking them to simply react in the way they normally would in this kind of situation.

Accordingly, the common criticism of decreased spontaneity and naturalness in this kind of data (Kasper 2008) was not completely eliminated. Different ways of improving this shortcoming have been advanced in the past, such as in discourse production tasks (cf., e.g., Schneider 2008). This form was not selected here because it would have further increased the complexity, thereby decreasing the comparability, of the utterances. Nevertheless, because prosodic studies are frequently based on laboratory data, such as data comprised of word lists that are read aloud (cf. Wichmann 2015: 176), DCTs are considered an improvement in comparison. In fact, they are situated in the middle of a continuum between conversational and experimental research (del Mar Vanrell et al. 2018: 192), which allows them to benefit from advantages that stem from both of these angles. The overall benefits of this elicitation instrument have also been acknowledged by other researchers, including those whose studies are situated at or near the interface between pragmatics and prosody (Astruc & del Mar Vanrell 2016; Astruc-Aguilera et al. 2016; Bardovi-Harlig et al. 2008; Borràs-Comes, Sichel-Bazin & Prieto 2015).

[39] It should not be disregarded that Vaissiere (2008: 237) also mentions that speech in which intonation can be studied should be interactional.

As a final call for caution regarding DCT data, the resulting data is known to not necessarily show what the informant would say in naturally-occurring situations but instead mirrors what the informant thinks they would say (Kasper 2008; Schneider 2011; Turnbull 2001). However, just as it was argued for other studies, especially those with an intercultural and interlanguage focus on speech acts (see Ogiermann 2018 for an overview), this can also be seen as an advantage of this method. The study at hand is, after all, an explorative study of the impact of the severity of the offence on the pragmatic and prosodic realisation of apologies. The fact that the data supposedly mirrors what the informants think would be appropriate in this situation in no way refutes this purpose. A necessary degree of carefulness regarding the lack of generalisability of the results is self-evident.

3.1.2 DCT situations and variables

During the development of the DCT situations, the sociopragmatic variables (micro- and macro-social alike) were maintained, with the exception of the chosen independent variable of severity of the offence. For all situations, social distance was low, and there was an equal distribution of power between the interlocutors. This was ensured by creating only contexts in which the informants had to apologise to a close friend. Choosing friends as the interlocutors had the advantage that the informants were not confronted with situations in which they had to pose as a fictional character in an unfamiliar role (e.g., in that of a professor). This was important because unnaturalness of this sort can impact the formulation of utterances in disadvantageous ways (cf. Ogiermann 2018: 235).[40]

Before the distribution of the questionnaire, the situations and the perceived severity of the offences were tested in a pre-study. This was essential to further inform and confirm the researcher's intuition of different levels of severity of the offence displayed. All situations used in the later study were presented to 25 informants who rated the situations for the perceived severity of the offence and naturalness of the situation. This was performed on 5-point Likert scales ranging from 1 = not severe to 5 = very severe and 1 = not natural to 5 = very natural (see Table 5 for the averages obtained from this pre-study).[41] The 25 informants from the perception pre-study were not the same as those in the actual data collection. However, they did have the same demographics and were equally reached via the platform Prolific (Prolific 2019 [2014]). The exact formulations for the situations selected after this process can be found in Table 4.

[40] As a sidenote, the low social distance meant that the apologies likely revealed a higher number of strategies attending to the positive face of the Hearer than would be the case if social distance was higher or if a difference in hierarchical power was displayed (Ogiermann 2009: 53). In such situations, one would expect strategies to attend to the negative face, which re-establishes the respect one has for the Hearer and the distance between oneself and this interlocutor.

[41] See also Wouk (2006: 1460) who used a similar rating procedure to obtain data on this hard to define category.

Table 4. Situational Descriptions Used in the Online Questionnaire.

High Severity (HS)	Scratched Car (HS-SC)	You just picked up a friend from the airport to take her home. While parking in front of her house, you accidentally scratch her new car and from the looks of it, it is pretty bad. You: _____
	Heavy Door (HS-HD)	You are out with a friend. When you walk into a shop you let go of a heavy door and it hits her in the face. Your friend screams out in pain and you are sure that her nose is broken. You: _____
Medium Severity (MS)	Unpunctual (MS-UP)	You arranged to meet a friend to study for an exam. You are a notoriously unpunctual person and arrive half an hour late for the meeting. Friend: I have been waiting at least half an hour for you! You: _____
	Bus Directions (MS-BD)	You are meeting up with a friend. The last time you saw her, you gave her some bus directions because she is new in town. Friend: You know you gave me the wrong bus number for the movie theatre yesterday! By the time we got there, we had already missed half the movie. You: _____
Low Severity (LS)	Borrowed Book (LS-BB)	You borrowed a book from a friend and promised to return it today. Unfortunately, you forgot to pack it. Friend: Oh hey, did you remember to bring the book? You: _____
	Newspaper (LS-NP)	You promised to buy a newspaper for a friend while you were in town, but you forgot. Friend: Did you get the paper? You: _____

The situations in the questionnaire were all created to elicit apologies which would adhere to the felicity conditions. They were based on the precondition that there was a previously committed offence for which the Speaker was responsible. This was explicitly mentioned and easy to identify in the situational descriptions; the displayed offences actually harmed the Hearer, although in different ways (see Chapter 3.1.3) and with different degrees of severity (see Chapter 2.1.2.2). Additionally, it could be assumed that the Speaker was sincere about the apology, as there was no evidence in the situational description that the attitude was a different one. Finally, since there was no reaction of the Hearer provided in the different situations, for example, in the form of a rejoinder (cf. Johnston, Kasper & Ross 1998), it could be assumed that the utterances produced by the respondents were meant to ultimately be considered actual, successful apologies.

Moreover, the initial selection was heavily based on the proposed three levels of severity of the offence as they were proposed by Holmes (1995: 171) and the examples given by her. Similar situations were also found in previous literature and were either replicated or slightly adjusted in accordance with the purpose of this study.[42] These

[42] HS-HD was adopted from Ogiermann (2009), HS-SC from Salehi (2014) and Holmes (1995), large parts of the formulation of MS-BD and MS-UP were taken from Salehi (2014), also cf. Holmes (1995),

adjustments were necessary to enhance the described offences in the high severity (HS) situations to obtain the required severity ratings in the perception pre-study. Furthermore, when necessary, the micro-social factors were fitted to the desired interlocutor constellation, for example, describing the owner of the forgotten book not as a professor but as a friend. Note that del Mar Vanrell et al. (2018) have found evidence that enhancing the detail of the situational description led to longer speech acts "[…] in terms of mean length of the speech act and of the mean number of supportive moves […]" (del Mar Vanrell et al. 2018: 207). Therefore, the length and detail of the descriptions were kept as similar as possible.

Table 5 reveals that the two situations which display low severity (LS) received a value of 1.9 on average for the Borrowed Book situation (LS-BB) and 2.0 for the Forgotten Newspaper situation (LS-NP) on the severity Likert scales.

Table 5. Overview of the Six DCT Situations and Their Varying Factors.

Situation	Power	Social Distance	Severity of the Offence	Naturalness of the Situation	Severity Level	Number of Apologies
HS-HD	+/-	+/-	4.1 (SD: 1.3)	3.0 (SD: 1.1)	High	43
HS-SC	+/-	+/-	4.25 (SD: 0.8)	3.7 (SD: 1.0)	High	40
MS-BD	+/-	+/-	3.0 (SD: 1.3)	3.7 (SD: 1.0)	Medium	42
MS-UP	+/-	+/-	3.0 (SD: 1.2)	3.7 (SD: 1.0)	Medium	36
LS-BB	+/-	+/-	1.9 (SD: 1.0)	3.8 (SD: 0.9)	Low	39
LS-NP	+/-	+/-	2.0 (SD: 0.9)	4.2 (SD: 1.1)	Low	46

The two medium severity (MS) situations, Bus Direction (MS-BD) and Unpunctual (MS-UP), both received values of 3.0. The HS situations obtained values of 4.1 for the Heavy Door situation (HS-HD) and 4.25 for the Scratched Car situation (HS-SC), with a slightly higher value on this scale for HS-SC (see Appendix A.i for all data gathered via this pre-study). Additionally, all situations scored relatively high on the naturalness scales. The LS situations earned the highest scores here, confirming that they represented situations that were more frequently encountered in everyday life. HS-HD and its serious offence received the lowest value for naturalness, which was, however, still considered to be convincingly high. Some dispersion in the perception of the underlying severity was evident in the values gained from the pre-study, visible also in the given standard deviations (HS-HD: 1.3, HS-SC: 0.8, MS-BD: 1.3, MS-UP: 1.2, LS-BB: 1.0, LS-NP: 0.9).

For the upcoming prosodic analysis and discussion, the outcomes for the two LS situations are the point of comparison for the apologies made on the MS and HS levels. The importance of a point of comparison, especially in prosodic studies, was previously

MS-UP was also used, e.g., in Olshtain (1989) and the two LS situations were taken from and further inspired by Cohen et al. (1986), Holmes (1995), Jones & Adrefiza (2017) and Olshtain (1989).

established. The reason for establishing the LS situations as the baseline is that, first, they constitute those situations which are closest to RITUALISTIC apologies while however still adhering to the felicity conditions. The MS and HS situations are then presented in terms of their deviations from this baseline. Furthermore, as mentioned, the LS situations received naturalness ratings of approximately 4 on the 5-point Likert scale, which was higher than that for the MS or HS situations (see Table 5). Finally, unlike the other situations, the two LS scenarios were highly comparable to one another in the sort of details provided in the situational descriptions. The only real difference between them lies in the factor of possession. LS-BB presents damage to the Hearer's face because the Speaker disrespected their PROPERTY (Wolfson et al. 1989; also, Holmes 1995: 167 has referred to it as an OFFENCE AGAINST THE HEARER'S POSSESSION); the newspaper in LS-NP was not yet possessed by the Hearer, thus making it merely a LACK OF CONSIDERATION (Deutschmann 2003). More detail on this characteristic of the type of the offence displayed will be addressed in the following.

3.1.3 Further contextual factors of relevance

As the final part of the previous section, the type of offence as the only identified difference between the LS-BB and LS-NP situations was highlighted. Therefore, despite the overall focus of maintaining the micro- and macro-social factors, a section discussing contextual factors of peripheral importance and their possible impacts is necessary. In fact,

> […] the most reliable way of determining the variable responsible for the use of particular linguistic items would be by using different versions of the same scenario, varied by one variable only, for instance: apologising for stepping on a female stranger's, male stranger's, and a female friend's and a male friend's foot. This, however, would give away the design of the study and the responses could easily become mechanical. (Ogiermann 2018: 235)

That such a layout of DCT items, while accepting the risk for a mechanical delivery of the speech acts elicited, is considered unwise for the study at hand was previously noted; Creating such similar situations repeatedly (in a design similar to that used in the study by Bardovi-Harlig et al. 2008) was not considered an adequate option for a study focussing on prosody.

This brings the matter back to the diverse types of offences that warrant an apology, as mentioned in Chapter 2.1.2.2, which did vary in this study's situational descriptions. For both the LS and HS levels, the offences posed in the situations stem from different categories in these taxonomies. HS-HD in Deutschmann's (2003) taxonomy would be coded as an ACCIDENT, as would HS-SC. According to Wolfson et al. (1989: 178-179), however, HS-HD would violate the OBLIGATION NOT TO CAUSE DAMAGE OR DISCOMFORT TO OTHERS, while HS-SC represents an OFFENCE AGAINST THE OBLIGATION TO RESPECT THE PROPERTY OF OTHERS.

This leads over to the two MS situations. Here, the argument is less clear because the Hearer missed parts of the movie, for which they paid money, which could warrant it as yet another OFFENCE AGAINST PROPERTY (i.e., in terms of monetary values). However, more clearly, it is an OFFENCE AGAINST TIME and a LACK OF CONSIDERATION (Deutschmann 2003). Similarly, in MS-UP, there is a clear violation against the TIME OF THE HEARER, making it at least comparable to MS-BD in this regard. TIME is also the corresponding category of offence in the taxonomy by Aijmer (1996), while Wolfson et al. (1989) would see this as an OFFENCE AGAINST ONE'S OBLIGATION TO KEEP A SOCIAL OR WORK-RELATED COMMITMENT OR AGREEMENT.

Though a difference regarding the type of offence on the MS level was highlighted, overall, the crucial difference between these two situations (MS-BD and MS-UP) which makes them especially valuable for the later discussion lies in the matter of the underlying sincerity. Because of the wording chosen for the situational description, MS-UP depicts an offence that has already been committed several times in the past by the Speaker. Therefore, the two MS situations lend themselves to a comparison of how and whether this fact impacts the different pragmatic and prosodic dimensions. Note again that Davies et al. (2007: 48), for example, have connected sincerity to the avoidability of the offence itself in the past or the future. Furthermore, Owen (1983: 119) has added intention to commit the same offence again in the future, which is not unlikely with a notoriously unpunctual person, as a further determiner for the sincerity with which an apology is made. In fact, the situational description explicitly suggests that the Speaker is not a first-time offender in this specific wrongdoing. Thus, there is room to argue that MS-UP is the one situation in which the severity of the situation is clear (due to the Likert scale outcomes) but the underlying attitude of sincerity has at least a different quality to it compared to all other DCT situations.

3.2 Informants

The data used for this study was elicited from 66 informants, while the questionnaire was initially completed by 70 informants. Four were eliminated due to technical issues across all of their answers or because they did not fit the study's prerequisites. Some also produced partially unusable data and audio files for only some of the situations they were presented with, while still completing the questionnaire. In these cases, their data remained in the study, resulting in the previously mentioned total of 246 apologies.

Regarding demographics, the platform Prolific (Prolific 2019 [2014]) allows for the setting of a number of filters. This was meant to ensure that only the target group with immediate relevance to the research project is reached. Here, with the aforementioned need to keep the macro-social factors stable, this filtering option was set in a manner that all informants were female. This was essential not only because of the manifold

differences between male and female speakers on the prosodic level, but also because of the need for pragmatic comparability of the apologies. Differences in the perceived weight of offences between male and female speakers (Holmes 1989: 203) as well as differences in the formulation of apologies (Holmes 1995), have been addressed in the past.

Furthermore, the informants had to be between 18 and 35 years of age, from the United States, female, White[43] and have English as their first language. This filter setting led to a pool of 2,128 eligible people.[44] The maximum number of informants allowed in the study was set to 70, and no further selection of informants was possible past that number. Ultimately, the 66 informants included in the study had an average age of 27.16 years (SD: 4.64). Additionally, they were asked to identify where they grew up, where (city and state) they lived at the point of their participation in the study and what other language(s) they spoke (and how well, on a scale from 1 to 5; 1= I just know some basic vocabulary, 5= very well). However, the additional information gathered via these scales did not end up as part of the analysis or discussion of the data and was therefore discarded.[45] Moreover, due to the high scattering of informants across the US and the vast number of variables that already factor into this study, regional variation is not considered in the analysis or discussion. Instead, this scattering can be seen as one limitation here, and regional affiliations should be kept stable in future studies.

3.3 Data and Data Analysis

All data was transcribed in detail and coded for several aspects of immediate interest to this study. The upcoming information on the data processing and analysis starts with the pragmatic analysis, based on a functional coding of all apologies by using the CCSARP coding categories (Blum-Kulka et al. 1989a; Blum-Kulka et al. 1989b). This is followed by information on the prosodic analysis, based on the acoustic analysis of the respective prosodic dimensions for the entire apology and the individual strategies.

3.3.1 Pragmatic analysis

As mentioned, especially for the quantitative analysis, apologies were segmented into categories based on the CCSARP coding manual (Blum-Kulka et al. 1989b). The main strategies in this scheme were presented in Chapter 2.1.2.1.

[43] The filtering option was labelled “Caucasian” on Prolific (2019 [2014]).
[44] A high number of these potential informants may have been prevented from actually taking part by the technical prerequisites stated in the introductory text of the study (i.e., specific browser requirements and a working microphone).
[45] The entire description of the different points on this rating scale was put as follows: 5: Very well 4: Well 3: I know enough to have simple conversations in it 2: I learned it in school but could not use it anymore 1: I just know some basic vocabulary

Table 6. Coding Scheme for Strategies Applied to the Data.

Strategies	Explanation	Examples
STRATEGIES PROPER		
EXPLANATION OR ACCOUNT	Providing reasons for the offence (external)	*If you didn't hear, today was so busy!*
IFID	An expression of regret or a request for forgiveness	*I'm sorry.* *I apologise.*
OFFER OF REPAIR	Compensation directly related to the offence	*Let's get help right now.* *I'll bring it tomorrow.*
PROMISE OF FORBEARANCE	Promise that the act will not occur again	*I promise to remember to bring it next time.*
TAKING ON RESPONSIBILITY	Different sub-categories; see Table 7	Examples; see Table 7
ADDITIONAL STRATEGIES		
ANSWER	Second adjacency pair part	*No.*
APPEASER	Compensation not directly connected to the Speaker's offence	*Let me give you my insurance information.*
CONCERN FOR THE HEARER	Expressing sympathy or concern for the person offended	*Are you alright?*
EXCLAMATION	Emotional interjection	*Oh no!* *Oh god!*
HESITATION	Verbalised items that may suggest hesitation	*Ehm, eh,* etc.
MINIMISING THE DEGREE OF THE OFFENCE	Utterance with the sole purpose of downgrading the offence	*Since I'm usually late, you kinda should have expected this.*
OTHER	Includes, for example, ALERTERS and GREETINGS	

However, in some cases, modifications were necessary for this scheme to fit the purpose of this study and make some of the categories more applicable. This led to the categories summarised in Table 6. The category boundaries which were set for this study are explained after this table. Notably, this study strictly separates between STRATEGIES PROPER (those presented in detail in the Theory part) and ADDITIONAL STRATEGIES.

Some of these ADDITIONAL STRATEGIES need further explanations. Due to the prosodic analysis of the entire apology, it was essential that <u>all</u> of the parts in each apology, and not only those which recognise the act itself, were included in the segmentation. Based on this necessity, the two categories of HESITATION and ANSWER were added. This may spark criticism because they do not actually upgrade or downgrade the apology, but are rather discursive in nature. The strategy labelled ANSWER occurred almost exclusively in the LS situations. For these two, the

situational prompt ended in a question which warranted an ANSWER to occur at the beginning of the apology to complete the adjacency pair.

Arguably, the message that underlies the delivery of this ANSWER in the form of *no* (regarding the acquisition of the newspaper or the successful return of the book) includes an admission that one has not brought the newspaper or book, similar to utterances in which the informant directly stated that they had forgotten to do so. While these concrete utterances would have been coded as an instance of TAKING ON RESPONSIBILITY, ANSWERS had a different quality than admitting that a wrongdoing had taken place and were deliberately kept separate for this study. Furthermore, as mentioned, the centrality of EXCLAMATIONS in intensifying the IFID made it worthwhile to add this strategy as a separate category to the coding scheme instead of simply treating it as an upgrader of the IFID. Notably, only utterances which are EXCLAMATIONS on the surface level – which include an EXCLAMATION PARTICLE and/or an EXCLAMATION TERM (e.g., *oh god, oh no*, *oh, no*) – qualified as EXCLAMATIONS. What was <u>not</u> systematically identified were those utterances which could be argued to be utilised with an exclamatory intonation. Essentially, it would also be an option to produce the IFID *I'm so sorry* in such a way that it would be perceived as an exclamation in the wider sense by the Hearer. Such a categorisation in the study at hand seemed circular in nature and would combine aspects of the pragmatic and prosodic levels already during the process of coding in disadvantageous ways and was therefore discarded in this coding process.

All parts of the apologies that did not fit any of the categories and/or occurred so rarely that they did not warrant the extension of the coding scheme were categorised as OTHER. This category includes, for example, a limited number of ALERTERS and GREETINGS.

The previously introduced functions within an apology, which are here treated as STRATEGIES PROPER, also require a slightly longer account on the differentiation between REPAIR and APPEASER applied in the study at hand. According to Blum-Kulka and Olshtain (1984: 294), "[a]s opposed to the 'Offer of Repair', compensatory offers which form the content of appeasers are not directly connected with the speaker's offence". As mentioned, they furthermore have stressed that REPAIRS can only be uttered in instances in which the offence is actually repairable. However, one notion that the data here did not present is that Blum-Kulka et al. (1989b: 294) have considered APPEASERS as instances of distracting from the offence. This attempt at distraction was not seen as automatically true for many of the instances in which compensations were offered that did not directly repair the offence or were given for offences which were, arguably, not directly repairable. In accordance with this, for HS-SC, a strategy was defined as an APPEASER when the informant only offered to provide the insurance information. To acquire an actual reparation, the offended must act, and this

strategy of APPEASER was more about distracting from the offence by pointing toward the next step that the Hearer must perform (i.e., call the insurance company). However, if the offender offered to call the insurance company themselves, which is again a reparation by proxy, this here qualified as an OFFER OF REPAIR. It was the next best thing the informant could do to repair the damage they had caused. Additionally, the Speaker indicated willingness to act.

A similar approach was here enacted for HS-HD, which was a specific and arguably overdrawn situation, at least compared to the other ones established. For this situation, the damage was not logically repairable by the offender at all. However, instead of categorising all instances as APPEASERS due to this characteristic of the situation, the majority of the instances in which action was proposed were either categorised as OFFER OF REPAIR or CONCERN FOR THE HEARER. A frequently selected action was to tell the Hearer that they needed to go to the doctor – who would then make advances to repair the outcome of the offence – or to offer to take them there. The Speaker in these cases stated that they would accompany the Hearer or call the ambulance for them. The strategy in these cases was again categorised as an OFFER OF REPAIR, the main reason being that offering to go see the doctor is not meant to distract from the offence; rather, it is the only logical step toward reparation that the informant can offer. However, if the offender instead asked the Hearer whether they needed to go to the hospital or call a doctor, then this qualified as a display of CONCERN FOR THE HEARER.

Additionally, and in line with the sub-categories presented in Table 1, the occurrences of TAKING ON RESPONSIBILITY were further divided into a number of different sub-categories. A coherent coding scheme with examples for the strategies of TAKING ON RESPONSIBILITY as they were coded in this study can be found in Table 7. Overview of Coding Categories and Examples for TAKING ON RESPONSIBILITY. These were differentiated between EXPLICIT SELF-BLAME, LACK OF INTENT, JUSTIFY HEARER, EXPRESSION OF EMBARRASSMENT, ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY and SELF-DEFICIENCY. The few instances of the last strategy enumerated in the table above, which the CCSARP would qualify as TAKING ON RESPONSIBILITY – REFUSAL TO ACKNOWLEDGE GUILT –, were not coded as TAKING ON RESPONSIBILITY here. They were counted as MINIMISING THE DEGREE OF THE OFFENCE or even the strategy OTHER (more information on this will be given later, in Chapter 5.2.3).

Table 7. Overview of Coding Categories and Examples for TAKING ON RESPONSIBILITY.

Sub-category	Explanation	Examples
DECLARING SELF-DEFICIENCY	Admitting that one's own incapacities were responsible for the offence	*I totally forgot.* *I must have messed up the instructions.* *I'm the worst driver.*
ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY	"The speaker does not deny his or her involvement in the offensive act but abstains from openly accepting responsibility" (Blum-Kulka et al. 1989b: 292)	*I think I came in a little too hard there.* *I planned on getting here much sooner.* *I was so busy.*
JUSTIFY HEARER	"The speaker communicates to his or her hearer that he or she fully understands the latter's reactions to the offence inflicted upon him or her" Blum-Kulka et al. (1989b: 292)	*Clearly, that is an inconvenience.* *You know, you're right.*
EXPRESSION OF EMBARRASSMENT	Explicitly stating that one feels uncomfortable because of the offence	*I can't believe I did that!* *I feel so awful.* *This is so embarrassing.*
LACK OF INTENT	"The speaker explicitly states that he or she had not intended to hurt the hearer through his or her offence" (Blum-Kulka et al. 1989b: 291)	*I didn't mean to hit you with that door.* *It was an accident.* *I didn't mean to give you the wrong bus number.*
EXPLICIT SELF-BLAME	"The speaker explicitly acknowledges the fact that he or she has been at fault" (Blum-Kulka et al. 1989b: 291)	*I should have texted you earlier.* *I know I'm always late.* *I just scratched your car.*

In line with the CCSARP, ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY here included those instances in which the informant offered an explanation in which the offence was, however, not unambiguously caused by an external factor, which is the prerequisite for an utterance to qualify as an EXPLANATION OR ACCOUNT (Blum-Kulka et al. 1989b).

3.3.2 Prosodic analysis

The entire acoustic analysis of the data was performed using the computer software program Praat (Boersma & Weenink 2020). To display a valid version of the F0 frequency for the categorisation of the pitch contours, the pitch settings for the visualisation of the F0 were based on an application used as part of the momel-intsint plug-in[46] (Hirst 2007). This plug-in automatically detects and recommends the settings

[46] "If automatic min and max option is selected, these are calculated respectively as 1.5* quantile 75 and 0.5* quantile 25 of the f0 values for the whole file, as calculated using the default values" (cf. Momel/Intsint Plugin (2018): Plugin Manual: Detect f0; to be found within the plugin itself; also: see Hirst 2007) The default values are here set to 50 Hz as the pitch floor and 700 Hz as the pitch ceiling (cf.

for the audio file inserted, which was helpful because, depending on the established thresholds of display set in the programme, the level of visualised detail differs. It is easily possible to have erroneous visualisations when the F0 reaches values with higher or lower frequencies than the peak (F0max) and valley (F0min) presented in the Praat spectrum, depending on the chosen visualisation setting. However, if one selects a pitch range that is overly broad, details in the contour can become missing in unnecessary manners. This leads to incorrect – or at least questionable – categorisations. For the measurement of intensity, the default settings in Praat (between 20 dB and 120 dB) were kept, which sufficed without any changes for the purpose of this study.

Prosodic analyses were performed for the average F0, intonation contours, pitch range, intensity values and speech rate. Notes on their measurement were introduced in their respective sections in Chapter 2.1. All measurements were conducted for the entire apology as well as for each of the strategies for which the data was coded on the pragmatic level, in accordance with the categories established previously. The analyses include values gathered via the F0 (F0mean, F0min, F0max and F0range) and intensity (IntensityMean and IntensityMax) as well as for the speech rate.

In addition to the actual numbers measured in Hz, dB and syllables per second, the discussion operates with corresponding relative values, which were named *F0mean%, F0min%, F0max%, F0range%, IntensityMean%, IntensityMax%* and *SpeechRate%*. These percentage values represent the deviation of the determined values measured in Praat from a specific point of comparison. This point is always a mean value: It is the mean value of the entire apology when deviations of individual strategies from the average values are given. When the focus is instead on the entire apology, the point of comparison is the corresponding value measured in the LS-level apologies produced by the same informant, due to their aforementioned status as the default for this study. In cases in which the informant received two LS situations based on the questionnaire's randomisation process, the point of comparison was determined as the average from both of these LS apologies.

Due to the relative complexity of these factors, all elements are demonstrated based on one example, which was taken from the data elicited from Informant 1 (see Table 8). Starting with the measurements for entire apologies, this table presents an overview of both raw and relative values for all apologies elicited from the audio files produced by Informant 1. Starting with the column labelled *F0mean*, this table includes all measurements taken directly from Praat in Hz – those values for HS-HD, MS-UP and, in this case, both of the LS situations' apologies. At the bottom, the table provides the

Hirst 2011: 59). In a later edition, it was suggested to use a factor of 2.2.5*q3, instead. However, this was not done for the study at hand.

average value of the F0mean, which was gathered by taking the average of the F0mean values measured for the two LS apologies. The same was performed for the average F0min, F0max and F0range values. Had there only been one LS situation presented to the informant, the values in the bottom line of this table would have been directly taken from the measurements made for this LS apology. [47]

Table 8. Participant 1; All Apologies with Raw Pitch-Related Frequencies (Hz) and Relative Frequencies (%).

Situation	F0mean (in Hz)	F0min (in Hz)	F0max (in Hz)	F0range (in Hz)		F0mean%	F0min%	F0max%	F0range%
HS-HD	224	193	336	55		+4%	+74%	-7%	-57%
MS-UP	221.3	81.2	375.2	188.5		+2.6%	+45%	-6%	-36%
LS-BB	229	161	338	82		+6%	-63.1%	+6.4%	+36.2%
LS-NP	202.4	60.8	383.9	175.5		-6.2%	-26.7%	+4%	+46.3%
LS Mean	**216**	**111**	**361**	**129**		-	-	-	-

Hence, the values in the bottom line of the table were the point of comparison for the individual F0mean, F0min, F0max and F0range measurements for HS-HD and MS-UP. The comparison resulted in the values in the columns F0mean%, F0min%, F0max% and F0range% on the right-hand side of Table 8. There, for example, the F0mean for the HS-HD apology of 224 Hz resulted in its representation of a value of 104% of the F0mean which was found as the point of comparison, measured at a pitch height of 216 Hz. Thus, the average F0 at which the HS-HD apology was produced is 4% higher than the average at which the LS baseline was uttered, hence the value of +4% in the table. Notably, Informant 1 was one of few participants in this study for whom the two LS situations behaved in a markedly different manner from one another in all of the F0 values. However, as the boxplots in the Results section and numerous other results prove, they usually displayed fairly similar values.

Thus far, the data processing has been presented for the values gathered for entire apologies as one entity. As mentioned, the second investigation made for these apologies was based on each of the pragmatic strategies with which they were performed separately. To illustrate the measurements taken when the findings for individual strategies are presented, Example 1 was inserted. It displays in detail the LS-NP apology for the same informant as above: the strategies, the transcript (see Table 10 for the transcription key) for each of these strategies and their F0mean, F0min, F0max and F0range values. These were measured for each strategy individually via Praat. Accordingly, the values at the bottom of this table correspond to the values presented for LS-NP in Table 8. This bottom line and the values presented therein were used as

[47] For those few examples in which no LS was produced due to technical issues, the entire mean across all apologies was used as the point of comparison.

the point of comparison for measuring the strategies' variation from this mean value in percentages.[48]

Example 1. Raw Frequencies in Hz: Informant 1, LS-NP

Strategy	Transcript	F0mean	F0min	F0max	F0range
IFID	i'm [SO sorry ↘#277-214#=#214#] (0.15)	231.1 Hz	206.7 Hz	277.2 Hz	70.5 Hz
TAKING ON RESPONSIBILITY	i didn't get the [PAPE:R ↘#246-205#=#205#] (0.28)	157 Hz	60.8 Hz	246.3 Hz	185.5 Hz
TAKING ON RESPONSIBILITY	i totally [FORGOT [○ creaky voice]] (0.36)	240.2 Hz	64.9 Hz	383.9 Hz	319.1 Hz
TAKING ON RESPONSIBILITY	it's my [FAULT ○ [creaky voice]] **	249.5 Hz	210.4 Hz	337.2 Hz	126.9 Hz
Mean/Min/Max/Range	-	202.4 Hz	60.8 Hz	383.9 Hz	175.5 Hz

For the F0range, the mean value here presents the average of the F0ranges that were found for the different strategies in combination. For the F0min and F0max values, it was decided to use the most extreme points in the entire apology, the overall valley and peak, as the points of comparison. Accordingly, the F0min and F0max in the bottom line actually portray the entire pitch range which was employed for this apology. The results for the deviation of each strategy from the F0mean, called F0mean%, of the entire apology for this situation are presented in Table 9. This table reveals that the strategy with the highest deviation from the F0mean found for the entire apology in the positive direction is the third instance of TAKING ON RESPONSIBILITY. The highest deviation in the negative direction is the first instance of TAKING ON RESPONSIBILITY. The decision to use the extreme points as F0min and F0max in the entire apology as the points of comparison means that one strategy always constitutes this marker of peak or valley, and the others mark the deviations from them. The automatic result is that there can only be positive deviations from the valley and negative deviations from the peak.

Table 9. Relative Frequencies in Percentages: Informant 1, LS-NP.

Strategy	Transcript	F0mean%	F0min%	F0max%	F0range%
IFID	[See above]	+14.2%	+240.1%	-27.8%	-59.8%
TAKING ON RESPONSIBILITY	[See above]	**-23.4%**	100%	**-35.8%**	+5.7%
TAKING ON RESPONSIBILITY	[See above]	+18.7%	+6.7%	100%	+81.8%
TAKING ON RESPONSIBILITY	[See above]	**+23.3%**	**+246.1%**	-22.2%	-27.7%

Notably, the F0min and F0max values as well as F0min% and F0max% mostly provide further information in unexpected cases in the later Discussion. Essentially, they are

[48] The overall F0mean value is not the one which would be obtained when taking the average of the values pointed out for the individual strategies above it. Instead, it is the value measured directly in Praat (Boersma & Weenink 2020) for the entire situation which made an (often very small) difference.

used to highlight some of the results obtained for the by far more central dimension of F0range.

Table 10. Transcription Key.[49]

Key	Explanation
Intonation Contours	
=	LEVEL Intonation
↘	FALLING intonation
↘↘	STEPPING-DOWN intonation
↗	RISING intonation
↗↗	STEPPING-UP intonation
↘=	FALL, then LEVEL contour
Combinations of these contours	Further combinations are possible; for example, "↗↘↗" illustrates a RISE-FALL-RISE contour
Additional Prosodic Information	
[○]	Intonation contour cannot be determined [reason provided in square brackets]
[XX]	The part of the utterance for which the intonation pattern is provided
{YY}	Additional information, for example, {laughter} if the informant is laughing
#XXX#	Between ##, the pitch heights in Hz can be found
:	Noticeably long duration of the preceding sound
/	End of intonation phrase
General Linguistic Mark Up	
(1.0)	Pause (of 1.0 sec)
↔	Intonation phrase continues in the next strategy
**	End of the apology

In addition to these values in Hz gained via the pitch values measured by Praat (Boersma & Weenink 2020), the visualised intonation contour was important. Based on this visualisation, a coding scheme for those contours at the end of each pragmatic strategy (frequently in line with the boundary tones of the final intonation phrases) was developed and inserted in Table 10. For the description of this final intonation contour in each strategy, a distinction was made in this study between the contour's general directions within the spectrum, differentiating between FALL, RISE, LEVEL, FALL-RISE, RISE-FALL and FALL-LEVEL intonations, with some additional (though rare) combinations. Furthermore, the terms *STEPPING-UP* and *STEPPING-DOWN* intonation were applied whenever necessary. Different from a RISING contour, STEPPING-UP refers to "a relatively abrupt change from lower to a higher pitch at the beginning of the stressed syllable" (Szczepek Reed 2010: 97), whereas STEPPING-DOWN correspondingly denotes the opposite tendency.

[49] Examples for these most central contours as they were visualised in Praat can be found in Appendix C.

The overall descriptive and unambiguous way of addressing intonation contours in the transcription key developed for this study indicates changes in pitch in a straightforward and visual way that is closer to the British utterance contour system than the more widely used ToBi Transcription (Silverman, Pitrelli, Beckman & Hirschberg 1992, cf. also Wichmann 2004: 1536 for a comparison of these transcription conventions for intonation). The reason for not using the ToBi Transcription system was the aim to make this study maximally understandable, thus considering not only researchers in phonetics and phonology, but also those interested primarily in pragmatics and the findings made here regarding the production of speech acts, politeness and prosody's role. Accordingly, these contours can be identified in the transcripts for each of the apologies and were transcribed using the corresponding arrow symbols, while LEVEL intonation is illustrated by using the equal symbol (=). Additionally, when contours were rare or overly complex and therefore impossible to code, these were distributed into a category labelled as OTHER.[50]

To further inform the intonation contours, especially the extent to which the changes in pitch occurred, the exact F0 values for each of these changes in pitch at the boundary tone were denoted in Hz. The values can be found between the number symbols (##) in the transcripts. These exact values ensure that no valuable information was lost during the categorisation. They are especially important in the discussion as well as the presentation of the results in which crucial details are revealed from individual examples and on a qualitative basis.

Another important factor in the analysis of prosodic patterns is stress, which indicates that an item of speech was produced with a particular loudness, duration and/or pitch movement compared to the syllables surrounding it. In the majority of cases, these stressed syllables are easily audible or visible in the acoustic spectrum. Stress here is represented by using capital letters for the syllable(s) to which the stress was applied.

Additionally, note that a pragmatic strategy can contain several intonation phrases. In such cases, the boundary tones for each are identified by arrows, and the corresponding pitch values are represented in Hz. The end of an intonation phrase and the beginning of a new intonation phrase are signalled by the forward slash symbol (/). If the intonation phrase is disrupted by the end of a strategy, such as when the end of the intonation phrase does not overlap with the end of the pragmatic strategy on the lexical level, this is also symbolised in the transcript, indicated with the bidirectional arrow symbol (↔). However, the final intonation in the strategy was systematically categorised and analysed in either case.

[50] This category mostly includes instances in which the intonation contour was actually so complex that it would have needed a myriad of symbols to describe it, or it was distorted due to the informant laughing while speaking.

An example for the application of these transcription conventions was inserted in Example 1 for the apology for LS-NP produced by Informant 1. Here, for the IFID, the visualisation of the intonation contour described as FALL-LEVEL began on *so* of *so sorry*. There was a noticeable stress on this part of the IFID, indicated by capitalisation. The same contour can also be found in the first instance of TAKING ON RESPONSIBILITY. The stress that marks the onset of the intonation contour is found on *paper*, produced with a marked duration on the second vowel sound. The third and fourth strategy, which are also instances coded as TAKING ON RESPONSIBILITY, were not visualised with an actual intonation contour because the informant employed the voice quality of CREAKY voice. This CREAK started on *forgot* and *fault* for these strategies, respectively. Additionally, all strategies ended in intonation phrases at the boundary tone and were set apart from one another by noticeable pauses, which were between 0.15 sec and 0.36 sec in length.

3.3.3 Further measurements and statistics

For the upcoming analyses and discussion of the data, whenever inferential statistics are provided as correlation values, they are based on Pearson's R (R) or Spearman's rho (r_s), depending on the characteristics of the data. Each correlation is accompanied by the corresponding value of statistical significance. All of these statistical measurements were performed with Excel (Microsoft Corporation 2018) and XLSTAT (Addinsoft 2020).

4. Results

Aligned with the structure chosen for this study, the results presented first reflect the pragmatic level (Chapter 4.1), followed by those for the prosodic analysis (Chapter 4.2). Because of the different measurements that were taken for the prosodic dimensions, these results are presented for the apologies as one entity in one section (Chapter 4.2.1) and for the individual strategies separately in another section (Chapter 4.2.2). Finally, two subsequent sub-chapters further illuminate the IFIDs' and the EXCLAMATIONS' pragmatic and prosodic compositions, again in terms of pragmatic and prosodic features (Chapters 4.3 and 4.4).

4.1 Analysing the Pragmatic Structure of the Apologies

All of the results presented here are based on the functional coding that was performed on the utterances by employing the coding scheme presented. This sub-chapter also includes the sub-categories for TAKING ON RESPONSIBILITY found in the data. Additionally, it provides details on the length of the apologies and the individual strategies in number of syllables as well as the position of these strategies within the apology.

4.1.1 Distribution of strategies across apologies

The raw and relative frequencies obtained for the strategies with which the apologies were performed are presented in Table 11.

Table 11. Percentage and Number of Strategies Relative to Number of Strategies per Situation.

Strategies	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPLANATION OR ACCOUNT	0% (0/97)	0% (0/117)	0% (0/98)	2.8% (3/109)	0.8% (1/123)	0.6% (1/126)
OFFER OF REPAIR	26.8% (26/97)	30.8% (36/117)	15.3% (15/98)	1.8% (2/109)	25.2% (31/123)	22.2% (28/126)
IFID	**56.7%** (55/97)	**44.4%** (52/117)	**52%** (51/98)	**49.5%** (54/109)	**26%** (32/123)	**34.1%** (43/126)
PROMISE OF FORBEARANCE	0% (0/97)	0% (0/117)	2% (2/98)	9.2% (10/109)	8.1% (10/123)	0% (0/126)
TAKING ON RESPONSIBILITY	**16.5%** (16/97)	**24.8%** (29/117)	**30.6%** (30/98)	**36.7%** (40/109)	**40%** (49/123)	**42.9%** (54/126)
Total (STRATEGIES PROPER)	**97**	**117**	**98**	**109**	**123**	**126**
ADDITIONAL STRATEGIES						
ANSWER	0% (0/208)	0% (0/182)	0% (0/149)	0.7% (1/152)	6.4% (11/173)	6.9% (12/173)
APPEASER	0% (0/208)	3.9% (7/182)	0.7% (1/149)	7.2% (11/152)	0.6% (1/173)	0.6% (1/173)
CONCERN FOR THE HEARER	**22.1%** (46/208)	5% (9/182)	2% (3/149)	1.3% (2/152)	1.2% (2/173)	0.6% (1/173)
EXCLAMATION	**23.1%** (48/208)	**15.9%** (29/182)	15.4% (23/149)	**2.6%** (4/152)	11% (19/173)	11.6% (20/173)
HESITATION	6.3% (13/208)	6.6% (12/182)	4% (6/149)	7.2% (11/152)	6.9% (12/173)	5.2% (9/173)
MINIMISING	0% (0/208)	0% (0/182)	3.4% (5/149)	1.3% (2/152)	0% (0/173)	0% (0/173)
OTHER	1.9% (4/208)	4.4% (8/182)	9.4% (14/149)	7.9% (12/152)	2.9% (5/173)	2.3% (4/173)
Total (ALL STRATEGIES)	208	182	149	152	173	173

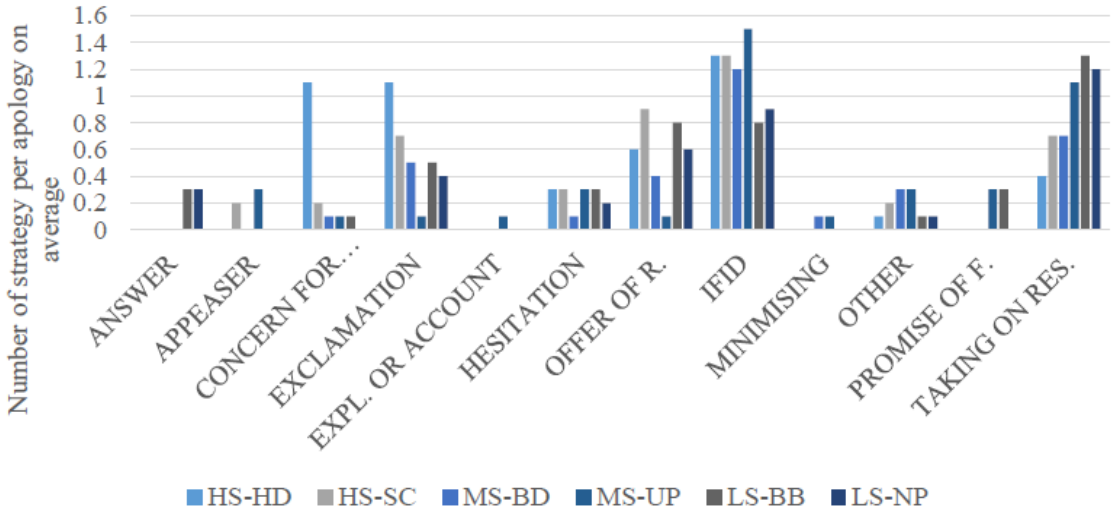
In the first five lines, the numbers for STRATEGIES PROPER are presented. They result in a total of 97 strategies for HS-HD, 117 for HS-SC, 98 for MS-BD, 109 for MS-UP, 123 for LS-BB and 126 for LS-NP. Additionally, the bottom half of the table displays all ADDITIONAL STRATEGIES and the percentage that each of these represents relative to the total number of strategies (including those which were coded as STRATEGIES PROPER) produced for each scenario. As is the case for the remainder of the Results chapter, those numbers which are most noteworthy are printed in bold in the table.

Starting with a general observation, some of the findings correspond to the systematic variation of the severity levels, which infers that they were utilised in a comparable manner in the two situations representing the same level of severity. This is especially true for the LS level. The majority of the strategies, however, seem to be situation-specific in their occurrence. As the table reveals, IFIDs are common across all situations. The highest number of IFIDs was found for the two MS situations, where 52% of all STRATEGIES PROPER produced for MS-BD and 49.5% for MS-UP (i.e., 34.2% and 35.5% of all strategies) are IFIDs. The lowest number of IFIDs was produced for the LS-BB apologies, for which it covers only 26% of STRATEGIES PROPER and 18.5% of all strategies.

Beyond the IFID, the strategy most often produced in the apologies for the LS situations was that of TAKING ON RESPONSIBILITY. It makes up 40% of the STRATEGIES PROPER in LS-BB and 42.9% of those produced in apologies for LS-NP. This strategy appeared considerably less frequently in both HS situations and not nearly as often in HS-HD (16.5%) as compared to HS-SC (24.8%). Another interesting difference was seen in the distribution of the strategy CONCERN FOR THE HEARER. While this strategy was rarely found in five of the six situations, 22.1% of all strategies formulated for HS-HD expressed this kind of concern. The apologies for HS-HD also behaved differently from most of the others in regard to the usage of EXCLAMATIONS; 23.1% of the HS-HD strategies were of this strategy type, equalling almost one-quarter of the total. This number for EXCLAMATIONS is followed by findings for HS-SC and MS-BD, with almost equal values (15.9% and 15.4%, respectively). Notably, MS-UP was produced with almost no EXCLAMATIONS (2.6% of all strategies).

Next, these exact numbers for the distribution of pragmatic strategies across situations is highlighted from an additional perspective. It puts them in relation to the number of apologies elicited for each situation, instead of the number of strategies the apologies were produced with (see Figure 5). This perspective adds to the findings the information that the HS-HD apologies were, on average, produced with 1.3 occurrences of the IFID; the same was true for HS-SC. MS-UP still shows the highest average number of IFIDs per apology, with a value of 1.5. Furthermore, the graph reveals that the apologies for the two LS situations contained, on average, less than one IFID per apology, with only 0.8 for LS-BB and 0.9 for LS-NP. In raw frequencies, this means that 30 of the 39 apologies for LS-BB and seven of the 46 for LS-NP were not produced with this strategy. For HS-HD, this is the case for two of the 43 apologies investigated and for HS-SC, for one of 40. In MS-BD, two of 44 apologies do not contain an IFID, and for MS-UP, not a single informant produced an apology without this direct expression of remorse.

Figure 5. Average Number of Strategies per Apology.[51]



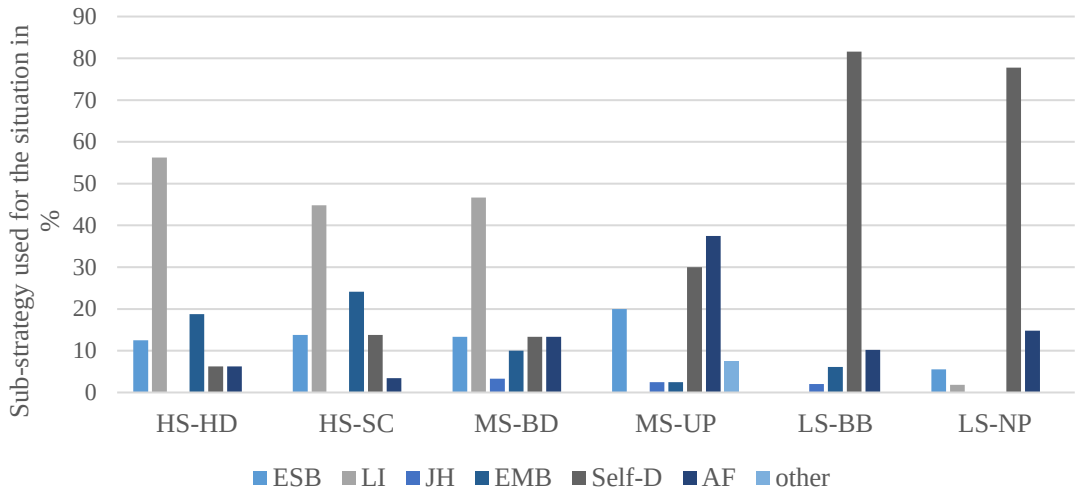
Again, the numbers are notable for TAKING ON RESPONSIBILITY, a strategy which occurred more than once on average per apology for the LS situations, where there were 1.3 such usages per apology in LS-BB and 1.2 per apology in LS-NP. This number is markedly lower for both HS situations. In specific, less than one-half of the apologies for HS-HD were produced with this strategy; only numbers of 0.4 occurrences per apology were found for HS-HD and 0.7 for HS-SC.

4.1.2 Sub-categorisation for TAKING ON RESPONSIBILITY

Due to its special importance in the discussion, the instances of TAKING ON RESPONSIBILITY were further categorised based on the sub-categories proposed by Blum-Kulka et al. (1989b). These sub-categories were modified for this study as described in Chapter 3.3.1. The results are presented in Figure 6. The differences found in the usage of these sub-categories across the situations is notable. The apologies for HS-HD and HS-SC behaved relatively similarly in this regard. The majority of the cases of TAKING ON RESPONSIBILITY were of the form that the respondent stressed a LACK OF INTENT (HS-HD: 56.3%, HS-SC: 44.8%). This was followed by an EXPRESSION OF EMBARRASSMENT (HS-HD: 18.8%, HS-SC: 24.1%). The apologies for MS-BD behaved much like those on the HS level regarding LACK OF INTENT (46.4%), although they received few instances of EXPRESSION OF EMBARRASSMENT (10%). For MS-UP, however, the apologies demonstrated a different distribution of this strategy in comparison to MS-BD as well as to any of the other situations. The differences found in the usage of these sub-categories across the situations is notable.

[51] The corresponding table for all strategies as they occurred on average per apology can be found in Appendix B.iv.

Figure 6. Sub-Categorisation of the Strategy TAKING ON RESPONSIBILITY.



Note: ESB: EXPLICIT SELF-BLAME, LI: LACK OF INTENT, JH: JUSTIFY HEARER, EMB: EXPRESSION OF EMBARRASSMENT, SELF-D: EXPRESSING SELF-DEFICIENCY, AF: ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY.

In the majority of the cases (37.5%), the informants demonstrated an ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY for the offence, followed by the strategy of EXPRESSING SELF-DEFICIENCY. This latter strategy was also very frequently chosen in apologies for the two LS situations. In fact, it was the by far most often applied sub-strategy on this severity level. It is followed by considerably lower numbers of only 14.8% in LS-NP and 10.2% in LS-BB for the strategy ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY.

4.1.3 Length of apologies and strategies

Because of its centrality in the prosodic analysis later, the length of the apologies is provided here as number of syllables rather than words, which is the measurement usually applied in prosodic analyses (see Chapter 2.2.3 on speech rate).[52] In addition to this length in syllables, length of the apologies was also determined in number of seconds the respondent needed to produce them. These two measurements correlate highly and significantly ($R = 0.95$, $p < 0.001$), which makes it futile to present both of them in detail at this point.

[52] Some details on how the syllables were determined: Contractions (e.g., *isn't, wanna*) were here counted as two syllables, repairs were counted with the number of syllables contained in the entire repair. hesitations were also counted simply by the number of syllables with which they were produced. Also, for those few stretches of talk in which the speech was unintelligible, the number of syllables was estimated, based on the auditory perception of syllables spoken.

The average length of entire apologies in number of syllables was 22.2 for HS-HD and 27.6 for HS-SC, making HS-SC 24.3% longer than its HS counterpart. For MS-BD, the length was 24 syllables on average, while MS-UP was, yet again, slightly longer with 27.6 syllables, a difference of 15%. The two apologies for the LS situations also differed in length. LS-BB was 25.8% longer than LS-NP (25.3 syllables and 20.1 syllables on average, respectively). Thus, the shortest apologies were found for LS-NP and the longest for HS-SC and MS-UP, with no correlation between this measurement and the severity of the offence ($R = 0.06$, $p = 0.35$).

To obtain a clearer picture of possible effects that caused these differences in length between the entire apologies, especially those on the same severity level, the lengths of the individual strategies are presented in Table 12. Starting with the apologies for the two LS situations, these behaved similarly for most strategies they had in common.

Table 12. Average Length of Each Strategy in Number of Syllables.

Strategies	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPLANATION OR ACCOUNT	-	-	-	5.7	13	11
IFID	4.1	4.8	5.3	5.2	4	4.5
OFFER OF REPAIR	7.8	9.4	13.9	7	10.1	11.5
PROMISE OF FORBEARANCE	-	-	25.5	11.2	11.4	-
TAKING ON RESPONSIBILITY	7.4	7.9	9.2	8.9	6.5	5.7
Mean Length in Syllables	6.4	7.4	13.5	7.6	9	8.2
ADDITIONAL STRATEGIES						
APPEASER	-	**11.3**	**24**	9.4	12	10
CONCERN FOR THE HEARER	**5.5**	**8.4**	**12.7**	**11.5**	**7.5**	**11**
ANSWER	-	-	-	1	1	1
EXCLAMATION	2.7	2.6	1.9	1.8	1.5	1.9
HESITATION	1	1.1	1	1.5	1	1
MINIMISING	-	-	13	13	-	-
OTHER	3	5.9	6.7	4.2	3.6	2.8
Mean Length in Syllables (All Strategies)	4.5	6.4	**11.3**	6.7	6.5	6

The most visible difference was found in the length of CONCERN FOR THE HEARER. It was longer in apologies for LS-NP, with 11 syllables compared to 7.5 syllables for LS-BB. However, with only two expressions OF CONCERN FOR THE HEARER for LS-BB and one for LS-NP, this finding can be disregarded for now. For both of these LS situations, no strategies were produced with markedly long utterances. The difference found in their overall length was mainly caused by the apologies for LS-BB, which were produced with more strategies than LS-NP, especially with the relatively long strategy of PROMISE OF FORBEARANCE.

Examining the HS level, it is notable for HS-HD that none of the strategies produced would be seen as particularly elaborate. Rather, they tended to be even shorter than those for the LS level. The highest average number of syllables was found in OFFERS OF REPAIR with 7.8, which is also the shortest average length of this strategy across all situations. The shortest strategy, similar to all other situations, was that of HESITATION, which were rarely (or, in the case of HS-HD, never) longer than 1 syllable. Except for EXCLAMATIONS, all strategies produced in HS-HD were uttered with fewer syllables than in any of the other situations. The strategy of EXCLAMATION, however, was here produced with the highest average number of syllables for all situational descriptions employed. Its number was closely followed only by HS-SC, with 2.6 syllables.

To further support this general notion of brevity for HS-HD, the apologies for HS-SC portrayed a number of strategies which were longer than any of those produced for its HS counterpart. In fact, for HS-SC, the strategy of APPEASER had an average length of 11.3 syllables, followed by OFFER OF REPAIR with 9.4 syllables and CONCERN FOR THE HEARER with 8.4 syllables. In summary, those strategies which exist in both HS situations were almost all articulated with more syllables for HS-SC. In fact, apologies in HS-SC behaved more similarly to MS-UP, LS-BB and LS-NP in this regard.

MS-BD offered unexpected results. The strategies with which the apologies were produced were between 16.8% and 25% longer than those that for the corresponding MS situation, MS-UP. Furthermore, two strategies were realised with more than 20 syllables on average: PROMISE OF FORBEARANCE, with 25.5, and APPEASERS, with 24 syllables. Of the latter, however, only one occurrence was found in each of these two situations. Additionally, in MS-BD, the strategy of OFFER OF REPAIR was produced with 13.9 syllables; CONCERN FOR THE HEARER was produced with 12.7 syllables. MS-UP, however, featured a similar length in the strategy of CONCERN FOR THE HEARER, with an average of 11.5 syllables. Accordingly, CONCERN FOR THE HEARER was the second longest strategy, only topped by MINIMISING THE DEGREE OF THE OFFENCE, with 13 syllables. It was followed by PROMISE OF FORBEARANCE, with 11.2, and APPEASERS, with 9.4 syllables, which mark the longest APPEASERS across all situations. Nevertheless, other strategies were noticeably short, such as OFFER OF REPAIR, with 7 syllables on average. In summary, the findings for MS-UP present themselves with an average strategy length that does, as mentioned, not behave markedly differently from the majority of situations, except for the apologies in its MS counterpart.

Table 13 reveals the average position of each strategy in the apology. This position is especially important for the prosodic analyses because the previous literature and the present study demonstrate that it often significantly correlates with the prosodic delivery

of the utterances. EXCLAMATIONS were always found at an early position in the apology. An exception was only visible for HS-SC, where it occurred in the second or even third position, on average. This can be explained by a higher number of EXCLAMATIONS in the HS-SC apologies in general, with multiple EXCLAMATIONS occurring in later positions and even toward the end of an apology (see, e.g., Example 15 in the Discussion).

Table 13. Average Position of All Strategies within the Apologies.

Strategies	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPLANATION OR ACCOUNT	-	-	-	4.3	3	4
IFID	**3.7**	**3.1**	**2.3**	**2.5**	**2.8**	**2.7**
OFFER OF REPAIR	4.8	4.2	3.8	3	4.5	4.3
PROMISE OF FORBEARANCE	-	-	5	4.7	4.8	-
TAKING ON RESPONSIBILITY	3.9	3.8	2.9	3.1	3	2.5
ADDITIONAL STRATEGIES						
EXCLAMATION	1.7	**2.4**	1.3	1	1.5	1.2
CONCERN FOR THE HEARER	4.4	4.9	3.3	6.5	5.5	5
APPEASER	-	4.1	4	6.7	5	6
ANSWER	-	-	-	1	1.2	1.3
HESITATION	5.5	4.8	3.5	5.9	4.5	3.4
MINIMISING	-	-	3.5	1.5	-	-
OTHER	**4.5**	**3.3**	**2**	**3.6**	**3.2**	**2.5**

IFIDs tended to occur earlier in apologies in the HS situations than in the MS and LS situations, while the latter four (the MS and LS apologies) behaved similarly in this regard. Here, it should be noted that the later positions of IFIDs in the HS situations were likely caused by the high number of EXCLAMATIONS that preceded them. Similarly, for the LS situations, many of the apologies started with the second adjacency pair part in the form of an ANSWER. This certainly impacted the positions of the remaining strategies. Additionally, similar to EXCLAMATIONS in which several IFIDs occurred in one apology, they cannot all share the initial position. Hence, the more IFIDs present, the later they occurred, on average, relative to those in the other apologies. A detailed overview of the most frequent strategies and their average positions in each situation can be found in Appendix B.i.

Correlations were found between the length of the strategy in syllables and the average position within the apology. In fact, across all situations, there was a weak positive correlation with the two factors representing length: length in seconds as well as length in syllables (position with length in seconds: $r_s = 0.3$, $p < 0.001$; with length in syllables: $r_s = 0.33$, $p < 0.001$). This further indicates that longer strategies tended to occur toward

the end of the apology, a finding which was impacted not only by the occurrence of more complex strategies in later positions, but also by the tendency of the short strategies of EXCLAMATIONS, ANSWERS and IFIDs utilised tendentially toward the beginning of the entire apology. Moreover, this correlation may have been weakened by the fact that HESITATIONS occurred later in the apology, although they were the shortest of all items coded for in this study.

4.2 Results for the Prosodic Analysis of the Apologies

The findings for the prosodic dimensions of the apologies as one entity and the individual strategies each contain six sub-sections. These sub-sections concentrate on one prosodic dimension at a time.

4.2.1 The Apology as one entity

All of the results in this section are presented in averages of the values measured for the apologies of one situation. Additionally, the deviation of these values' averages from the LS baseline are displayed, obtained as indicated in Chapter 3.3.2. Boxplots and correlation values were added whenever deemed helpful. Outliers to these averages across informants are revealed in their boxplots, which portray the overall dispersion of the data. These outliers are addressed in detail in the section on the prosody of the individual strategies (Chapter 4.2.2).

4.2.1.1 Mean F0

The average values obtained for the F0mean provide an idea of the overall pitch height at which the apology was produced. Table 14 presents the findings for the values of F0mean in Hz and the difference from the corresponding average pitch values on the LS level for each situation.

Table 14. F0mean and F0mean% Values for the Entire Apologies.

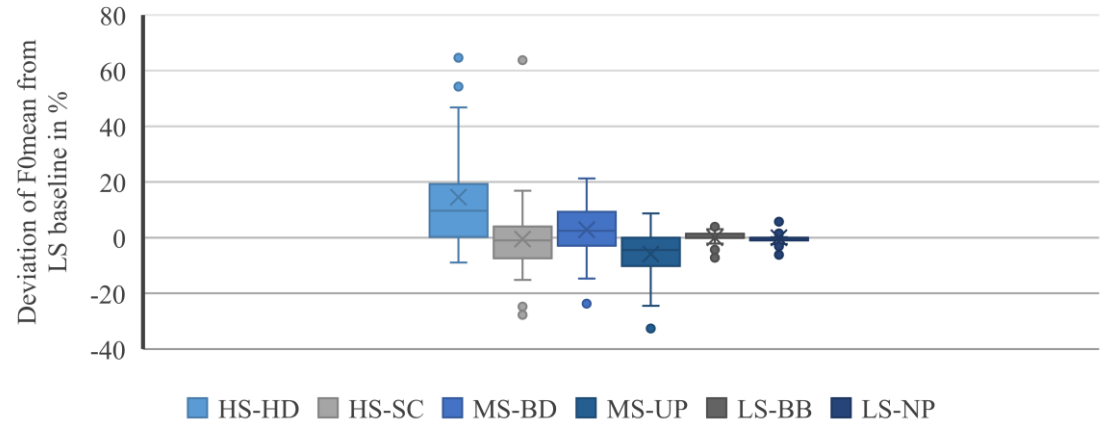
Factor	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
F0mean Value	**228.2 Hz**	208.2 Hz	207 Hz	**205.2 Hz**	213 Hz	205.5 Hz
F0mean%	**+14.6%**	-0.5%	+2.8%	**-5.9%**	+0%	-0%

No significant correlation was found between the F0mean and the severity of the offence, but a weak positive correlation was detected for severity and F0mean% (R = 0.23, $p < 0.001$). This suggests that a higher positive deviation was tendentially found in apologies for situations of higher severity. While this is obviously not visible on the F0mean% level, the average pitch height in Hz suggests that the LS-BB apologies were, on average, formulated with a slightly higher F0mean than the LS-NP apologies. It must be remembered that there was a high individuality across informants in their average pitch. Given that not for each situation, an apology was produced by each of these informants due to the selection of situations performed via the randomisation of DCTs,

the F0mean% results are more reliable. Nevertheless, two situations are relatively close to the default (HS-SC and MS-BD), while the other two indicate more noticeable deviations. HS-HD illustrated by far the strongest one, with a +14.6% higher F0mean%, on average, than the LS apologies.

The boxplots in Figure 7 add information about the overall dispersion of the data for these F0mean% results. First, it confirms that the median differs slightly between the situations, where it is set at +9.7% for HS-HD, -1% for HS-SC, +2.5% for MS-BD and -4.4% for MS-UP. Additionally, it portrays that dispersion of the data for the LS situations is barely present. This is the case for the boxplots presented for the majority of the different prosodic dimensions in the LS situations; therefore, it is disregarded for the current part of the analysis. Generally, however, this lack of dispersion can further maintain the appropriateness of employing the LS situations as a point of comparison for the F0mean% variable. HS-HD is the one situation which deserves closer attention. As the interquartile range reveals, 50% of the data had F0mean% values between +0.3% and +19.3%. The interquartile ranges for the other three situations are markedly narrower (HS-SC: Q1 = -7.4%, Q3 = 13: 4%; MS-BD: Q1 = -2.9%, Q3 = +9.3%; MS-UP: Q1 = -10.9%, Q3 = -0%) and all of them reach negative values.

Figure 7. Variation of F0mean% for the Entire Apologies.



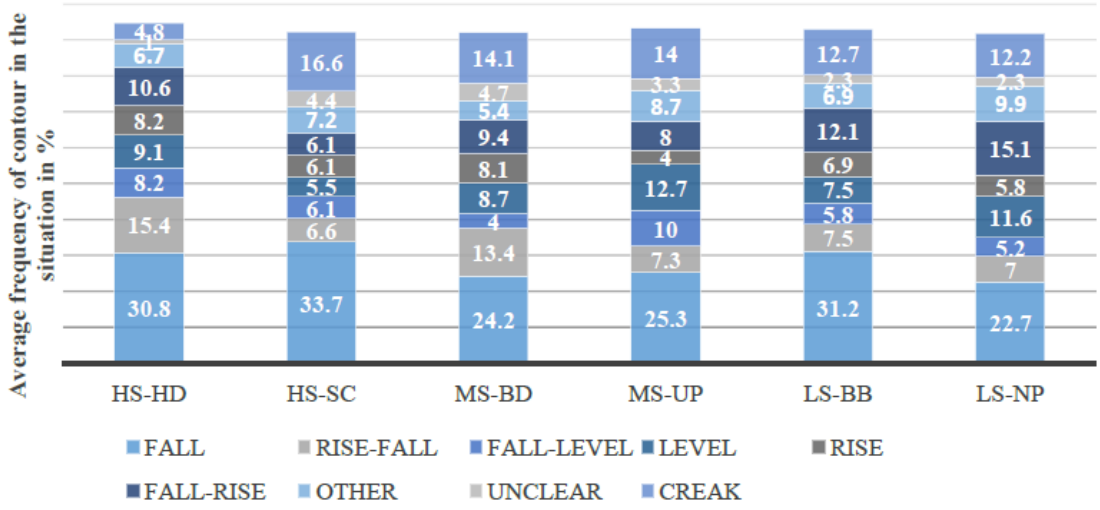
Additionally, the data for the HS-HD situation largely skews right, with the highest non-outlier of the F0mean% observations found at +46.7%. HS-SC and MS-UP, however, skew left but to a lesser extent. Nevertheless, the boxplot reveals that the data for HS-SC, MS-BD and MS-UP are more consistent, and the F0mean% found in these situations therefore – at least theoretically – easier to predict. By comparison, HS-HD presented itself with additional strong positive outliers, which deviate as strongly as +54.2% and +64.6% from the LS baseline of the two respective informants. Note, though, that there are actually three outliers that scatter around +55% for HS-HD, which is not discernible in this visualisation due to their similarity. The only other situation

with such strong outliers is HS-SC, which is further presented and discussed in the later Chapter 4.2.2.1.

4.2.1.2 Intonation contour

With the wide variety of intonation contours found in the apologies, their distribution in Figure 8 is merely intended as a rough overview. Their exact distribution across the apologies for the different situations is analysed in some detail in-text and in additional tables. The bars in this figure indicate the frequency with which each contour occurred in each situation in percentages, relative to the total number of strategies produced per situation.

Figure 8. Intonation Contours Found in the Different Situations (for All Strategies Combined).



Note: The missing percentages were small values for the contours of FALL-RISE-FALL, FALL-LEVEL-FALL, RISE-FALL-RISE and LEVEL-RISE or UNCLEAR, for which the contours were either not visible or experienced technical difficulties, neither of which are included in this overview.

The different contours are ordered within the bars; the bottom represents the simple FALL and the RISE-FALL contour just above it. It is followed by the two contours of FALL-LEVEL and the LEVEL tendency. Subsequently, the bars present the two variants of a final RISE, the simple RISE and THE FALL-RISE, with OTHER contours and UNCLEAR contours almost at the top of the bars. The final category, included at the top, indicates how many instances were not categorised according to their intonation contours because they ended in the voice quality of a vocal fry and were thus categorised as CREAK.

As this figure reveals, the contour found most often across all situations was the FALLING intonation, followed by RISE-FALL. Following this contour in frequency was the usage of a CREAKY voice in HS-SC, MS-BD, MS-UP and LS-BB apologies. CREAKY voice did not factor substantially in the apologies for HS-HD. Here, instead,

RISE-FALL was prominent, with 15.4%. Additionally, especially in the two LS situations as well as in MS-BD, the contour of FALL-RISE was frequently employed. While details on the distribution of these contours across the different strategies are discussed in Chapter 4.2.2.2, those found in the final positions of the apology, regardless of the strategy in which the apology ended, are here added in Table 15. Again, one contour dominated across all situations: the FALLING contour. This was most often the case in the two apologies for the HS situations and for MS-UP.

Table 15. Percentage of Apologies Which Ended in the Respective Intonation Contour.

Situation	FALL	RISE-FALL	FALL-RISE	LEVEL	RISE	FALL-RISE	OTHER	CREAK
HS-HD	27.9%	**16.3%**	4.7%	0%	2.3%	14%	9.3%	**16.3%**
HS-SC	22.5%	2.5%	2.5%	10%	7.5%	**5%**	5%	20%
MS-BD	11.9%	7.1%	2.4%	7.1%	11.9%	**7.1%**	7.1%	16.7%
MS-UP	19.4%	2.8%	5.6%	5.6%	2.8%	13.9%	16.7%	**27.8%**
LS-BB	15.4%	2.6%	10.3%	2.6%	10.3%	15.4%	5.1%	**28.2%**
LS-NP	10.9%	6.5%	8.7%	4.3%	8.7%	13%	8.7%	**23.9%**
All Apologies	19%	6.9%	6%	5.2%	7.8%	12.1%	9.1%	23.3%

Moreover, many apologies ended in a CREAK. Even for the HS-HD apologies, 16.3% ended in this voice quality. The highest numbers for the CREAKY voice were, however, found in the apologies produced in the LS situations and MS-UP. Additionally, apologies in the HS-HD situation tended to end in a RISE-FALL contour with a considerably higher frequency than the other situations, while FALL-RISE was markedly low in frequency for HS-SC and MS-BD.

4.2.1.3 Pitch range

The values gathered for the pitch range can be found in Table 16. This table presents the overall average range employed in Hz. Additionally, and more importantly, it displays the average deviation of each apology from the LS baseline, which is presented as F0range%.

Table 16. Overview of F0range and F0range% for the Entire Apologies.

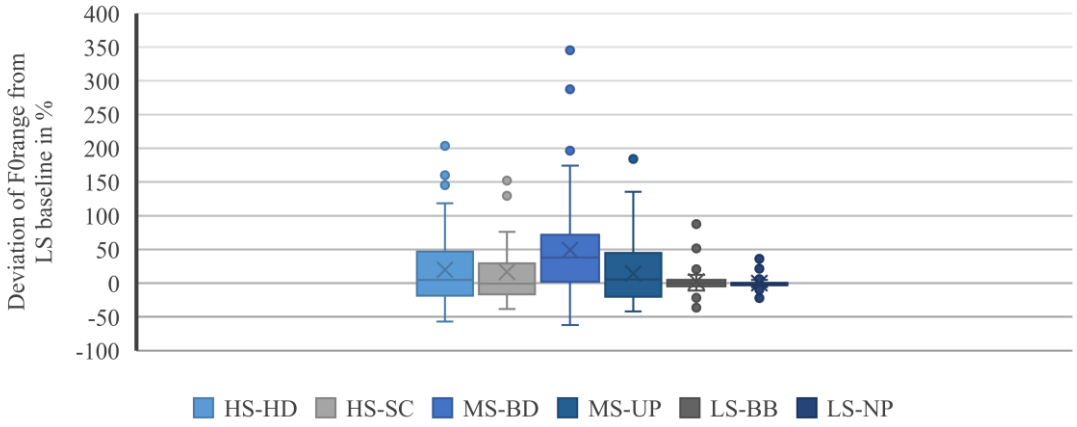
Factor	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
F0range	94.7 Hz	92.7 Hz	108.1 Hz	107.9 Hz	95.8 Hz	91.9 Hz
F0range%	+19.7%	+16.5%	**+49.2%**	+14%	**+2.3%**	**0%**

First, all situations strongly deviated from the LS baseline, with roughly comparable high values found for the F0range% for HS-HD, HS-SC and MS-UP. This confirms that the values gathered via the F0range% add another perspective to the findings; the results obtained via this measurement can be different than those obtained by simply comparing the mean values across all apologies for one situation to the overall average

of the baseline. Specifically, the F0range% obtained for MS-BD was unexpected. It reveals a remarkable average deviation of MS-BD apologies from the informants' LS baselines. Such a high value is not noticeable when examining the average difference of the F0range and the average for the two LS situations in Hz. The result can be explained by a considerably higher number of outliers in the F0range% values for MS-BD apologies. Many participants employed a noticeably higher pitch range than in the LS default by the respective participant. Two of these instances reveal four times as wide a F0range utilised in the MS-BD apology compared to the average pitch range the participant employed for the LS baseline. Such tendencies were not measured for the apologies for MS-UP.

The boxplots in Figure 9 support the finding that the apologies in MS-BD behaved visibly differently, not only from those in MS-UP, but also from the other situations in terms of their dispersion. Consequently, the median for all situations except MS-BD are relatively close to the 0% marker (HS-HD: +4.8%, HS-SC: -0.6%, MS-BD: +37.9%, MS-UP: +5.7%). Notably, the dispersion of this pitch range data is relatively wide for MS-BD as well as for all other situations of interest. In fact, this finding is somewhat underrepresented in Figure 9 due to the extreme outliers detected.

Figure 9. Variation of F0range% for the Entire Apologies.



The situation with the least dispersion is HS-SC, but the interquartile range for this situation remains relatively wide (Q1 = -16.6%, Q3 = 29.9%). It is even wider for HS-HD (Q1 = -18.4%, Q3 = +46.8%), MS-BD (Q1 = +1.2%, Q3 = +71.7%) and MS-UP (Q1 = -20%, Q3 = +44.8%); fittingly, MS-BD presents the widest interquartile range, the most noticeable skewing to the right and the most significant minimal value of -62.1%. Therefore, the pitch range is highly dispersed, and the applied pitch range in relation to the LS baseline is generally difficult to predict for all situations. In fact, such a prediction is considerably more difficult here than for the other dimensions. However, what should be noted is that some extent of the right skewing mentioned is observable

in all situations. The extreme outlier for MS-BD is highlighted further in the Discussion for Example 11 and in the Results chapter that addresses the distribution of the F0range across the individual strategies (Chapter 4.2.2.3).

As for possible correlations, between the F0range for all apologies and length in syllables, a weak positive correlation indicates at least some tendency that longer apologies in number of syllables were produced with a wider pitch range ($R = 0.17$, $p = 0.01$).

4.2.1.4 Speech rate

As mentioned, speech rate was measured as the number of syllables the informant produced within one second. Similar to the previously presented results, Table 17 portrays two perspectives on the data.

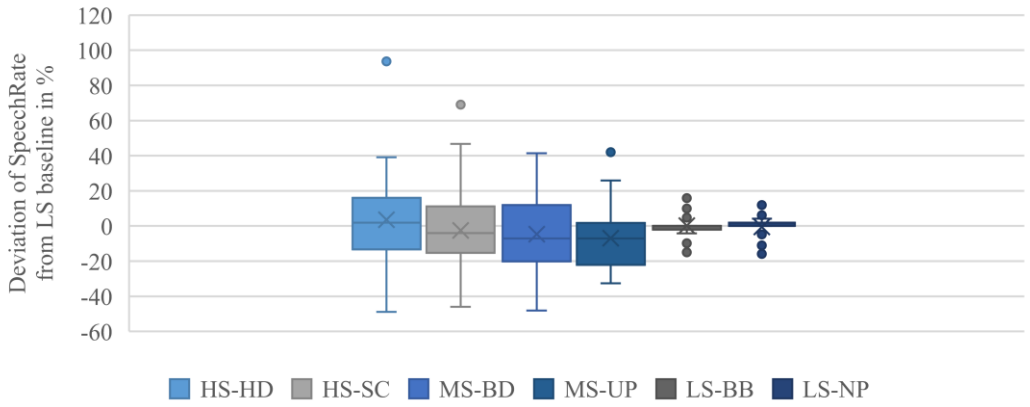
Table 17. Overview of SpeechRate and SpeechRate% for the Entire Apologies.

Factor	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
SpeechRate (syl/sec)	4.7	**4.4**	4.4	4.5	**4.9**	4.6
SpeechRate%	+3.6	**-2.6%**	-4.6%	-7%	**+0.2%**	-0.5%

It reveals that the speech rate did not differ significantly between the apologies produced for the different situations compared to the LS baseline (SpeechRate%) or when examining the actual average speech rate elicited, which is presented in the first line. The lowest actual speech rate was found for the apologies produced in HS-SC and MS-BD (4.4 syl/sec) and the highest for those in LS-BB (4.9 syl/sec). When considering the mean values for the participants' individual speech rates, a similar picture can be drawn. The highest positive deviation from the LS baseline is then found for the HS-HD apologies (+3.6%), and the highest negative one is found for those produced in MS-UP (-7%).

As the boxplots for the SpeechRate% values in Figure 10 demonstrate, although the dispersion is comparatively narrow, it is not true that all participants utilised a similar speech rate in their apologies throughout. While the median is comparably close to 0% for all of the six situations (HS-HD: +1.9%, HS-SC: -4%, MS-BD: -7.1%, MS-UP: -7.1%), dispersion still exists in all of them. The highest interquartile range can be found in HS-HD and MS-BD (HS-HD: Q1 = -13.3%, Q3 = 16.1%; HS-SC: Q1 = -15.3%, Q3 = 11.1%; MS-BD: Q1 = -20.2%, Q3 = +12%; MS-UP: Q1 = -22.1%, Q3 = +1.8%). The situation with the lowest dispersion (except the baseline situations) was found in MS-UP, in which the lowest observation which is not an outlier is situated at a -32.7% deviation from the corresponding baseline.

Figure 10. Variation of SpeechRate% for the Entire Apologies.



This observation is considerably lower for the other three situations (HS-HD: -48.9%, HS-SC: -46%, MS-BD: -48.2%). Additionally, this situation also features the lowest dispersion in the positive direction, with a maximal value at +25.8%. This one is situated at higher values for the other three situations (HS-HD: +39%, MS-BD: -46%, MS-BD: -48.2%). Finally, although low in dispersion overall, some skewing in either direction is visible, with skewing to the right for HS-SC and MS-BD and to the left for HS-HD and MS-UP. Additionally, there are three noticeable outliers toward the positive direction, which are highlighted in Chapter 4.2.2.4.

4.2.1.5 Intensity

As an overall finding for intensity, the values obtained are judged to be less informative than those presented thus far. It cannot be ruled out that instrument effects, due to the technical differences in microphones used by the informants or other technical settings, may have impacted the intensity in unforeseen ways. The lack of noteworthy results becomes immediately visible when studying all deviations from the LS baseline in dB as well as in percentages (see Table 18).

Table 18. Overview of IntensityMean, IntensityMean% and IntensityMax% for the Entire Apologies.

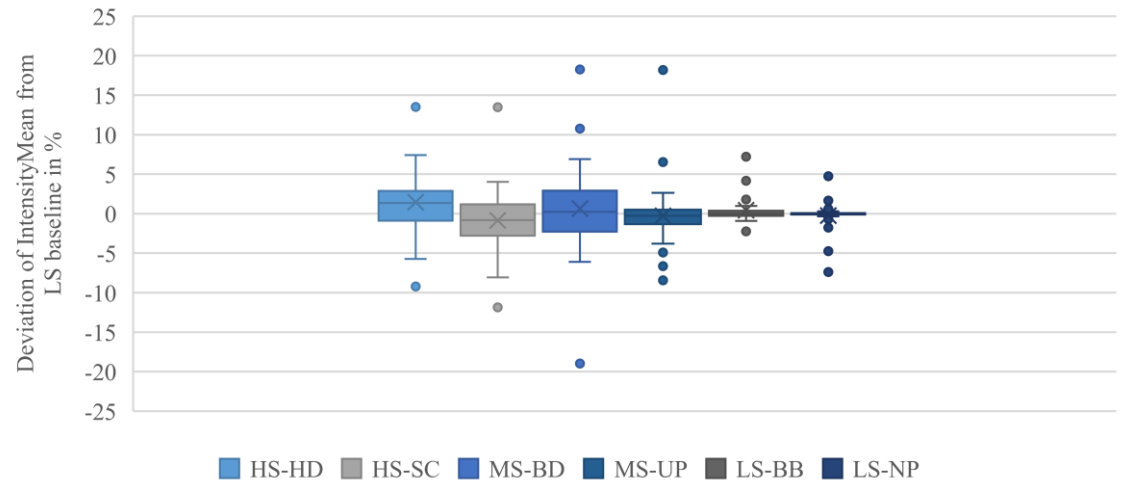
Factor	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
IntensityMean	72.5 dB	73.3 dB	72.4 dB	73.6 dB	74.1 dB	72.1 dB
IntensityMean%	**+1.4%**	-0.9%	+0.6%	-0.3%	+0.4%	-0.3%
IntensityMax%	0.3%	-1.3%	+1.5%	**+5.1%**	+0.4%	-0.7%

As for the deviations from the LS baseline, the apologies produced in HS-HD were, on average, produced with a 1.4% higher intensity. This already constitutes the highest value throughout. The measurement of IntensityMax% added here further reveals that, while this is not visible in in the IntensityMean% value, the intensity peaks in the apologies for MS-UP were, on average, +5.1% higher than the peak measured for the

corresponding LS level apology. Nevertheless, with the highest deviation of the overall maximal height in the entire situation only at this value of +5.1%, this can be perceived as another strong call for caution. Finally, there is possible, though equally weak, evidence that in apologies in which a relatively higher F0mean was employed, the loudness in dB was also relatively higher (R = 0.13, p = 0.05); the same was true for F0max (R = 0.18, p = 0.01). Additionally, higher intensity correlates weakly with apologies that were relatively longer in the number of syllables produced and length in seconds (both R = 0.17, p = 0.02). However, all of these correlations are considered to be tendencies at best.

Again, Figure 11 adds some final information on the dispersion of data obtained for intensity. It supports the overall findings presented regarding noticeably little dispersion for intensity. This starts with the median, which is almost at 0% for all four situations of interest (HS-HD: +1.3%, HS-SC: -0.8%, MS-BD: +0.2%, MS-UP: -0.3%). Additionally, the interquartile range is considerably narrow for all but one situation, MS-BD, in which it is slightly wider but still narrow.[53]

Figure 11. Variation of IntensityMean% for the Entire Apologies.



Despite this lack of variation, outliers exist in both directions and for all situations except those that comprise the baseline, although even these outliers are relatively close to the median. Nevertheless, omitting the narrow interquartile ranges previously mentioned, even the maximal and minimal observed values that are not outliers, visible as the endpoints of the whiskers, lie between +7.4% (HS-HD) and -8.1% (HS-SC) across all of the situations.

[53] HS-HD: Q1 = -0.9%, Q3 = +2.9%; HS-SC: Q1 = -2.8%, Q3 = 1.2%; MS-BD: Q1 = -2.3%, Q3 = +2.9%; MS-UP: Q1 = -1.3%, Q3 = +0.5%

4.2.1.6 Voice quality: Vocal fry

Regarding the usage of this voice quality across the different situations, on average, 12.1% of all strategies (125 out of 1,037) ended in a CREAK. The participant with the highest percentage of CREAKY voice employed was Informant 20, for whom 63.3% of all strategies produced across all situations ended in this quality (seven out of 11 strategies produced). Note that it was previously pointed out that there was a high variability of this quality between individuals. Indeed, 39.4% of the respondents did not produce a single CREAK in any of their strategies.

Table 19, moreover, reveals that a high number of apologies contain at least one CREAK at the end of the strategies with which they were produced. For HS-HD, however, this was true for only 16.3%. Thus, it represents the situation with the by far lowest number of apologies that contained the usage of CREAKY voice out of all of the six situations. In addition, revealed by the first line in the table, the majority of situations show that between 10.5% and 14.3% of the strategies with which their apologies were produced ended in this voice quality; however, apologies in HS-SC present the highest value (17.6%).

Table 19. Average Percentages of Creaks per Apology and Percentage of Apologies with at Least One CREAK.

Feature	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
Percentage of CREAKS in Strategies	4.2%	17.6%	14.3%	14.3%	10.5%	11.9%
Apologies with at Least One CREAK	16.3%	42.5%	36.4%	38.9%	41%	30.4%

As expected from the insights provided thus far, the apologies produced in HS-HD behaved markedly differently from those produced in the other situations. Here, only 4.2% of all strategies ended in a CREAK.

4.2.2 Individual strategies

This sub-chapter focusses on the coded apologies and presents all prosodic dimensions discussed for the individual strategies the apologies were composed of. Consequently, differences between the prosodic production of these strategies are highlighted that may have been unnoticeable when illustrating only the overall averages. The deviations presented in percentages this time are not compared to the LS baseline but to the values for the entire apology in which the strategy occurred.

4.2.2.1 F0mean

A closer look at the F0mean% values for the individual strategies (see Table 20) reveals that the IFIDs were produced with pitch heights close to the overall F0mean of the apologies. In fact, the two LS situations were the only ones with some deviation, though in different directions.

Table 20. F0mean% Values for the Individual Strategies.

Strategies	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPLANATION OR ACCOUNT	-	-	-	+1.8%	+2.5%	-10%
IFID	**-0.2%**	**+0.1%**	**-0.6%**	**+1.3%**	**+2.7%**	**-3.1%**
OFFER OF REPAIR	-2.2%	-0.7%	**-8.1%**	**-10.4%**	-2.5%	-1%
PROMISE OF FORBEARANCE			-1.6%	-6.4%	-2.6%	-
TAKING ON RESPONSIBILITY	-2.1%	-0.3%	-3.3%	-0.5%	-2%	-1%
ADDITIONAL STRATEGIES						
ANSWER	-	-	-	**+6.6%**	**+11.4%**	**+10.5%**
APPEASER	-	-1.7%	-7.1%	-1.7%	-17.7%	-4.3%
CONCERN FOR THE HEARER	+1.2%	+0.2%	+6.1%	-3.9%	+10%	+9.7%
EXCLAMATION	**+6.1%**	+5.1%	**+16.2%**	**+15.7%**	+9%	+12.6%
HESITATION	**-10.2%**	**-9%**	**-10.9%**	**-4.3%**	**-3.7%**	**+0.5%**
MINIMISING	-	-	-0.2%	+1.7%	-	-
OTHER	+1.6%	+3.1%	+5.7%	+12%	+9.3%	+12.3%

The IFIDs in LS-BB were produced with a slightly higher pitch and LS-NP with a slightly lower pitch. One reason for this finding is detected in the position of the IFID. In the LS-NP situation, the IFID occurred less often in the initial position, in many cases because of a preceding ANSWER. The correlations, in turn, demonstrate that the position of any strategy within the apology and the mean pitch at which it was produced indeed correlate in a negative manner (r_s = -0.2, p < 0.001). This correlation is considerably stronger for F0mean% (r_s = -0.46, p < 0.001), proposing that strategies in later positions tended to reveal stronger negative deviations from the apology's mean pitch. This correlation further informs the finding that ANSWERS were produced with a higher mean value, as these ANSWERS consistently occurred in the initial position of the apology. This effect could also factor into the finding of the higher F0mean% values for the EXCLAMATIONS. However, this strong positive deviation found in EXCLAMATIONS in many of the situations (with up to 16.2% and 15.7% for the two MS situations) may also be due to other factors which are connected to emotional attributes, as discussed later.

Further correlations indicate that longer strategies tended to be produced with a somewhat lower F0mean. This is true for length measured in number of seconds (F0mean: R = -0.15, p < 0.001; F0mean%: R = -0.14, p < 0.001) and for length measured in number of syllables (F0mean: R = -0.16, p < 0.01; F0mean%: R = -0.17, p < 0.001). These weak correlations hint that longer strategies tended to come with a lower average pitch height in regard to actual pitch measured in Hz. In addition, this is also true in terms of their deviations from the average pitch with which the apology was produced. Together with the tendency for longer strategies to occur toward the end of

the apology, as noted previously, this supports the overall picture drawn here: longer strategies tended to occur toward the end of the apology and with lower pitch. F0mean, in turn, also appeared to be tendentially lower in strategies in later positions.

Table 20 further illustrates that in the two MS situations, OFFER OF REPAIR was generally produced with a lower F0mean% than the rest of the apology. This negative deviation is noticeably stronger here than in the other situations. Again, though, the position of this strategy within the utterances has at least some part in this finding; however, so does the overall apology composition. This becomes strikingly clear in the upcoming qualitative discussion of the outliers for this prosodic dimension.

Moving on to this qualitative presentation of actual examples from the data, the outliers in the previously presented boxplots are discussed in detail. The most noticeable outlier for the value of F0mean% appeared around a F0mean which was +65% higher compared to the F0mean found for the LS point of comparison. The apology which represented this outlier can be found in Example 2.

Example 2. Outlier for F0mean%, Informant 37, HS-HD.

Strategy	Transcript	F0mean	F0mean%
EXCLAMATION	oh my [GOSH ↘#276-243#] /	233.5 Hz	+18.9%
IFID	i'm so [SORry =#103#] (0.37)	154.6 Hz	-21.3%
OFFER OF REPAIR	let me [CALL somebody [○ [too quiet]] (0.22)	206.4 Hz	+5.2%
IFID	i'm SO SO SO [SORry ↘#201-176#=#176#] **	190.7 Hz	-2.9%
Mean	-	196.3 Hz	-

It consists of an EXCLAMATION, two IFIDs and an OFFER OF REPAIR. The F0mean values in this table were somewhat unexpected because the second IFID, which appeared later in the apology, had a higher F0mean. This tendency was not often found in the data (cf. Chapter 4.3.3). The first IFID was -21.3% lower than the apology's baseline; as previously revealed, on average, IFIDs tended to be uttered at pitch heights similar to the average pitch of the entire apology in which they occurred. One likely cause for this pitch height of the first IFID is identified in the pitch contour. This strategy was produced with a LEVEL contour and was therefore rather monotonous, at least in the final part of the contour in this strategy. Notably, the second IFID was different from the first IFID in its form and included three successive adverbials as intensification. Additionally, the uttered EXCLAMATION was produced high in the F0 range of this informant and was 18.9% higher than the average pitch at which this apology was performed. Thus, it was considerably higher than the average deviation for this strategy (+6.1%) presented above. Overall, a high F0mean was found throughout the entire apology.

This raises the question regarding how far this apology differed in the pragmatic form and functions from the corresponding LS baseline. The baseline for this participant was determined by LS-NP, which had an average pitch of 119.3 Hz (see Example 3).

Example 3. F0mean Baseline: Informant 37, LS-NP.

Strategy	Transcript	F0mean	F0mean%
IFID	i'm [SO SOrry [○ technical issues] (0.07)	104.8 Hz	-12.1%
TAKING ON RESPONSIBILITY	[i forgot the newspaper ○ [technical issues]] **	132.4 Hz	+11%
Mean	-	119.3 Hz	-

The apology produced for LS-NP was considerably shorter in number of strategies than that for the HS-HD situation. It consisted of only an IFID and one instance of TAKING ON RESPONSIBILITY. Importantly, however, the transcript also reveals that there were technical issues when measuring the F0 contour. This may have impacted the F0mean in unpredictable ways. The other two apologies produced by this informant were excluded completely from the analysis because of even stronger technical difficulties. Consequently, this outlier should be taken with a degree of caution.

To additionally exemplify an outlier for this same situation, Example 4 was inserted. It represents one of several outliers for the F0mean% of HS-HD which clustered around a value of a +55% difference from their LS baselines. Here, no technical difficulties interfered with the measurements, and four different apologies were produced by the informant.

Example 4. Outlier: F0mean%: Informant 4, HS-HD.

Strategy	Transcript	F0mean	F0mean %
EXCLAMATION	oh [GOSH ↘#353-301#] /	326.2 Hz	+12.7%
IFID	i'm so [SORRY ↗#295-329#↘#329-283#] ↔	294.5 Hz	+1.8%
TAKING ON RESPONSIBILITY	i didn't [SEE you ↗#295-309#↘#309-266#] ↔	282.3 Hz	-2.4%
IFID	i'm [SORRY ↘#339-315#↗#315-321#↘#321-256#] ↔	301.7 Hz	+4.3
CONCERN FOR THE HEARER	are you [OKAY ↘#267-243#↗#243-328#] **	268.3 Hz	-7.3%
Mean	-	289.4 Hz	-

The LS baseline for this informant was determined by the average F0mean for the two LS situations produced. LS-BB received an average pitch height of 180.5 Hz, and LS-NP was slightly higher at 194.5 Hz. The fourth speech act produced by Informant 4 was an apology for the offence in MS-UP, which received an even lower F0mean than the LS baseline and was produced with a pitch height of only 171.1 Hz. Hence, the HS-HD apology was indeed produced at a particularly high pitch for this informant.

On the pragmatic level, HS-HD was produced with a large number of strategies, including two IFIDs, an EXCLAMATION, one instance of TAKING ON RESPONSIBILITY and one instance of expressing CONCERN FOR THE HEARER. Here, the commonly found steady decline of F0mean from the beginning to the end of the apology was not detected. Instead, the second IFID, situated in fourth position, revealed a slightly higher F0mean value than the first IFID in second position. Nevertheless, as shown in Table 20, both IFIDs were produced with F0mean values close to the apology's overall pitch height. The EXCLAMATION was equally in line with this overview, in that its average F0mean was high; in fact, it was produced with a 12.7% higher F0mean than the apology on average. In summary, the entire apology presented in Example 4 was produced with a high F0mean compared to the baseline, as was the other apology on the MS level produced by this informant.

4.2.2.2 Intonation contour

To acquire a closer picture of the intonation contours employed, the following tables highlight the distribution of specific contours for the individual strategies one contour at a time. Four of these contours were selected to be presented in-text (FALL, RISE-FALL, FALL-RISE and RISE). The numbers for all other contours can be found in Appendix D.i.

Table 21 presents the findings for the FALLING intonation contour. This contour emerged as the one most frequently employed for the final boundary tones of strategies throughout all situations in Chapter 4.2.1.2. Nevertheless, the highest frequencies were visible in the two HS situations. For these two, the strategy with the highest occurrence of this contour was the IFID. This was followed by the strategy of OFFER OF REPAIR and EXCLAMATION in the HS-HD apologies. For those produced for HS-SC, OFFER OF REPAIR behaved differently. It was employed with a FALLING intonation in only 13.9% of the cases, which was relatively less than the 38.5% in HS-HD apologies. Notably, a FALLING intonation was frequently found in EXCLAMATIONS across all situations, with up to 52.2% for MS-BD. Another unexpected finding was made for TAKING ON RESPONSIBILITY. It was produced with a FALLING intonation with percentages between 27.6% (HS-SC) and 38.8% (LS-BB) for five of the six situations. However, this contour was only found in five of the 30 instances of TAKING ON RESPONSIBILITY in the apologies produced for MS-BD.

Table 21. Raw Frequency and Percentages of FALL Contour for the Individual Strategies.

Strategy	HS-HD		HS-SC		MS-BD		MS-UP		LS-BB		LS-NP	
PROPER	n	%	n	%	n	%	n	%	n	%	n	%
EXPL. OR ACCOUNT	-		-		-		1/3	33.3	0/1	0	1/1	100
IFID	**24/55**	**43.6**	**23/52**	**44.2**	13/51	25.5	16/54	29.6	11/32	34.4	11/43	25.6
OFFER OF REPAIR	10/26	**38.5**	5/36	13.9	2/15	13.3	0/2	0	6/31	19.4	2/28	7.1
PROMISE OF FORB.	-		-		0/2	0	1/10	10	1/10	10	-	
TAKING ON RESP.	5/16	31.3	8/29	27.6	**5/30**	**16.7**	14/40	35	19/49	38.8	15/54	27.8
ADDITIONAL												
ANSWER	-		-		-		0/1	0	0/11	0	1/12	8.3
APPEASER	-		3/7	42.9	0/1	0	4/11	36.4	0/1	0	0/1	0
CONCERN FOR THE H	**4/46**	**8.7**	2/9	22.2	0/3	0	0/2	0	0/2	0	0/1	0
EXCLAMATION	**15/48**	**31.3**	**10/29**	**34.5**	**12/23**	**52.2**	**1/4**	**25**	**7/19**	**36.8**	**6/20**	**30**
HESITATION	3/13	23.1	6/12	50	1/6	16.7	1/11	9.1	2/12	16.7	0/6	0
MINIMISING	-		-		0/4	0	0/2	0	-		-	
OTHER	3/4	75	4/8	50	3/14	21.4	0/12	0	3/5	60	3/4	75
Total	64 /208	**30.8**	61 /182	**33.5**	36 /149	24.2	38 /152	25	49 /173	28.3	39 /173	22.5

The next contour analysed is the RISE-FALL intonation, as portrayed in Table 22. For this contour, considerably fewer instances were found. The apologies with the highest display were produced for HS-HD, with 14.9%, followed by MS-BD, with 12.8%. In terms of strategy, this RISE-FALL contour was most often found as the contour for EXCLAMATIONS, with up to one-quarter of all EXCLAMATIONS in HS-HD (and those for MS-UP, but this comprised only one of the four EXCLAMATIONS which were uttered for this situation in total) produced this way. In the apologies produced for HS-HD, another strategy was employed with this contour relatively frequently: TAKING ON RESPONSIBILITY, with 31.3% uttered with a RISE-FALL intonation. Though it also occurred in the other five situations for this strategy, it was substantially rarer there. Finally, the RISE-FALL intonation was relatively common in CONCERN FOR THE HEARER for the HS-HD situation. The FALL-RISE intonation contour (see Table 23) was most noticeably frequent in CONCERN FOR THE HEARER, with a total of 34.8% in the HS-HD situation. This contour did not occur in any of the other – although few – instances of this strategy and barely appeared in any of the other strategies in HS-HD. Additionally, FALL-RISE was frequently found as the contour at the end of the IFIDs, especially in those produced for MS-BD and the two LS situations. This finding is further highlighted in Chapter 4.3.3. Finally, FALL-RISE occurred in over 20% of the cases of OFFER OF REPAIR in the two LS situations. Otherwise, this strategy was rarely performed using the contour presented here.

Table 22. Raw Frequency and Percentages of RISE-FALL Contour for the Individual Strategies.

Strategies	HS-HD		HS-SC		MS-BD		MS-UP		LS-BB		LS-NP	
PROPER	n	%	n	%	n	%	n	%	n	%	n	%
EXPL. OR ACCOUNT	-	-	-	-	-	-	0/3	0	0/1	0	0/1	0
IFID	4/55	7.3	0/52	0	5/51	9.8	2/54	3.7	0/32	0	1/43	2.3
OFFER OF REPAIR	2/26	7.7	0/36	0	2/15	13.3	0/2	0	2/31	6.5	3/28	10.7
PROMISE OF FORB.	-	-	-	-	0/2	0	0/10	0	0/10	0	-	-
TAKING ON RESP.	**5/16**	**31.3**	4/29	13.8	2/30	6.7	2/40	5	2/49	4.1	3/54	5.6
ADDITIONAL												
ANSWER	-	-	-	-	-	-	0/1	0	0/11	0	2/12	16.7
APPEASER	-	-	0/7	0	0/1	0	2/11	18.2	0/1	0	0/1	0
CONCERN FOR THE H	**6/46**	**13**	0/9	0	1/3	33.3	0/2	0	1/2	50	0/1	0
EXCLAMATION	**12/48**	**25**	**4/29**	**13.8**	**5/23**	**21.7**	**1/4**	**25**	**5/19**	**26.3**	**2/20**	**10**
HESITATION	1/13	7.7	2/12	16.7	0/6	0	1/11	9.1	1/12	9.3	1/6	16.7
MINIMISING	-	-	-	-	0/4	0	1/2	50	-	-	-	-
OTHER	1/4	25	2/8	25	4/14	28.6	2/12	16.7	0/5	0	0/4	0
Total	31 /208	**14.9**	12 /182	6.7	19 /149	**12.8**	11 /152	7.2	11 /173	6.4	12 /173	6.9

Table 23. Raw Frequency and Percentages of FALL-RISE Contour for the Individual Strategies.

Strategy	HS-HD		HS-SC		MS-BD		MS-UP		LS-BB		LS-NP	
PROPER	n	%	n	%	n	%	n	%	n	%	n	%
EXPL. OR ACCOUNT	-	-	-	-	-	-	0/3	0	0/1	0	0/1	0
IFID	3/55	5.5	4/52	7.7	**8/51**	**15.7**	6/54	11.1	**5/32**	**15.6**	**8/43**	**18.6**
OFFER OF REPAIR	1/26	3.8	1/36	2.8	2/15	13.3	0/2	0	**7/31**	**22.6**	**7/28**	**25**
PROMISE OF FORB.	-	-	-	-	0/2	0	0/10	0	1/10	10	-	-
TAKING ON RESP.	0/16	0	1/29	3.4	4/30	13.3	1/40	2.5	6/49	12.2	4/54	7.4
ADDITIONAL												
ANSWER	-	-	-	-	-	-	1/1	100	0/11	0	3/12	25
APPEASER	-	-	0/7	0	0/1	0	2/11	18.2	0/1	0	0/1	0
CONCERN FOR THE H	**16/46**	**34.8**	0/9	0	0/3	0	0/2	0	0/2	0	0/1	0
EXCLAMATION	1/48	2.1	2/29	6.9	0/23	0	0/4	0	0/19	0	4/20	20
HESITATION	1/13	7.7	2/12	16.7	0/6	0	0/11	0	2/12	16.7	0/6	0
MINIMISING	-	-	-	-	0/4	0	0/2	0	-	-	-	-
OTHER	0/4	0	1/8	12.5	0/14	0	2/12	16.7	0/12	0	0/4	0
Total	22 /208	10.6	11 /128	8.6	14 /149	9.4	12 /152	7.9	21/ 173	12.1	26 /173	15

This leads the analysis over to the second variant of a final RISE of the intonation, the simple RISE. Overall, this contour was rare. Its distribution across the strategies is visualised in Table 24. A final note must follow this demonstration of FALL-RISE and RISE contour occurrences regarding their syntactic functions. Especially given their distribution across strategies, the assumption that many of these instances overlap with the syntactic structure of an interrogative stands to reason.

Table 24. Raw Frequency and Percentages of RISE Contour for the Individual Strategies.

Strategy	HS-HD		HS-SC		MS-BD		MS-UP		LS-BB		LS-NP	
PROPER	n	%	n	%	n	%	n	%	n	%	n	%
EXPL. OR ACCOUNT	-	-	-	-	-	-	0/3	0	0/1	0	0/1	0
IFID	0/55	0	1/52	1.9	0/51	0	2/54	3.7	0/32	0	2/43	4.7
OFFER OF REPAIR	1/26	3.6	**5/36**	13.9	5/15	**33.3**	0/2	0	5/31	**16.1**	2/28	7.1
PROMISE OF FORB.	-	-			0/2	0	0/10	0	1/10	10	-	
TAKING ON RESP.	0/16	0	2/29	6.9	3/30	10	0/40	0	2/49	4.1	2/54	3.7
ADDITIONAL												
ANSWER	-		-		-		0/1	0	0/11	0	1/12	8.3
APPEASER	-		0/7	0	1/1	100	0/11	0	0/1	0	0/1	0
CONCERN FOR THE H	**10/46**	**21.7**	**3/9**	33.3	0/3	0	1/2	50	0/2	0	1/1	100
EXCLAMATION	5/48	10.4	0/29	0	1/23	3	0/4	0	0/19	0	1/20	5
HESITATION	1/13	7.7	0/12	0	0/6	0	2/11	3.7	0/12	0	1/6	16.7
MINIMISING	-		-		0/4	0	0/2	0	-		-	
OTHER	0/4	0	0/8	0	2/14	14.3	1/12	8.3	2/5	40	0/4	0
Total	17 /208	8.2	11 /128	8.6	12 /149	8.1	6 /152	3.9	10 /173	5.8	10 /173	5.8

To further elucidate this overlap, the distribution of intonation contours across all strategies which were syntactically formulated as interrogatives can be found in Table 25. There are 89 strategies in the entire dataset that were formulated with this syntactic form. Indeed, presenting these in numbers independent of situation or strategy reveals that the interrogative formulations co-occurred with the contours of RISE and FALL-RISE particularly often.

Table 25. Overall Distribution of Intonation Contours for Interrogatives.

Contour	FALL	RISE-FALL	FALL-LEVEL	LEVEL	RISE-LEVEL	RISE	FALL-RISE	UN-CLEAR	OTHER	Total
Frequency	4	**15**	3	4	1	**25**	**25**	3	9	89
Percentages	4.5%	**16.9%**	3.4%	4.5%	1.1%	**28.1%**	**28.1%**	3.4%	8.9%	100%

In fact, 28.1% of the interrogatives were formulated with a FALL-RISE and another 28.1% with a RISE contour. However, an additional 16.9% were formulated with a RISE-FALL formulation, which is a finding that deserves further attention in the later Discussion.

4.2.2.3 Pitch range

Examining the numbers for PitchRange% for the individual strategies, Table 26 highlights that there were strategies which were more likely to be produced with a wider pitch range as well as strategies which were more likely to be produced with a less dynamic voice.

Table 26. F0range% Values for the Individual Strategies.

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPLANATION OR ACCOUNT	-	-	-	-1.7%	-58.2%	+53%
IFID	-2.7%	+2.7%	-1.3%	-4.2%	-7.6%	-7.4%
OFFER OF REPAIR	**+18.7%**	**+14.6%**	**+27%**	**+15.4%**	**+22.8%**	**+28.2%**
PROMISE OF FORBEARANCE	-	-	+50.3%	+14.6%	+31.8%	-
TAKING ON RESPONSIBILITY	**+23.1%**	+9.4%	+1.9%	+3.1%	+4.1%	+9.8%
ADDITIONAL STRATEGIES						
ANSWER	-	-	-	-64.1%	-33.7%	-31.7%
APPEASER	-	+14.9%	+58.6%	+15.2%	+60.9%	+9.8%
CONCERN FOR THE HEARER	+12.3%	-4.6%	+23.4%	**+53.1%**	**+55.9%**	**+53%**
EXCLAMATION	-17.9%	-17.8%	-23.3%	-70.1%	-23.8%	-14.6%
HESITATION	-53.4%	-53.8%	**-68.6%**	-9.3%	-35.3%	-52.2%
MINIMISING	-	-	+29.7%	+31.6%	-	-
OTHER	-1.7%	+17.3%	-2.4%	-4.6%	-0.4%	+2.2%

A wider pitch range was found across all situations for OFFER OF REPAIR, which had the highest deviation in the MS-BD situation with a +27% wider pitch range. Little F0 variation was found for HESITATIONS, which were up to 68.6% less dynamic than the apology, on average. Furthermore, in three of the six situations, CONCERN FOR THE HEARER was produced with a dynamic intonation, with values between +53% for LS-NP, +53.1% for MS-UP and +55.9% for LS-BB apologies. However, note that in HS-HD, in which the apologies displayed the greatest number of occurrences of CONCERN FOR THE HEARER, there was only a F0range% of +12.3%. This highlights that this expression of concern was not necessarily formulated with a particularly pronounced speech melody in all circumstances. Additionally, TAKING ON RESPONSIBILITY behaves differently in the HS-HD apologies, in which it displayed a 23.1% wider pitch range than the average of the corresponding apology.

Some notable correlations were detected. These demonstrate that the length of the strategies in syllables also correlates with pitch range, where longer strategies tended to be produced with a wider pitch range (F0range and length in syllables: $R = 0.38$, $p < 0.001$, F0range and length in seconds: $R = 0.36$, $p < 0.001$). Although correlations are weaker between F0range and the position of the strategy in the apology ($r_s = 0.15$, $p <$

0.001), it is, once again, in line with the finding that longer strategies tended to occur toward the end of the entire speech act.

This final section for pitch range provides detailed insights into the most significant outliers detected in the data and visualised in the boxplots in Figure 10. The two most notable outliers occurred in apologies for MS-BD. One was produced by Informant 10; this example is not discussed here in detail. Instead, it re-occurs in Chapter 5.2.3, Example 17, because it was detected as an interesting example on the functional and formal levels alike. In fact, it was the only data point which was ultimately identified as not qualifying as an apology. Regarding the prosodic level, briefly, compared to the LS apology produced by this informant, the range for this apology employed for MS-BD was +385% wider. In fact, it was produced with a pitch range of 150.7 Hz, as compared to the value of 38.9 Hz which was found for the LS-BB apology. Notably, it is not LS-BB which is the noteworthy exception here. The apologies for the other two situations were produced with F0ranges only slightly wider than that measured for the baseline, with pitch ranges of 58.6 Hz for HS-SC and 57.7 Hz for MS-UP.

The two other outliers mentioned – another for MS-BD and one for HS-HD – were both produced by the same informant, Informant 33. The entire apology produced for MS-BD can be found in Example 5. Notably, this consists of only one strategy, the IFID, which was therefore solely responsible for this width of the pitch range. The transcript reveals that, while the boundary tone remained on *sorry* and was categorised as a FALL-RISE, this was not the part which reached the F0max of 281.3 Hz. Accordingly, a higher peak appeared in the *I'm so* part that preceded the *sorry*.

Example 5. Outlier: F0range%: Informant 33, MS-BD.

Strategy	Transcript	F0min	F0max	F0range
IFID	I'm SO [sorry ↘#206-130#↗#130-146#] **	127.1 Hz	281.3 Hz	**154.2 Hz**
Min/Max/Mean	-	127.1 Hz	281.3 Hz	**154.2 Hz**

Nevertheless, the informant achieved the valley of this utterance's pitch when producing the FALLING intonation that led to the ultimate RISE on *sorry*. Accordingly, the participant, with the short and direct apology she produced, employed a wide pitch range, which was considerably wider than the one utilised in the apology that determined the LS baseline.

The HS-HD example from the same informant, visible in Example 6, included additional strategies to the one seen previously. This apology was produced with a preceding EXCLAMATION and two separate IFIDs. The widest pitch range here still did not reach the pitch range that was employed for the single IFID in Example 5. It was produced during the EXCLAMATION, where a RISE-FALL intonation contour was measured (different than the FALLING contour for both IFIDs). The two IFIDs were

uttered with a considerably narrower pitch range and were similar in this dimension and the intonation contour with which they were delivered. Note, though, that the second IFID was produced with a contour that would, strictly speaking, be considered STEPPING-DOWN.

Example 6. Outlier: F0range%: Informant 33, HS-HD.

Strategy	Transcript	F0min	F0max	F0range
EXCLAMATION	oh [my GOD ↗#166-260#↘#227-207#] ↔	165.8 Hz	272.7 Hz	**106.9 Hz**
IFID	i'm [SORRY ↘#264-210#] {laughs} /	180.5 Hz	263.5 Hz	**83 Hz**
IFID	i'm SO [sorry ↘↘#266-185#] **	185.4 Hz	265.6 Hz	**80.1 Hz**
Min/Max/Mean		165.8 Hz	272.7 Hz	**90 Hz**

Compared to the pitch range that was delivered on average in the LS baseline for both of these preceding examples, it is notable that the informant produced two other apologies with remarkably larger pitch ranges. Therefore, to complete this picture, Example 7 presents the composition of this LS baseline.

Example 7. LS Baseline F0range: Informant 33, LS-BB.

Strategy	Transcript	F0min	F0max	F0range
ANSWER	[NO ○ [creaky voice]] /	187.6 Hz	228 Hz	40.3 Hz
IFID	[SORRY =#181#] /	176.9 Hz	196.5 Hz	19.6 Hz
TAKING ON RESPONSIBILITY	i [FORGOT ↘#199-155#] **	154.8 Hz	198.8 Hz	44 Hz
Min/Max/Mean	-	154.8 Hz	228 Hz	34.6 Hz

This illuminates the possible reasons which led to a pitch range of only 34.6 Hz for this apology. Over the entire apology, a narrow pitch range was utilised, with the widest in TAKING ON RESPONSIBILITY and ANSWER; furthermore, an unusually narrow pitch range of only 19.6 Hz was used for the IFID. In fact, this strategy was produced with a LEVEL intonation. LEVEL intonation was, overall, a rare intonation contour for the IFID, stressing a specific focus of the participant to talk with a monotonous voice in this delivery of the strategy at hand. This finding strengthens the assumption that the wide pitch range presented was indeed marked; the apology delivered in this way was presumably meant to convey an underlying message different than the one meant to be conveyed in LS-BB.

4.2.2.4 Speech rate

Previously, relatively little variation of speech rate was found across the apologies for the six situations. This is now further investigated for the individual strategies and presented in Table 27. As mentioned, for EXCLAMATIONS and IFIDs, this prosodic dimension is highlighted in later sections. The table illustrates that the speech rate was, on average, slower for these strategies in the majority of the situations compared to the

average for the corresponding apologies. Additionally, given the nature of HESITATIONS, the speech rate in this strategy was considerably slower throughout. OFFER OF REPAIR received the quickest speech rate. It was up to +29.5% faster than the average in the apologies produced for HS-SC. Its speech rate was only topped by that of the APPEASERS in MS-UP, with +40%, and +82.3% in LS-NP.

Table 27. SpeechRate% Values for the Individual Strategies.

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPLANATION OR ACCOUNT	-	-	-	-12.2%	+9.8%	+16.9%
IFID	**-5.2%**	**-10.5%**	**+6.3%**	**+11.6%**	**-1.3%**	**-1.7%**
OFFER OF REPAIR	**+17.3%**	**+29.5%**	+12.2%	+2.4%	+22.2%	+12.8%
PROMISE OF FORBEARANCE	-	-	-3.5%	+13.8%	+7.5%	-
TAKING ON RESPONSIBILITY	+5.8%	+10.7%	+4.2%	15.6%	+4.2%	+13%
ADDITIONAL STRATEGIES						
ANSWER	-	-	-	-8.8%	-49%	-39.9%
APPEASER	-	+12.5%	-9.2%	+40%	-5.6%	+82.3%
CONCERN FOR THE HEARER	**+6.6%**	+28.2%	+19.1%	**-2.6%**	+34.6%	+40.4%
EXCLAMATION	**+2.8%**	**-5.9%**	**-24.5%**	**-3%**	**-29.6%**	**-19.6%**
HESITATION	-44%	-28%	-48.5%	-62.4%	-44.4%	-33.2%
MINIMISING	-	-	-2.3%	-1.5%	-	-
OTHER	+3.8%	+5%	+4.9%	-23.4%	-16.9%	-8.3%

Considerably lower than the overall average was the speech rate for ANSWERS. Overall, the table clearly illustrates that entire apologies were not produced with the same speech rate throughout. Instead, there were considerable variations and tendencies in each strategy. This can, in turn, further inform the variations found for entire apologies established in the boxplots in Figure 10. The overall speech rate was then presumably influenced by the different apology compositions which were most often found for each situational context.

Furthermore, there is evidence that strategies which were longer in number of syllables correlated with a faster speech rate ($R = 0.27$, $p < 0.001$). This makes sense, given the numbers presented in which the longer strategies in syllables (TAKING ON RESPONSIBILITY, OFFER OF REPAIR, APPEASER) were often produced with faster speech rates, whereas those which were shorter (ANSWERS, EXCLAMATIONS, IFIDS) were produced with slower speech rates. Regarding the length in seconds, however, no noteworthy correlation with speech rate was found ($R = -0.09$, $p = 0.004$). This suggests an impact caused on the dimension of speech rate by other factors, presumably that of the importance of vowel duration in some of the strategies performed with few syllables.

Examining the two strongest outliers revealed in the boxplots in Figure 10, one occurred in the apologies produced for HS-HD and one for those in HS-SC. The first to be highlighted in detail is the strongest outlier, which was produced by Informant 69 for HS-HD (see Example 8).

Example 8. Outlier: SpeechRate%, Informant 69, HS-HD.

Strategy	Transcript	SpeechRate%	SpeechRate syl/sec
EXCLAMATION	OH my [GOD =#300#] ↔	-9.81%	4.7
IFID	I'M so [SORry ↘#334-299#=#299#] /	-4.6%	5
TAKING ON RESPONSIBILITY	i didn't mean to [DO that ↗#304-336#↘#336-255#] **	+7.7%	5.6
Mean Values	-	-	5.2

Overall, the speech rate for this apology was 5.2 syllables per second. The apology for LS-BB, which formed the baseline, was produced at a considerably slower rate, with only 2.7 syllables per second. It is clear that HS-HD and not LS-BB caused this outlier. For HS-SC and MS-UP, the two other apologies produced by this informant, the speech rates were also considerably slower, with 3.1 syllables per second for HS-SC and 3 syllables per second for MS-UP.

As the detailed transcript for the apology in Example 8 reveals, the strategy delivered with the fastest speech rate is TAKING ON RESPONSIBILITY. Notably, the strategy was also the longest in syllables; it is therefore in line with the correlation between length in syllables and speech rate noted above. EXCLAMATIONS were overall discovered to be delivered with a slow speech rate. Here, however, though the slowest strategy produced for this apology, it was nevertheless produced with a speech rate faster than that employed for the LS baseline. Thus, the entire apology was produced with a significantly faster speech rate than the baseline throughout for this informant, which deserves further discussion later.

The second outlier to be presented was produced by Informant 23 for situation HS-SC, and can be found in Example 9. Here, the overall speech rate was 5.5 syllables per second.

Example 9. Outlier: SpeechRate%, Informant 23, HS-SC.

Strategy	Transcript	SpeechRate%	SpeechRate Syl/sec
IFID	i'm [SO SORry about that ↘↘#298-176#] /	+2.6%	5.5
TAKING ON RESPONSIBILITY	it was a total [ACcident ↘#210-174#] (0.12)	+9.1%	6.1
OFFER OF REPAIR	i'll PAY [for it ↘#216-180#] **	-12.2%	4.9
Mean Values	-	-	5.5

The speech rate for the LS baseline, in this case established by LS-NP, was 3.3 syllables per second. It is visible that all three strategies which comprised the apology were produced with a fast speech rate and were delivered faster than found for the average LS value. The fastest speech rate was measured for TAKING ON RESPONSIBILITY. Notably, the IFID was produced with a faster speech rate than OFFER OF REPAIR, differently than what was proposed previously as the average tendencies for these two strategies. However, in this apology, the IFID was produced with additional syllables in the expression *I'm* (adverbial) *sorry*. This could be a factor, given the correlation previously mentioned.

Furthermore, although HS-SC led to this apology with the highest speech rate for this informant, with speech rates of 4.5 syllables per second for HS-HD and 4.6 syllables per second for MS-BD, the baseline apology for LS-NP was the outlier, as it was produced with a notably slower speech rate. Example 10 illustrates this LS apology as a point of comparison.

Example 10. Baseline Apology, Informant 23, LS-NP.

Strategy	Transcript	SpeechRate%	SpeechRate Syl/sec
EXCLAMATION	[UH ○ [not visible]] /	-65%	1.1
IFID	i'm [SORRY ↘#221-197#] /	+49.6%	4.9
TAKING ON RESPONSIBILITY	i [FORGOT ↘#229-205#] (0.54)	-23.7%	2.5
OFFER OF REPAIR	i'll get it [NEXT time ↘#206-188#↗#188-199#] **	+53.6%	5.1
Mean Values	-	-	3.3

As can be seen, this apology was composed differently than the previous example. It included an EXCLAMATION and an IFID, both of which have been demonstrated to be slow in speech rate. Additionally, this IFID was not produced with additional syllables, and the formulation of TAKING ON RESPONSIBILITY was considerably shorter than the one uttered in Example 9. The only strategy in which the speech rate neared the one found in HS-SC is the OFFER OF REPAIR, which is the final and also longest strategy in this LS-NP apology.

Thus, it is possible that situational context had a role in the marked measurements for this apology's speech rate here and that the comparably faster speech rate in HS-SC was employed purposefully because of the context in which the apology was produced. The composition of the apology, especially the length with which the individual strategies were formed, is, however, presumed to have impacted the speech rate in significant ways as well.

4.2.2.5 Intensity

When focussing on the intensity of individual strategies within the situations, some variation was detected (see Table 28). The APPEASERS formulated in MS-BD were produced with a -6.7% lower intensity than the overall apology in which they occurred. For LS-BB, the ANSWERS offered were relatively high and the instances of EXPLANATION OR ACCOUNT were relatively low in intensity. Finally, for the apologies in MS-UP, the (few) EXCLAMATIONS were formulated with a +4.9% higher intensity, while PROMISE OF FORBEARANCE was on average -2.1% lower in intensity than the overall apology in which they occurred.

Table 28. IntensityMean% Values for the Individual Strategies.

Strategies	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPLANATION OR ACCOUNT	-	-	-	+1.8%	**-6.6%**	-1.9%
IFID	+0.4%	+0.6%	0.3%	+0.9	+0.6%	+0.3%
OFFER OF REPAIR	-0.9%	+0.6%	-0.9%	-1%	-0.9%	-0.3%
PROMISE OF FORBEARANCE	-	-	-0.8%	**-2.1%**	-1.5%	-
TAKING ON RESPONSIBILITY	-0.2%	-0.7%	-0.6%	-1.3%	-1.4%	-0.3%
ADDITIONAL STRATEGIES						
ANSWER	-	-	-	+0.7%	**+4.1%**	+2.4%
APPEASER	-	-1.6%	**-6.7%**	+0.8%	-0.3%	+0.7%
CONCERN FOR THE HEARER	0%	+0.5%	-0.3%	+0.5%	-3.5%	-0.7%
EXCLAMATION	+2%	-0.4%	-1.8%	**+4.9%**	+3.2%	+0.1%
HESITATION	+2.1%	+3.2%	+2.6%	-1%	+0.4%	-0.7%
MINIMISING	-	-	-0.3%	+2.2%	-	-
OTHER	+0.2%	+0.7%	+1.4%	0%	+1.5%	+0.9%

Many of these results indicate that there is, again, at least some connection between the position of the strategy in the apology and the intensity. Those strategies with a positive deviation occurred relatively early in the apology. Those strategies with a negative deviation tendentially appeared toward the end or even at the end of the apology. This was further supported by a weak negative correlation between IntensityMean% and position (R = -0.25, $p < 0.001$).

Because of the overall limitations which underlie the results for this dimension – the suspected instrument effect and a high possibility of technical influences – outliers are not discussed here in detail.

4.2.2.6 Voice quality: Vocal fry

This last investigation of prosodic dimensions in the individual strategies highlights the occurrence of the voice quality of vocal fry, presented in Table 29. Notably, there were

strategies which barely led to the usage of CREAKY voice at all. This included the ANSWER provided by the informants, especially in apologies for the LS situations. It was further true for EXCLAMATIONS (with some exceptions on the HS level) and the majority of the HESITATIONS. However, some strategies frequently led to CREAKY voice in some of the situations. This included TAKING ON RESPONSIBILITY, which, in the apologies for MS-BD, was produced in this manner in 30% of the cases. For OFFER OF REPAIR, the highest number (19.4%) of the cases were produced with a CREAK in apologies for HS-SC (though with 0% in the MS situations).

Table 29. Raw Frequency and Percentages of CREAK for the Individual Strategies.

Strategy	HS-HD		HS-SC		MS-BD		MS-UP		LS-BB		LS-NP	
STRATEGIES PROPER	n	%	n	%	n	%	n	%	n	%	n	%
EXPL. OR ACCOUNT	-	-	-	-	-	-	1/3	33.3	0/1	0	0/1	0
IFID	**5/55**	**9.1**	**9/52**	**17.3**	**9/51**	**18.2**	**6/54**	**11.2**	**4/32**	**12.5**	**6/43**	**14.1**
OFFER OF REPAIR	3/26	11.5	7/36	**19.4**	0/15	0	0/2	0	5/31	16.1	5/28	17.9
PROMISE OF FORB.	-	-	-	-	0/2	0	3/10	30	3/10	30	-	-
TAKING ON RESP.	**1/16**	**6.3**	**5/29**	**17.2**	**9/30**	**30**	**7/40**	**17.5**	**7/49**	**14.3**	**10/54**	**18.5**
ADDITIONAL STRATEGIES												
ANSWER	-	-	-	-	-		0/1	0	0/11	0	0/12	0
APPEASER	-	-	1/7	14.3	0/1	0	2/11	18.2	0/1	0	0/1	0
EXCLAMATION	1/48	2.1	5/29	17.2	0/23	0	0/4	0	0/19	0	0/20	0
CONCERN FOR THE H	0/46	0	2/9	22.2	0/3	0	0/2	0	1/2	50	0/1	0
HESITATION	0/13	0	1/12	8.3	0/6	0	0/11	0	0/12	0	0/6	0
MINIMISING	-	-	-	-	1/4	25	1/2	50	-	-	-	-
OTHER	0/4	0	0/8	0	2/14	14.3	1/12	8.3	0/5	0	0/4	0
Total	10 /208	4.8	30 /182	16.5	21 /149	14.1	21 /152	13.8	20 /173	11.6	21 /173	11.3

Additionally, this voice quality was relatively frequently employed in the IFIDs for several different situations (see Chapter 4.3 for a closer discussion of the IFIDs). Finally, this table highlights that, of the few instances of CREAKY voice which were produced for the HS-HD apologies, three occurred in the strategy of OFFER OF REPAIR, one in that of TAKING ON RESPONSIBILITY, one in EXCLAMATIONS and five in the IFIDs.

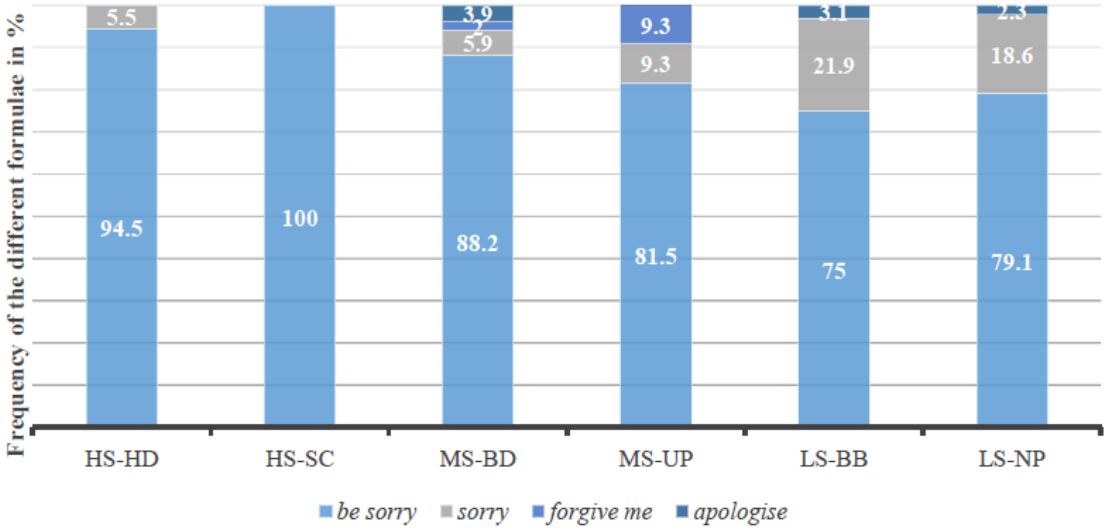
4.3 A Closer Inspection of the IFIDs

As a reminder, a high number of IFIDs was found in the apologies produced for all six situations, although the numbers were lower on the LS level. Additionally, the findings demonstrate that the two MS situations elicited the apologies with the overall highest frequency of IFIDs. This chapter is dedicated to highlighting further characteristics of this strategy in pragmatic and prosodic aspects.

4.3.1 Formulation of the IFIDs

This first part outlines the occurrences of the different IFID formulae presented in previous literature and the data of this study, including their distribution across the apology situations. Figure 12 demonstrates that the most common formulation was *be sorry* with numerous variants and intensifications, which are highlighted in a separate figure (Figure 14).

Figure 12. Formulae Employed for the IFIDs.



In HS-SC, *be sorry* was the only formula employed, while the apologies in HS-HD reveal a share of 5.5% of its IFIDs formulated with *sorry* without the personal pronoun. Almost the same relative frequency was found for MS-BD, while this was true for 9.3% of the MS-UP IFIDs as well as 21.9% (LS-BB) and 18.6% (LS-NP) for those produced in apologies on the LS level. Of note is the finding that another 9.3% of the MS-UP IFIDs were performed by asking for forgiveness, a formulation that was not found at all in four of the six situations. The only other exception is MS-BD, in which 2% of the IFIDs were also of this form. In the two LS situations, a small number of the IFIDs were formulated with the performative verb in the form of *I apologise.* The situation in which this form most often occurred as part of the apology was MS-BD, with 3.9% of its IFIDs uttered this way.

The next feature of the IFID under scrutiny is the utilisation of contractions (*I'm vs. I am*) in IFIDs produced with *be sorry*. The usage of contractions is arguably connected with the formality level employed. Given that all situations created for this study were informal, discovering contracted formulations of the verb to a high degree is not unexpected (see Figure 13). Indeed, this high usage of contractions is visible across all situations, with numbers ranging from 91.7% for LS-BB to 73.1% for HS-SC. Accordingly, the highest number of non-contracted IFIDs were found for HS-SC with 26.9%. This is more than one-quarter of all IFIDs produced with the form *be sorry*, which applies to all IFIDs in HS-SC apologies; as previously noted, in this situation, all IFIDs were produced with this formulation.

Figure 13. Percentages of Contractions of the Auxiliary Verb in the IFIDs.

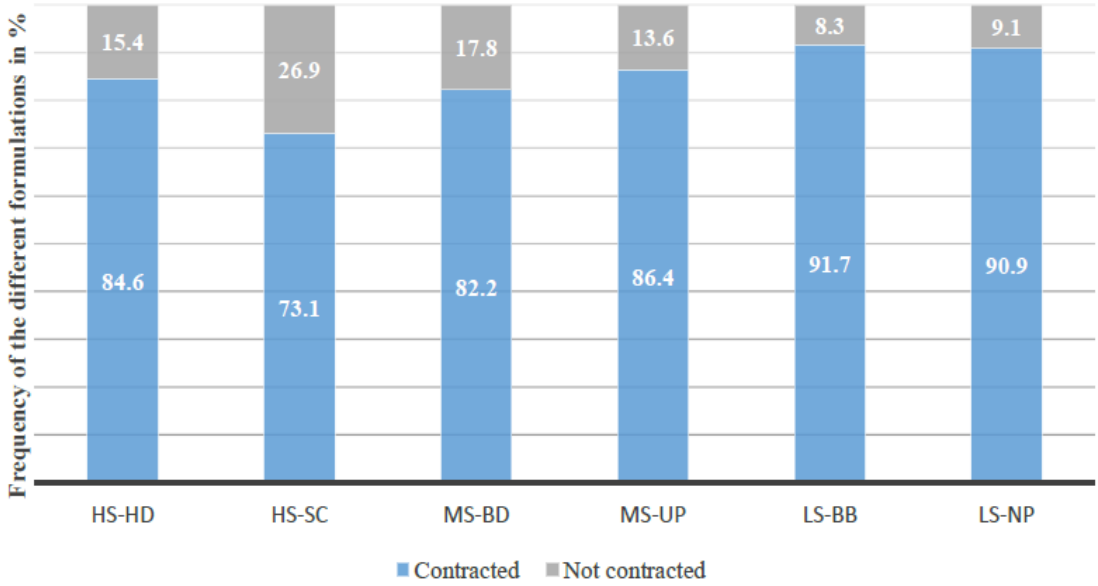
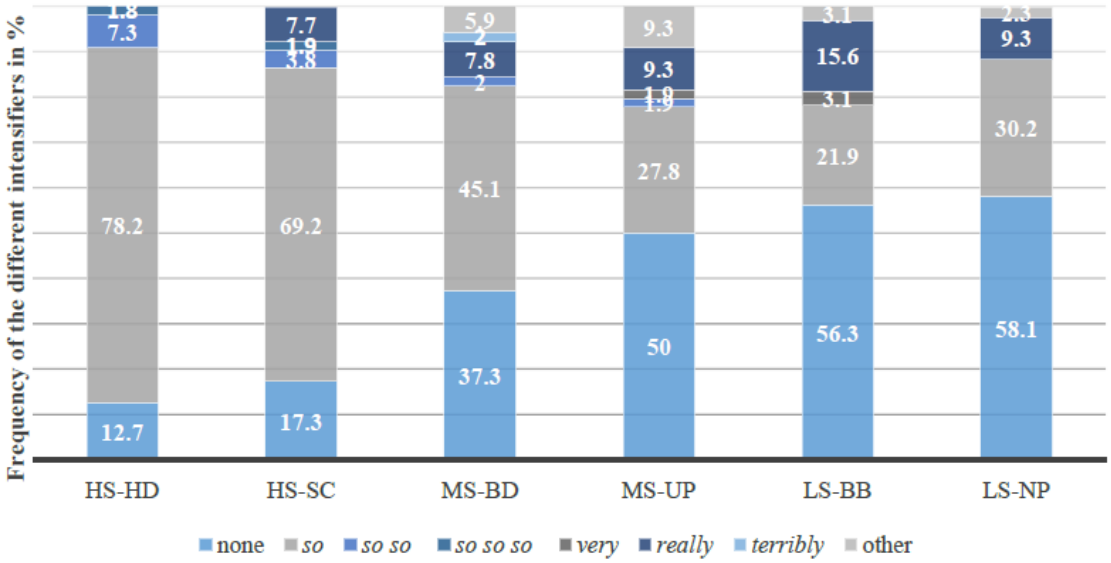


Figure 14 highlights the numbers and types of internal intensifications used in the form of adverbials. The different ways of formulating the IFID which did not lend themselves to intensifications of the sort presented here were placed in the category called *other* in this figure. The numbers were distinctly different between the apologies produced for HS, MS and LS situations. Additionally, the situations which represented one level of severity, especially the MS and LS situations, did not portray the same usage of intensifications. This figure reveals that the intensifier most often applied across all situations was *so*. The highest numbers were found for the two HS situations, with 78.2% (HS-HD) and 69.2% (HS-SC) of the IFIDs. Additionally, 7.3% of the IFIDs produced for HS-HD and 3.8% of those for HS-SC (i.e., a raw frequency of four and three occurrences) contained the double intensifier *so so*. Of note for the apologies on the HS level is the low number of IFIDs which appeared without any intensification, described here as *none*. This category contains only 12.7% of the IFIDs for HS-HD and

17.3% for HS-SC. Furthermore, of these two situations, only the IFIDs in HS-SC apologies presented occurrences of *really* as intensification (i.e., a raw frequency of four occurrences). None of the participants used this type when apologising for the offence in the HS-HD situation.

Figure 14. Percentages of IFIDs Containing an Intensifier and the Intensifier's Form.



For the apologies in the two MS situations, the tendencies appeared to be different. In MS-UP as compared to its MS counterpart, exactly one-half of all IFIDs did not contain any intensification, while they reached 37.3% for MS-BD. In this second situation, MS-BD, many of the intensifiers chosen, namely, those in 45.1% of all IFIDs, had the form of *so*, with an additional 7.8% realised as *really* and two instances that were produced with the double intensifier *so so*. With considerably less intensification of the IFID overall, MS-UP reveals that 27.8% of the IFIDs included in this figure were realised with *so*, 9.3% with *really* and 1.9% (i.e., one occurrence each) with each *so so* and *so so so*. Hence, at least the distribution of the formulation preference is somewhat comparable to that of MS-BD.

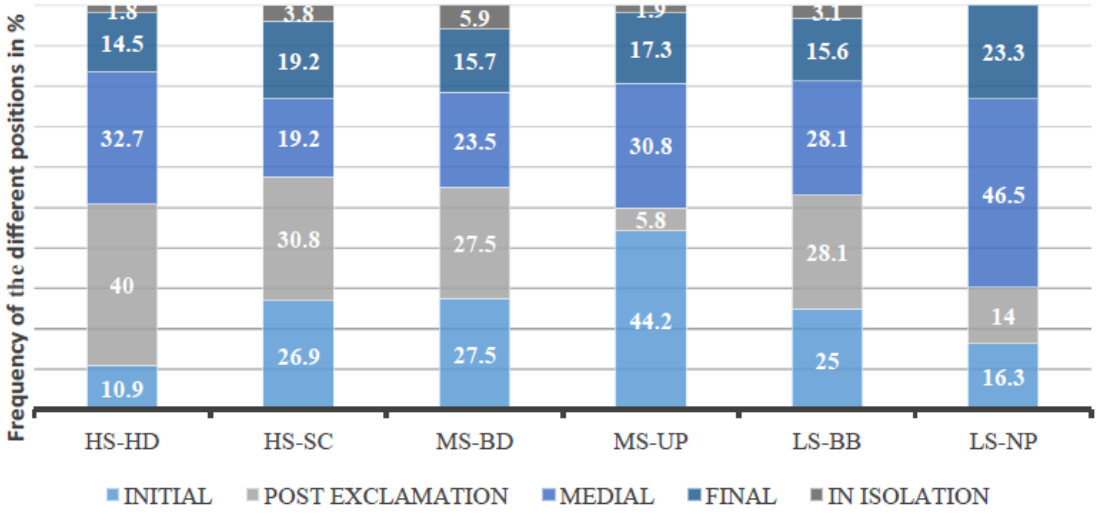
Finally, on the LS level, both situations demonstrated the highest number of IFIDs without any intensification utilised: 56.3% in LS-BB and 58.1% in LS-NP. There were slightly more intensifications performed by employing the expression *so* for the IFIDs in LS-NP than in LS-BB (30.2% *vs.* 21.9%, respectively) and slightly more intensification with *really* in apologies for LS-BB than LS-NP (15.6% *vs.* 9.3%, respectively). Notably, the two LS situations did not warrant any double intensification (nor triple intensification). It is visible that this tendency decreased from HS to LS in these results.

4.3.2 Position of the IFIDs in the apology

Due to the correlations of the position of a strategy within the apology and several different prosodic dimensions, especially F0mean, F0range and IntensityMean, more details on the position of the IFIDs in the apologies must be presented. Consequently, they were sorted into the categories of INITIAL position, POST EXCLAMATION position (i.e., in the position right after an EXCLAMATION), MEDIAL position – which is anywhere in the apology where it is preceded and followed by a strategy (except when preceded only by an EXCLAMATION) – FINAL position and IN ISOLATION. This last category refers to the rare cases in which there were no other strategies added to the IFID. Hence, this IFID constituted the entire apology of a respondent for the given situation. Note, though, that situations in which more than one IFID was produced automatically had at least one IFID which was not in INITIAL or POST EXCLAMATION position as well as one that was automatically not in FINAL position (or any in ISOLATION).

Figure 15 reveals that, again, the situations present different outcomes. Starting with those IFIDs which occurred in INITIAL position, this was more often the case for apologies produced for MS-UP (44.2%) than any other situation. Concurrently, POST EXCLAMATION was seldom utilised in this context (5.8%).

Figure 15. Position of the IFID in the Apologies.



Both of these findings are impacted by the near lack of EXCLAMATIONS for the apologies in MS-UP in general. For HS-HD apologies, however, few IFIDs occurred in INITIAL position (10.9%), which, here, was influenced by the high number of EXCLAMATIONS. Accordingly, the majority occurred in POST EXCLAMATION position (40%). IFIDs in MEDIAL position were most often found in the apologies in LS-NP (46.5%), followed by HS-HD (32.7%) and MS-UP (30.8%). IFIDs which

occurred IN ISOLATION were, as previously mentioned, rare in the data. The highest number for this category was found for MS-BD apologies, with 5.9%. IFIDs in FINAL position occurred with different frequencies across the situations, with the majority found in LS-NP apologies (23.3%), followed by HS-SC (19.2%) and MS-UP (17.3%) and with the lowest numbers observed in MS-BD (15.7%) and LS-BB apologies (15.6%).

4.3.3 Prosodics of the IFIDs

In the following, the F0 values (F0mean, F0min, F0max and F0range) for the IFIDs are highlighted with a focus on different formulations of the IFID. This further elucidates possible connections between, for example, the usage of intensifiers and the employed prosodic dimensions. Later parts of this section refer to the intonation contour and the speech rate as well as the length of the intensifying adverbial in relation to the speech rate of the apology and IFID.

Summarising in one coherent table what was previously discussed in separate chapters, Table 30 provides a closer look at the different F0mean% values for the IFIDs, revealing that they did not differ distinctly from the mean for the entire apology. The maximal average deviation was found in LS-NP apologies with a -3.1% lower pitch height for the IFIDs.

Table 30. F0mean%, F0min%, F0max% and F0range% Values for the IFIDs.

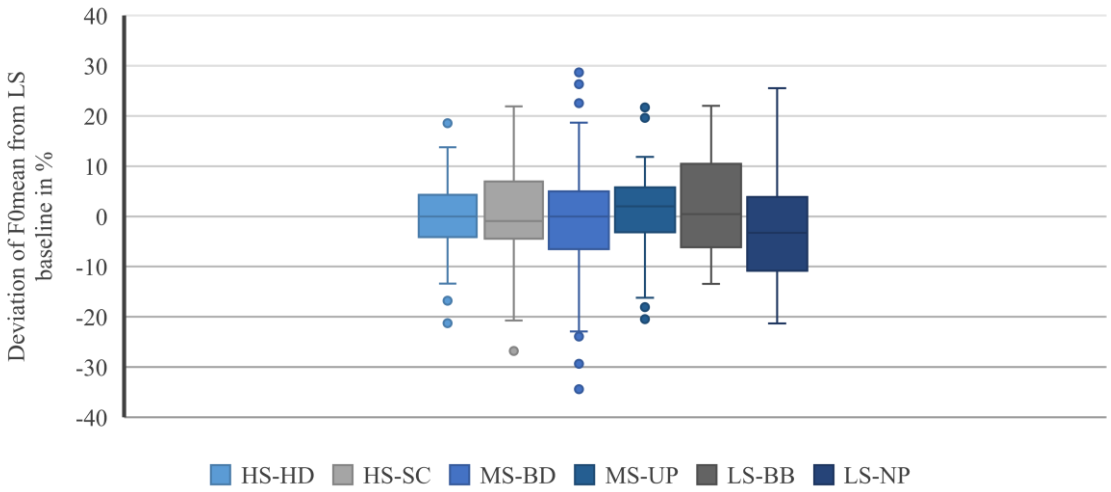
Situation	F0mean%	F0min%	F0max %	F0range %
HS-HD	-0.2%	+18.2%	-11.9%	**-41.6%**
HS-SC	+0.1%	+14.8%	-9.4%	-32.5%
MS-BD	+1.1%	+15.2%	-9.6%	-33.4%
MS-UP	+1.3%	+15.6%	-11.8%	-35.4%
LS-BB	+2.7%	**+25.8%**	-11.4%	**-43.7%**
LS-NP	**-3.1%**	**+21.3%**	**-16.2%**	**-56%**

The F0min% and F0max% values can now be used to further inform the F0range% in the final column of the table. While IFIDs were consistently produced with a pitch range that was narrower than that employed for the entire apology, the IFIDs in LS-NP presented the highest negative deviation at -56%. This was followed by the IFIDs for its LS counterpart and then by the pitch ranges with which the IFIDs in the apologies for HS-HD were produced. The different correlations that were previously noted were likely a factor here. When examining the correlations between the values obtained only for the IFIDs, a mild correlation was found between F0range and length in seconds (R = 0.26, $p < 0.001$) as well as length in syllables (R = 0.25, $p < 0.001$).

Similar to the deviation of the entire apology from the baseline presented previously, the findings for the F0mean% values of the IFID are now further informed through the

visualised dispersion of the data points in Figure 16 in the form of boxplots. It illustrates that this dispersion is, overall, rather low and that the majority of values are close to the F0mean elicited for the entire apology in which the IFID occurred. The median is close to, or even at, 0% for all situations (HS-HD: 0%, HS-SC: -0.9%, MS-BD: 0%, MS-UP: +2%, LS-BB: 0.48%, LS-NP: -3.3%). Noticeably, while HS-HD, MS-UP and LS-NP are relatively evenly skewed in both directions, HS-SC and LS-BB are instead skewed right, whereas MS-BD is skewed left.

Figure 16. Variation of F0mean% for IFIDs.



In line with this skewing, the dispersion of the data differs between situations, and the interquartile range is most pronounced for LS-BB (Q1 = -6.2%, Q3 = +10.5%), followed by LS-NP (Q1 = -10.8%, Q3 = +3.9%). This is followed by HS-SC (Q1 = -4.4%, Q3 = +6.7%) and MS-BD (Q1 = -6.5%, Q3 = +5%) and is least noticeable for HS-HD (Q1 = -4.1%, Q3 = +4.3%) and MS-UP (Q1 = -3.2%, Q3 = +5.8%).

Some additional insights into possible reasons for the dispersion presented are here granted by a closer presentation of the two most extreme outliers in this boxplot in the positive and the negative directions. Both were found in the apologies for MS-BD and correspond to the F0mean% values of +26.7% and -34.4%. The most notable positive deviation was produced by Informant 56 in the apology for MS-BD and can be seen in Example 11. While there were actually two IFIDs produced, the outlier is found to be the second. These two IFIDs differ substantially from one another, and the outlier itself also differs from all other strategies that were produced in this apology.

It appears that, here, it truly was the case that the participant employed a significantly higher F0 in this strategy than in the rest of the apology, with this second IFID also maintaining a higher F0mean than the earlier IFID. This finding runs counter to the direction of the correlation between these two (i.e., the F0mean of the IFID and the

position of this strategy in the apology) noted previously. What was unexpected is that this IFID was also produced without any intensification, while the first IFID was produced with *really* as the intensifying adverbial. Thus, they differ in the formulation chosen and also in the prosodic features applied.

Example 11. Outlier: F0mean% for IFID: Informant 56, MS-BD.

Strategy	Transcript	F0mean
IFID	i'm really [SORRY [○ creaky voice]]	181.7 Hz
TAKING ON RESPONSIBILITY	i didn't MEAN to give you the [wrong NUMBER [○ creaky voice]]/	153 Hz
TAKING ON RESPONSIBILITY	i must have just [gotten CONFUSED [○ creaky voice]] (0.59)	179 Hz
IFID	**i'm [SORRY ↘#271-221#] (0.61)**	**231.1 Hz**
OFFER OF REPAIR	i'll buy you movie tickets next [TIME ↗#154-174#] (0.79) to go resee the [MOVIE ↗#155-173#↘#173-150#] **	177.3 Hz
Mean		179.6 Hz

The second example, which contains the most noticeable negative deviation, was produced by Informant 63 for the same situation (see Example 12). Again, two different IFIDs were produced; one was markedly different from the other and also from all other strategies in the apology. Of note here, though, and worth discussing before the actual outlier, is the first IFID in the apology. This was produced with a relatively distinct positive deviation from the F0mean for the entire apology, with a +18.6% deviation.

Example 12. Outlier: F0mean% for IFID: Informant 63, MS-BD.

Strategy	Transcript	F0mean
EXCLAMATION	OH [SHOOT ↗#383-402#↘#402-227#] /	325.3 Hz
IFID	i'm REALLY [SORRY about that ↗#390-466#↘#466-181#] /	360.3 Hz
OTHER	that's [TOTALLY not me ↗#348-452#↘#452-181#] /	299.3 Hz
TAKING ON RESPONSIBILITY	and i've BEEN here longe:r [ASWELL↗#233-331#] /	317.9 Hz
IFID	**i'm [SORRY man ↘#249-183#=#183#] /**	**199.3 Hz**
HESITATION	[ehm =#256#] **	256.3 Hz
Mean		303.7 Hz

In fact, it was produced with a F0mean higher than the one employed in the preceding EXCLAMATION. By comparison, the second IFID was produced low in the pitch range compared to all other strategies. The second IFID was also unique in its formulation. It included the address term *man* and a FALL-LEVEL intonation, in which the pitch started relatively low in the pitch range and then fell to an even lower 183 Hz, where it remained level.

Thus far, considerable diversity in IFIDs in lexical formulation and prosodic delivery has been found. The next step regards differences in the intonation pattern between

instances in which an intensifying adverbial was either produced or not produced. Accordingly, the F0 values that were discussed for the IFIDs were separated depending on whether the IFID had an intensifier in its formulation. The results are illustrated in Table 31.

Table 31. F0mean%, F0min%, F0max% and F0range% for the IFIDs with and without Intensifiers.

Situation	Variant	F0mean%	F0min%	F0max%	F0range%	Total # of IFIDs
HS-HD	none	+2.1%	**+24.7%**	-22.5%	**-21.8%**	7
	Intensifier	-1.2%	**+17.2%**	-11.8%	**+0.1%**	48
HS-SC	none	+0.0%	+13.5%	-7.5%	-6.2%	9
	Intensifier	+0.2%	+14.8%	-9.7%	+4.6%	43
MS-BD	none	-2.4%	+19.2%	-13.1%	-3.1%	19
	Intensifier	+1.2%	+13.2%	-7.9%	-1.4%	31
MS-UP	none	-0.9%	+16.1%	**-14%**	**-12.7%**	28
	Intensifier	+3.1%	+15.1%	**-7.2%**	**+9.1%**	24
LS-BB	none	+3.7%	+26.1%	-9.6%	-6.9%	18
	Intensifier	-0.8%	+25.4%	-3.8%	-9%	14
LS-NP	none	-4.1%	**+18.0%**	-87.4%	**-9.1%**	25
	Intensifier	-3%	**+25.8%**	-14.5%	**+8.9%**	18

It reveals that there are no noteworthy differences between these two cases regarding F0-based dimensions, except for F0range%, which was higher for all apologies when the IFID was produced with an intensifier, with one exception (LS-BB). In fact, the F0range% differed between the two variants by as much as 21.7% for HS-HD. In this situation, IFIDs without an intensification were produced with a narrower F0range than the rest of the apology, while those with intensification had an F0range similar to the overall mean with which the apology was produced.

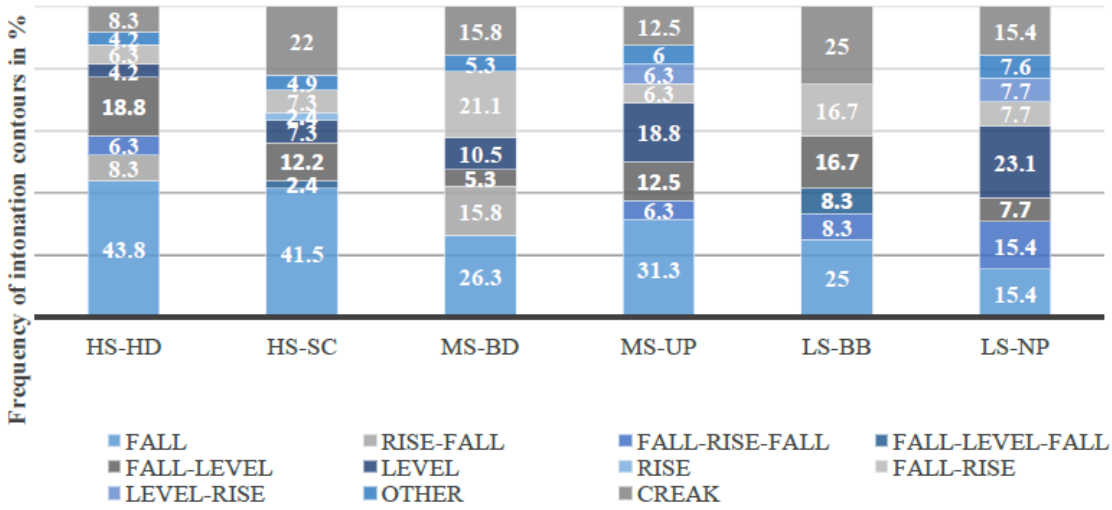
This leads to the second dimension: the intonation contours extracted from the IFIDs. Table 32 summarises their distribution across the situations. The intonation contour found most often in the IFID is a FALLING intonation contour. The apologies with the highest percentage of FALLING contours were elicited via the HS situations, with 41.8% for HS-HD and 38.5% for HS-SC. They were closely followed by LS-BB with 34.4%. Furthermore, note the distribution of the contour FALL-RISE, which was found most often in the apologies for the two LS situations and MS-BD, while it was rare in the two HS situations. The third contour to be highlighted is the FALL-LEVEL contour, which was included in this study precisely because of its high frequency in the IFIDs. It was utilised in 18.2% of the IFIDs produced for HS-HD, which was the highest value overall.It was, however, also frequent in the IFIDs for HS-SC, MS-UP and LS-BB and therefore is noteworthy across all levels and most situations. Nevertheless, it demonstrated higher frequencies for one of each of these levels and different numbers for their severity level counterparts.

Table 32. Overview of All Intonation Contours Produced for the IFIDs.

Contour	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
FALL	**41.8%**	**38.5%**	**25.5%**	**29.6%**	**34.4%**	**25.6%**
RISE-FALL	5.5%	0%	9.8%	3.7%	0%	2.3%
FALL-LEVEL-FALL	0%	3.9%	2%	1.9%	6.3%	0%
FALL-RISE-FALL	3.6%	0%	0%	1.9%	3.1%	7%
FALL-LEVEL	**18.2%**	**13.5%**	**7.8%**	**14.8%**	**12.5%**	**9.3%**
LEVEL	5.5%	9.6%	7.8%	11.1%	9.4%	9.3%
RISE	1.8%	1.9%	0%	3.7%	0%	4.7%
LEVEL-RISE	0%	0%	0%	1.9%	0%	2.3%
FALL-RISE	**9.1%**	**7.7%**	**15.7%**	**11.1%**	**15.6%**	**18.6%**
RISE-FALL-RISE	0%	0%	3.9%	1.9%	0%	0%
TECHNICAL DIFF.	0%	0%	0%	1.9%	0%	2.3%
NOT VISIBLE	0%	1.9%	2%	0%	0%	0%
UNCLEAR	0%	0%	3.9%	3.7%	0%	0%
CREAK	**10.9%**	**17.3%**	**17.7%**	**11.1%**	**12.5%**	**14%**
OTHER	3.6%	5.8%	3.9%	1.9%	6.3%	4.7%
Total	100%	100%	100%	100%	100%	100%

Again, the contours are now presented as they occurred for IFIDs with and without intensifiers. Those with intensifiers are visualised in Figure 17. Here again, the FALLING contour was the one most often found in the majority of situations. However, MS-BD also presented a remarkable percentage of CREAKY voice.

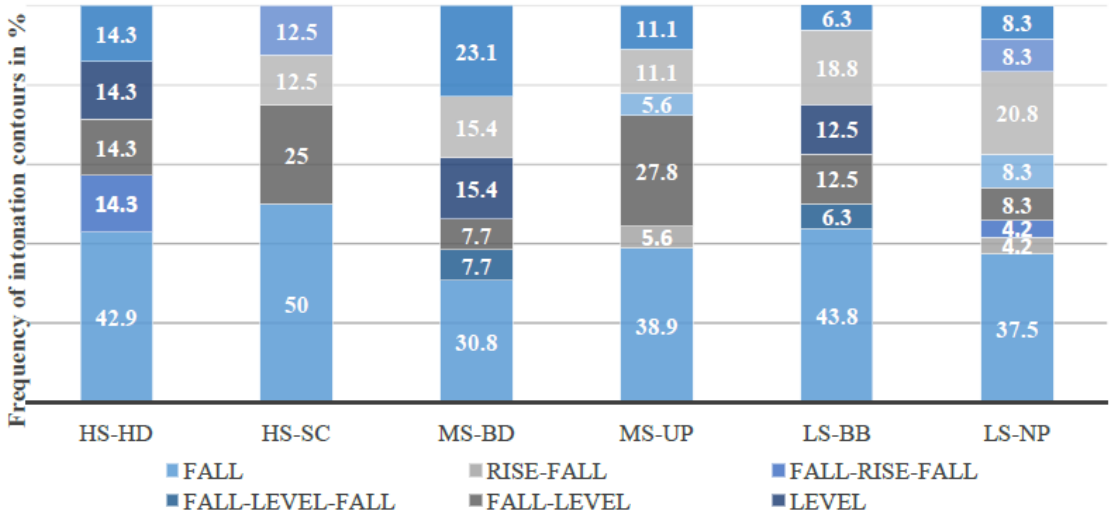
Figure 17. Intonation Contours for IFIDs with Intensifier.



Note: Contours that only had a small number of occurrences across all situations were here added to the category OTHER to achieve a complete presentation of contours.

Additionally, different than the other situations, no FALL-RISE contours were applied for the HS-HD IFIDs. This suggests that all 9.1% of this contour found for the IFIDs in HS-HD must have occurred in those without intensifiers; these are represented in Figure 18. Furthermore, not a single IFID with intensifiers for HS-SC was produced with CREAKY voice, while 17.3% of all IFIDs (with and without intensifiers) were produced this way. Accordingly, all of them must have been produced in the IFIDs without intensifiers, which is confirmed in Figure 18 which further reveals that no LEVEL intonation was found in the IFIDs without intensifiers for LS-NP. However, it was, in addition to CREAK, the contour with which a large proportion of IFIDs produced with intensifiers were delivered.

Figure 18. Intonation Contours for IFIDs without Intensifier.



Note: Contours that only had a small number of occurrences across all situations were here added to the category OTHER to achieve a complete presentation of contours.

Note that, for the sake of completion, a final table was inserted in Appendix D.iii which presents the intonation contours and distributions across those IFIDs which were formulated with forms other than *be sorry* or *sorry*. It includes especially those IFIDs in which the *I'm* (adverbial) *sorry* was followed by *for*…. These are not covered in the two figures inserted here. The contour applied with the overall highest frequency was, again, the FALLING contour. However, with small numbers of apologies in this category of more elaborate IFIDs overall, these findings are not considered to be meaningful.

Looking at the third dimension, speech rate, the most important values are presented in Table 33. The values for SpeechRate% of the IFIDs are presented in the first column. It reveals that the IFIDs in MS-BD were, on average, uttered with a +3.8% faster speech rate than the entire apology. Those in the apologies for MS-UP were uttered with an even faster speech rate of +11.6%. All of the other situations – those produced for the LS and the HS levels – instead displayed a negative deviation from the mean. Notably,

the IFIDs in HS-SC were produced with a 10.4% slower speech rate, and those for HS-HD showed a 5.2% slower speech rate than the entire apology.

Table 33. SpeechRate%, SpeechRate and Values of Length for the IFIDs.

Situation	SpeechRate%	SpeechRate	Length
HS-HD	-5.2 %	4.4 syl/sec	0.97 sec
HS-SC	**-10.4 %**	4 syl/sec	1.32 sec
MS-BD	+3.8 %	4.7 syl/sec	1.18 sec
MS-UP	**+11.6 %**	4.9 syl/sec	1.11 sec
LS-BB	-1.3 %	4.7 syl/sec	0.9 sec
LS-NP	-1.7 %	4.4 syl/sec	1 sec

In the Theory part, a connection between speech rate and the duration of syllables was addressed which may be important for the IFID. It is conceivable that the vowel duration in the adverbials impacted the underlying message perceived (see Chapter 2.2.3). Consequently, it was not expected that the speech rate would be faster for the IFIDs in some situations than in the entire apology in which it occurred – especially to the extent with which it was found for MS-UP. Therefore, there is no clear tendency detected that would suggest that speech rate in the IFIDs systematically varied with the severity of the offence; however, HS-SC and MS-UP are further discussed later, including possible reasons for their average deviations toward opposite sides.

To further account for differences of the duration of a particular vowel in the IFID, in this case the /o/ in *so*, Table 34 is presented. It displays the actual speech rate employed for this syllable in the middle column. Additionally, the left column of this table reveals the difference between the time the informant needed to produce this syllable and the entire IFID's mean length in seconds. Furthermore, the right column illustrates the difference between the speech rate of *so* and the speech rate of the entire IFID (i.e., whether the *so* was tendentially produced with faster or slower speech).

Table 34. Length and SpeechRate of the Intensifying Adverbial so.

Situation	% of the Entire IFID Length in sec	Speech Rate of the Intensifier *so*	Difference between Speech Rate Intensifier and IFID
HS-HD	30.2%	3.8 syl/s	-12.6%
HS-SC	28.4%	3.3 syl/s	-15.2%
MS-BD	25.1%	3.8 syl/s	-13.6%
MS-UP	25.5%	3.5 syl/s	-18.4%
LS-BB	25.5%	4.3 syl/s	+4.3%
LS-NP	25.1%	3.9 syl/s	-6.2%

In all but one situation, the intensifier was produced with a slower speech rate. Only LS-BB, featured a relatively small positive deviation with a +4.3% faster speech rate for the syllable *so* than for the remaining IFID. Therefore, this faster speech rate is, at least to a

low extent, visible in the raw frequency (presented in the middle column) as well as when placing the *so* in relation to the speech rate of the respective IFID. The slowest speech rate, that is, the highest negative deviation in the intensifier compared to the entire IFID, was found for MS-UP. This is notable because this situation also had the highest positive SpeechRate% value of the entire IFID in Table 34.

4.4 A Closer Inspection of the Exclamations

This final Results sub-chapter further elucidates the EXCLAMATIONS. It provides further details on their lexical formulations as well as their prosodic features, including F0 values and speech rates. As a reminder, in MS-UP, only four EXCLAMATIONS were produced in total. Therefore, without further empirical support, the results for this situation do not lend themselves to drawing strong conclusions and are largely disregarded.

4.4.1 Formulation of the EXCLAMATIONS

Exclamations differed in whether they included the initial EXCLAMATION PARTICLE *oh,* as in, for example, *oh my god*. Although the differences between the severity levels were not substantial, they seemed systematic. In the two HS situations, the EXCLAMATIONS for HS-HD and HS-SC presented the highest frequency of containing an *oh* (91.3% and 86.2%, respectively). Those in the two MS situations displayed a slightly lower percentage (MS-BD: 82.6%, MS-UP: 75%). The lowest percentages were found in the two LS situations. LS-BB contained this particle in 63.2% and LS-NP in 70% of their EXCLAMATIONS.

In addition to whether *oh* was utilised, the EXCLAMATIONS differed in the formulation of the EXCLAMATION TERM. Generally, there was either no addition to the EXCLAMATION PARTICLE – the EXCLAMATION consisted of a simple *oh* (described here as *none*) – or an addition was made with *no*, *my god*, *my gosh*, *gosh*, *shit* or other EXCLAMATION TERMS (see Table 35). The distribution of these terms across the situations was markedly different.

Table 35. EXCLAMATION TERMS Found in the Different Situations.

Terms	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
none	4.2% (3)	6.9% (2)	**17.4% (4)**	25% (1)	**42.1% (8)**	20% (4)
no	6.3% (3)	6.9% (2)	**39.1% (9)**	25% (1)	26.3% (5)	**30% (6)**
my god	**41.7% (20)**	**31% (9)**	0% (0)	0% (0)	0% (0)	5% (1)
my gosh	**27.1% (13)**	**20.7% (6)**	0% (0)	25% (1)	0% (0)	10% (2)
gosh	2.1% (1)	0% (0)	4.4% (1)	25% (1)	10.5% (2)	5% (1)
shit	6.3% (3)	6.9% (2)	8.7% (2)	0% (0)	5.3% (1)	0% (0)
other	12.5% (6)	**27.6% (8)**	**30.4% (7)**	0% (0)	15.8% (3)	**30% (6)**
Total	100% (48)	100% (29)	100% (23)	100% (4)	100% (19)	100% (20)

In HS-HD, 27.1% of the EXCLAMATIONS were formulated with *my gosh* and 41.7% with *my god*. A similarly high percentage of *my god* was found in the second HS situation: 31% of all EXCLAMATIONS for HS-SC were formulated this way. However, different from HS-HD, only 20.7% of the EXCLAMATIONS were produced with the formulation *my gosh* in HS-SC. The other situations were in stark contrast to this: in MS-BD, the EXCLAMATIONS were frequently formulated with *no*, accumulating to 39.1% of all EXCLAMATIONS employed in this situational context. This EXCLAMATION TERM was almost non-existent for apologies on the HS level.

4.4.2 Prosodics of the EXCLAMATIONS

This more detailed view of the prosodic features of EXCLAMATIONS starts with the F0 values (see Table 36). Across all situations, EXCLAMATIONS were produced with a higher F0mean as compared to the overall pitch employed in the entire apology, as previously noted.

Table 36. MeanF0%, MinF0%, MaxF0% and PitchRange% for all EXCLAMATIONS.

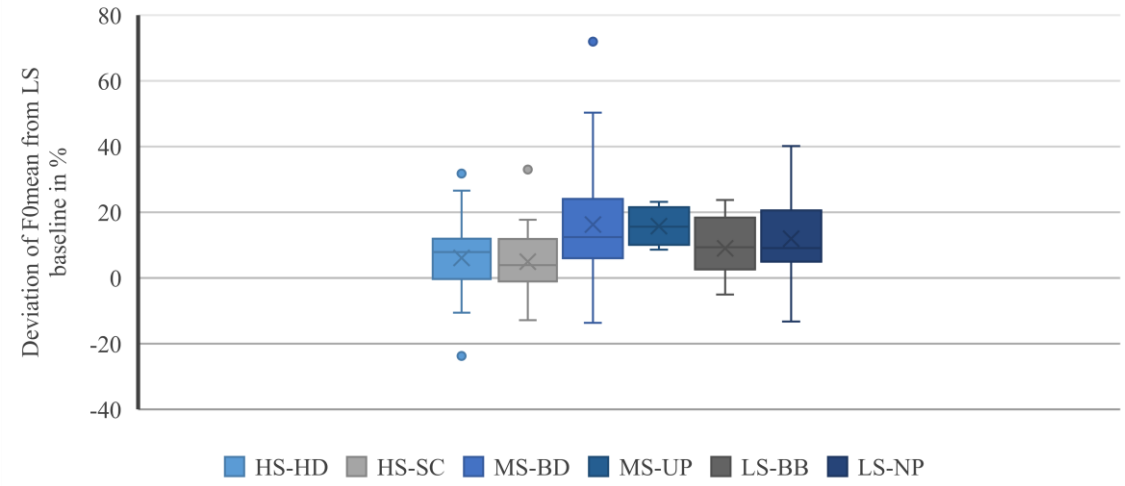
Situation	MeanF0%	MinF0%	MaxF0%	F0range%
HS-HD	+6.1%	+29.7%	-12.3%	-17.9%
HS-SC	+5.1%	+30.4%	-13.6%	-17.7%
MS-BD	**+16.2%**	+46.1%	-11.5%	-23%
MS-UP	**+15.7%**	+61.5%	-18.3%	-70%
LS-BB	+9%	+32.6%	-12.2%	-23.8%
LS-NP	+12.6%	+40.9%	-8.6%	-14.6%

This deviation, however, differed between situations. The highest was found in the apologies for both MS situations and the lowest in the two HS situations. In other words, the EXCLAMATIONS for the HS situations, although produced with a slightly elevated pitch compared to the entire apology, were not produced with considerably higher F0mean compared to the other situational contexts. In the other situations, notably those on the MS level as well as LS-NP, EXCLAMATIONS were produced with a higher pitch as compared to the respective apology overall.

Notably, there is a moderate negative correlation visible between F0mean% and the position in which the EXCLAMATION occurred (r_s = -0.4, $p < 0.001$). However, with most of the EXCLAMATIONS occurring in initial positions to begin with, the impact of this correlation on the numbers in the previous table is not considered to be overly strong. Additionally visible here is that the EXCLAMATIONS produced in all situations presented a considerably narrower pitch range than was utilised for the rest of the apology. In fact, all employed at least a 14.6% narrower pitch range. This seems noteworthy given that they were, overall, produced with an elevated pitch compared to the rest of the situation. EXCLAMATIONS were, accordingly, rather more statically produced at this relatively higher pitch.

Again, the values found for the F0mean% were further informed by closer insights into the dispersion of the EXCLAMATION data across all apologies and situations in the boxplots in Figure 19. In line with previous discussions about mean pitch, all medians are here situated above the value of 0% (HS-HD: 7.8%, HS-SC: 3.8%, MS-BD: 12.4%, MS-UP: 15.6%, LS-BB: 9.4%, LS-NP: +9.1%). The highest dispersion of data was found in MS-BD and LS-NP, with minimal values for observations that are not outliers at -13.7% for MS-UP and -13.2% for LS-NP and maximal values of +50.3% for MS-BD and +40.1% for LS-NP. The highest interquartile range (18%) was found for the MS-BD EXCLAMATIONS.

Figure 19. Variation of F0mean% for EXCLAMATIONS.



With this moderate scattering of the F0mean% measurements, the three most noticeable outliers are presented in detail next. The apology for HS-SC performed by Informant 11 (see Example 13) was produced with the EXCLAMATION in first position, followed by an IFID and an OFFER OF REPAIR. While the F0mean for the entire apology is 149 Hz, the EXCLAMATION is considerably higher, resulting in a +32.9% deviation from the overall mean. The reason for this substantial difference from the overall mean is visible when studying the contours with which the individual strategies were produced toward the end of their utterances. Two did not present an actual intonation contour at all but were produced with the voice quality of CREAK.

Example 13. Outlier: F0mean% in an EXCLAMATION: Informant 11, HS-SC.

Strategy	Transcript	F0mean
EXCLAMATION	[OH NO ↗#170-218#↘ #218-168#] /	**198.1 Hz**
IFID	i'm [so SORry [○ creaky voice]] (0.27)	109.1 Hz
OFFER OF REPAIR	i'll PAY [for it [○ creaky voice]] **	139.8 Hz
Mean Value	-	149 Hz

This quality is, as mentioned, produced in the lowest parts of the pitch range a person can physically achieve. This low pitch affected the F0mean of the apology overall, leading to a decrease in the mean Hz value. Thus, the reason for the deviation is not that the EXCLAMATION was produced with an exceptionally high pitch within this apology, but rather that the other two strategies in this apology were produced with an exceptionally low pitch. Further evidence can be gained from the F0mean values in Hz in the other apologies produced by Informant 11, where similar tendencies exist. Whenever there was an actual intonation contour other than CREAK – a voice quality which this respondent produced frequently, in 5 of 13 strategies across all apologies – they ranged in values around 150 Hz or higher.

The next outlier was found in an EXCLAMATION produced in an MS-BD apology by Informant 38 (see Example 14). This EXCLAMATION revealed a +71% higher F0mean than the F0mean employed for the entire apology.

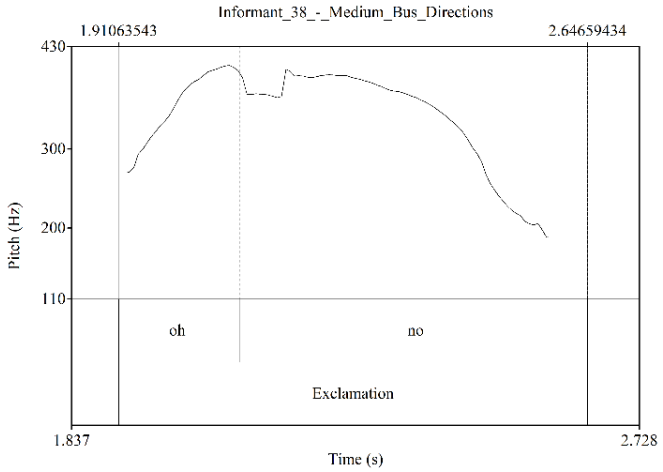
Example 14. Outlier: F0mean% in an EXCLAMATION: Informant 38, MS-BD.

Strategy	Transcript	F0mean
EXCLAMATION	[OH NO ↗↗#294-406#↘↘#406-217#] (0.12)	**343.8 Hz**
IFID	i'm so sorry that you missed HALF of your [movie ↘#170-150#↗ #156-180#] (0.14)	178.7 Hz
HESITATION	[ehm =#162#] (0.3)	161.7 Hz
TAKING ON RESPONSIBILITY	sometimes i'm [really BAD with directions [○ creaky voice]] (0.19)	150.7 Hz
IFID	[i APOLOGISE [○ creaky voice]]	152.1 Hz
Mean Value	-	200 Hz

Furthermore, as the arrows in the transcript and the corresponding values in Hz confirm, the voice was dynamic and reached values of up to 406 Hz during the production of the EXCLAMATION. This is noteworthy compared to the overall F0mean of the apology and the large pitch range employed. It is also visible in the pronounced RISE-FALL contour with which the EXCLAMATION was produced. The contour itself is presented as Intonation Contour 1. Note that the second IFID was also considerably lower in Hz than the first IFID, and that there was an overall tendency toward lower F0mean values throughout the apology.

The third EXCLAMATION to be analysed more closely occurred in the HS-HD apology produced by Informant 49 (see Example 15). It reveals a deviation from the overall F0mean of -33.7%. The reason for this strong negative deviation is similar to previous discussions. While there were actually three EXCLAMATIONS in this apology, two were situated at the beginning, and they both showed a production at higher F0mean values than the overall mean for this apology. The actual outlier is the third EXCLAMATION, which was situated at the end of the apology. This position alone could have impacted the F0mean, given the correlations mentioned.

Intonation Contour 1. Outlier for F0mean% (EXCLAMATION): Informant 38, MS-BD.



However, the dominant impact on this occurrence of the EXCLAMATION is that it was produced with a CREAK, which was otherwise rare for this strategy. This quality, as frequently addressed, automatically leads to notably lower F0mean values.

Example 15. Outlier: F0mean% in an EXCLAMATION: Informant 49, HS-HD.

Strategy	Transcript	F0mean
EXCLAMATION	[OH my GOSH ↗#257-407#↘#407-330#↗#330-347#] /	331.8 Hz
EXCLAMATION	[oh my GOSH ↘#394-262#↗#262-333 #] /	337.6 Hz
IFID	i'm so [SORRY [○ creaky voice]] ↔	332.2 Hz
OFFER OF REPAIR	[let's [○ other]] (0.68) [i will take [○ laughs]] i will take you to the [HOSPITAL: ↘#327-243#] / or [something [○ other]] /	302.2 Hz
CONCERN FOR THE HEARER	are you [OKAY [○ unclear]] /	300.7 Hz
IFID	i'm so [SORry ↗#260-288#↘#288-217#] /	278.7 Hz
EXCLAMATION	**[OH my GOD [○ creaky voice]] ****	**233.1 Hz**
Mean Value	-	305.6 Hz

Regarding the second representation of the prosodic dimension of pitch, that of intonation contour, only a short note must be added here about the contours with which the EXCLAMATIONS were produced. The most commonly found contours across all situations are FALL, RISE-FALL and LEVEL. In all situations (except MS-UP), the majority of utterances were produced with a FALLING intonation contour, ranging between 30% of the EXCLAMATIONS for LS-NP and 52.2% for MS-BD (see Table 21). The second-most common contour was RISE-FALL, which was utilised in roughly one-quarter of the EXCLAMATIONS in MS-UP, HS-HD, MS-BD and LS-BB (see Table 22). LS-NP and HS-SC appeared slightly differently in this regard, with noticeably lower values of 13.8% for the EXCLAMATIONS for HS-SC and only 10%

for LS-NP. The only further contour worth mentioning here is LEVEL intonation, which was, in comparison, somewhat rare; its highest frequency (apart from MS-UP) occurred in LS-BB with 15.8%, followed by HS-HD with 10.4% (see Appendix D.i)

To conclude this chapter, additional details on the speech rate of the EXCLAMATIONS must be offered, based on the findings presented in Table 37. It reveals the speech rate deviation of the EXCLAMATIONS from the apology's average speech rate in the left column. It further displays the average of the actual speech rate itself for each situation in syllables per second in the middle column and the length of the EXCLAMATION in seconds in the column to the right.

Table 37. SpeechRate%, SpeechRate and Length in Seconds for all EXCLAMATIONS.

Situation	SpeechRate%	SpeechRate	Length in seconds
HS-HD	**+2.8%**	4.7 syl/sec	0.63 sec
HS-SC	-5.9%	4.1 syl/sec	0.83 sec
MS-BD	**-25.8%**	3.3 syl/sec	0.6 sec
MS-UP	-3%	3.8 syl/sec	0.46 sec
LS-BB	**-29.6%**	3.3 syl/sec	0.48 sec
LS-NP	-19.6%	3.4 syl/sec	0.62 sec

The table reveals differences between the EXCLAMATIONS produced in the different situations. Those in three of the situations (HS-HD, HS-SC and MS-UP) revealed values which are relatively close to the overall speech rate found in the apology in which the EXCLAMATION was uttered. However, the other three, MS-BD and both LS situations, illustrated a substantially lower speech rate for the EXCLAMATIONS than the respective apology. The speech rate of the EXCLAMATIONS correlates with the length of the respective EXCLAMATIONS (in seconds: r_s = -0.53, $p < 0.001$; in syllables: r_s = 0.57, $p < 0.001$). Here, the correlations suggest that longer EXCLAMATIONS in syllables correlated with a faster speech rate. Additionally, those which were longer in seconds correlated with a slower speech rate.

5. Discussion

As mentioned, the approach of this discussion is to unite the presented findings under specific focal points, summarise them according to their relevance for this focus and discuss them in light of the posed research questions and previous literature. Accordingly, the upcoming discussion is divided into five parts. The first discusses in detail the apologies that were used as the point of comparison in this study: the LS level apologies, demonstrating the extent to which they behaved as expected based on findings in previous literature. This includes especially the established neutral and marked pragmatic forms and intonation contours of the IFID. Afterward, Chapter 5.2 examines the impact of the levels of the severity of the offence on the data. It refers to

those findings which may present a systematic deviation from the LS baseline. Furthermore, it discusses the findings in light of the Frequency Code and additional theoretical concepts. Another section (Chapter 5.2.3) is dedicated to a qualitative analysis of several examples, in which a minimisation of the severity of the offence is aimed at in the formulation of the apology itself. It ends with an argument about the underlying sincerity and its role in the delivery of the apologies. This part of the argument specifically focusses on the different quality of this attitude found in the apologies on the MS level. The next sub-chapter exclusively addresses the strategy of EXCLAMATION. It discusses the strategy's role in conveying underlying speaker meaning in the study at hand (Chapter 5.3). Chapter 5.4 covers other contextual features and their impact on the apologies, including situational urgency, the communication of embarrassment potentially felt by the Speaker and findings regarding age and its correlation with specific prosodic variables. Finally, it highlights limitations of this study (Chapter 5.5) and notes possible improvements for any future research with similar aims and methodology.

5.1 The LS Apologies as the Point of Comparison

The idea of a baseline to which other instances can be compared is, especially for the discussion of prosodic factors, central to this study. Consequently, markedness observed in the situations of elevated severity were and are noted; furthermore, possible reasons for a thereby argued markedness are discussed in detail. The basic idea is the general assumption that there must be a reason to select a different pragmatic or prosodic formulation of an apology if it differs from what the informant felt was an appropriate apology for LS offences.

The findings for the LS situations further support the notion that using them as a baseline is a valid point of comparison. In fact, none of the other situations elicited apologies which featured distinct similarities to outcomes on the LS level nor to one another. Those on the LS level, however, elicited with the situational descriptions of LS-BB and LS-NP, led to apologies that were similar for the majority of factors investigated in the apologies. Differences are addressed and are attributed to the variance between the situational descriptions, especially the type of offence, specifically regarding the aspect of possession.

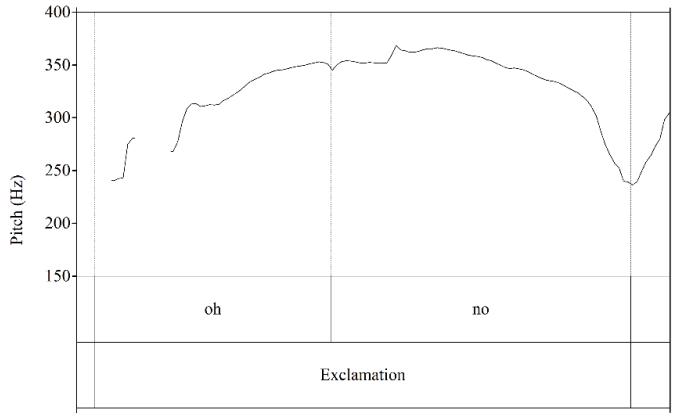
A closer description of the LS apologies on the functional level reveals that the high number of IFIDs found even on this level confirms that apologies are commonly formulated with this explicit expression of regret. This aligns with the intrinsic nature of this strategy (see Chapter 2.1.2). Nevertheless, compared to the other situations, the LS apologies contained the fewest numbers of IFIDs. In line with what numerous studies have presented in their quantitative results (e.g., Aijmer 2019, 1996; Deutschmann 2003; Holmes 1995, 1990, 1989; Trosborg 1987; Salehi 2014), the formulation of the

IFIDs in the form of *be sorry* is the most frequent here and is, as mentioned, considered the neutral formulation of this strategy (Aijmer 1996: 82). Adding intensifiers is meant to increase the perceived empathy and concern (Leech 1983: 213; Vollmer and Olshtain 1989: 213). Given that LS apologies are here argued to be the one closest to the severity (and sincerity) level of being RITUALISTIC, it is fitting that there is a relatively high percentage of IFIDs produced without such an intensification, amounting to 56.3% in LS-BB and 58.1% in LS-NP. Among those formulations which did warrant an intensification, slightly more IFIDs were produced with the expression *so* for LS-NP (30.2% compared to those in LS-BB with 21.9%) and slightly more with *really* in LS-BB (15.6% compared to those in LS-NP with 9.3%). This confirms the tendencies identified for the numbers of the different intensifications used which increase across the MS and toward the HS level. This, therefore, aligns with Aijmer's suggestion for a correlation of the need to intensify the IFID with increasing severity of the offence (Aijmer 1996: 82). Despite their status as apologies for the lowest severity offences in this study, however, the LS baseline still had intensifiers in roughly 40% of all the IFIDs that occurred. This was, arguably, the case because, though low in severity, they represented a sincerity level above that of RITUALISTIC apologies and are considered to express actual remorse. Hence, intensifications were still likely, despite their baseline status in this study.

Next, the situation-specific interrelation between ANSWERS and EXCLAMATIONS needs to be highlighted. It was previously established that the LS situations prompted a high number of occurrences of ANSWERS, by virtue of including a first adjacency pair part at the end of the situational description. Importantly, in those cases in which an ANSWER was the first strategy (23.1% of LS-BB apologies and 19.6% of LS-NP apologies), the informants usually refrained from formulating an EXCLAMATION. In fact, only two instances appeared in the entire data set in which both of these strategies were produced in succession: by Informant 15 for the apology in LS-BB and Informant 49 for that in LS-NP; both uttered an EXCLAMATION followed by an ANSWER. This study does not analyse the possibility that the ANSWERS could have prosodic patterns that lent them a dual function of being ANSWERS and EXCLAMATIONS simultaneously. This could have been achieved by employing prosodic attributes to mark the exclamation as such (cf. Chapter 5.3). Note that the EXCLAMATION formulation of *oh no* was commonly found in the data. This was, however, consistently coded as one EXCLAMATION. The decision that it was not a combination of EXCLAMATION and ANSWER was, as circular as this may sound, based on their prosodic attributes, including the fact that formulations of *oh no* were continuously comprised of a single intonation phrase (see Intonation Contour 2 as an example). In summary, the second adjacency pair part status held by these two LS situations and none of the other four means that this finding must be considered whenever the position of strategies within the individual apologies is referenced. It additionally had a role in

the number of EXCLAMATIONS that were produced for these situations because ANSWERS seemed to impact the usage of an EXCLAMATION to be formulated in the same apology.

Intonation Contour 2. EXCLAMATION Formulated as oh no *with FALL-RISE Contour: Participant 6, LS-BB.*



For the next strategy, TAKING ON RESPONSIBILITY, there was a considerable frequency found for the entire LS level, with 1.3 (LS-BB) and 1.2 (LS-NP) used, on average, per apology (see Appendix B.iv). This is notable, as previous literature has also stated that the forgotten book situation (though with a professor as the offended party) led to a high number of occurrences of TAKING ON RESPONSIBILITY (Olshtain 1989). However, the data in this study showed that the willingness to take on the responsibility for the offence may decrease with rising severity of the offence. Further similarities for this strategy for the two LS situations were found in their distribution across the sub-categories. In both situations, the most common strategy was DECLARING SELF-DEFICIENCY, with only a handful of usages OF ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY. In summary, the participants were relatively quick to assume responsibility for the LS offences, although this was typically done by admitting that the offence had something to do with their own lack of capability. This was not expected because, for the LS-BB situation as used in the DCT items in Olshtain's (1989) study, 95% of the instances of TAKING ON RESPONSIBILITY were of the type JUSTIFY HEARER. However, the difference between the power and distance in Olshtain's (1989) situational description and the situation used here must be considered. As for the effect of DECLARING SELF-DEFICIENCY, Ogiermann (2009: 163), who also employed a similar situation, does in fact argue that TAKING ON RESPONSIBILITY by stating that the Speaker had forgotten the book is an attempt "to protect their face […], thus reducing the severity of the offence".

Not least due to Ogiermann's (2009) statement, TAKING ON RESPONSIBILITY must be discussed in more detail on the formal level and the use of intensifications employed within this strategy, which is visible in Table 38.

Table 38. Intensification of TAKING ON RESPONSIBILITY in the LS Apologies.

Situation	*totally*	*completely*	None	*just*	Other	∑
LS-BB	8.2% (4)	6.1% (3)	51% (25)	6.1% (3)	28.6% (14)	49
LS-NP	18.5% (10)	13% (7)	38.9% (21)	1.9% (1)	29.6 (16)	54

In both of the LS situations, not only was there a high incidence of TAKING ON RESPONSIBILITY, but there were also frequent linguistic measures taken to intensify this strategy further by way of using an intensifying adverbial. As can be seen, intensifying the strategy occurred in almost one-half of the cases for LS-BB and in more than 60% for LS-NP. Differences were, however, identified regarding the exact formulation. In fact, the majority of intensifiers were produced in such a diverse fashion that almost one-third was included in the OTHER category in Table 38.[54] Still, the most common formulations were *totally* or *completely* for LS-NP, while *just* was used slightly more often for LS-BB. This fact further stresses that it is common not only to declare that one's action was deficient, but also to intensify the description of this shortcoming. This aligns with Ogiermann's statement that infers that the Speaker attempts to reduce the severity of the offence even more noticeably by stressing that they had, for example, *totally* forgotten about the book. This, in turn, further decreases the face threat of the offence on the Speaker of the apology.

Furthermore, for OFFER OF REPAIR, differences were found between the two situations on the level of formulation, which advances the understanding of any underlying impact on the apologies beyond that of severity. For LS-BB, 41% of occurrences were formulated as interrogatives. This was only true for 25% of OFFERS OF REPAIR for LS-NP. Initially, these numbers may seem as though the willingness to threaten one's own negative face was higher for LS-NP. Here, the commissive to repair the offence in the future was less frequently formulated using a syntactic downgrader. However, in most cases, the reason for formulating the OFFER OF REPAIR as an interrogative in LS-BB was not that the Speaker was wondering whether a repair was necessary. Instead, the Speaker inquired whether it was acceptable to repair the offence at another point in time in the future rather than immediately. Generally, there was no doubt that the repair would happen at some stage. This is visible in Table 39, which presents that 45.2% of the informants offered to repair the offence the next day and 29% to do it the next time they saw the Hearer. For LS-NP, 53.6% of the OFFERS OF REPAIR included the idea of repairing the offence immediately. Notably, for those

[54] The items in the category OTHER were formulated in such a way that there was no possibility of stressing it with any of the lexical items mentioned, e.g., *it's at home, I didn't remember the book.*

instances in which the OFFER OF REPAIR was formulated as an interrogative in LS-NP apologies, this was indeed intended to inquire whether a repair was really necessary, which poses a difference from LS-BB.

Table 39. Time Deixis for OFFER OF REPAIR in the LS Apologies.

Situation	*now*	*tonight/ later today*	*tomorrow*	*next time*	*next week*	Other	∑
LS-BB	6.5% (2)	3.2% (1)	45.2% (14)	29% (9)	3.2% (1)	12.9% (4)	31
LS-NP	53.6% (15)	10.7% (3)	10.7% (3)	7.1% (2)	0% (0)	17.9% (5)	28

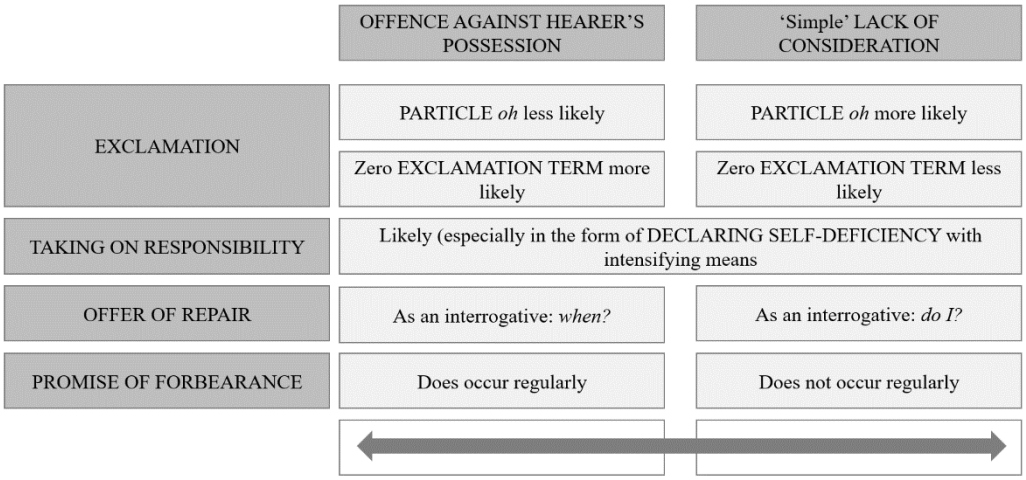
Finally, the two LS situations' apologies varied in length. The apologies for LS-BB were 25.8%, or 5.2 syllables, longer than those for LS-NP (25.3 syllables and 20.1 syllables, on average, respectively), as previously noted. The reason was identified to be primarily because there were 10 cases of PROMISE OF FORBEARANCE for LS-BB but none for LS-NP. PROMISE OF FORBEARANCE was a relatively lengthy strategy; it was, on average, 11.4 syllables long. The reason for this additional strategy employed in LS-BB lies in the nature of the offence, as explained further in the upcoming paragraphs.

In summary, these findings on the level of form and function, though quite similar when focussing on the level of strategy, differed on the level of their exact formulation. These findings are now discussed in light of the only substantial contextual difference between the two LS situations, which was seen in the type of offence. Again, in LS-BB, the offence was one against the Hearer's PROPERTY (Holmes 1995; Wolfson et al. 1989), while it was a simple LACK OF CONSIDERATION (Deutschmann 2003) in LS-NP. In Aijmer's (1996: 109) categorisation of the types of offences, though, both fall into the same category: INCONVENIENCE OR IMPOLITENESS TO ANOTHER PERSON AND POSSESSION. The possible distinction in the type of offence displayed, along with the differences in the apologies that were found, are presented in Figure 20 through a schematic representation of the strategies used in the respective apologies in this study.

Starting with the difference in the length of the apologies and the role that PROMISE OF FORBEARANCE played, this difference is found at the bottom of the model. In a situation such as LS-BB, the Speaker still has the Hearer's possession at home, which means the Speaker will have to return it. With the inherent possibility of forgetting it again, using such a strategy here is logical. The same argument can also explain the difference previously noted regarding the usage of interrogatives in the OFFER OF REPAIR in LS-BB. These cases constituted an inquiry regarding when, not whether, one should return the book, and are therefore different from cases of interrogative constructions in LS-NP. Given that the book is owned by the Hearer, not returning it at some point in the future is not an option. TAKING ON RESPONSIBILITY was

regularly used in apologies responding to both situational descriptions; frequently, this occurred by DECLARING SELF-DEFICIENCY. Similarities were also found for the use of EXCLAMATIONS, meaning that both were seemingly unaffected by POSSESSION. A difference was, however, found for the uneven distribution of the EXCLAMATION PARTICLE *oh*. Regarding the formulation of EXCLAMATIONS, the majority produced in apologies for LS-BB did indeed include this particle.

Figure 20. Apologies: OFFENCE AGAINST POSSESSION versus Simple LACK OF CONSIDERATION (Pragmatic Level).



However, there were also a relatively high number in which this was not the case, namely, in 36.8% of LS-BB EXCLAMATIONS. This is remarkable compared to the other levels of severity and especially the LS-NP apologies; here, this number was not as high, and only 30% of the EXCLAMATIONS did not include the particle *oh*. Additionally, in 42.1% of the cases of EXCLAMATIONS in LS-BB and in only 20% of LS-NP, the respondent decided that an EXCLAMATION TERM was not necessary, leaving the EXCLAMATION at a simple *oh*. This finding aligns with an argument discussed in detail in Chapter 5.3, which highlights the function of EXCLAMATIONS to stress a LACK OF INTENT.

These findings of considerable impact of whether the contextual features of the offence involve the Hearer's POSSESSION on the apology formulation calls into question the categorisation of offences established by Aijmer (1996) or Deutschmann (2003). Their categorisations have encompassed both of these offences in one category. The results of the present study demonstrate that it is more sensible to employ categorisations of offences that make this distinction, such as that of Wolfson et al. (1989) which is, at least in this regard, seen as more suitable.

In terms of prosody, the elicited values for the LS apologies were again the point of comparison for the majority of the results presented, in which they were used to indicate

whether and the extent to which the HS and MS situations' values deviated from it. Since most prosodic dimensions only reveal their quality when compared to another data point, discussing them for the LS apologies on their own is futile. Therefore, the only F0 measurement that can be highlighted here regards the findings for the intonation contour.

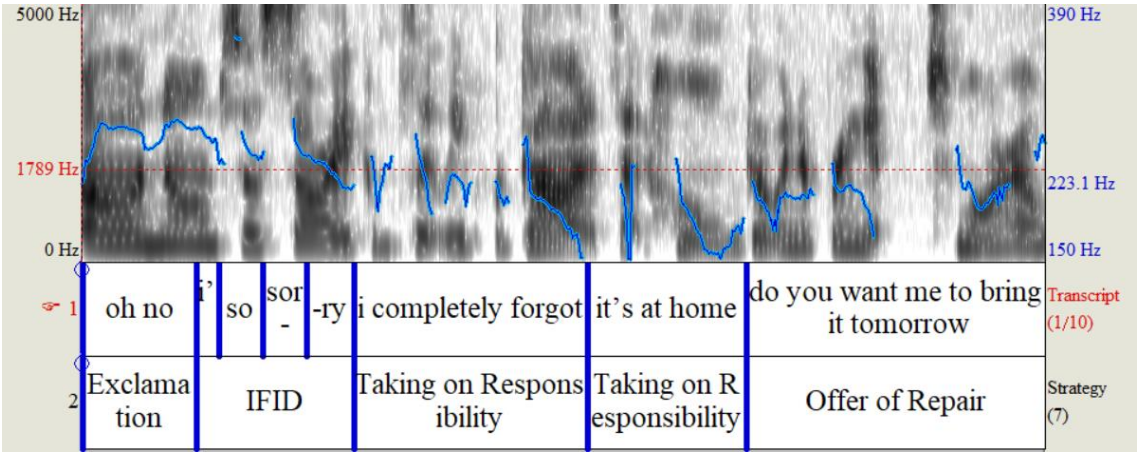
Similar to all other situations, both of the LS situations' apologies featured the FALLING contour most often in the strategies' final boundary tones. Additionally, as Table 15 reveals for both LS situations, the apology most often ended in a CREAK (28.2% for LS-BB and 23.9% for LS-NP), followed by a FALL and FALL-RISE intonation (or the other way around for LS-NP). When focussing on the IFID, the FALLING intonation was again the most commonly utilised contour (34.4% for LS-BB and 25.6% for LS-NP), with FALL-RISE being far less frequent (LS-BB: 15.6%, LS-NP: 18.6%). Note, however, that despite these relatively low values, these were still the highest values for the FALL-RISE intonation contour in IFIDs across all situations. Furthermore, there was a difference in percentages between LS-BB and LS-NP in FALL-RISE (LS-BB: 15.6%, LS-NP: 18.6%), which was even more noticeable for the FALLING contour (LS-BB: 34.4%, LS-NP: 18.6%) and pointed in the opposite direction. These findings further informed the effect of the type of offence presented in Figure 20.

The differences in the preferences for intonation of the IFID seemingly overlapped with the idea of a casual intonation (FALL-RISE), which was more often found to be the appropriate intonation contour in LS-NP IFIDs (cf. Aijmer 1996; Lindström 1976). This can be corroborated with the proposed findings in previous studies which have posited that the offence type of LACK OF CONSIDERATION is frequent (Deutschmann 2003) and that the FALL-RISE intonation contour typically occurs in these kinds of recurring situations (Aijmer 1996: 89). Regarding the high occurrence of FALLING intonation on this severity level, once again, neither of the situational descriptions for LS were meant to display CASUAL apologies in the explained sense of this concept. Therefore, the production of the IFIDs with a high number of FALL-RISE – certainly higher than found for the apologies on the other two severity levels – although this was not the most common contour, is fitting.

As a final impression of the baseline apologies and a summary of what has been suggested thus far, one screenshot from Praat (Boersma & Weenink 2020) is presented here, which displays the most common strategies and their pragmatic and prosodic forms. The intonation contour visualises the corresponding most common contours for each of these strategies for the LS-BB apologies. The EXCLAMATION was formulated with *oh no*, ending in a FALLING intonation. It continued without interruption in the intonation phrase of the IFID. The IFID itself was formulated with an intensifying adverbial and ended in a clear FALLING intonation contour. Another FALLING

contour can be seen for the first case of TAKING ON RESPONSIBILITY. The second case of this strategy then ended in the second-most frequent contour for TAKING ON RESPONSIBILITY in the LS-BB data: a FALL-RISE. The apology ended in an OFFER OF REPAIR and another FALL-RISE contour.

Intonation Contour 3. Apology for LS Baseline: Informant 19, LS-BB.



With this OFFER OF REPAIR formulated as an interrogative, which was the syntactic structure often found for this strategy in LS-BB, the FALL-RISE was the expected intonation contour. Note also the steady decline of the peaks, even for the RISING and high pitch, from the beginning toward the end of the entire utterance. This is an example of how the found correlations between the position of the strategy and their F0mean% originated (F0mean%: r_s = -0.46, $p < 0.001$). It presents a tendency that strategies later in the apology were generally produced with lower F0mean than that used, on average, for the entire apology. This finding aligns with the Production Code by Gussenhoven (2002), who has claimed that this lowering of pitch in later parts of the utterance is a universal factor.

5.2 Systematic Impact of Severity and Sincerity on the Apologies

This sub-chapter addresses tendencies in the results of the present study with the potential to highlight systematic impacts of the severity of the offence on the apologies. It dives deeper into the discussion regarding the extent to which increased severity is connected to features assumed to express sincerity in the apology. This is performed on the pragmatic and, with sincerity's status as an attitude, on the prosodic levels. To ultimately discern a potential impact of the micro-social factor in focus, large parts of this section directly compare the LS baseline to the HS apologies. As a reminder, for both of the HS situations, the severity of the offence was taken to an extreme. This led to offences that are rare in daily life and hold the risk of legal repercussions. This fact is important, especially in this first section, which considers the impact of severity on the pragmatic formulation of the apologies.

5.2.1 Impact of severity on the pragmatic level of apologies

The discussion of the impact of severity on apologies starts with the length of the apologies. As a reminder, Holmes (1995: 164-165) has found that higher severity leads to more elaborate apologies, although in her study, this was the case when the other two micro-social factors were also elevated. For her New Zealand English data, she has claimed that "[…] in general, a serious offence elicits more elaborated apology strategies and that a powerful victim receives more elaborated strategies than an equal or less powerful one" (Holmes 1990: 189). This sub-chapter highlights that length of apology can be modified by different means: 1) the number of strategies with which the apology is formulated, 2) the length of each of these strategies in syllables (in line with the claim made by Holmes (1990) or 3) a combination of both. Additionally, Holmes has noted that elaboration is highly dependent on the kind of offence which elicited the apology. This point was previously made in the presentation of LS-level results above and will now be re-visited.

In accordance with these important arguments, length of apology was determined in different ways, starting with the mentioned mean 1), the measurement of length in the number of strategies with which the apology was produced. Regarding the number of strategies, the first finding proclaims only a marginal positive correlation with the severity level which is not statistically significant ($R = 0.11$, $p = 0.09$). The apologies for HS-HD and HS-SC were relatively lengthy in this regard, with 4.8 and 4.6 strategies performed, on average. This made them longer than those for MS-BD, LS-BB and LS-NP. However, one situation was produced with even more individual strategies: MS-UP with 5.8, on average. When considering the numbers for only the STRATEGIES PROPER per apology, the highest frequency occurred also for MS-UP with a value of 3.0. This situation was followed by LS-BB, with, on average, 3.2 STRATEGIES PROPER. Hence, a purely quantitative view on the matter, without considering the formulation of the individual strategies, does not reveal any patterns. Instead, a closer look at the individual strategies, their lengths and, ultimately, their exact formulations are granted in the remainder of this sub-section, revisiting above-mentioned means 2) and 3) for producing more elaborate apologies.

The first and probably most noteworthy finding is an increase in the number of the IFIDs produced along the severity spectrum from LS to HS of the offence. However, as mentioned, the highest frequency of IFIDs is visible on the MS level. Additionally, a direct view on correlations between severity and length of these IFIDs does not reveal that longer versions of this strategy correlate with higher severity, at least not consistently. While the length of the IFID in seconds presents a weak positive correlation with the severity of the offence ($R = 0.14$, $p = 0.02$), [55] the same is <u>not</u> true

[55] Note the correlation between length in syllables and speech rate and the impact it may have had here.

for length in number of syllables ($R = 0.008$, $p = 0.88$). One reason for this is seen in the high number of IFIDs in LS apologies, which were especially lengthy. They frequently included the reason for apologising (i.e., in the form of, e.g., *i'm sorry (for)* or *(about) (that)* [...]) by way of syntactic expansions of the IFID (Limberg 2016: 702). Additionally, IFIDs of a different form than *I'm sorry* (e.g., *please forgive me*) were most often found in apologies for the MS situations (13 times in MS-BD and 13 times in MS-UP). They occurred relatively rarely in the apologies for the other two severity levels (five times on the LS level and four times on the HS level but not once for HS-HD). This may have also impacted the aforementioned correlations in the direction presented.

To zoom in even more on the formulations, it is wise to treat elaboration not only as an increase in the quantifiable measure of number of syllables, but also to apply it to the internal usage of adverbials in the IFIDs. The value of this approach is supported by the made claim that the IFID without intensifying adverbials is the neutral variant, used in situations in which RITUALISTIC apologies are acceptable (Aijmer 1996: 82); an intensification of the IFID with increasing weight of the offence was considered likely (see Chapter 2.3.3) and was certainly true for the study at hand, as the results have demonstrated. Cohen et al. (1986) have further confirmed that the exact form of intensification can affect the underlying messages in higher-severity offence situations. They have stated that "[i]n American English, a more suitable form to intensify the apology is '*really (very) sorry'*, since it sounds more sincere and implies more regret than a plain '*sorry'* or '*very sorry'"* (as mentioned by Limberg 2016: 714, emphasis added). Indeed, in addition to a systematic increase of intensifications, the apologies also varied systematically in the intensifier chosen. There is a steady decrease of the percentage of the usage of *so* in the IFIDs from HS to LS (HS-HD: 78.2%, HS-SC: 69.2%, MS-BD: 45.1%, MS-UP: 27.8%, LS-BB: 21.9%, LS-NP: 30.2%); moreover, a small but steady decrease was found for *really* (LS-BB: 9.3%, LS-NP: 15.6% MS-BD: 7.8%, MS-UP: 9.3%, HS-HD: 0%, HS-SC: 7.7%).

With all of these apologies situated at levels of severity and sincerity above that of being RITUALISTIC, this finding neither agrees with nor refutes the finding made by Cohen et al. (1986). The form of *very sorry* was rare across all apologies elicited. However, a decrease was found in IFIDs formulated with only *sorry* (without the personal pronoun preceding it) with rising severity level as well as a decrease of IFIDs without any intensifiers for this same circumstance. Consequently, severity seems to affect not only the overall need to intensify an IFID, but also the way in which this is preferably done. To strengthen this argument further, neither of the two LS situations warranted any apologies with double nor triple intensification, which is different compared to the IFID production identified on the HS level. In fact, this tendency steadily decreased for the apologies from HS to MS of the offence. In summary, it can

be claimed that the number of IFIDs and lexical intensifications appear to be essential in conveying the necessary sincerity in apologies for offences that are more severe than the established default.

To add to the findings for the length of the IFID, a note on the usage of the full auxiliary (e.g., *I am sorry*) must be made. This form has been claimed to be more emphatic (Aijmer 2019: 262) than the contracted form. Therefore, it has the potential to also demonstrate a higher frequency in apologies for higher-severity offences. Additionally, Holmes (1990: 184) has noted that, in her study, the apologies for medium offences were more formal than those for low severity offences. This could further suggest a trend that markers of formality increase with increasing severity of the offence. The one marker which presented itself with a more or less formal version, which is investigated systematically in the results chapter, is then this contraction or non-contraction of the verb in the IFID *be sorry.*

Though such a trend toward formality with rising severity was found in the present data, it was rather weak across the different severity levels; in fact, the vast majority of IFIDs with *be sorry* contained a contracted form. Still, the highest number of IFIDs without contractions was indeed used in a HS situation, HS-SC (see Figure 13), with lower numbers in HS-HD (HS-HD: 15.4%, HS-SC: 26.9%). The lowest frequencies of IFIDs of the form *I am sorry* were found in the two LS situations. Thus, it is conceivable that some connection between severity of the offence and the non-contraction of the auxiliary verb exists. Additionally, there is a distinct possibility that other situational factors make a clearer finding more difficult to state in this study. To be precise, the urgency created for the apologies produced in HS-HD may have played a role here (see Chapter 5.4.1). Additionally, this increasing tendency with increasing severity was mild, even for HS-SC, with nearly all IFIDs containing contracted verbs. This was attributed to the fact that all situations created for this study occurred in an informal setting, whereas this form could generally be seen as more appropriate than the rather formal version of *I am.* Thus, with the highly tentative result in HS-SC, the findings suggest some interesting tendencies. Nevertheless, participants mostly stressed sincerity by adapting their formulations of the IFID to the severity level in the number and form of intensifiers uttered.

Moving on to the important strategy of EXCLAMATION, this ability to (further) intensify the IFID (described in detail in Chapter 2.5.1) is central for this part of the Discussion. Due to this intensifying function, the quantitative findings for EXCLAMATIONS are expected to behave parallel to the findings for internal intensifications of the IFID by employing adverbials. This would, in turn, lead to a steady increase of this strategy from the LS to HS levels. However, it is also possible that EXCLAMATIONS are more, or at least equally, appropriate in situations with LS offences. This would align with the statement that "[t]ypically emotives occurred in

apologies for inadvertent offences such as minor accidents or mistakes: these apologies were often uttered after the offender had been made aware of his/her blunder" (Deutschmann 2003: 54). As clarified previously, the results indicate that the number of EXCLAMATIONS was visibly lower in apologies on the LS level (HS-HD: +143.3%, HS-SC: +56.1%). While EXCLAMATIONS were not rare for LS apologies, they occurred significantly more often in situations of higher severity. It therefore seems conceivable that they were indeed applied to further intensify the underlying message of the apology. Still, one must remember in this argument the aforementioned observation regarding a possible influence on the usage of EXCLAMATIONS, which was caused by the adjacency pair structure of the situational prompt and addition of an ANSWER to the speech act.

In addition to this finding, EXCLAMATIONS were longer in the apologies for HS situations than for LS situations. This tendency, revealed in the actual numbers of syllables presented in Table 12, is mirrored by the moderate positive correlation between the severity values and the length of the EXCLAMATION in syllables (R = 0.53, $p < 0.001$). Such a finding warrants a closer discussion of the formulations which led to this increase in number of syllables with increasing severity. Contrary to the formulation of EXCLAMATIONS in the LS baseline, almost all of the EXCLAMATIONS in HS-HD apologies were formulated with *oh*, as in *oh my god*. Additionally, the forms of *my god* and *my gosh* were the most commonly utilised EXCLAMATION TERMS. The same was also true for HS-SC, although with lower percentages. The apologies for this situation as well as the second HS situation were therefore notably different than those for the two LS situations. For LS, such formulations of the EXCLAMATION were rare. It is, however, these forms which emphasise the feeling of surprise as the underlying message (Ogiermann 2009: 124). Similarly, as mentioned previously, Deutschmann (2003: 54) has stressed that the overall effect of EXCLAMATIONS is that of emphasising “genuine and spontaneous regret on behalf of the speaker, whereas the responsibility for the event itself is toned down”. In his British English data, he has found that such a usage of interjections was particularly high in offences that were accidental in nature (Deutschmann 2003: 82). This second function of toning down the severity, achieved by stressing the unintentionality regarding the wrongdoing (see Chapter 2.5.1), is intriguing. In this line of argument, it is noteworthy that the offences that were displayed in the HS situations were both of the offence type of ACCIDENT (Deutschmann 2003).

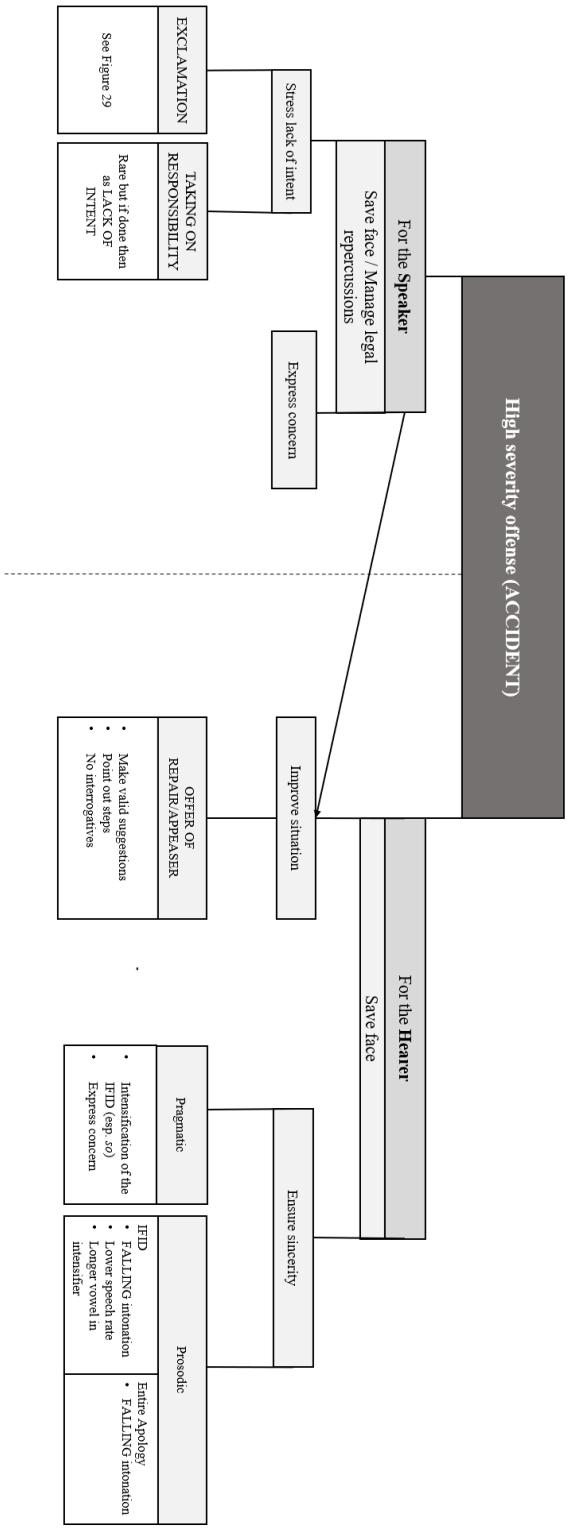
The possibility that an increase in the number of EXCLAMATIONS could suggest a higher need to express the unintentionality inherent to this strategy necessitates a turn toward the sub-strategy of TAKING ON RESPONSIBILITY called *LACK OF INTENT*. This sub-strategy shares exactly this underlying function with EXCLAMATIONS in remarkable ways. Indeed, different than the LS baseline, the most commonly found way

of TAKING ON RESPONSIBILITY in the two HS situations was expressing LACK OF INTENT (see Figure 6).[56] Similar to the sub-strategy of EXPRESSING SELF-DEFICIENCY by Ogiermann (2009), Deutschmann (2003) has considered this sub-strategy of TAKING ON RESPONSIBILITY as a strategy for MINIMISING THE OFFENCE. This lends initial evidence that the formulation as LACK OF INTENT is intended to save the Speaker's face instead of (exclusively) supporting the Hearer. Overall, it seems crucial for the Speaker that the HS apologies convey the accidental nature of the offence, using two ways at the Speaker's disposal to accomplish such an underlying message: 1) EXCLAMATIONS, 2) TAKING ON RESPONSIBILITY via expressing a LACK OF INTENT. Indeed, the three situations with the highest number of EXCLAMATIONS (i.e., HS-HD, HS-SC, MS-BD), were those in which occurrences of TAKING ON RESPONSIBILITY were produced most frequently with this sub-strategy. However, as a reminder, numerous apologies were formulated on the HS level without any formulation of TAKING ON RESPONSIBILITY. In fact, the decreasing frequency of this strategy with increasing severity of the offence was clear. This general tendency indicates that participants rather shied away from expressing this important message of lack of intent in a form that would simultaneously imply TAKING ON RESPONSIBILITY.

The highlighted need to express that the offence was not intended in the HS situations and overall reluctance to explicitly assume responsibility leads the discussion to the nature of the HS situations. In the following, evidence is clarified which suggests that some of these strategies address different faces, based on the model in Figure 21. It reinvokes the general visualisation of apologies by Ogiermann (2009: 54), as cited in Figure 1 and demonstrates this ability of the realised apology to attend to the negative and positive faces of the Hearer as well as the positive face of the Speaker. Some are intended to save the face of the Hearer (as apologies should do to re-establish social equilibrium; cf., e.g., Olshtain 1989: 156); these are found on the right-hand side of the model. Others seem to be directed at saving the Speaker from unnecessary harm and manage the legal repercussions and real-life consequences which accompany the types of HS offences established for this study (Bergman & Kasper 1993: 90). These include strategies which attempt at toning down the severity by stressing a lack of intent, which can be found on the left-hand side of the model. For the sake of a coherent overview, this model includes additional prosodic aspects, which are discussed later in Chapter 5.2.2.

[56] Note that for HS-HD in the form in which it was applied by Ogiermann (2009: 154), she found that the vast majority of instances in which the informants took on responsibility were in the form of JUSTIFICATIONS.

Figure 21. HS Situations (ACCIDENTS) and Underlying Messages on the Pragmatic and Prosodic Levels.



Along with stressing a lack of intent, another strategy that offers face-saving attributes for the Hearer is expressing CONCERN FOR THE HEARER. This was the second-most often used strategy for HS-HD, with roughly one-quarter of all strategies being of this kind. Generally, this strategy can be considered as yet another external way of intensifying the apology (Deutschmann 2003; Ogiermann 2009; Olshtain 1989; Vollmer & Olshtain 1989: 199). Ogiermann (2009) has posited that expressions of CONCERN FOR THE HEARER are positive politeness strategies attending to both the Hearer's and Speaker's face. This standpoint is seconded here and in the model, although the face-saving attributes for the Hearer's face are more central to the ongoing argument. In line with the discussion of possible legal repercussions affecting the formulation of apologies, it can be argued that inquiring about the person's wellbeing is essential in a situation such as the one in HS-HD. Without it, the entire turn could qualify as a further example of inconsideration, and it could therefore also cast doubt on the underlying level of sincerity. Along these lines, CONCERN FOR THE HEARER was previously suggested to correlate with the sincerity of the apology due to its ability to "reinforce the sincerity of the apology presented and to show the apologiser's concern for the offended person" (Lubecka 2000: 170, as cited by Ogiermann 2009: 180). This potential need to further stress the underlying sincerity increases the matter's intrigue. In fact, this point was previously argued to be crucial in legally problematic situations and generally for those of HS (see argument made below).

On the other hand, as noted previously, Vollmer and Olshtain (1989) have claimed that CONCERN FOR THE HEARER can also be considered routinised behaviour in some situations. This may then impact its intensifying function and make it somewhat of a "more or less generalized (defunctionalized) element in the overall apology" (Vollmer and Olshtain 1989: 213). Indeed, closer attention to the exact formulations chosen by the participants for this strategy indicate that they are highly formulaic. For HS-HD, of the 47 instances of CONCERN FOR THE HEARER, 25 were of the exact formulation *are you okay*. Instances of CONCERN FOR THE HEARER which were formulated in a different but related way were a*re you alright* in one case and *are you bleeding* in two cases. Finally, five instances featured an inquiry whether the Hearer needed a doctor or an ambulance. However, 13 instances portrayed that the respondents were more creative with their expressions of concern. These can be found in Appendix D.iv. Interestingly, these less formulaic instances regularly occurred in later positions in the apology than the average position for CONCERN FOR THE HEARER. This tendency frequently reoccurred in this study's data in general: less formulaic strategies or less formulaic forms of otherwise formulaic strategies appeared later in the apologies than those instances which followed strict formulae. Nevertheless, whether a formulaic utterance or a more creative expression was chosen, expressing CONCERN FOR THE HEARER has been said to express sympathy, regardless of how sincere the speaker actually is

about the concern (Vollmer & Olshtain 1989: 213). This justifies its occurrence on the right-hand side of the model in Figure 21.

The discussion now leads to the strategy of OFFER OF REPAIR, the underlying message of which can be seen as important in arguments made about offences with risk of legal consequences; offering some kind of reparation is expected in legal settings (cf. Scott and Lyman 1968). Consequently, the previously mentioned difficulty of repairing the offence in HS-HD becomes relevant. As discussed in the Methodology, the formulation of offering help in any form was the decisive factor during the coding process, while a certain overlap with CONCERN FOR THE HEARER was also navigated. For the HS apologies, a high number of OFFERS OF REPAIR was found, although the number was no higher than in the LS situations. Regarding its general function in the apology, the high number of OFFERS OF REPAIR reveal a certain degree of deference. This lies in the Speakers' willingness to produce a commissive strategy (Searle 1976: 11), causing a further threat to their negative face; the Speaker grants the Hearer power.

To finish this discussion of pragmatic formulations and functions, the strategy of EXPLANATION OR ACCOUNT was rare across all situations, LS and HS alike. Generally, such low numbers for explaining why the offence occurred were not entirely expected. It was noted previously that this strategy is important in situations which may have legal repercussions (Scott & Lyman 1968). Additionally, EXPLANATIONS OR ACCOUNTS have been categorised by Aijmer (1996: 83) as being emotional and she has stated that, in appropriate contexts, these could function as apologies on their own. An emotional character would lend EXPLANATION OR ACCOUNT a further relevant characteristic in situations in which emotionality is essential and actual remorse must be convincingly presented. However, as noted, an overlap between this strategy and TAKING ON RESPONSIBILITY in the CCSARP coding must be considered (cf. Ogiermann 2009 for a detailed discussion). It has been stressed that, legally speaking, a distinction between EXCUSES and JUSTIFICATIONS is possible (Ogiermann 2015: para. 4; Scott and Lyman 1968). In this sense, ACCOUNTS were seen as EXCUSES and parallel to what the coding scheme applied here calls *TAKING ON RESPONSIBILITY* by means of *ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY*.

Consequently, this demands an examination of the distribution of this sub-strategy in the apologies. However, it only had a minor role for the HS apologies, with 6.25% of the instances of TAKING ON RESPONSIBILITY for HS-HD and 3.5% for HS-SC being of this kind. The situation in which this strategy was used most often was, in fact, MS-UP, with 37.5%. At least on the HS level, the reason for such a low number of EXPLANATION OR ACCOUNT itself but also the corresponding sub-strategy of ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY likely lies in the fact that

these tended to address not the face of the Hearer but the Speaker and consequently reduce the severity of the offence by blaming external factors. A strong situational dependency on the appropriateness of an EXPLANATION as an apology strategy has also been stressed by Ogiermann (2009: 208; cf. also Wolfson et al. 1989 on the cultural dependency of this appropriateness). The same is likely true for those formulations deemed to be EXCUSES for the offence in Scott and Lyman's (1968) distinction.

Moreover, regarding the potential of this strategy to convey sincere emotions, it was mentioned that HS apologies were produced with a high frequency of EXCLAMATIONS, which adds emotive or attitudinal meaning to the overall message (Leech 2014: 116). For these, Deutschmann (2003: 54) has found that, at least in apologies of lower severity, emotives were "seldom followed by explanations or justifications; the unintentional nature of the offence was understood". This presupposes that an EXCLAMATION – and a possible additional stress of unintentionality via the corresponding sub-strategy of LACK OF INTENT – already suffices to express what is necessary in terms of underlying emotionality. It additionally mutes the point one could add to the underlying sincerity via EXPLANATIONS OR ACCOUNTS by stressing that the offence was not committed purposefully. What then remains is the message of blaming external factors for the offence itself, which actually weakens the illocution. This, one might argue, is not beneficial in apologies which are not RITUALISTIC in nature but those which instead address offences as severe as those proposed here with their inherent risk of legal consequences.

5.2.2 Impact of the severity on the prosodic level of apologies

Now that an impact of severity of the offence has been confirmed for some of the pragmatic factors, this sub-chapter debates whether similar evidence can be found for the prosodic level. This part of the discussion focusses on whether previously suggested tendencies, including those advanced by the Frequency Code, can be detected in the data. As a reminder, the Frequency Code proposes that genuine intentions and seriousness (here referred to as sincerity) tend to be associated with a low and FALLING intonation. Politeness and deference, however, which are arguably also beneficial to the success of an apology, tend to be associated with a high and RISING pitch (Gussenhoven 2002; Ohala 1995, 1984). Tendencies which confirm similar connections between these intonations and underlying messages were presented for thanking and apologies in Chapter 2.3.2.

For all arguments made in the following, the difficulty with cross-effects of the variables in the apologies, which are especially strong for the prosodic dimensions, means that the majority of the results are relative and difficult to interpret. Therefore, even weak but statistically significant correlations that were found between prosodic

dimensions and severity, or between different prosodic dimensions, are seen as valuable outcomes that are worthy of discussion.

The discussion starts with the central part of an apology, the IFID. This strategy is referred to in the majority of the previous literature which addresses the role of prosody in the delivery of this speech act – and the related act of thanking (Aijmer 1996; Knowles 1987; Ladd 1978; Lindström 1976, Wells 2006). Afterward, this sub-section highlights the extent to which similarly informative tendencies can be detected for the more complex and variable formulation of the entire apology. Accordingly, this includes all strategies for which the data was coded. Certainly, such a longer stretch of talk is more prone to highly diverse manifestations on the formal level and resulting complications on the dimensions of prosody.

5.2.2.1 Impact of severity on the prosodic dimensions of the IFID

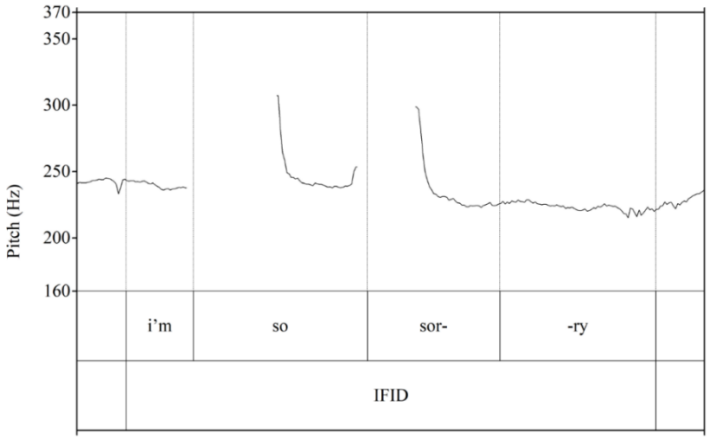
The first point for the findings for the IFID's prosodic features concerns the average pitch heights and the question of whether these can be interpreted by either of the associations with pitch proposed by the Frequency Code. Starting with the comparison of the IFID's F0mean to that of the rest of the apology, neither of these F0mean% values for the HS situations was produced markedly lower or higher in the participants' pitch range. This could have confirmed at least the most general conception of the Frequency Code. In fact, no correlation was found for the F0mean% values and the severity of the offence (R = 0.015, p = 0.81). Accordingly, the deviation of the IFID from the F0mean in the rest of the apology did not change systematically with a lower or higher severity value. Nevertheless, in raw frequencies, the IFID, especially for the HS-HD situation, was, on average, found to be higher in Hz than those values obtained for the LS baseline (HS-HD: 232.6 Hz, HS-SC: 211.7 Hz, MS-BD: 206.7 Hz, MS-UP: 208.4 Hz, LS-BB: 223.2 Hz, LS-NP: 198.4 Hz). To be specific, its apologies demonstrated the highest average pitch in Hz of all situations and across all informants.

A circumstance with possible impact on this finding is the following: overall, HS-HD presented a high F0mean%, which is, on average, +14% higher than the LS baseline of the participants. This additionally resulted in IFIDs with a higher F0mean in Hz for the HS situations compared to those elicited for the other five situations, which is logical. This outcome did not result in a marked deviation of the IFID's F0mean from that of the rest of the apology, which confirms that the difference measured in Hz resulted from the overall high pitch produced in HS-HD apologies (see Chapter 5.4.1 for a closer interpretation). This stresses further that results for the comparison of one strategy with the entire apology are highly influenced by the exact composition of the apology and the realisations of the individual strategies on both the prosodic and pragmatic levels, which determines the overall pitch of the utterance.

The next dimension in focus is the intonation contour and the question of whether the aforementioned expectation for more FALLING intonations in HS offences (due to their role in expressing sincerity) can be verified. This expectation was built not only on the Frequency Code, but also on additional sources (Aijmer 1996; Lindström 1976); therefore, intonation contour is the dimension of highest interest for the argument made here. For the IFIDs produced, the FALLING contour was indeed the most commonly used intonation contour across all situations. Equally in line with this expectation, the highest percentages were found for the apologies produced on the HS level. These numbers for HS offences were, however, not followed by coherent MS-level and then LS-level results. Instead, LS-BB and MS-BD were next in frequency of occurrence. MS-UP and LS-NP achieved the final positions, with percentages between 25.5% and 29.6% of FALLING intonation applied to the IFIDs.

Before delving deeper into this discussion, a note must be made about the category of FALL-LEVEL intonation (see Intonation Contour 4) added to this study's categorisation scheme. It was established for this study because it occurred frequently, specifically in the IFIDs. The FALL-LEVEL contour was found to be clearly distinct (visually and audibly) from those instances which were seen as simple FALLING contours without an additional LEVEL tendency at the end. Hence, they were coded separately. HS-HD demonstrated a FALL-LEVEL intonation in 18.2% of the IFIDs; HS-SC showed this in 13.5% of the IFIDs. These numbers were lower for MS-BD at 7.8%, LS-BB at 12.5% and LS-NP at 9.3%; these tendencies align with the results for FALLING intonations. Only the IFIDs for MS-UP were slightly distinguished, with 14.8% produced with a FALL-LEVEL intonation contour.

Intonation Contour 4. FALL-LEVEL Intonation Contour of the IFID: Informant 36, HS-HD.



This begs the question whether these instances would not, in other studies on prosodic manifestations of the IFID have been categorised as simple FALLING intonation contours as well. Such a difference in categorisation would have significantly impacted the quantitative outcome for the FALLING intonation category in this study. In fact,

such a categorisation of contours would have strengthened the findings advanced in the following even further. It has thus far been established that FALLING (and FALL-LEVEL) intonation was frequently applied to the IFIDs. This insight must be combined with the expression of sincerity and its application in apologies. Producing an IFID with such a final FALL is supposed to convey actual remorse (Aijmer 1996), and it was mentioned as part of the apology frame posed for the apology type *I am* (intensifier) *sorry* (see Table 3). In line with the features mentioned by Aijmer (1996: 120) for this frame, next to the proposed importance of FALLING contours on the level of prosody, the IFID *I am* (intensifier) *sorry* was the most frequent formulation in this study, especially in the HS apologies. Therefore, disregarding the question of whether to include FALL-LEVEL contours in this category, tendencies which support the role of a final FALL to stress seriousness or sincerity can certainly be argued for in situations with higher severity of the offence.

The contour of equal importance to the FALLING intonation for the current line of argument is the FALL-RISE contour. RISE or FALL-PLUS-RISE has been described as casual or non-committal when applied in apologies (Aijmer 1996: 41; Lindström 1976: 193) and appropriate in ritualistic ones. As hypothesised, these contours occurred with the lowest frequency in the IFIDs produced in HS-HD and HS-SC (9.1% and 7.7%, respectively) compared to the other situations. Notably, the results for FALL-RISE were somewhat ambiguous, because MS-UP followed HS-HD relatively closely with only 11.1% of its IFIDs delivered this way. Remarkably, this lower percentage of FALL-RISE in apologies for MS-UP was not met with a higher number of FALLING intonations contours, a finding that is further highlighted in Chapter 5.2.4.2. Nevertheless, overall, there was a definite increase of the numbers of FALL-RISE contours in IFIDs from HS to LS apologies. The highest frequency was found in LS-NP; 18.6% of its IFIDs were produced this way.[57]

As a note, differences were found in the manner with which the intonation contour was applied to the IFID, in that they were seemingly dependent on the formulation chosen. A closer look into this matter was granted due to the remark from Aijmer (1996: 47) which has been supported by Knowles (1987: 195). They have argued that, for the related speech act of thanking, those speech acts performed with an adverbial (e.g., *thank you very much*) could sound sarcastic, amused, impolite or ironic if produced with a FALL-RISE contour. This stresses the importance of the pragmatic and prosodic formulations of a speech act to fit each other. Based on this idea, a closer look into the application of intonation to those IFIDS with and without intensifiers was deemed an important contribution to the holistic investigation intended in this study. Several

[57] The fact that FALL-RISE is relatively rare across all situations and the numbers of FALLING contours relatively high is once again explained by the by the high level of severity kept even for the LS baseline, which does not reach the RITUALISTIC apology level but implies actual remorse.

patterns were found. In fact, not a single IFID without an intensifier was produced with the casual-sounding FALL-RISE contour for HS-HD; this contour was utilised, however, in 6.3% of the IFIDs with an intensifier in this situation. No clear patterns can be observed for the rest of the situations. FALL-RISE was used more frequently in IFIDs with than in those without intensifications for some situations, while the opposite tendency was true for others. However, the opposite direction of intonation, that of the FALLING contour, further illuminates this issue. Here, it was revealed that 43.8% of the LS-BB and 37.5% of the LS-NP IFIDs without an intensifier were produced with a FALLING intonation. This was only true for 25% of the LS-BB and 15.3% of the LS-NP IFIDs with an intensifier. Higher numbers of FALLING contours in IFIDs without an intensifier were also found in all of the other situations except HS-HD. For this situation, the numbers for FALLING intonation, with 43.8% of the IFIDs with an intensifier and 42.9% of those without an intensifier, were fairly similar.

Nevertheless, these initial findings may point toward a cumulative nature of sincerity features on the prosodic and pragmatic levels. This addresses a question that was previously raised in the Introduction regarding a possible cumulative relationship between linguistic politeness features and intonational strategies (Astruc & del Mar Vanrell 2016: 95). The data at hand suggests that, when stressing the underlying message of sincerity via an intensifier, using an intonation contour that does not necessarily further stress the sincerity may be more appropriate than in a situation in which one produces an IFID without an intensifier and *vice versa.* This is an important note for later discussions concerning these factors' contributions to the underlying message.

In addition to the intonation contours, there are further prosodic dimensions of immediate interest. For the pitch range employed in the overall apologies, the argument is, once again, highly intertwined with sincerity. It is connected to the claim that apologies that are static and made overly quickly may result in utterances that are perceived as not "so deeply felt" (Lakoff 2001: 204). Additionally, an increased level of politeness has been said to be perceived in utterances produced with a wider pitch range (Chen et al. 2004). This opens the discussion to potential findings for a wider pitch range applied systematically to IFIDs in HS situations compared to LS scenarios. Such a finding would suggest that this potential for supporting the underlying attitude of sincerity was indeed used in an obvious – and therefore measurable – manner in this one strategy already.

For the study at hand, the results for PitchRange% presented interesting results. First, across all situations, the pitch range employed for the IFID was narrower than that found for the entire apology. The strongest negative deviation was found for the IFIDs produced in LS apologies. These demonstrated a pitch range which was, on average, -43.7% and -56% narrower for LS-BB and LS-NP than the entire apology,

respectively. The IFIDs in HS-SC, MS-BD and MS-UP all featured less severe negative deviations of -34%. As stressed throughout the prosodic dimensions discussed, the F0range% tendencies were highly dependent on the apology composition, including, for example, the application of specific interrogative structures within an apology. Nevertheless, the finding that the baseline apologies on the LS level presented the least dynamic voice in the IFID compared to the pitch range with which the rest of the apology was produced is notable: a less dynamic voice was seemingly enough to convey the underlying message on the LS level, while a more dynamic intonation was tendentially found in IFIDs produced for offences of higher severity.

With this in mind, the previous claim that IFIDs which employed a narrower pitch range could be perceived as less deeply felt must be further discussed. This statement is oversimplified – and was likely consciously utilised this way by Lakoff to infer a general tendency. Contour and pitch range can here be united for a moment. This includes further details on the extent to which these changes in pitch were present in FALL and FALL-RISE intonation contours, instead of treating them completely categorically. In fact, categorising pitch contours by their overall tendency is generally simplistic. In reality, "[s]uch variation is gradient rather than categorical, and is generally assumed to convey natural (paralinguistic) meaning" (Wichmann & Blakemore 2006: 1537). This perspective was not systematically included in this study thus far, though it has the potential to reveal additionally detailed tendencies.

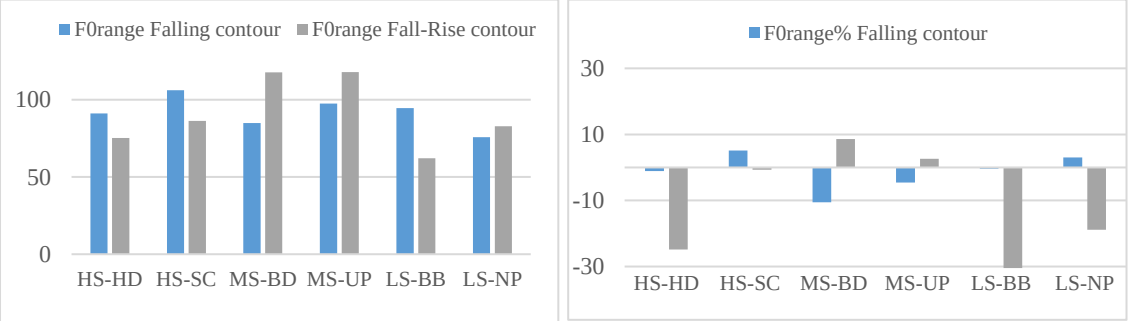
Hence, it seems fairly unrealistic to assume that one would choose a completely different contour for the IFID (e.g., a FALL-RISE instead of a RISE-FALL), especially one which could change the perceived underlying message dramatically. Instead, it is possible that measures were taken to magnify the existing extent to which these contours were noticeable, in order to stress or tone down a certain association. This could, in turn, become visible in a wider or narrower pitch range employed. It would then further inform the claim by Lakoff; if one wants to stress the underlying message delivered via a FALLING intonation, that is, expressing additional heartfelt remorse, employing a wider pitch range to stress this FALL appears to be sensical. However, the same argument can be made for the rather ritualistic attitude associated with a FALL-RISE and the potential to stress this by employing a wider pitch range.

This line of argument agrees with the claim by Nadeu and Prieto (2011: 841): a wider pitch range is not intrinsically polite, but it is highly dependent on the context in which it is employed. However, note that Nadeu and Prieto have based their argument on the fact that appropriateness tended to decrease with wider pitch range in *yes-no* questions. In such an interrogative context, the intonation contour serves a different function than it did here. Nevertheless, a wider pitch contour could indeed be employed to strengthen the presumed underlying messages: the casual-sounding or sincere-sounding illocutionary force with which the IFID was conveyed. More research into this

explorative finding must be conducted to fully understand the connection between sincerity, intonation contour, pitch range and the IFID.

To check for any evidence for this argument in the data, the measurements for the IFIDs produced in the situations were here separated into two groups, one including only those with a FALLING contour and the other containing only those with a FALL-RISE contour. The corresponding F0range and F0range% values found for these sub-sets can be seen in Figure 22. The chart on the left-hand side presents the F0range values as they were directly measured in Hz. It reveals that FALLING contours were produced with a wider pitch range, on average, than FALL-RISE contours in three of the six situations. This includes both HS situations and, noticeably, LS-BB. HS-SC received the widest pitch range, on average, employed in the FALLING contour, followed by HS-HD. LS-NP presented relatively similar pitch ranges for both of these contours, but for the two MS situations, the FALL-RISE was produced with a wider pitch range – it was the widest across all situations.

Figure 22. F0range and F0range% for IFIDs with FALLING or RISE-FALL Contours.



Due to the high individuality in the prosodic realisation of speech in general and the issues this individuality causes when comparing the actual values measured in Hz, the same was performed for the F0range% values in the chart on the right-hand side, presenting the deviation from the F0range employed in the IFID from that for the entire apology in percentages. Notably, the tendencies shifted slightly from those presented thus far. Im sum, they suggest that the MS situations were the only ones which featured such a wider pitch range when expressing the IFID with the casual contour (see discussion in Chapter 5.2.4). Three situations (HS-HD, LS-BB and LS-NP) received high negative deviations for the FALL-RISE condition; they represented a far less dynamic voice than applied to the overall utterance.

To conclude this section on the prosodic realisation of the IFID, speech rate is the final dimension to be discussed. Lakoff (2001: 204) has referred to its effect when addressing the issue of expressing sincerity in apologies which were made overly quickly, although other interpretations of this claim are certainly possible. In a similar way, it has also been noted that a slower speech rate can increase politeness ratings, where there is at

least a possible connection between the underlying speaker meaning and vowel duration (see Chapter 2.2.3). There, it was noted that evidence for a correlation between slower speech rate, longer vowel duration and an increase in perceived politeness can be observed (Grawunder & Winter 2010; Hidalgo Navarro & Cabedo Nebot 2014; Ofuka et al. 2000). It was also, however, stressed that evidence for such a connection is limited and not entirely straightforward. As discussed, for the IFID, the average speech rate was slower in the HS situations compared to the rest of the apology. SpeechRate% for HS-HD was determined to be -5.2% slower than the rest of the apology. Furthermore, this deviation was more than twice as high for HS-SC, with -10.5%. This is especially notable when compared to those values determined for the IFIDs from the other situations, in which the IFIDs for LS presented almost no negative deviation (LS-BB: -1.3%, LS-NP: -1.7%). Importantly, the more revealing result for a slower speech rate for HS-SC IFIDs as compared to its HS counterpart could once again be due to the urgency created in HS-HD (see Chapter 5.4.1). This urgency could have led to a faster speech rate than would normally be employed in HS apologies, when such an additional attitude was not present.

As a sidenote, speech rate weakly correlated with the number of syllables (i.e., for SpeechRate and number of syllables: $R = 0.22$, $p < 0.001$; for SpeechRate%: $R = 0.19$, $p = 0.001$). Accordingly, longer apologies correlated weakly with faster speech rates. As a reminder, the longest IFIDs in syllables, on average, were found in the two MS situations (MS-BD: 5.3 syllables, MS-UP: 5.2 syllables) as compared to the other four situations which, in this regard, all behaved fairly similarly to one another (HS-HD: 4.1 syllables, HS-SC: 4.8 syllables, LS-BB: 4 syllables, LS-NP: 4.5 syllables). Fittingly, and in line with the correlation mentioned, the fastest speech rate across all situations was found for the IFIDs for these two MS situations, at least when measured by their deviation from the average speech rate of the apology in which they occurred (HS-HD, -5.2%, HS-SC: -10.5%, MS-BD: +6.3%, MS-UP: +11.6%, LS-BB: -1.3%, LS-NP: -1.7%). However, given their similar severity levels as well as the similar lengths of the IFIDs in syllables, this difference between MS-BD and MS-UP is striking and further discussed later and combined with the delivery of sincerity in the apologies produced for these situations (see Chapter 5.2.4.2 for more details).

Another angle which is related to this investigation of speech rate of the IFID was inspired by Limberg's (2016: 702) remark that IFIDs can be upgraded or downgraded not only syntactically and lexically, but also prosodically. Additionally, he has stated that this can be done by stressing the adverb via the prosodic dimensions. This aspect itself has also been posited to affect politeness-related phenomena. As a reminder, though, the majority of results on the impact of vowel duration on politeness features were obtained for Asian languages and therefore bear limited applicability for this study (Grawunder & Winter 2010; Ofuka et al. 2000). In any case, whether such a tendency

can also be found for the IFID and in line with an increase of severity levels was deemed worthy of analysis and discussion. A focus only on the length, that is, the duration of the intensifier, was here narrowed to the occurrences and length of *so* in the IFIDs (see Table 34). Based on this measurement, the only finding in which the intensifier behaved in a somewhat marked way compared to the other situations was for LS-BB, where it was generally produced with a faster speech rate in syllables per second. Based on this finding alone, no general assumption can be made for the role of vowel lengthening – built only on the findings for the intensifier *so* – and its relation to the severity of the offence.

5.2.2.2 Impact of severity on the prosodic dimensions of the entire apology

This sub-section is dedicated to the increasingly complex issue of tendencies found in the entire apology and the strategies with which they were performed. The first topic of interest is the F0mean% values. The apology with the highest positive deviation from the LS baseline was found in HS-HD, with +14.6%. MS-UP, however, demonstrated the strongest negative deviation with -5.9%. No substantial deviation was found for HS-SC, however, suggesting that it was not, or at least not only, severity which played a role here. Arguably, urgency, as was briefly mentioned for the findings for the F0mean of the IFIDs, was likely involved in the findings for HS-HD in a similar way as regards the entire apology uttered (see Chapter 5.4.1). Notably, HS-HD featured considerably shorter strategies than the other situations. This may have at least partially affected the clear positive deviation found and would align with the negative correlation between the length of a strategy in seconds and the average F0mean with which it was produced (r_s = -0.2, $p < 0.001$) and especially with the deviation from the average of the apology (r_s = -0.46, $p < 0.001$). The finding mentioned previously for MS-UP is further discussed in Chapter 5.2.4.2, where it is considered with the underlying level of sincerity instead of only the severity of the offence.

Regarding the intonation contour with which all of the individual strategies tended to end, as with the IFIDs, the FALLING contour was frequently utilised in all six situations. The results ranged between 20.2% for MS-BD and 33.8% for HS-SC apologies. When including all strategies rather than simply the IFID, the syntactic construction of each strategy and especially their mood becomes an undeniable factor that must come into focus. Before addressing this, one finding that needs to be mentioned is that the FALLING contour was highly visible at the very end of the apologies. The highest number of this occurrence was found in both HS situations yet again, and the lowest in LS-NP. However, there was no steady decrease from HS to LS for this factor, not least because MS-BD behaved differently from this trend. The numbers for this situation were exceptionally low and amounted to 11.9% FALL intonations and a relatively high number of RISE intonations. However, much of this can be explained simply by the types of strategies in which these apologies tended to

end. An overview of this distribution of strategies can be found in Appendix B.iii. For example, a steady increase of OFFER OF REPAIR was visible at the end of the apologies from the HS- to LS-levels.

The RISING intonation contours at the end of a strategy have two variants: FALL-RISE and RISE, which are here largely discussed together. For the IFID, the FALL-RISE was of special interest because of its role in conveying a sense of casualness in the apology. However, as mentioned, its illocutionary function overlaps with the syntactic function that it is known to possess (cf., e.g., Wichmann 2015) for the majority of the other strategies in which more diverse syntactic constructions are a possibility. FALL-RISE and RISE alike can be employed for the prosodic marking of interrogatives. FALL-RISE would here be considered the prototypical contour for *yes-no* questions, and a FALLING contour on this boundary tone may even be "perceived as 'challenging' […] (where a final rise is expected from the syntactic structure)" (Bänziger & Scherer 2005: 255-256, referring to Scherer, Ladd & Silverman 1984). This syntactic structure was previously demonstrated as a factor in CONCERN FOR THE HEARER in HS-HD, with 21.7% of these produced as interrogatives. Fittingly, a high number of CONCERN FOR THE HEARER were either posed with a RISE intonation or a FALL-RISE intonation (10 and 16 of 46 cases, respectively) for HS-HD. Indeed, HS-HD was the only situation in which this strategy had a major role. In this type of situation and in a strategy such as CONCERN FOR THE HEARER, using a contour that risks association with posing a challenge could be problematic. Three of the four occurrences of CONCERN FOR THE HEARER which were categorised with FALLING intonation contours were, in fact, formulated as imperatives rather than interrogatives, further strengthening this point.

Moving from these contours and the marginally relevant results, the pitch ranges used in the strategies and apologies are now investigated more closely. The focus, for now, remains on the apologies produced in the HS situations. Along the same lines argued previously, a wider pitch range could potentially indicate a higher emotional involvement with monotonous voice indicating less deeply felt apologies (Lakoff 2001: 204). Here, the pitch range was noticeably wider than that used in the LS baseline, though this was also true for the apologies produced for the MS level. Therefore, attention is shifted to the pitch range employed in individual strategies (other than the IFID). Strategies in the HS-HD apologies that most deviated from the overall pitch range for each apology were OFFERS OF REPAIR and TAKING ON RESPONSIBILITY (with +23.1%), while OFFERS OF REPAIR and APPEASERS were produced with the widest pitch ranges for HS-SC.

Ultimately, the data reveal that the high number of IFIDs resulted in equalising dynamic and static strategies, as the IFIDs were quite static themselves. This is, again, the expected complication when addressing the apologies as a single entity because of their

different internal strategic compositions. LS-BB was produced with considerably fewer instances of IFIDs and EXCLAMATIONS, showing instead a use of highly dynamic and longer strategies. This makes any further claims about a systematic impact of severity on this dimension unwise at this point. A similar argument can be made for the dimension of speech rate, which was homogenous for the entire apologies across all situations. Overall, it is likely that the difference in formulation between the situations prevented any definite results in differences across severity levels. The one intriguing finding for speech rate was obtained for the apologies for MS-UP, which revealed the highest negative deviation of -7% from the LS baseline. This, though not considerably far from the baseline, fits the argument for an impact of decreased sincerity (rather than severity) on this prosodic dimension, which is discussed in Chapter 5.2.4.

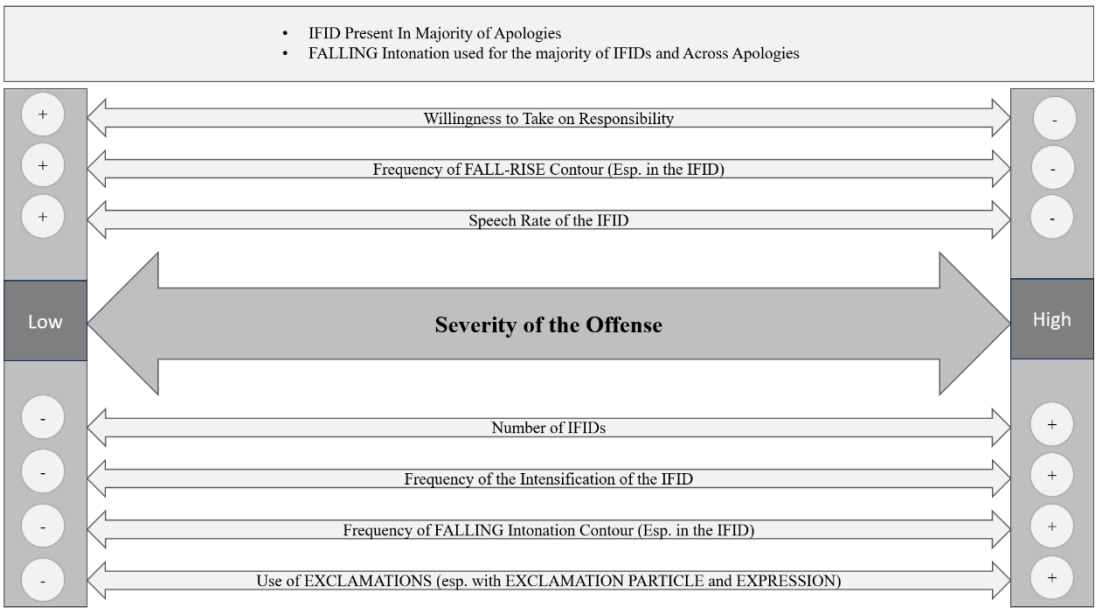
A final note can be made about the frequency of vocal fry found in the apologies in HS-SC. This situation had the highest number of strategies ending in this voice quality, resulting in a frequency of 16.6%. Table 29 offers no particularly striking distribution of vocal fry for a specific strategy. Instead, vocal fry was found in almost all of the categories of strategies with which the apologies for HS-SC were realised. Many (IFID, OFFER OF REPAIR, TAKING ON RESPONSIBILITY, APPEASER, EXCLAMATION and CONCERN FOR THE HEARER) revealed frequencies between 14.3% and 22.2%. Especially noteworthy is the 17.2% (five of 29 occurrences) for EXCLAMATIONS. There was only one additional EXCLAMATION across all situations in which this voice quality was found.

According to previous literature, CREAKY voice can convey a certain degree of calmness and assurance and has been said to be connected to negative politeness (Brown & Levinson 1987: 268). Given that in HS-SC, one has just destroyed the property of another, which presents a threat to the negative face of the Hearer, this claim seems fitting. However, the same argument could also be made for all other situations, in which the numbers were not nearly as high. It has also been suggested that CREAKY voice can be associated with characteristics such as being less competent (Anderson et al. 2014: 5), an association which must be discussed here. There is a possibility that the Speaker wants to stress that the offence was not committed on purpose but due to mere incompetence in parking a car. This would, once again, align with the argument made for stressing lack of intent. This strategy of using a specific voice quality to stress lack of intent was, however, rarely produced in HS-HD, a finding which is later connected to an emphasis on being efficient and in line with the Effort Code (Gussenhoven 2002). This argument includes the possible need to convey competence because the Hearer, who has been physically injured, needs immediate help (see Chapter 5.4.1 for more details)

Based on all of the findings thus far, an overview of the possible impacts of a higher or lower severity of the offence on the realisation of apologies was created as a model that

can be found in Figure 23. Severity of the offence as the independent variable is in the centre of this model, with a range from LS to HS offences. The three arrows toward the top of this model summarise that, in higher-severity offences, the willingness to TAKE ON RESPONSIBILITY is lower, as is the frequency of the FALL-RISE contour in the IFID and the speech rate with which the IFID is produced. However, with rising severity, increases are seen in the number of IFIDs produced, the frequency of intensification of the IFID, the frequency of FALLING intonation contours at the end of IFIDs and the usage and length (in syllables) of EXCLAMATIONS.

Figure 23. Effects of Severity of the Offence on the Prosodic and Pragmatic Levels.



The top of the model notes that, for all levels displayed here, IFIDs were present in the majority of apologies. This was also true for those representing the LS apologies in this study. Additionally, FALLING intonation was applied to the IFIDs in the majority of cases across all situational circumstances created.

5.2.3 The effect of minimising the severity of the offence within the apology

This sub-chapter offers a qualitative discussion of different apologies in which the participants used strategies that directly aimed to lower the severity of the offence. Based on these examples, it indicates how these attempts at minimising the severity of the offence may have impacted the formulations chosen for the other strategies as well as the prosody employed. A special focus is on the IFID. As presented in the theory, downgrading the situation's severity, which results in a lower degree of face damage to the Hearer (and the Speaker), means that less intensification of the apology is necessary in order for it to be appropriate (Ogiermann 2009: 164). The appropriateness of the apology is, therefore, ultimately determined by whether the Hearer perceives the apology as a sincere representation of remorse for the offence they themselves feel has

been committed to them (cf. Wichmann 2015: 185). This ultimately governs the degree of success of this speech act; a mismatch can lead to the Hearer's perception of insincerity on the Speaker's part. Accordingly, employing such strategies poses a risk for the perlocutionary effect.

One apology in which the severity of the offence was manipulated by the Speaker in such a fashion can be seen in Example 16. In this utterance, the respondent started her apology with an IFID. However, this IFID was followed by a *but*-clause, which has been said to "often have a downgrading effect due to implicatures running counter to expectations" (Thomas 1995: 57). It has been claimed that *but*-clauses are frequently combined with the full form of the IFID (*I'm sorry*), that is, not the short form of only *sorry* (Ogiermann 2009: 114). This can also be witnessed in this example. The attempted minimisation of the severity of the offence was performed by partially blaming the fact that the Hearer had to wait for the Speaker on the Hearer. Notably, a number of aspects that were stated previously for offences of LS can now be observed in the formulation of the two IFIDs. On the one hand, the occurrence of two IFIDs indicates that the centrality of this strategy was not affected by the lowered severity implied. On the other hand, a closer look reveals that neither of these IFIDs was produced with intensifications, which were otherwise relatively frequently used in IFIDs on the MS level.

Example 16. Lowering the Severity of the Offence on the Lexical Level: Informant 38, MS-UP.

Strategy	Transcript	F0min	F0max	F0range
IFID	i'm sorry for being [LATE ↘↘#221-113#] /	105 Hz	262.8 Hz	157.9 Hz
MINIMISING THE OFFENSE	but since i'm [USUSALLY late ↗↗#161-307# ↘↘#307-119#] / you kinda should [have EXPECTED it [○ creaky voice]]	104 Hz	306.6 Hz	202.7 Hz
IFID	[but [○ not visible] (0.41) i am [STILL sorry [○ creaky voice]] **	114.8 Hz	155.7 Hz	40.9 Hz
Min/Max/Mean		104 Hz	306.6 Hz	133.8 Hz

Approaching an explanation for the strategies and their formulations in this apology, the line of argument made here poses that the act that occurred prior to the apology can also be perceived as a complaint by the offender, which is yet another expressive speech act. Here, the utterance which preceded the apology made the Speaker of the apology aware that the Hearer missed the movie because of her (i.e., the offender's) mistake. In a study on apologies performed as a response to such complaints (Trosborg 1987), it has been reasoned that the reaction to a complaint does not necessarily have to be an apology. It can also represent an utterance that indicates that the Speaker does not accept that the event happened at all. This can be done either by denying it explicitly or implicitly. However, the person can also decide to accept that the event occurred. In this case, they can resort to justifying themselves or blaming it on someone or something else, even on

the complainer. In the latter case, this is the strategy also seen as an ATTACK, which is the most direct form of a reaction (Trosborg 1987: 149). Of course, BLAME THE HEARER is also a sub-strategy put forward in the CCSARP coding manual itself as one way of producing the strategy of REFUSAL TO ACKNOWLEDGE GUILT (Blum-Kulka et al. 1989b: 292). However, the distribution of different ways of not taking on responsibility into the different categories proposed by Trosborg (1987) is considered as illuminating for the in-depth discussion of this example and others to follow.

In the example above, the participant clarified that she did not accept the complaint, although the event did occur. Therefore, she used the strategy of EXPLICIT DENIAL. This strategy was accompanied by the prosodic attributes of the usage of CREAKY voice in two of the three strategies. Note that the first IFID, which was followed by the *but*-clause, was instead produced with a noticeable FALLING intonation from 221 Hz to 113 Hz, here transcribed as STEPPING-DOWN. Both of these attributes – low pitch, and FALLING intonation – have thus far been associated with the delivery of sincerity. Given that the strategy in addition to the two IFIDs was to lower the severity of the offence, it stands to reason that lowering the perceived sincerity, for example, by resorting to a FALL-RISE intonation of the IFID in addition, was simply not intended here. In fact, the respondent may well have been sincere about the apology and aimed to express this in its delivery.

However, she simultaneously stressed that she was reacting to an offence of lower severity than the one for which she was blamed for by the Hearer. In the Speaker's eye, the Hearer was partially to blame for what happened. This raises questions on the interconnection between severity and sincerity. The participant may have seen her apology as perfectly appropriate to the situation, given her sense of a lower level of severity of her committed offence. However, if the Hearer does not agree with the argument made by MINIMISING THE DEGREE OF THE OFFENCE and still perceives it as an offence of relatively higher severity, then the Hearer could consequently perceive the apology as inappropriate and possibly also insincere, given their close connection.

The argument made above connects to a second example (see Example 17), in which the respondent again resorted to denial. In this example, the informant blamed the wrongdoing on the Hearer completely. It was therefore in line with the strategy of BLAMING THE HEARER as it was introduced in the CCSARP (Blum-Kulka et al. 1989b: 292). This was achieved in exactly this form of BLAMING THE HEARER by a denial of responsibility.

Example 17. Not Taking on Responsibility for the Offence: Informant 10, MS-BD.

Strategy	Transcript	F0Min	F0Max	**F0Range**
MINIMISING THE OFFENCE	i could have sworn that was the right [BUS ↗#158-203#↘#203-185#] (1.0)	110.5 Hz	269.4 Hz	**158.8 Hz**
OTHER	[i don't KNOW [○ creaky voice]] (0.35)	100.3 Hz	227 Hz	**126.7 Hz**
BLAMING THE HEARER	must have gotten the wrong one and not what i [TOLD you to ↗↗#158-275#↘↘#275-135#↗#135-202#] **	108.2 Hz	274.7 Hz	**166.6 Hz**
Min/Max/Mean	-	100.3 Hz	274.7 Hz	**150.7 Hz**

In addition, this is an example that qualifies as DISTRACTING FROM THE OFFENCE (a strategy that was not introduced thus far) in the form of a QUERY PRECONDITION (Blum-Kulka et al. 1989b: 293). A QUERY PRECONDITION means that "the speaker attempts to throw doubt on the modalities of a previous arrangement which he or she broke" (Blum-Kulka et al. 1989b: 293). In fact, Example 17 represents the only data point in the entire study in which the utterance did, strictly speaking, not qualify as an apology to begin with. This utterance in question was produced for the situation of MS-BD. Participant 10 explicitly expressed doubt that it was her fault and openly told the Hearer that it must have been her mistake; afterward, she did not produce any of the strategies from the CCSARP that qualify the utterance as an apology. This lack of even presenting the illocution of an apology in a manner that would achieve the illocution meant to be elicited makes this 'apology' a marked instance on the pragmatic level in this study. Therefore, it is especially necessary to analyse its prosodic features and how they were employed.

With an overall F0mean value of 150.7 Hz, presented at the bottom of Example 17, the average pitch of this apology was significantly different than that of the other three apologies produced by this participant. This not only includes the baseline apology for LS-BB, which was produced at a pitch height of 38.9 Hz, on average, it also adheres to HS-SC with 58.6 Hz as well as the apology for MS-UP, with an average pitch of 57.7 Hz. Furthermore, the pitch range employed here was considerably wider than in the other three utterances elicited from Informant 10. This, as stated in Chapter 4.2.2.3, made it an outlier in the boxplots in Figure 9. While the mean range for the entire apology was 150 Hz, it was between 38 Hz and 58 Hz for the other apologies produced by this participant. These results can nicely be united with the corresponding intonation contour. The strategy in medial position was produced with a CREAKY voice, making it impossible to ascertain the intonation contour. The other two strategies were, however, produced with a RISE-FALL intonation. This delivery allowed the participant the ability to use a wide pitch range, varying by more than 100 Hz within a single intonation phrase. Such a finding is interesting because this RISE-FALL intonation with

a wide pitch range was accordingly utilised for the two strategies of MINIMISING THE OFFENCE and BLAMING THE HEARER.

In the literature, it has been suggested that a noticeable FALL of this sort can also convey "an accusation or authoritative imperative" (Bolinger 1986: 208). Indeed, if this is the case, it would further stress that a wider pitch range is not polite *per se* in any context (Nadeu & Prieto 2011: 841). The association of RISE-FALL with attributes such as accusation and authority are seen here as possibilities for the underlying Speaker meaning, in addition to the other underlying messages suggested for this contour, especially that of exclamation and surprise. In fact, this finding could actually be connected to previous statements regarding sarcasm feeding off of emotions such as surprise (Culpeper 2005:61). If the Speaker was merely aiming for an attribute such as mock politeness, then a highly marked usage of intonation would be in order (cf. Aijmer 2019: 264). Such an underlying message could therefore have invoked the usage of a noticeable surprise/redundancy contour (Sag & Libermann 1975). In either case, the pragmatic formulation as well as the intonation make this example a marked delivery of the individual strategies for the dataset in this study.

Example 18 presents yet another apology for MS-BD in which the respondent decided to minimise the severity of the offence by blaming the offence on something outside of their own doing. Specifically, the lexical item *either* in the strategy of MINIMISING THE DEGREE OF THE OFFENCE adds an interesting nuance to the message.

Example 18. MINIMISING THE DEGREE OF THE OFFENCE: Informant 3, MS-BD.

Strategy	Transcript	F0mean	F0min	F0max	F0range
IFID	[SORRY ↘#302-266#] ↔	276 Hz	266.1 Hz	302.4 Hz	36.3 Hz
TAKING ON RESPONSIBILITY	[my BAD ↘#266-202#] (0.16)	233.9 Hz	202.2 Hz	266.3 Hz	64.1 Hz
MINIMISING THE OFFENCE	i don't really use [the BUSES either [○ other]] **	224.9 Hz	173.8 Hz	254.8 Hz	81 Hz
	-	225.2 Hz	173.8 Hz	302.4 Hz	60.5 Hz

Notably, as something that was also visible in the other examples in this section, this apology was produced without an EXCLAMATION. Furthermore, the IFID was produced without an intensifier and in a way that has previously been described as informal and ritualistic (Aijmer 1996). Accordingly, this composition fits the frame for the IFID formulation as the simple *sorry* proposed by Aijmer (1996: 120). Thus far, this second frame was not applicable to the data at hand (cf. Table 3) because the formulation which invokes it was barely present. According to said frame for *sorry* as the IFID formulation, this formula is typically produced in apologies that are disarming and therefore are not necessarily a part of a remedial interchange; they are used in cases which Deutschmann (2003) would call FACE ATTACK apologies. This was not the

illocution of the speech act here, as it was a reaction to a previously committed offence and not one that would happen immediately after the production of the apology.

As regards the prosody ascribed to this frame, stereotypically, *sorry* would be performed with a RISING tone – although according to the overall picture drawn in the literature, one might assume a FALL-RISE intonation, in line with the proposal in Chapter 2.3.3, where it was proclaimed as the neutral variant in LS offences with a RITUALISTIC character, such as TALK OFFENCES. In direct opposition to this expectation, the informant here, however, employed a FALLING intonation contour to this IFID. Notably, when comparing this contour to the FALLING contour found in TAKING ON RESPONSIBILITY, the one produced for the IFID is not nearly as noticeable. As previously proposed, in accordance with this assumption, the noticeably wide pitch range employed in these contours has the potential of strengthening the underlying message. This cannot be assumed to be the case for the IFID here.

Along the lines of the argument made for this example, it can be established that the informant did not employ an IFID formulation on the pragmatic level which would have been expected in an apology for an offence of this severity. However, the participant does, via her formulation of an active MINIMISATION OF THE OFFENCE, lower this severity and hence may have perceived this formulation as adequate. Again, it could be argued that the informant wanted to convey – by employing the FALLING intonation contour – that she was sincere about her apology, although only for the lowered severity of the offence she established. In cases in which the Hearer does not agree with this newly established severity level, the apology could nevertheless come across as insincere. Moreover, the way in which responsibility was claimed in the apology in Example 18 stresses this notion of a more ritualistic nature which was rather expected with LS offences. Although EXPRESSING SELF-BLAME has been established as the most efficient way of TAKING ON RESPONSIBILITY, the formulation chosen in this example was casual and highly formulaic, which presumably, did not stress an underlying sense of sincerity in this message to an extent to which it would have been possible.

Example 19 displays a final special case of relevance for the discussion of the impact of the severity of the offence on the pragmatic and prosodic realisations of apologies. Here, the participant produced an EXCLAMATION (though with a unique formulation) and also internally intensified the IFID. Both of these features were found often for IFIDs in MS-BD apologies and were noted to increase in frequency with increasing severity of the offence. However, the expression categorised as the IFID here could actually constitute what Lakoff (2001: 201) calls an *expression of sympathy*. It can be disputed whether it expresses remorse – as is necessary for an apology to be felicitous.

Example 19. MINIMISING THE DEGREE OF THE OFFENCE: Informant 18, MS-BD.

Strategy	Transcript	F0mean	F0min	F0max	F0range
EXCLAMATION	[WOW ↘#281-181#] /	201.8 Hz	180.8 Hz	280.5 Hz	99.8 Hz
IFID	i'm so sorry [to HEAR that ↘#206-163#] (0.12)	184.4 Hz	126.1 Hz	222.1 Hz	96 Hz
MINIMISING THE OFFENCE	can you tell me which bus [NUMber ↘#294-262#↗#262-270#] (0.61) you rode to the [movie THEATRE =#245#] (0.16)	218.4 Hz	166.7 Hz	289.7 Hz	122.9 Hz
HESITATION	[ehm ↗#157-179#=#174#] (0.46)	173.1 Hz	157.3 Hz	178.9 Hz	21.7 Hz
MINIMISING THE OFFENCE	just wanna make [SURE ↘#217-168#=#170#] (0.9) of the information i [GAVE you [○ creaky voice]] **	170.2 Hz	121 Hz	216.6 Hz	95.6 Hz

While IFIDs frequently contained expressions such as *I'm sorry you missed the movie*, the Speaker here ensured that the Hearer knew that she was actually sorry to hear that something went wrong with her friend's plans. This does not – at least not explicitly – involve the part the Speaker played in this previously experienced inconvenience. Even if it qualified as the IFID of an apology, though, these two strategies were followed by a long stretch of talk, here categorised as a two-part strategy of MINIMISING THE DEGREE OF THE OFFENCE. In it, the Speaker openly shared her doubt regarding who was to blame for the past event. Though this could qualify as an indirect way of accepting the blame, it was clear that the informant was not willing to simply accept responsibility or deliver an apology appropriate to the level of severity. Instead, she decided to first verify that the offence had occurred. Prosodically, it is striking that the majority of these numerous strategies end in a FALLING contour or in a CREAK. Additionally noteworthy is that the entire apology was produced with a remarkably slower speech rate than the LS baseline as well as the other apologies produced by the informant. The average speech rate was 3.5 syllables per second for this apology for the MS-BD situation compared to 4.5 for LS-NP, 4 for LS-BB and 4.5 for HS-HD. Though these peculiarities found for some of the prosodic dimensions are difficult to interpret, this apology was marked not only on the pragmatic level, but also on the prosodic level for many of the dimensions highlighted in this study.

To conclude, it can at least qualitatively be established that an informant downtoning the offence often led to interesting phenomena on the pragmatic and prosodic levels. Nevertheless, in some of the cases, the intonation contour applied to the IFID did not directly connect to the presumably prototypical way of expressing that one is less sincere about the apology. This could have been achieved by resorting to a FALL-RISE intonation. However, the underlying risk is that the apology could be unsuccessful, considering that the perspective of the Hearer on the matter of appropriateness is essential (Trosborg 1987: 148). Whether these formulations chosen actually influence the Hearer's perception of sincerity or insincerity cannot be determined without an additional perception study. However, given how closely severity and sincerity have

been argued to be connected in the literature and in this study, such an effect is likely. The markedness of many of the presented apologies with MINIMISING DEGREE OF THE OFFENCE strengthens its likelihood.

5.2.4 The role of sincerity and the apologies for MS offences

What has not been covered regarding findings for severity and sincerity so far were those findings that illuminate the possible impact of the formulation of MS-UP's situational description on the resulting apologies. This formulation of the situational context was noted to cause a difference in quality in the underlying level of sincerity (cf. Chapter 3.1.3). Therefore, the argument now leads to a closer examination of MS-BD and MS-UP. It discusses their formal and prosodic mark-ups from a quantitative viewpoint as well as the role of underlying sincerity when the matter of being notoriously unpunctual is in focus.

As noted, for many factors investigated, the apologies produced in MS-UP behaved differently than those in other situations and in its MS counterpart. The situations in MS-BD and MS-UP were judged to have the exact same severity of the offence in the perception pre-study. Therefore, discussing these differences which were nevertheless generated in the respondent's output is not only intriguing, but also necessary.

Table 40. Admitting to a Recurring Offence in MS-UP.

Informants	Strategy	Transcript
29	IFID	i'm sorry i was [LATE **again** ↗#191-257#↘#231-196#↗ #196-243#] (0.51)
49	IFID	i'm SORRY i made you WAIT for me [**agai:n** =#170#] (0.85)
10	MINIMISING	you know how i am - **i'm always** [LATE ↗#154-180#↘#180-160#] (0.81)
38	MINIMISING	but since **i'm [USUSALLY** late ↗↗#161-307#↘↘#307-119#] / you kinda should [have EXPECTED it [○ creaky voice]]
63	PROMISE OF FORBEARANCE	i'm **trying** to [WORK on this ↘#234-193#] (0.45)

It was established that, based on the situational context in which the apologies for MS-UP were produced, the argument for, at least, a different quality of underlying sincerity can be made (Chapter 3.1.3). Strictly speaking, the lexical item in MS-UP that provoked this discussion of sincerity is the specification that the Speaker is notoriously unpunctual.

It cannot be guaranteed that all of the informants registered this important information. However, one reassuring finding is that, on several occasions, informants incorporated this contextual detail into their apology (see Table 40). The upcoming sections illustrate the impact that this re-occurring nature of the offence had on the apology, which can be retraced on the pragmatic and prosodic levels.

5.2.4.1 Pragmatic level

This part of the discussion starts with the overall composition of the strategies of apologies produced for this situation. The first crucial finding is that the IFID was, on average, present in all of the apologies for MS-UP. For many, it occurred more than once, with a ratio of 1.4 IFIDs per apology. This tendency for more than one IFID per apology is similar to its MS counterpart, though with a slightly lower ratio of 1.2 IFIDs per apology. This finding means that the apologies for the two MS situations featured the highest average number of IFIDs per apology. These numbers are initial evidence that the presumed complexity in the Speaker's underlying attitude had no direct impact on the delivery of this one strategy, at least not regarding its actual occurrence in the apology in general.

Regarding the quality of this strategy, however, 50% of the MS-UP IFIDs did not include an intensification. IFIDs of the form *be sorry* without intensifiers have been established as the neutral formulation (Aijmer 1996: 82; Ogiermann 2009) and were established to decrease in frequency from low to high severity offences. This un-intensified variant was only found in 37.3% of the IFIDs in MS-BD. Accordingly, while a need to formulate the IFID itself was present in MS-UP, this was not equally true for the production of intensifications of the remorse felt.

Another aspect of formulation in which the MS-UP apologies differed from those in the MS-BD situation was detected in the overall form of the IFID. The MS apologies were the only ones in which the informants asked for forgiveness (i.e., they produced IFIDs of the form *forgive me*). This was, however, performed with markedly higher frequencies for MS-UP (2% of IFIDs in MS-BD and 9.3% in MS-UP). Such a finding is notable, because this formulation is one of the rarest formulations of IFIDs in this study as well as according to the previous literature. In Deutschmann's (2003) British English data, he has found that of 3,070 apologies, only 15 contained this formulation (0.5%). In the New Zealand English data in Holmes' (1990) study, this form accounted for 18 of the 252 IFIDs, or 7%. In the British English data elicited by Ogiermann (2009), she has found that only three of the 645 IFIDs were of this kind (0.4%). Hence, the special circumstance in this situation could certainly explain the numbers found here. Given that the informant has committed the offence before, directly asking for forgiveness was apparently considered an appropriate formulation to achieve the perlocution of the apology by several of the informants.

The next feature to investigate is the second manner of intensifying the apology: the usage of EXCLAMATIONS. It is of interest to see whether the decline in internal intensifications of the IFID in MS-UP can be detected in a correspondingly lower frequency with which EXCLAMATIONS were employed. As a reminder, however, the most remarkable difference between MS-UP and MS-BD (and all other situations) was

established in that there were considerably fewer EXCLAMATIONS produced for MS-UP – only four in total. One might feel tempted to argue that the informants did not decide to produce an EXCLAMATION to intensify the apology precisely because of the decrease in sincerity. However, this interpretation is overly simplistic because, not only is the person notoriously unpunctual, but she also entered a situation in which she is fully aware that she is late. In other words, she does not learn that she committed an offence upon arrival, nor can she pretend that this was the case. Surprise is, however, a message intrinsic to EXCLAMATIONS (Deutschmann 2003: 45). Ogiermann (2009: 124) has also posited that "[o]bviously, exclamations are unlikely to be used in situations in which the apology is simultaneously a confession". Such a confession-like character could also be the case for the apologies in this situation; 22.6% of the IFIDs in MS-UP included the name of the offence, for example, in the form of *I'm sorry I was late.* Also, in accordance with Aijmer (2019: 264), utilising EXCLAMATIONS in this context, in which one is not surprised by the offence, might even be inappropriate and come across as sarcastic (see also the argument on EXCLAMATIONS in Chapter 5.3). Accordingly, this remarkable finding for the lack of EXCLAMATIONS cannot convincingly be argued to be impacted by the underlying degree of sincerity. However, it reveals that the adaptation to the situational circumstance was incorporated into the apology. This occurred despite the fact that, due to the instrument used, the informants were confronted with this situation only at the time they read the DCT situation and formulated an answer immediately thereafter.

As discussed qualitatively in the previous section, the apologies for the two MS situations were produced with the highest frequency of downgrading strategies. In fact, they contained the only occurrences of MINIMISING THE DEGREE OF THE OFFENCE (MS-BD: five occurrences, MS-UP: two occurrences) in all apologies in all situations. Additionally, EXPLANATIONS OR ACCOUNTS occurred four times in MS-UP (though never in MS-BD). For these kinds of formulations, it has been noted that they also downgrade the offence by blaming external influences (Davies et al. 2007: 48). Arguably, they can also adhere to the positive face of the Hearer and clarify that the offence was not avoidable. This second function is of special interest for apologies made for offences such as the one in MS-UP. It has been explicitly stated in the literature that offering an explanation when having wasted someone else's time is expected in most Western cultures (Limberg 2016: 714). However, not only were there low numbers to begin with, of the instances of EXPLANATION OR ACCOUNT in MS-UP, two were produced by the same Informant (Informant 4). Therefore, a centrality of this strategy in an offence against another person's time cannot be directly confirmed – at least not when the categorisation of a strategy as an EXPLANATION OR ACCOUNT presupposes the blaming of external influences. However, the named complications for this strategy in the CCSARP and further suggestions of overlapping functions already invoked in previous parts were equally present here. Again, some

utterances categorised as TAKING ON RESPONSIBILITY in the CCSARP coding scheme could be categorised as EXPLANATION, JUSTIFICATION, ACCOUNT or other related strategies (cf. Deutschmann 2003; Ogiermann 2015; Ogiermann 2009; Scott & Lyman 1968). Therefore, the upcoming discussion of TAKING ON RESPONSIBILITY plays into the argument made thus far for EXPLANATION OR ACCOUNT, at least in parts.

For TAKING ON RESPONSIBILITY, another notable finding was made. It occurred almost twice as often in MS-UP compared to MS-BD. This was unexpected because this strategy is, on the one hand, known to have the potential to strengthen the message of an apology (Vollmer & Olshtain 1989: 211). On the other hand, however, it was discussed previously that apologies in LS situations were produced with this strategy particularly often, while its frequency of occurrence decreased toward HS offence apologies. Accordingly, it can tentatively be suggested that the special circumstances presented by MS-UP made the Speakers resort to a formulation of the apology which is closer to that found for apologies on the LS level than its MS counterpart.

Furthermore, the frequency of TAKING ON RESPONSIBILITY was similar to the LS baseline as were the formulations and the sub-categories. For MS-UP, 30% of the strategies of TAKING ON RESPONSIBILITY claimed SELF-DEFICIENCY, which was, yet again, the sub-strategy that was otherwise found most often for the LS apologies. Additionally, however, MS-UP revealed another 37.5% of TAKING ON RESPONSIBILITY formulated as ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY. This strategy was rare in any of the other situations. The highest number of occurrences in addition to this was found in the apologies for LS-NP (14.8%) and MS-BD (10.2%), where both numbers were markedly smaller. In the taxonomy for the different realisations of TAKING ON RESPONSIBILITY in the CCSARP coding scheme (Blum-Kulka et al. 1989b: 291-292), ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY presents one of the lowest degrees of actually assuming responsibility for the offence. In fact, it occurs immediately before REFUSAL TO ACKNOWLEDGE GUILT. Therefore, this can be seen as evidence that the informant was willing to TAKE ON RESPONSIBILITY, while the degree to which the responsibility was accepted is limited in nature.

Finally, another point must be made about the high number of occurrences of PROMISE OF FORBEARANCE in MS-UP (n = 10) compared to the majority of other situations, especially MS-BD. This strategy was otherwise rare, except for the LS-BB situation, for reasons previously outlined. It stresses the informant's awareness that she needed to ensure that she would do better next time; given her record, it is a realistic possibility that the offence will be repeated in the future. However, in four of those promises, the informants expressed a level of uncertainty that they could actually

uphold their word. Consequently, the informants promised that they would try to be on time the next time they wanted to meet (see also Line 5 in Table 40).

This, along with numerous other points provided thus far, invokes the argument of situational appropriateness. Given the close connection between severity and sincerity, this discussion of the data and the issues of the underlying level of sincerity must encompass another perspective. Some features resemble those found in apologies on the LS level; however, this should not be automatically interpreted as evidence that the Speaker is insincere regarding their remorse, nor can it be valued as expressing an apology which does not contain the appropriate markers for the severity of the offence, at least not with certainty. The opposite is equally possible and advocated here. In a situation in which one apologises for the same offence one has repeatedly committed in the past, these formulations could, in fact, be appropriate; they could follow the lines of what Locher and Watts (2005) call *politic behaviour*. This suggests that the respondent deliberately used formulations that decrease the underlying message of the strategy and that the resulting apology would be perceived as unmarked in the given situation. In turn, given that the Speaker has committed this offence not for the first time, utilising strategies that imply the same level of sincerity could be perceived as overpolite or even sarcastic. This relates to the discussion for EXCLAMATIONS, which can also be used to convey mock politeness (Aijmer 2019: 264). EXCLAMATIONS, although functioning as intensifiers of the underlying message, do not fit the situational context. As a further point, generally, the PROMISE OF FORBEARANCE strengthens the illocution of the apology by causing an even higher negative face threat to the Speaker (i.e., by deliberately performing a commissive speech act). However, promising something that the participant has not been able to perform in the past without openly stating that a risk of violating the promise exists could come across as insincere as well. Therefore, a promise to try to be better could be the ideal solution to this dilemma, despite this relativisation actually downgrading the underlying message of this strategy.

In summary, employing the same strategies in MS-UP as in MS-BD could be perceived as inappropriate in an MS-UP-like situation. It could suggest that the Speaker is not aware that their past and present actions already cast doubt on their sincerity. Not admitting to this could make their current standing in the Hearer's eyes additionally problematic. Whether this interpretation is correct can only be convincingly determined in a perception study. It could be revealing to analyse appropriateness ratings for the MS-UP apologies produced here compared to apologies which do not contain the mentioned adjustments and instead more closely resemble features from the MS-BD apologies. In any case, it indicates that higher severity does not automatically lead to greater emphasis on sincerity. Certain adjustments of this attitude's underlying strength can be made, if this is necessary in the situation. This would provide sincerity and its expressions a strategic character of their own. The points offered thus far are further

discussed based on the impact on the prosodic level, which was so far argued to be even more closely related to the underlying message of sincerity.

5.2.4.2 Prosodic level

The final step in this argument elucidates the differences between MS-BD and MS-UP on the level of prosody. It discusses whether the argument can be confirmed for parallels between the formulation of MS-UP apologies and those of lower severity, rather than its MS counterpart. In this case, fewer FALLING intonation contours and a higher frequency of FALL-RISE would be observed in the IFIDs of MS-UP compared to MS-BD. This was deemed possible especially because of Lindström's (1976: 194-195) claim that utilising a FALLING intonation when the situational circumstances do not warrant it can be perceived as ironic or at least inappropriate, a claim that has been seconded by Aijmer (2019: 268).

Firstly, FALLING intonation was the most commonly chosen contour at the end of all strategies for both MS situations and also for the IFID on its own. A higher frequency in occurrence of FALL-RISE in MS-UP compared to MS-BD cannot be confirmed; in fact, it was rarer in MS-UP than in MS-BD. Furthermore, the number of FALL-RISE contours for MS-UP was rather comparable to the low numbers which were found for the two HS situations. Therefore, tentatively, an impact of the situational circumstances in MS-UP did not cause a higher frequency of the application of intonation of the IFID which is typically associated with a RITUALISTIC apology.

However, when broadening the view slightly, MS-UP received the highest number of strategies produced with a LEVEL intonation for all strategies and STRATEGIES PROPER, followed only by LS-NP. This was also true for LEVEL intonation contours employed in the IFIDs, where it was the only situation that featured more than 10% of the IFIDs produced with this contour. Given the small number and the small difference compared to the other situations, this finding may also be coincidental. Overall, though, finding additional instances of LEVEL intonation is intriguing. LEVEL intonation suggests a more monotonous application of pitch, which was otherwise mostly found in HESITATIONS and was proposed to express less emotional involvement (Lindsey 1981: 17-18).

There are certain limitations to this claim (see Chapter 2.2.2), and this finding could also be connected to the lack of surprise regarding the offence. This would then include the need to display acknowledgement of one's own wrongdoing instead of acting surprised or shocked on the prosodic level. A display of surprise could, as argued, further offend the other person's face, indicating that the Speaker has no self-awareness for their own wrongdoing. In line with this argument, though a tentative result only, the F0mean% values obtained in the apologies on the MS level suggest that MS-UP apologies were produced with a lower average pitch than those for MS-BD compared to

the LS baseline. In fact, the apologies for MS-UP were produced with the lowest average F0mean% of all situations, which was -5.6% lower. This could be further cautious evidence for the argument regarding the specific underlying emotional and attitudinal attributes.

Regarding the speech rate with which the apologies were produced, the speech rate of the IFID in MS-UP was remarkable. There were only two situations in which the IFID was uttered in a faster manner in syllables per second than the overall apology in which they occurred. These two situations were MS-BD with a +3.8% faster talking speed and MS-UP, with +11.6%, potentially making an apology sound less heartfelt (Lakoff 2001: 204). All of the other apologies, the LS as well as HS ones, displayed a negative deviation of the IFID from the apologies' mean, with HS-SC IFIDs presenting -10.4% and HS-HD -5.2% slower speech rate.[58] These slower speech rates applied to the IFID were previously suggested to have a positive impact on the delivery of the underlying sincerity in one's remorse.

5.3 EXCLAMATIONS and Their Special Function in Apologies

As mentioned, one of the factors that makes the strategy of EXCLAMATION crucial for work on the interface of pragmatics and prosody is its role in the delivery of emotions in this expressive speech act. Chapter 2.5.1 proposed that EXCLAMATIONS can fulfil the function of expressing surprise, while simultaneously toning down the responsibility for the offence that preceded the apology (Deutschmann 2003: 54). While the majority of the findings for the EXCLAMATIONS were previously discussed with a focus on the pragmatic side, they are now discussed regarding their presentation on the prosodic level.

As proposed in the Theory part, when EXCLAMATIONS are produced as part of bad news, they are typically delivered with a low pitch level, a more static F0range, a longer duration of vowel sounds that results in a lower speech rate and an "often breathy or creaky" voice quality (Freese & Maynard 1998: 198). This attribute of low pitch in EXCLAMATIONS has also been found in a study by Syrdal and Jun Kim (2008). Additionally, a possible role of the usage of the surprise/redundancy contour (Sag & Liberman 1975) – what was here coded as RISE-FALL – and its role in the delivery of EXCLAMATIONS was previously discussed.

First off, the strategy itself occurred in initial position with remarkable consistency. The only exception to this rule needs to be considered for the EXCLAMATIONS produced in HS-SC. In this situation, a higher number of EXCLAMATIONS occurred later in the apology (i.e., in Position 2.4, on average). For those EXCLAMATIONS in later

[58] This is a tendency that was not found for the IFIDs in the apologies for the LS situations compared to those in the HS situation, though.

positions, no correlation with the F0mean value was expected; however, the data revealed a medium correlation of this factor with the F0mean% (correlation of F0mean with position: r_s = -0.04, p = 0.67, and correlation of F0mean% with position: r_s = -0.4, $p < 0.001$). This must be remembered in the following.

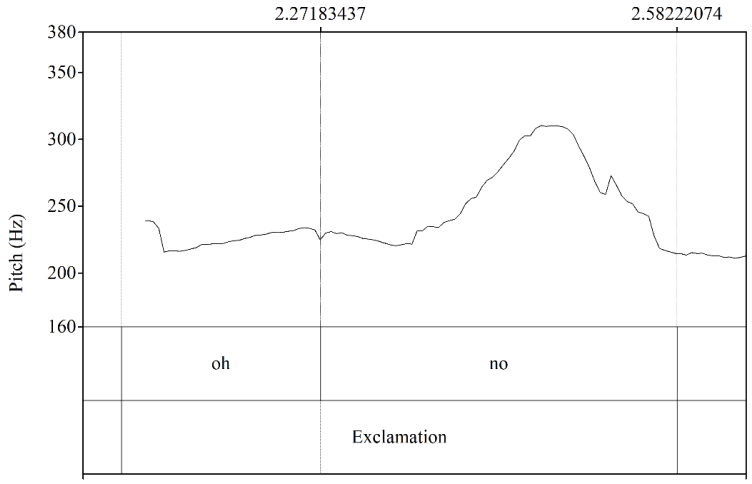
Regarding the average pitch height at which the EXCLAMATIONS were produced, no conclusive results were obtained for possible correlations with the severity values and the actual pitch values in Hz (R = 0.01, p = 0.9). However, a weak negative correlation of the severity of the offence with F0mean% (R = -0.22, p = 0.01) suggests that the higher severity levels actually correlated with a lower positive deviation of the F0mean when compared to the rest of the apology. This was also visible in the F0mean% values for the EXCLAMATIONS presented previously in the form of numerous examples from the data set. However, it should be noted that the HS EXCLAMATIONS were close to the LS-BB EXCLAMATIONS when examining raw numbers (HS-HD: +6.1%, HS-SC: +5.1%, LS-BB: +9%, LS-NP: +12.6%). Those for the two MS situations exhibited a markedly higher deviation of the average pitch from the F0mean for the entire apologies (MS-BD: +16.2%, MS-UP: +15.7%). Although only a possible interpretation, this finding indicates parallels to previous statements about the EXCLAMATIONS in the delivery of bad news. When the offences increase in severity, one might say that the news that one has to react to a committed offence also becomes more heavily weighted. Hence, an apology that does not include news deemed as positive could produce a lower pitch height in the EXCLAMATIONS. In fact, the aim could be to ensure that the EXCLAMATION does not convey any evidence for inherent excitement (cf. also Freese & Maynard's 1998 claims made about the prosody of the delivery of good news).

This notion that keeping excitement out of the voice leads to specific attributes in the delivery can be supported by the overall narrow F0range with which EXCLAMATIONS were produced compared to the rest of the apology. Indeed, the finding for MS-UP is intriguing. As a reminder, for this special situation, EXCLAMATIONS were produced with the strongest negative deviation from the overall average range employed across all situations, with a -70% narrower range compared to the rest of the apology. Furthermore, they were produced with a high pitch, constituting the highest F0mean% value for EXCLAMATIONS within the apology, together with MS-BD (see above). Combining this with the narrow pitch range illustrates that there was a continuously high pitch utilised without considerable FALLING movements for the EXCLAMATIONS in MS-UP.

Discussing the intonation contours in the EXCLAMATIONS along with what Sag and Libermann (1975) have proposed to be the surprise/redundancy contour is one of the main points addressed in this sub-chapter. In accordance with the prosodic attributes advanced by these researchers, there was a certain expectation for a high frequency of

the RISE-FALL intonation contour for this strategy. Notably, Sag and Liberman (1975) have applied their concept of the surprise/redundancy contour to general utterances meant to function as exclamations. It therefore does not exclusively refer to EXCLAMATIONS as they are categorised in this study. This must be remembered. Nevertheless, as Table 22 reveals, the contour of RISE-FALL was found often in EXCLAMATIONS, while it was rarely utilised for any of the other strategies produced in the apologies. Consequently, this finding is worth highlighting in more detail. The following example in Intonation Contour 5 illustrates an instance of what was described as a typical formulation for an EXCLAMATION in LS-BB.

Intonation Contour 5. Surprise Contour in EXCLAMATIONS: Informant 46, LS-BB.



The contour proposed in previous research and inserted as a stylised contour in Figure 4 was found as a RISING contour toward the strategy's final intonation contour, followed by a STEPPING-DOWN pitch movement. Due to the coding process performed in this study, RISING contours leading toward this pattern are not necessarily required to appear in the part that is systematically categorised; these instances could have been simply categorised as FALL in cases where the RISING tendency preceded this categorised part of the EXCLAMATION. Due to this possibility, all of the FALLING contours in EXCLAMATIONS identified (which was the most commonly found contour for this strategy) were investigated again regarding an initial RISE leading toward the final FALL. Of the 51 instances coded as FALLING, there were nine for which this FALLING contour was preceded by a RISE. Hence, they also mirrored Sag and Liberman's (1975) proposal of typicality for the prosodic delivery of surprise and further supported the presence of FALL-RISE for this strategy. The overall finding of a high occurrence of RISE-FALL therefore strengthens the claim of a connection between EXCLAMATION and the delivery of surprise.

To add further to this discussion, the few EXCLAMATIONS in MS-UP and their prosodic attributes give additional insights. In the contours found in the four

EXCLAMATIONS produced for MS-UP, only one ended in a RISE-FALL, one in a FALL, and two were categorised as LEVEL intonations, which were otherwise relatively rare for EXCLAMATIONS. The aforementioned possibility – that this was performed deliberately to tone down the message of surprise, knowing that it was not appropriate in a situation in which the offence was already known to the Speaker – is therefore further strengthened. Producing EXCLAMATIONS instead only to express emotional involvement and possibly a LACK OF INTENT overall seems likely to be the underlying message to be conveyed.

Similarly, as a final note on the matter of intonation contours, it is reasonable that those EXCLAMATIONS which occurred at the beginning of an utterance were deemed more likely to convey surprise; they were the most immediate reaction to the news learned about one's previous wrongdoing. To determine whether any evidence for this can be found on the prosodic level, all EXCLAMATIONS were separated into two categories in Table 41. The first line displays the intonation contours for those EXCLAMATIONS that occurred in initial positions, which were the vast majority (n = 116), and the second illustrates the contours for EXCLAMATIONS that occurred later in the apology (n = 26). The small numbers obtained for EXCLAMATIONS in later positions may decrease the reliability of this data. Nevertheless, fewer of them were produced with the RISE-FALL contour and the FALL contour than those in initial positions.

Table 41. Intonation Contours of EXCLAMATIONS in First and Later Positions.

Position	R-F	F	L	R	F-R	Not vis	Creak	Unclear	Other
Position 1 (n = 116)	**24.1%**	**37.1%**	9.5%	5.2%	5.2%	**0.9%**	**2.6%**	0%	15.5%
Position 2+ (n = 26)	**11.5%**	**23.1%**	11.5%	7.7%	0%	**11.5%**	**11.5%**	11.5%	11.5%

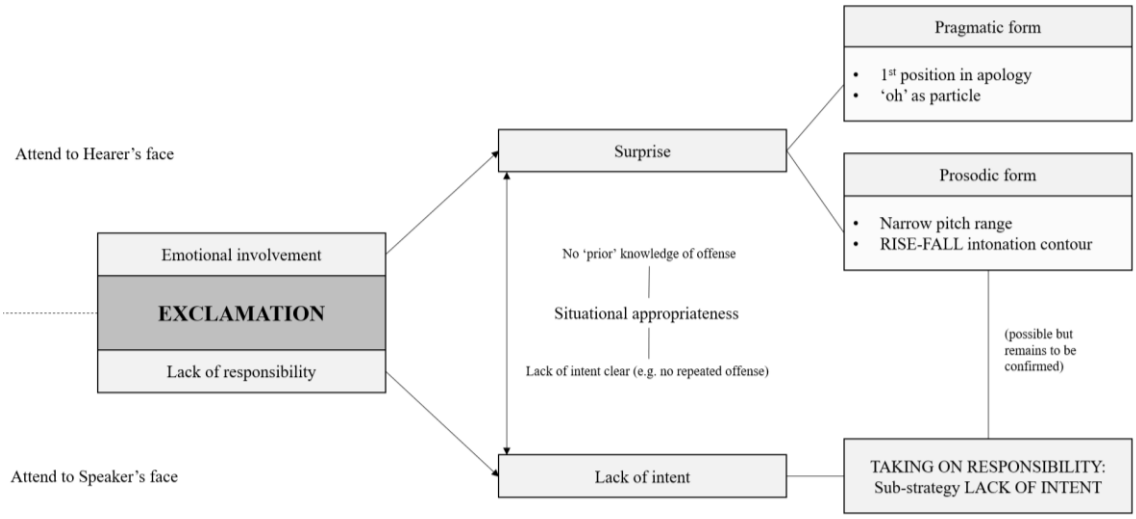
Note: R-F: RISE-FALL; F: FALL; L: LEVEL; R: RISE; F-R: FALL-RISE; Not vis: intonation contour was not visible

Additionally noteworthy is the number of EXCLAMATIONS in later positions which were produced with a CREAKY voice. These rarely occurred in initial positions, which further supports the assumption that their underlying emotions could be different in nature. The transcripts of all EXCLAMATIONS in later positions sorted by situation can be found in Appendix A.a.i.

Finally and as a summary, Figure 24 offers an overview of the functions of EXCLAMATIONS and how they work together. Furthermore, it is an extension to the model presented in Figure 21 which dealt with the importance of EXCLAMATIONS in apologies for offences of high severity and with potential legal repercussions. Visualised in Figure 24 are the two underlying messages conveyed via the utterance of an EXCLAMATION in apologies: expressing emotional involvement and stressing a lack of intent. The emotional involvement generally expressed by an EXCLAMATION may extend beyond this single feeling, which is why surprise is here only noted as the

emotion that is the focus of the current discussion. Notably, LACK OF INTENT is expressed via the surprise toward the previous offence. It therefore saves the Speaker's face, as it is meant to downgrade the severity of the offence. Signalling LACK OF INTENT was likely chosen simply by formulating an EXCLAMATION, without needing to produce it in a certain way on the pragmatic or prosodic side. However, this was different for the emotional involvement expressed by surprise and the necessity of the prosodic level to convey this underlying message. Furthermore, as included in the model, between surprise and LACK OF INTENT, the expression chosen on both the pragmatic and the prosodic level, must be appropriate to the situation.

Figure 24. Overview of Function(s) of EXCLAMATIONS.



In those cases in which the emotion of surprise was beneficial, the participants utilised the EXCLAMATION in first position in the apology. The majority of the EXCLAMATIONS included not only the EXCLAMATION TERM, but also, and sometimes exclusively, the EXCLAMATION PARTICLE *oh*. Additionally, the production of EXCLAMATIONS in this study offered convincing results for the deliberate display of surprise when it appeared that bad news would follow. EXCLAMATIONS preceding the delivery of good news have been described as being delivered high in the pitch range (Freese & Maynard 1998: 198).

As a final note, the intonation contours applied to the 36 instances of TAKING ON RESPONSIBILITY via LACK OF INTENT were conceivably parallel to EXCLAMATIONS due to the similarities in their underlying messages and, therefore, possibly also in the prosodic attributes with which they are produced. As the tables in Chapter 4.2.2.2 indicate, six of these instances were categorised as ending in a RISE-FALL (16.7%), nine in a FALL (25%), and seven were delivered with a CREAKY voice (19.4%). This lends initial evidence that such a connection could be true;

furthermore, the LACK OF INTENT delivered via this sub-category of TAKING ON RESPONSIBILITY could be further strengthened by delivering it with surprise. There is a considerably higher diversity of TAKING ON RESPONSIBILITY in formulation and length as well as position in the apology compared to EXCLAMATIONS. Therefore, highlighting the prosodic dimensions of pitch range and average pitch between instances of different sub-categories of this strategy was deemed futile at this point. In summary, however, such parallels in the prosodic delivery of TAKING ON RESPONSIBILITY via LACK OF INTENT with that of EXCLAMATIONS further strengthens the assumption of the positive impact of the delivery of surprise in this message of unintentionality. This aspect needs to be investigated systematically in future studies, but it is an intriguing idea and was therefore included in Figure 24.

5.4 Additional Contextual Features with Impact on Pragmatic and Prosodic Realisations

Based on the results gathered from this study, agreement remains strong with the fact that, despite all the strengths of the questionnaire employed for this study,

> [u]ltimately, it may not always be possible to fully determine which situational factors have brought about the use of a particular strategy or politeness formula. […] analyses correlating particular sociolinguistic categories with strategy choice need to carefully examine the responses and look beyond the incorporated factors. (Ogiermann 2018: 236)

This is especially true here for the social variable of age (see Chapter 5.4.3) as well as for interesting variables that are not social in nature. These are instead based on the complex nature of apologies and their interrelation with the factors of emotions and attitudes. Exploring some of these additional underlying factors and effects that were found in the data in the upcoming sections ultimately enabled the holistic nature of this study announced in the Introduction. Further emotional and attitudinal features highlighted here are the impact of the urgency to act (Chapter 5.4.1) caused by the situational description in HS-HD and the question of prosodic means to demonstrate a sense of embarrassment regarding the offence itself (Chapter 5.4.2).

5.4.1 The impact of urgency on the formulation of apologies

Different levels of urgency to act in the situations, based on the formulation of the situational context described in the DCT, were previously mentioned in the resulting apologies, not only for HS-HD. For example, as previously discussed in detail, in LS-BB, many informants offered to return the book the next day. For the forgotten newspaper, some informants offered to right the wrong *tomorrow,* some *right away*. Similarly, in HS-SC, almost all of the informants who produced the strategy of OFFER OF REPAIR offered immediate action. This was equally true, if not more so, for HS-

HD. Hence, nuances of urgency regarding the immediacy of the repair were visible across several situations.

Still, the urgency in HS-HD was of a different kind. This situation was the only one in which the offence inflicted physical harm on the Hearer or, as one may want to say, it showed a particular quality of an offence against the OBLIGATION NOT TO CAUSE DAMAGE OR DISCOMFORT TO OTHERS (see Wolfson et al. 1989). Accordingly, in this situation, a repair was time sensitive, and the emotion of urgency was caused by the responsibility to help a person who was injured and bleeding with no time to spare. To a certain extent, this was equally true for the time participants invested in the apology itself. The HS-HD situation therefore differs from HS-SC in which the damage was done to the Hearer's property and no further damage was expected if the Speaker reacted less quickly than possible. Generally, urgency, as mentioned, is one of the emotional or attitudinal attributes layered on top of the overall contextual factors of a scenario (cf., e.g., Hellier et al. 2002; Prieto & Rigau 2012). Therefore, urgency was expected to have an especially strong impact on the level of prosody. Some of these impacts were mentioned, though not discussed, in previous sections.

Instead of delving into this argument of prosody immediately, however, the discussion starts with a closer investigation of the impact of urgency on the length of the apologies and the individual strategies. This feature was visibly affected: the apologies in HS-HD were produced with 22.2 syllables, on average, while those for HS-HC had an average length of 27.6 syllables, which is a difference of 24.3%. It was argued that OFFER OF REPAIR and CONCERN FOR THE HEARER held an important function in HS situations in which legal repercussions were possible (see Chapter 5.2.1). Notably, though, even these crucial strategies, which were rather long in other situations, were relatively short in terms of number of syllables in HS-HD. Additionally, it was mentioned that the majority of the informants refrained from formulating other possibly elaborate and complex strategies for this situation altogether. All of these findings combined point to the effect that urgency led to an increased need for brevity.

However, despite this need for brevity, apologies for HS-HD were nevertheless uttered with a high number of IFIDs. Furthermore, it earned the highest number of IFIDs which included one or several intensifiers. This stresses that producing this strategy itself and also with the appropriate usage of intensifiers to save face overrode the need to be brief. The same seemed to be true for EXCLAMATIONS and the importance of the underlying messages of this strategy (see Chapter 5.3). Here as well, a high frequency was present and the majority of EXCLAMATIONS were produced not only with the particle *oh*, but also with an additional EXCLAMATION TERM. Equally intriguing is the finding that the apologies for the second HS situation, HS-SC, were those with the highest number of IFIDs produced with *I am sorry* and no contraction of the verb. In fact, a steady decrease of these contractions was visible from LS to HS situations. HS-

HD, however, behaved differently (see Figure 13). While the formulation without a contraction was found in 26.9% of IFIDs with *I am sorry* in HS-SC, this was the case for only 15.4% of the IFIDs in HS-HD. Notably, the IFIDs for this situation still contained a higher number of non-contracted verbs than found in the LS baseline, although it was markedly different than the HS counterpart. Consequently, it stands to reason that a contraction was favoured in a situation of urgency, despite the level of severity, to keep the apology as brief as possible. Different than the means of intensification, urgency here presumably overrode the possibility to resort to more formal ways of speaking, such as utilising a non-contracted verb as an additional marker of sincerity in apologies. Overall, it is significant that urgency noticeably affected the formulation of this and other strategies in terms of length while distinctly keeping important markers of sincerity and the display of remorse in line with the severity of the offence. The omission of intensifiers in the IFIDs or EXCLAMATION TERMS in the EXCLAMATIONS, for example, was conceivable, where even Brown and Levinson (1987: 69) have stated that, in cases of urgency, face needs can be suspended.

Moving on to the prosodic level, the F0mean is discussed before elucidating the intonation contours employed. For the F0mean values, previous literature presented in Chapter 2.5.2 has claimed that an increase in the level of urgency could cause a higher F0 (Kamiyama et al. 2019: 917). Additionally, evidence demonstrates that speech which co-occurs with the emotion of panic or fear is produced with a noticeably high F0mean and F0min but not a wider pitch range, especially when compared to other emotions, such as sadness or anger (Bänziger & Scherer 2005). The emotion of panic or fear could indeed factor into the emotional subtones of the HS-HD situation. In the data at hand, a difference was found between the respective F0 values of the complete apologies in HS-HD and HS-SC (F0mean% for HS-SC: -0.5%) when compared to the LS baseline. Figure 7 reveals that the F0mean% value for HS-HD is +14.6%, which was the highest deviation identified of all situations. These values are evidence that emotional attributes created in HS-HD, including urgency as well as possible related feelings such as fear and panic, may be detectable in the pitch height with which the apologies were produced. This was argued to potentially be the cause for some of the mentioned differences between the prosodic values of the two HS apologies in several of the previous chapters.

As regards the intonation contour, the apologies in the HS situations were produced with a FALLING intonation contour at roughly the same frequency, while the usage of a FALLING intonation contour was constantly combined with sincerity in this study. One additional point to be considered in this specific section, however, is the claim that "*yes-no* interrogatives with final falls [were found] to express seriousness or urgency" (O'Connor and Arnold 1963: 492). Additionally, note that the Frequency Code combines low and FALLING pitch with associations with seriousness, which here was

interpreted as sincerity, but also with the attitude of authority (Gussenhoven 2002; Ohala 1984). Hence, the FALLING contour was here the expected speech melody for *yes-no* questions, where the attributes of finality and FALLING intonation have been combined in the past in numerous sources (Cruttenden 1981; Knowles 1987; Wichmann 2004, as noted in Chapter 2.2.1). In either case, an effect would be reached by using an intonation different than the expected default of the FALL-RISE contour for this syntactic structure.

All of these statements reveal the relevance of examining the usage of FALLING intonation in interrogatives in the HS-HD. However, the picture gathered in this study's data is not clear. Across all interrogative constructions found in the HS-HD apologies and across all strategies (n = 44), 25% were produced with a RISING intonation and another 34.1% with FALL-RISE, which was yet another intonation contour frequently combined with the delivery of interrogative constructions. In fact, only a single instance of these interrogatives was uttered with a FALL (as stated for one instance of CONCERN FOR THE HEARER). Noteworthy, however, is the finding that 18.2% – eight occurrences – were produced with a RISE-FALL contour. In fact, having a FALLING contour preceded by a RISING contour could theoretically make the FALLING tendency more noticeable It could therefore be used to amplify the underlying message and could theoretically align with the argument made previously. In addition to this interpretation, this finding again invokes statements regarding the usage of RISE-FALL and its usage in EXCLAMATIONS as well as its ability to convey surprise.

Furthermore, previous literature demonstrates that a relatively wide pitch range might be employed when urgency is a factor (Hellier et al. 2002, Prieto & Rigau 2007). For this prosodic dimension, the apologies for HS-HD did not behave markedly differently from those for HS-SC; additionally, pitch range was only slightly wider in HS-HD compared to the LS baseline (F0range% in HS-HD: +19.7%, in HS-SC: +16.5%). However, with the somewhat peculiar findings for the apologies for the MS-BD situation in regard to this prosodic dimension (as a reminder, the F0range% in MS-BD was measured as +49.2%), HS-HD apologies did not receive the widest pitch range of all situations. The reason may be that HS-HD apologies tended to be performed with strategies which were prone to be produced with a more static voice, especially EXCLAMATIONS and IFIDs. EXCLAMATIONS demonstrated a relatively high negative deviation from the overall pitch range of the apologies across all situations. Consequently, the data at hand and the taken measures to analyse them do not reveal any convincing evidence that the situational urgency impacted the pitch range employed.

Of additionally high importance for the argument of urgency and apology formulation is the prosodic dimension of speech rate. The speech rate with which an utterance is

produced notably influences the length of an apology in seconds. Consequently, it could be impacted in a similar way as the length in number of syllables already demonstrated, again with the goal of saving time. This expectation results from the need for brevity that urgency creates (Hellier et al. 2002; Kamiyama et al. 2019: 917). In effect, speech rate was higher in the apologies for HS-HD than those in HS-SC when compared to the LS baseline; HS-HD featured the highest positive deviation in SpeechRate% of all situations. HS-SC, however, exhibited a negative deviation from the LS baseline on average (HS-HD: +3.6%, HS-SC: -2.6%) and therefore followed the expected tendencies. Overall, though, these numbers are small and do not lend themselves to much more than tentative observations.

When examining the speech rate of only the IFIDs, however, more noteworthy findings were obtained. This strategy was actually produced with a lower speech rate than the rest of the apology for both HS situations (i.e., SpeechRate% for HS-HD: -5.2%, HS-SC: -10.5%). Initially, one can therefore discern that, despite the urgency that exists, it is still important to take one's time when formulating the IFID. This concerns the appropriate means of intensification demonstrated previously as well as a slower speech rate than the rate with which the informant produced the entire apology on average. However, even with a slower speech rate applied in the IFID compared to the apology's average speech rate, the value of a negative deviation was twice as high for HS-SC. Accordingly, while it was appropriate in HS apologies to deliver the IFID with slower speech, this could have been impacted by the factor of urgency, after all: it could have caused the slowing of speech to be less pronounced. Additionally, HS-HD was the only situation in which EXCLAMATIONS had an average faster speech rate than the mean speech rate of the apology (SpeechRate% for HS-HD: +2.8%). EXCLAMATIONS were produced with a slower speech rate than the average speed in all other situations; in some situations, this was markedly so. Accordingly, in EXCLAMATIONS, evidence for pacing oneself in their delivery was not seen in the data, and urgency appears to have surpassed the emotive and intensifying function for EXCLAMATIONS in this regard. Again, though, the validity of this interpretation is limited by the issue of apology composition and its impact for the values of deviation of individual strategies from the apology's overall mean values.

A final note can be made about the noticeable lack of CREAKY voice in HS-HD. It was only elicited in 10 strategies for this situation's apologies overall. Among other features, it has been suggested that CREAKY voice can offer comfort or ask for sympathy (Brown & Levinson 1987: 119) and can also be associated with incompetence (Anderson et al. 2014: 5) as well as embarrassment (see below). All of these features could be seen as beneficial underlying messages in apologies produced for the offence in HS-HD. The finding that it was frequently employed in all situations (when studying all strategies) except HS-HD is therefore intriguing. As stated previously, respondents

may have wanted to convey attitudes such as authority and assurance in this situation instead, especially assurance that they could handle the situation, which could be one interpretation for avoiding this voice quality. It is also possible that this near lack in CREAKY voice was connected to the overall higher F0mean for this situation's apologies; with CREAKY voice produced low in the pitch range, utilising a higher voice for the entire utterance may simply make it less likely that a person would resort to this speech quality. Furthermore, the Effort Code could have been a factor here (see Gussenhoven 2002). Because of the need to be especially clear in what one is saying, the usage of a marked voice quality such as CREAKY voice could be less appropriate, as it could reduce the acoustic quality of the utterance itself.

5.4.2 Indications for the emotions of embarrassment and discomfort

Committing an offence holds the possibility of causing embarrassment to the Speaker, as established in Chapter 2.5.2. Expressing this emotion in the apology "can be interpreted as the offender's admission to have committed an act offensive enough to be embarrassed" (Ogiermann 2009: 144). This notion can be expressed strategically on the pragmatic level when formulating the sub-strategy for TAKING ON RESPONSIBILITY as an EXPRESSION OF EMBARRASSMENT. This section discusses further evidence for this underlying emotion and its manifestation on the prosodic and pragmatic levels.

EXPRESSIONS OF EMBARRASSMENT as a sub-strategy of TAKING ON RESPONSIBILITY experienced a steady decline of usage from the HS to LS levels. The highest amount of this strategy was found in HS-SC, followed by HS-HD. The LS situations barely received an application of this sub-strategy (it was used in only 6.1% of the instances of TAKING ON RESPONSIBILITY in LS-BB and never in LS-NP), which is distinct because these situations received the highest frequency of TAKING ON RESPONSIBILITY to begin with. With the overall low numbers of TAKING ON RESPONSIBILITY in the HS situations, however, the relatively high frequency of EXPRESSION OF EMBARRASSMENT (HS-HD: 18.8% and HS-SC: 24.1%) translated to three occurrences in HS-HD and seven in HS-SC. All of the occurrences coded into this sub-strategy are presented in Table 42. Notably, four of the seven instances found in HS-SC were produced by the same informant, Informant 39. Two of these instances were produced with the RISE-FALL contour, which, as mentioned previously, could express an exclamatory character and raises the possibility that this emotive characteristic was also part of the underlying message. Further intriguing here is a claim that was previously cited in which RISE-FALL with a wide pitch range was combined with the underlying message of an accusation (cf. Bolinger 1986: 208). Such attributions are dependent on the context; however, here, an accusatory tone seemed to be a possible interpretation: both of these instances of an EXPRESSION OF EMBARRASSMENT with a RISE-FALL contour indicated in Table 42 were

performed with a wide pitch range. The one produced by Informant 60 for HS-HD was delivered with a RISE from 170 Hz to 205 Hz, followed by a STEPPING-DOWN contour from 205 Hz to 121 Hz.

Table 42. EXPRESSIONS OF EMBARRASSMENT in the HS Situations.

Informants	Situation	Transcript	Contour
2	HS-HD	i feel [TERRIBLE ↘#192-168#=#168#] (0.49)	FALL-LEVEL
39	HS-HD	i feel so [BAD =#177#] (0.87)	LEVEL
60	HS-HD	I am [just ↘#151-132#] (0.43) [TERRIBLE ↗#170-205#↘↘#205-121#] **	RISE-FALL
2	HS-SC	i can't believe i [DID that ↗↗#143-232#↘↘#232-150#] (0.09)	RISE-FALL
21	HS-SC	i cannot BELIEVE that i [did that ↘#227-211#↗#211-260#] /	FALL-RISE
25	HS-SC	i can't believe i [DID that [○ husky voice]]	OTHER
39	HS-SC	i feel [SO awful [○ unclear]] (1.06)	UNCLEAR
39	HS-SC	i feel [REALLY really bad [○ unclear]] ↔	UNCLEAR
39	HS-SC	that is SO [EMBARRASSING =#190#↘#190-175#] ↔	LEVEL-FALL
39	HS-SC	i can't [BELIEVE i DID that [○ creaky voice]] (0.39)	CREAK

The following example, produced by Informant 2 for HS-SC, was produced with a STEPPING-UP intonation, followed by a STEPPING-DOWN contour. In this case, the accusation was not against the Hearer of the offence but the Speaker herself, who, in theory, may have been accusing herself of having done something embarrassing by using this prosodic attribution. The other measurements and instances of EXPRESSION OF EMBARRASSMENT did not present any clear connections between notions of embarrassment and prosodic attributes in relation to the average pitch, pitch range or mean intensity. It should be noted, though, that several of these utterances were produced with a voice quality that made adequate measurement of the intonation contour impossible.

Focussing the discussion of findings on the voice quality of vocal fry, HS-SC was described as the situation with the highest frequency of CREAK. In fact, 17% of the IFIDs were produced with this quality. This begs the question whether HS-SC was contextually marked in a way that could reveal potential causes for this markedness on the prosodic level, i.e., a higher potential for this underlying emotion of embarrassment. As for the offence in HS-SC – scratching another person's car, which is different than the accident with the heavy door – could be seen as a lack of driving skill on the Speaker's side. Previously, it was stated that embarrassment can be caused by a situation in which the person feels inadequate (Spencer-Oatey 2011: 3572; Miller 1992: 193), which may indeed be more present in this situation than in other situations, while an additional connection with the severity of the offence itself seems possible. HS-HD aligns with the claim that embarrassment can be caused by doing harm to others (Miller 1992: 193). The finding for the low numbers of CREAKY voice in HS-HD was previously discussed in detail and attributed to the factor of urgency, and this situation is therefore disregarded for now.

For HS-SC then, the high frequency of CREAKY voice which was addressed as prone to convey the feeling of embarrassment could be in line with Goffman's (1956: 264-265) statement that vocal pitch changes and hesitation can be utilised to signal this feeling. Such a vocal pitch change is especially visible (and audible) in cases of CREAKY voice with the inevitable employment of the lowest part of the pitch range of a person. Furthermore, as mentioned, some studies have associated CREAKS with attributes such as being hesitant and non-aggressive (Yuasa 2010) as well as traits such as being less educated and less capable (Anderson et al. 2014: 5). This would also fit this situation, in which a lack of capability was responsible for the offence's occurrence. Furthermore, if CREAKY voice is indeed employed as a marker of embarrassment, then OFFENCES AGAINST THE HEARER'S PROPERTY may be related to a greater sense of embarrassment than a simple LACK OF CONSIDERATION; this speculation is based on the fact that LS-BB contained considerably more apologies with a CREAK (41.4% compared to 30.4% in LS-NP), as noted previously. It is therefore considered to be another interesting finding that could further inform the differences caused by the different offence types on the LS level in Figure 20.

Another point of discussion regarding the conveyance of embarrassment can be made by examining laughter in the apologies, given that laughter is a vocal expression of manifold emotions, including joy, taunting, general amusement and even sarcasm (Aijmer 2019; Stadler 2006; Szameitat et al. 2009). This study stresses that there are also "[n]otions like 'nervous' or 'polite' laughter" (Glenn 2009: 162). Therefore, those instances of laughter found in the study are further discussed regarding their potential to express emotions of the sort mentioned in this sub-chapter, including embarrassment.

Notably, this feature was rare, with only 13 instances in total. All of these instances are summarised in Table 43, which additionally presents the respondent, situation and strategy in which it was produced. These instances of laughter are here categorised for two functions which originated from the data itself. The first function identified in Table 43 encompasses instances in which laughter appeared to be EMPLOYED STRATEGICALLY. One case in which this impression was strong was produced by Informant 40 in MS-UP for TAKING ON RESPONSIBILITY. This instance of laughter could express the embarrassment argued for in this chapter by conveying that the Speaker felt uncomfortable regarding the mistake she made.

Furthermore, this laughter could be interpreted as having an almost downtoning function, minimising the offence by offering the impression that it was a laughable matter, although such statements would need corroboration with perception ratings. Another instance of this strategic function could be the first utterance visible in Table 43, which was produced by Informant 16 for HS-SC. This strategy was difficult to code; although it was an APPEASER on the surface level, it could also be counted as HUMOUR, a specific way of DISTRACTING FROM THE OFFENCE and thereby

downtoning the offence itself (Blum-Kulka et al. 1989b: 294) and it was, as such, unique in the dataset. Here, laughter could have been added strategically to stress that the Speaker was not entirely serious about her suggestion of having the Hearer scratch the Speaker's car. However, it could also show an underlying emotion of embarrassment that was managed by trying to lighten the mood. In addition to this possible underlying embarrassment, the entire formulation of this strategy seems to be an attempt at comic relief, making the Hearer laugh while simultaneously making the Speaker feel better.

Table 43. Overview of Instances of Laughter in the Data.

Informant	Sit.	Strategy	Transcript
Function 1			
16	HS-SC	OTHER	If you WANT you can scratch my car and get [EVEN =#180#] {laughs} **
22	MS-UP	CONCERN FOR THE HEARER	did you get any [STUDYING done ↗#230-321#] / while [I was eh =#213#] / not [HERE ↗#250-293#] {laughs} /
40	MS-UP	OTHER	{laughs} hey [HEY ↗#204-218#↘#218-187#] /
40	MS-UP	TAKING ON RESPONSIBILITY	I guess I just LOST track of [TIME [laughs/chimes] [○ unclear]] /
40	MS-UP	OTHER	[{laughs} [○ other]] (0.43)
66	MS-UP	TAKING ON RESPONSIBILITY	a:nd I thought I was looking at the CLOCK but I really [WASN'T [○ other] {laughs}] /
66	LS-BB	IFID	i'm SO Sorry [I FORGOT [○ {laughs}]] **
24	LS-NP	EXCLAMATION	[OH NO ↘#283-205# {laughs}] (0.45)
66	LS-NP	IFID	I'm SO [SORry ↘#246-165#↗#165-219# {laughs}] **
Function 2			
26	HS-HD	OFFER OF RESPONSIBILITY	can I get you to the [HOSPITAL ↗#226-263#↘#263-186#] {laughs} **
33	HS-HD	IFID	I'm [SORRY ↘#264-210# {laughs}] /
47	HS-HD	CONCERN FOR THE HEARER	I guess we have got to go to the [DOCTOR [○ {laughs}]] /
49	HS-HD	OFFER OF RESPONSIBILITY	[let's [○ other]] (0.68) [I will take {laughs}] I will take you to the [HOSPITAL: ↘#327-243#] / or [something [○ other]] /

The second function which can be identified in Table 43 represents those instances in which the laughter simply demonstrated that the situation described in HS-HD was perceived as somewhat silly. This is arguably the case in those instances in which laughter did not seem to fit the utterance but stressed the awkwardness felt by the informant. In this sense, laughter was also an INSTRUMENT EFFECT of this study, shaped by the level of severity created in the description of this HS situation.

As a final point on embarrassment, HESITATIONS also deserved some notice where, as a further impact connected to breathing a difference between filled and unfilled pauses has been suggested. Audible pauses may here fulfil important functions – in addition to taking in air – and may be directed at an audible expression of attitude and emotion (Grawunder and Winter 2010). This is based on the assumption that a "[...] higher amount of fillers and hesitation markers in the polite condition serves as a stylized way to mark insecurity" (Grawunder and Winter 2010: Results section, para. 8). Accordingly, fillers and hesitation markers may be utilised systematically to signal a degree of insecurity toward an interlocutor, the situation, or simply the fact that one is producing a turn that is presumably dispreferred by the Speaker. Given the way in which HESITATION was coded in the present study, the analysis is, however, only cursory and is merely meant to further illuminate its usage to add to the ongoing argument. Included here are not only those hesitations between strategies which were previously mentioned, but also the hesitation markers (including repairs) which were employed within the strategies. The results obtained this way (see Appendix B.ii) are, however, not revealing and only meant to complete the holistic nature of the study. The only somewhat remarkable finding is that MS-BD and LS-NP both received few hesitation devices within their apologies.

5.4.3 Intonation and the micro-social factor of age

One finding that has not yet been discussed are unexpected correlations between the prosodic dimensions and the age of the informants who participated in the study. They were unexpected because of the age range established during the selection process, which was set to 18–30 years of age. Correlations between age and prosodic features were not expected based on previous findings of physical attributes which are impacted by age. It has been found that the F0 of female speakers declines "steadily from 4 to 60 years of age but with a shallower slope than that of male participants" (Stathopoulos et al. 2011: 1017); however, this decline is strongest in the time periods connected to puberty and menopause (cf. Traunmüller & Erikson 1995). Neither of these events were likely to factor into the age group included in this study.

Regardless, for all apologies combined, correlations suggest a tendency that the older the participants, the lower the average pitch employed by them (correlation between age and F0mean: $R = -0.36$, $p < 0.001$). Notably, the strength of this correlation differs between the individual situations. It was strongest for HS-HD ($R = -0.51$, $p < 0.001$) and LS-BB ($R = -0.54$, $p < 0.001$) and slightly less pronounced in the apologies in HS-SC ($R = -0.36$, $p = 0.02$) and MS-UP ($R = -0.39$, $p = 0.02$). For the remaining two situations, MS-BD and LS-NP, age did not correlate with the F0mean values of the apologies.

When examining the correlations between age and F0range, this correlation was weak and not statistically significant when considering all situations ($R = -0.11$, $p = 0.07$).

However, when focussing on the different situations' apologies separately, a weak but statistically significant correlation was found for HS-SC (R = -0.37, p = 0.02), while it was weak or non-existent and not statistically significant for all other situations. Hence, in the situation in which there was damage to the interlocutor's car, older participants tended to use a less dynamic pitch range when uttering their apology and, in several situations, employed an overall lower pitch.

Discussing these age-related findings is difficult, but they suggest an additional research focus for the future. Different reasons – should these correlations be verifiable in larger studies and, ideally, with stronger correlations – are thinkable, in addition to the unlikely one of an impact of the steady decline of voice with age. When employing only physical explanations, there are findings that an impact on the pitch, resulting in a lower voice, occurs after pregnancy (Pisanski, Bhardwaj & Reby 2018) and also that habits such as smoking take their toll on a human's voice (cf. also Traunmüller & Erikson 1995). Another and possibly more convincing – though completely intuitive – thought could also be explored. Specifically in the two HS situations, it seems possible that older respondents have a different grasp on how to manage circumstances that induce stress and discomfort. They could resort to tones that induce a sense of calmness and authority rather than delivering prosody in such a way that they signal emotions such as fear or panic, which are associated with a higher F0 mean (Bänziger & Scherer 2005).

5.5 Limitations

This final discussion sub-chapter presents a number of limitations of this study and its results. The first is a common limitation of studies such as the one at hand. The study is based on qualitative data with a limited number of data points in the form of a convenience sample; therefore, results should not be generalised to all female American English speakers, let alone native speakers of American English or even English speakers altogether. Furthermore, the decision to focus only on female speakers means that the findings are not applicable to male speakers, who are known to use prosodic and pragmatic features differently than female speakers. Additionally, many of the correlations presented were weak. The well-known individual differences between speakers, especially in prosodic attributions, were continuously noted and presented in the form of boxplots. Inter-speaker variability must be stressed here again as a cause for limitation of the validity of claims made.

Furthermore, although tendencies are visible, the extent to which all of the prosodic factors are intertwined and influence one another makes it difficult to determine exactly how the apology formulation was impacted and which combination of factors had a role in it. This confirms previously mentioned difficulties when working at the pragmatics-prosody interface with the known challenge of determining which phonological cues correlated with which politeness features. Thus, the study confirms that "[…] speakers

do not rely on a single politeness strategy, but rather use a combination of strategies" (Astruc & del Mar Vanrell 2016: 95). Furthermore, it supports the claim that

> [t]he idea of establishing perfectly defined, universal intonation patterns is perhaps somewhat utopic; however, having humbler expectations may render some interesting results. For instance, *marked* intonation patterns may contextually be able to convey some kind of *im/politeness* meaning. (Hidalgo Navarro & Cabedo Nebot 2014: 16)

Despite the detailed approach that was performed here and by incorporating as many angles into the equation as possible, this utopic goal was not reached nor aimed for. Still, highlighting marked instances led to interesting results that further the overall understanding of apologies to an important extent.

The second limitation should be seen in the instrument itself. At this point, the well-known and frequently mentioned downsides of DCTs can be recalled. It is indisputable that the data obtained from DCTs is not directly comparable to spontaneously produced speech in naturalistic settings. More globally speaking, relying on speech act theory and non-interactional data in general represents a limitation to the conclusions that can be drawn. Brown and Levinson (1987: 10-11) have also acknowledged that in a way that can be established also for this study. When developing their politeness theory, they used speech acts only as a starting point and, while expressing that they are no longer entirely happy with this decision, they have also recognised that "[…] the speech act categories we employed were an under-analysed shorthand, but one which, were we to try again today, would still be hard to avoid".

The naturalness of the data was further impacted on the prosodic level by the different approaches the participants employed regarding the naturalness with which they performed the apology. Participants were all randomly chosen with no mandatory previous experience in performing a scenario in a particularly natural way. Additionally, they did not know the purpose of the study or its focus on prosodic aspects. Therefore, they were unaware of the need to apply natural prosody to their utterances, although the instructions of the questionnaire stated that they should attempt to answer as spontaneously and naturally as possible. Consequently, from listening to the audio files, it appeared that some informants acted out the apologies. Others, however, sounded as if they were enumerating the strategies they would apply in such a situation. This may have impacted the outcome of the study in unknown and unpredictable ways. In the future, it is advisable to have more experienced informants who are, ideally, actors, participate in studies similar to this one to minimise such an effect.

Another instrumental shortcoming was recognised in the coding of the data, pragmatic and prosodic alike. Many of the utterances and their categorisation were carefully considered by the author of this study; the coding of all data was performed several times with several weeks between each session. This included refined guidelines for

qualifications of a strategy belonging to one rather than another category. However, another well-known shortcoming when working with qualitative data is subjectivity in the coding process, which is an issue that cannot and should not be concealed (cf., e.g., Dörnyei 2007). Additionally, as stated in the description of the methodology, coding choices were sometimes made differently here than in the CCSARP coding scheme to enable a more suitable categorisation for the study and data type at hand. Thus, the findings are not directly comparable to studies which strictly follow the CCSARP coding scheme. The same is true for the coding of intonation contours. Knowing that intonation contours are individualised, it was necessary to abstract from the details visible in those contours and focus on the global direction of pitch envisaged to categorise them in a limited number of contour categories.

Finally, technical shortcomings to be mentioned again at this point were identified, especially for the measurement of intensity, in which it cannot be ruled out that different microphones and settings employed by the informants caused the small differences in intensity across informants measured for the vast majority of apologies. Technical details, including hardware, were not consistent across informants, which leads to a global call for caution, especially compared to the tightly controlled experimental settings that are frequently used in phonetics and phonology studies when measuring any pitch-related phenomena. However, describing the prosodic dimensions of the apologies via the deviations from mean values that were obtained from the participants themselves was seen as one way of ensuring that any such interferences were kept as small as possible.

6. Conclusion

This study addressed an important research gap in the study of politeness from the angle of speech act theory: the role of prosody in the realisation of apologies when they are prompted by offences from different levels of severity (high, medium and low). Another aim was to better understand the connection between severity of the offence and sincerity of the apology as well as to discuss in detail which other external, emotional and attitudinal factors (other than sincerity) have a role and how they interact with each other.

The study was based on data elicited via DCTs which were completed by female American English speakers regarding six different situations. All of these apologies presented the highest level of sincerity, that is, true remorse as opposed to CASUAL or RITUALISTIC apologies or even sarcastic contexts. Additionally, even those situations which represented the same level of severity of the offence varied in the type of offence they displayed. This allowed further crucial insights regarding how the type of offence impacted the formulation of apologies on the pragmatic and prosodic levels.

The data itself was perpetually discussed from two angles: the pragmatic side, which was largely based on the commonly utilised functional coding of strategies as proposed for apologies in the CCSARP coding manual (Blum-Kulka et al. 1989b), and the prosodic angle. The latter was based on the visualisation of the F0 contour using Praat (Boersma & Weenink 2020) and the extraction of the values for the most commonly investigated prosodic dimensions of average pitch, pitch range (including peak and valley), intensity and speech rate.

6.1 Summary of Findings

All findings made in this study and the outcomes of their discussion are summarised in the following by addressing each of the three research questions which were posed in Chapter 1.3 one at a time. After this summary, the study is completed with a final outlook on future studies that can further develop the understanding of the pragmatics and prosody interface and benefit from the explorations made in this study.

Research question 1: What impact does the systematic variation of severity of the offence (low, medium or high) have on the pragmatic and prosodic realisations of apologies?

To approach this question, the apologies elicited via the two situations which represented offences on the lowest level of severity were used as the point of comparison for large parts of this study, especially prosodic measurements. This enabled the establishment of ways in which the apologies produced in MS and HS situations deviated from this point for each of the respondents and to point out marked instances. A focus on this deviation, instead of the raw measurements, allowed the researcher to compensate for some of the inter-individual differences of prosodic attributes and further enabled a discussion of particularly marked instances.

The apologies for the HS offences differed from the LS baseline, especially in a higher number of IFIDs and a higher frequency of intensifications within these IFIDs as well as fewer contractions of the verb. Similar tendencies were found for EXCLAMATIONS, which not only increased in frequency with rising severity of the offence, but were also longer in number of syllables. The opposite tendency – decreasing frequency with increasing severity of the offence – was found for TAKING ON RESPONSIBILITY. For the baseline apologies established on the LS level, this strategy was frequent, with an average of more than one instance in each apology. The majority were formulated with ADMISSION OF FACTS BUT NOT OF RESPONSIBILITY. For the HS situations, however, LACK OF INTENT – another sub-strategy of TAKING ON RESPONSIBILITY – was most frequently employed. The increasing frequency found for EXCLAMATIONS as well as similar claims in previous literature supported the argument here that a dual function of EXCLAMATIONS can be identified (cf., e.g. (Deutschmann 2003: 54). These emotives were produced not only to

intensify the apology by expressing emotional involvement, but also to tone down the offence through their underlying message of declaring the accidental nature of the offence. This was supported by the finding that the increase in number of EXCLAMATIONS co-occurred with that of the sub-strategy of LACK OF INTENT expressed in the instances in which TAKING ON RESPONSIBILITY was performed in HS apologies.

Important insights were also gained by the decision to formulate the HS offences in such a way that they represented extreme points on the severity continuum, even to the extent which holds the risk of legal repercussions (cf. Bergman & Kasper 1993: 90). It was argued that this might be the reason why a focus on stressing the unintentional nature of the offence was found in the HS apologies. In fact, both of the HS offences represented ACCIDENTS (Deutschmann 2003) in which the notion of involuntariness regarding the offence is especially important to convey, not only from a face-saving perspective, but also from a legal aspect. This was further stressed by a high number of instances of expressing CONCERN FOR THE HEARER in the situation in which the offence caused physical harm and further supported by the low frequency of TAKING ON RESPONSIBILITY detected in these situations. These findings stress even more vigorously the intent of the Speaker to save the face of the Hearer as well as their own (Ogiermann 2009) and an argument was made that the Speaker may further want to save themselves from legal consequences.

To further illuminate this research question from the central prosodic level of intonation contours, it was revealed that the IFIDs in the HS situations tended to be produced more frequently with a FALLING intonation than in LS or MS scenarios. Furthermore, the IFIDs in HS situations were less commonly produced with a FALL-RISE intonation than in those of LS scenarios. Both of these tendencies are in line with the Frequency Code (Gussenhoven 2004, 2002; Ohala 1995, 1984) and numerous previous studies which have posed the idea that a FALL-RISE applied to the IFID of an apology tends to be realised in CASUAL apologies (e.g., Aijmer 1996: 41; Knowles 1987: 195 for thanking; Lindström 1976). A FALLING intonation is instead favoured in situations in which the apology is supposed to express actual remorse to stress the underlying attitude of sincerity. However, since the LS apologies in this study also presented actual remorse, i.e., in the form of HEARTFELT apologies, and not CASUAL apologies (see Deutschmann 2003: 93; Fraser 1981: 266; Lakoff 2001: 201; Owen 1983: 119), only tentative conclusions can be drawn here. Findings for the FALL, FALL-RISE and RISE contours across all strategies rather than only the IFID are ultimately considered to be only of minor importance when comparing them between situations due to their simultaneous role as syntactic markers, especially for the interrogative mood.

As for the average pitch at which the apologies or the IFIDs were produced, if any tendency can be highlighted, it would point toward a higher average pitch found in HS

situations. Diverse numbers as well as weak and often not statistically significant correlations mean that these results should be considered tentative at best. However, the wider pitch range witnessed in the two HS situations' apologies compared to the LS baseline aligns with the assumption that these may benefit from expressions of a higher emotional involvement (Lakoff 2001: 204). This can be demonstrated by using a more dynamic voice, although this tendency seemed to be influenced by the situation in which the physical health of the Hearer was jeopardised. In other words, due to the urgency in this situation as well as potential emotions of fear or even panic (cf. Bänziger & Scherer 2005) when having physically harmed a friend, additional emotions and attitudes could be a significant factor, besides adapting the pitch range to the severity of the offence.

The final prosodic dimension that was argued as important in the formulation of IFIDs as regards the severity of the offence is speech rate. The data demonstrates that IFIDs in apologies for HS offences tended to be produced more slowly than those for LS offences. Similar to previous arguments for contours, observing a systematic impact of the severity of the offence on the speech rate in the entire apology was more difficult than for the highly formulaic strategies of IFIDs and EXCLAMATIONS, due to diverse realisations and different moods employed.

Research question 2: Which additional contextual factors may have impacted the selection of pragmatic strategies and prosodic features applied to this speech act?

Even between the two situations representing the LS level, a number of differences were found. They included the exact phrasing of the OFFER OF REPAIR and the number of occurrences of PROMISE OF FORBEARANCE. These differences were argued to arise from the contextual differences between the two LS situations, specifically the type of the offence: one represented an offence against the Hearer's PROPERTY and the other was a simple LACK OF CONSIDERATION (Holmes 1995, Wolfson et al. 1989). It was notable that this had such an impact on the phrasing. Consequently, it was recommended that in future studies, the type of the offence should be categorised such that offences against PROPERTY are distinguished from offences which merely pose a LACK OF CONSIDERATION. This distinction has not consistently been applied in all categorisation systems for offences in the past (e.g., Aijmer 1996; Deutschmann 2003).

Further, it was proposed that urgency to react (because of a friend who is in physical pain and in need of immediate help) can affect an apology in marked ways (cf. Brown & Levinson 1987: 69). The need to be brief was visible on the lexical level with shorter and less complex strategies. However, what was not affected by this situational circumstance was the IFID and the need to, first, formulate the apology with one or, in many cases, several instances of this strategy and second, to intensify the IFID as the

severity of the offence demands. Additionally, despite the underlying urgency, the IFID was produced with an, on average, slower speech rate than the overall apology in which it was produced, although to a lesser extent than in the apology for an HS offence in which urgency was not an issue.

In fact, with attitudes such as urgency commonly being conveyed via the prosodic level, it was noted that the urgency created in the HS-HD situation seemed to impact the F0mean; these apologies tended to be produced with a higher pitch. Additionally, a higher number of FALLING intonations was found compared to the second HS apology. This leads to another intriguing argument: the lexical and prosodic levels may have been utilised to signal authority (Ohala 1995: 327) because the situation demanded swift action. Finally, few instances of CREAKY voice were found in this situation compared to all other situations – including the second HS one in which the apologies were produced with the highest frequency of CREAKY voice. This near-absence of CREAKY voice in the high-urgency circumstance was interpreted as the need to be clear and acoustically intelligible and brought together with the Effort Code (cf. Gussenhoven 2002); it was possibly less important to convey the supposed underlying notions of CREAKY voice (e.g., sympathy, embarrassment, incompetence), and instead more important to be verbally maximally efficient.

Finally, it was argued that speakers can employ lexical and prosodic markers, especially in combination, to convey embarrassment about the offence (cf. Goffman 1956). Examples include CREAKY voice, hesitations and laughter, though no conclusive correlation with severity of the offence could be identified for any of them.

Moreover, interesting correlations between age and the pitch height and the pitch range with which the informants spoke were found in the data. There was a tendency for the apologies to be produced with a lower pitch when the informant was older, at least for some of the situations. HS-SC showed an additional tendency of a narrower pitch range employed by older informants. Though it is difficult to interpret these results, the most convincing possibility posited was that older informants tended to react with a sense of authority and a notion of capability to handle the situation of increased stress and an impulse to act instead of employing considerably higher pitch which may instead be associated with the emotions of fear or panic (cf. Bänziger & Scherer 2005).

Research question 3: What is the interrelation between severity of the offence and sincerity of the apology, and how does this present itself on the pragmatic and prosodic levels?

Due to the confirmation of a tight connection between severity of the offence and the sincerity with which the apology was produced, addressing this research question relies on additional findings from the two MS situations. This was based on the fact that one of the two situations, MS-UP, described a recurring offence (being notoriously

unpunctual) while the other MS offence (and all other offences created for this study) was accidental in nature. Previous literature has claimed that the repeated commitment of the same offence makes the sincerity of the apology questionable (Davies et al. 2007: 48; Owen 1983: 119).

For the MS-UP apologies, on the prosodic as well as pragmatic levels, it was found that they displayed features otherwise common in the apologies on the LS level. These features included a high number of IFIDs but fewer instances of intensifying adverbials. Additionally, there was a larger amount of TAKING ON RESPONSIBILITY from the same sub-category as found in the apologies on the LS level. Findings on the prosodic level included a noticeably larger amount of LEVEL intonation as compared to the apologies in all other situations, including the MS counterpart. However, there was no difference in the usage of FALL and FALL-RISE intonation contours visible. This was different from the findings for LS apologies and the attribution of this contour to the delivery of either HEARTFELT or RITUALISTIC apologies. Thus, a supposed decline in sincerity due to previous occurrences of the same offence may not necessarily lead to a contour that suggests a more CASUAL apology, as observed in less severe offences. However, it was demonstrated that the IFIDs for MS-UP were produced with the fastest speech rate compared to the speech rate in the apology overall.

Based on these findings, it was suggested that, because the informant has repeatedly committed the offence in the past and is likely to do so again, she is strategically realising a formulation associated with LS offences or, one may argue, strategies showing a lower sense of sincerity. Given the tight connection of severity and sincerity, by extension, a somewhat lowered underlying sincerity on the pragmatic and prosodic levels may actually be perceived as appropriate. Based on this finding, the terminology and concept of relational work by Locher and Watts (2005) was invoked and applied to the findings at hand and the aim to produce an apology that is unmarked in the situational context the informant was faced with. It was suggested that overpolite notions are possible if strategies are applied in such a way that they express sincerity in an exaggerated fashion. This can quickly become inappropriate and perceived as ironic or sarcastic, in line with similar claims made for sincerity – mostly conveyed on the prosodic level – in the past (e.g., Aijmer 2019; Lindström 1976). The findings from MS-UP described above can therefore be taken as one example in which employing markers of a lower level of severity and sincerity is actually beneficial. The situational circumstances and the doubt regarding the actual sincerity of the Speaker may lead to the perception of a more appropriate apology than if markers of higher severity and sincerity orders had been chosen.

6.2 Future Outlook

Given the limitations and, especially, the explorative nature of the study, more research is needed to support or contest its conclusions. This includes research conducted with different data samples, larger numbers of informants and different methodological approaches, including their triangulation. The findings and claims made in the explorative study at hand lend themselves as inspiration for a step toward developing hypotheses. Further testing of each of the results in this study individually and with a narrow focus can further inform the different models that were presented throughout the study and represent an insightful angle for future studies. This includes similar studies that are performed with a different combination of the micro- and macro-social attributes, different cultures and languages as well as different varieties of English. Additionally, the correlations between the prosodic dimension of average pitch and age, especially in situations of higher emotional stress, would be interesting to investigate more closely. The strongest recommendation for future studies is to add a perception study to a production study such as the one at hand. A perception study would enable a discussion of the actual effects of prosodic and pragmatic features and their various combinations on the Hearer, which were here only described in terms of production and from the Speaker's angle.

Returning to the aforementioned possible fields of application for the results of this study, some notes are offered on next steps to inform L2 teaching and learning. The findings of the present study further strengthen previous claims regarding the high level of importance of prosody in the delivery of apologies and its dependency on the severity of the offence and the delivery of sincere apologies. This simultaneously underscores the importance to teach not only the different formulations of apologies on the pragmatic level, but also the general pointers regarding important features on the prosodic level. This includes details on pragmalinguistic input and sociopragmatic dependencies as well as raising awareness about patterns on the pragmatic-prosodic interface. The most basic connection claimed in the past was further supported here: underlying messages are clearly delivered when using a FALLING voice in the IFID of expressing true remorse, while employing a FALL-RISE pattern can convey a RITUALISTIC apology. Stressing the importance of a dynamic voice and the underlying messages conveyed via pace of delivery could be further contributions toward this awareness. Highlighting these and other patterns which will hopefully be revealed in the future could not only prevent misunderstandings, but also enable L2 speakers to better perceive the level of sincerity in their interlocutor's voice if they are the Hearer of the apology produced in their L2 English. Therefore, a call for future research regarding exactly this perspective of the pragmatic-prosodic interface and the delivery of speech acts with an aim at raising awareness is self-evident.

Other research questions for follow-up studies that originated from this one throughout the discussion can be repeated at this point. This includes the question of whether and to what extent TAKING ON RESPONSIBILITY via the sub-strategy of LACK OF INTENT expresses similar attributes to those found in EXCLAMATIONS. A further argument can be made for their relation to this second strategy as well as surprise as the underlying emotion further stressing this message. Furthermore, in relation to the recommendation to add perception studies, one specific suggestion was made. Further light could be shed on the assumption that apologies which utilise the full range of markers for sincerity for offences that have already been committed by the same Speaker (or are likely to occur again in the future) could be perceived as overpolite and therefore inappropriate.

Finally, although this study does certainly add to the overall knowledge of the underlying impact of prosody on the speech act of apologies, some of the calls that have been made in previous literature can be reiterated. This includes demands for investigating more closely how prosody and gesture are connected to one another, the context in which they occur and by whom they are produced (Brown & Prieto 2017: 375). Additionally, another claim made by Astruc and del Mar Vanrell (2016: 95) forms the final statement in this study, which reiterates that "[i]t still remains an empirical question whether intonational strategies are used cumulatively in addition to other types of linguistic politeness strategies". Though addressed generally in some parts of this study, narrowing the focus toward such a potential trade-off between prosodic and pragmatic formulations and their underlying strategies could build an intriguing research endeavour in the future.

References

Addinsoft (2020). XLSTAT [Computer software]: *Addinsoft*. Retrieved from: https://www.xlstat.com/en/ [Last accessed: 8 May 2021].

Aijmer, K. (2019). 'Ooh whoops I'm sorry!' Teenagers' use of English apology expressions. *Journal of Pragmatics, 142,* 258–269.

Aijmer, K. (1996). *Conversational routines in English: Convention and creativity*. Studies in language and linguistics. New York: Routledge.

Ancarno, C. (2015). When are public apologies 'successful'? Focus on British and French apology press uptakes. *Journal of Pragmatics, 84,* 139–153.

Anderson, R. C., Kolfstad, C. A., Mayew, W. J., & Venkatachalam, M. (2014). Vocal fry may undermine the success of young Women in the labor market. *PLOS ONE, 9*(5), 1–8.

Armstrong, L. E., & Ward, I. C. (1926). *A Handbook of English Intonation*. Cambridge: W. Heffer and Sons.

Arndt, H., & Janney, R. W. (1985). Politeness revisited: Cross-modal supportive strategies. *IRAL - International Review of Applied Linguistics in Language Teaching, 23*(1-4), 281–300.

Astruc, L., & del Mar Vanrell, M. (2016). Intonational phonology and politeness in L1 and L2 Spanish. *Probus, 28*(1), 91–118.

Astruc-Aguilera, L., del Mar Vanrell, M., & Prieto, P. (2016). Cost of the action and social distance affect the selection of question intonation in Catalan. In M. E. Armstrong, N. Henriksen, & M. del Mar Vanrell (Eds.), *Issues in Hispanic and Lusophone Linguistics. Intonational Grammar in Ibero-Romance* (vol. 6) (pp. 91–114). Amsterdam: John Benjamins Publishing Company.

Austin, J. L. (1962). *How to do things with words*. London: Oxford University Press.

Bänziger, T., & Scherer, K. R. (2005). The role of intonation in emotional expressions. *Speech Communication, 46*(3-4), 252–267.

Bardovi-Harlig, K., Rose, M., & Nickels, E. L. (2008). The use of conventional expressions of thanking, apologizing, and refusing. *Selected proceedings of the 2007 second language research forum,* 113–130.

Bergman, M., & Kasper, G. (1993). Perception and performance in native and nonnative apologizing. In G. Kasper & S. Blum-Kulka (Ed.), *Interlanguage pragmatics* (pp. 82-107). New York, Oxford: Oxford University Press.

Blomgren, M., Chen, Y., Ng, M. L., & Gilbert, H. R. (1998). Acoustic, aerodynamic, physiologic, and perceptual properties of modal and vocal fry registers. *The Journal of the Acoustical Society of America, 103*(5, Pt 1), 2649–2658.

Blum-Kulka, S., House, J., & Kasper, G. (Eds.) (1989a). *Cross-cultural pragmatics: Requests and Apologies.* Norwood, N.J.: Ablex Pub.

Blum-Kulka, S., House, J., & Kasper, G. (1989b). The CCSARP coding manual. In S. Blum-Kulka, J. House, J., & G. Kasper (Eds.), *Cross-cultural pragmatics: Requests and Apologies* (pp. 273–294). Norwood, N.J.: Ablex Pub.

Blum-Kulka, S., & Olshtain, E. (1984). Requests and Apologies: A Cross-Cultural Study of Speech Act Realization Patterns (CCSARP). *Applied Linguistics*, *5*(3), 196–213.

Boersma, P. & Weenink, D. (2020). Praat: doing phonetics by computer [Computer program]. Version 6.1.13, retrieved 1 May 2020 from http://www.praat.org/ [Last accessed: May 2021]

Bolinger, D. (1986). *Intonation and its parts: Melody in spoken English*. Stanford, California: Stanford University Press.

Bolinger, D. (1978). Intonation across languages. In J. H. Greenberg, C. A. Ferguson, & E. A. Moravcsik (Eds.), *Universals of human language* (pp. 471–524). Stanford, California: Stanford University Press.

Borkowska, B., & Pawlowski, B. (2011). Female voice frequency in the context of dominance and attractiveness perception. *Animal Behaviour*, *82*(1), 55–59.

Borràs-Comes, J., Sichel-Bazin, R., & Prieto, P. (2015). Vocative Intonation Preferences are Sensitive to Politeness Factors. *Language and Speech*, *58*(1), 68–83.

Borrie, S. A., & Delfino, C. R. (2017). Conversational entrainment of vocal fry in young adult female American English speakers. *Journal of Voice*, *31*(4), 513–526.

Bostanov, V., & Kotchoubey, B. (2004). Recognition of affective prosody: Continuous wavelet measures of event-related brain potentials to emotional exclamations. *Psychophysiology*, *41*(2), 259–268.

Briz, A. (2007). Para un análisis semántico, pragmático y sociopragmático de la cortesía atenuadora en España y América [A semantic, pragmatic and sociopragmatic analysis of attenuating politeness in Spain and America]. *LEA XXIX*, 5–40.

Brown, B. L. (1980). Effects of speech rate on personality attributions and competency evaluations. *Language*, 293–300.

Brown, P., & Levinson, S. C. (1987). *Politeness: Some Universals in Language Usage*. *Studies in Interactional Sociolinguistics: Vol. 4*. Cambridge [Cambridgeshire] and New York: Cambridge University Press.

Brown, P., & Levinson, S. C. (1978). Universals in language usage: Politeness phenomena. In E. N. Goody (Ed.), *Questions and politeness* (pp. 256–289). Cambridge: Cambridge University Press.

Brown, L., & Prieto, P. (2017). (Im)politeness: Prosody and Gesture. In J. Culpeper, M. Haugh, & D. Z. Kádár (Eds.), *The Palgrave Handbook of Linguistic (Im)Politeness* (pp. 357–379). London: Palgrave Macmillan.

Brown, L., Winter, B., Idemaru, K., & Grawunder, S. (2014). Phonetics and politeness: Perceiving Korean honorific and non-honorific speech through phonetic cues. *Journal of Pragmatics*, *66*, 45–60.

Catford, J. C. (1977). *Fundamental Problems in Phonetics.* Bloomington: Indiana University Press.

Chang, W.-L. M., & Haugh, M. (2011). Strategic embarrassment and face threatening in business interactions. *Journal of Pragmatics*, *43*(12), 2948–2963.

Chen, A., Gussenhoven, C., & Rietveld, T. (2004). Language-specificity in the perception of paralinguistic intonational meaning. *Language and Speech*, *47*(Pt 4), 311–349.

Cohen, A. D., & Olshtain, E. (1981). Developing a measure of sociocultural competence: The case of apology. *Language Learning*, *31*(1), 113–134.

Cohen, A. D., Olshtain, E., & Rosenstein, D. S. (1986). Advanced EFL apologies: what remains to be learned? *International Journal of the Sociology of Language*, 62(1986), 51–74.

Coulmas, F. (1981). Poison to Your Soul: Thanks and Apologies Contrastively Viewed. In F. Coulmas (Ed.), *Conversational Routine: Explorations in Standardized Communication Situations and Prepatterned Speech* (pp. 69–92). Berlin/Boston: De Gruyter Mouton.

Couper-Kuhlen, E. (2015). Intonation and Discourse. In D. Tannen, H. E. Hamilton, & D. Schiffrin (Eds.), *The Handbook of Discourse Analysis* (pp. 82–104*)*. John Wiley & Sons, Inc.

Cruttenden, A. (1981). Falls and rises: Meanings and universals. *Journal of Linguistics*, *17*(1), 77–91.

Crystal, D. (1969). *Prosodic systems and intonation in English* (1st Publication). Cambridge studies in linguistics: Vol. 1. Cambridge: Cambridge University Press.

Culpeper, J. (2011). 'It's not what you said, it's how you said it!": Prosody and Impoliteness. In Linguistic Politeness Research Group (Eds.), *Discursive Approaches to Politeness* (pp. 57–83). Berlin: De Gruyter Mouton.

Culpeper, J. (2005). Impoliteness and entertainment in the television quiz show: The Weakest Link. *Journal of Politeness Research. Language, Behaviour, Culture*, *1*(1), 35–72.

Culpeper, J. (1996). Towards an anatomy of impoliteness. *Journal of Pragmatics,* 25(3), 349–367.

Culpeper, J., Bousfield, D., & Wichmann, A. (2003). Impoliteness revisited: with special reference to dynamic and prosodic aspects. *Journal of Pragmatics*, *35*(10–11), 1545–1579.

Davies, B. L., Merrison, A. J., & Goddard, A. (2007). Institutional apologies in UK higher education: Getting back into the black before going into the red. *Journal of Politeness Research*, *3*(1), 39–63.

Deutschmann, M. (2003). *Apologising in British English*. Umeå: Umeå Universitet.

Dilley, L., Shattuck-Hufnagel, S., & Ostendorf, M. (1996). Glottalization of word-initial vowels as a function of prosodic structure. *Journal of Phonetics*, *24*(4), 423–444.

Dörnyei, Z. (2007). *Research methods in applied linguistics.* Oxford applied linguistics. Oxford, New York.: Oxford University Press.

Du Bois, J. W., Schuetze-Coburn, S., Cumming, S., & Paolino, D. (1992). Discourse transcription. *Santa Barbara Papers in Linguistics, 4*, 1–225.

Durkheim, E. (1976 [1915]). *The Elementary Forms of the Religious Life* (Second Edition). London: George Allen and Unwin.

Edmondson, W. J. (1981). On Saying You're Sorry. In F. Coulmas (Ed.), *Rasmus Rask Studies in Pragmatic Linguistics,* Volume 2, Conversational Routine (pp. 274–288). Berlin, New York: De Gruyter Mouton.

Eelen, G. (2001). *A critique of politeness theories* (Encounters: Vol. 1). Manchester: St. Jerome Publishing.

Escandell-Vidal, V., & Prieto, P. (2021). Pragmatics and prosody in research on Spanish. In D. A. Koike, & J. C. Félix-Brasdefer (Eds.), *Routledge Spanish Language Handbooks. The Routledge Handbook of Spanish Pragmatics: Foundations and Interfaces* (pp. 149–166). London: Routledge.

Faerch, C., & Kasper, G. (1984). *CCSARP - A Project Description*. Copenhagen: University of Copenhagen.

Fivela, G. B., & Bazzanella, C. (2014). The relevance of prosody and context to the interplay between intensity and politeness. An exploratory study on Italian. *Journal of Politeness Research*, *10*(1), 97–126.

Fraser, B. (1981). On apologizing. In F. Coulmas (Ed.), *Conversational Routine: Explorations in Standardized Communication Situations and Prepatterned Speech* (pp. 259–271). The Hague: De Gruyter Mouton.

Freese, J., & Maynard, D. W. (1998). Prosodic features of bad news and good news in conversation. *Language in Society*, *27*(2), 195–219.

Gibbon, D. (2017). *Prosody: The Rhythms and Melodies of Speech*. arXivLabs: experimental projects with community collaborators, https://arxiv.org/abs/1704.02565 [Last accessed: 7 March 2021]

Glenn, P. (2009). *Laughter in Interaction* (Studies in Interactional Sociolinguistics 18). New York: Cambridge University Press.

Gobl, C., & Ní Chasaide, A. (2003). The role of voice quality in communicating emotion, mood and attitude. *Speech Communication*, *40* (1-2), 189–212.

Goffman, E. (1976). Replies and responses. *Language in Society, 5*(3), 257–313.

Goffman, E. (1971). *Relations in Public: Microstudies of the Public Order* (4th print, Harper Colophon books: Volume 276). New York [etc.]: Harper & Row.

Goffman, E. (1956). Embarrassment and social organization. *American Journal of Sociology*, *62*(3), 264–271.

Gosztolya, G., Grósz, T., Szaszák, G., & Tóth, L. (2016). Estimating the sincerity of apologies in speech by DNN rank learning and prosodic analysis. *Interspeech 2016*, 2026–2030.

Gottliebson, R. O., Lee, L., Weinrich, B., & Sanders, J. (2007). Voice problems of future speech-language pathologists. *Journal of Voice*, *21*(6), 699–704.

Grawunder, S., & Winter, B. (2010). Acoustic Correlates of Politeness: Prosodic and Voice Quality Measures in Polite and Informal Speech of Korean and German Speakers. In *Speech Prosody 2010*, paper 316.

Grice, P. (1975). Logic and Conversation. In P. Cole, & J. L. Morgan (Eds.), *Speech Acts: Syntax and Semantics* (pp. 41–58). Bloomington, Indiana: Brill.

Grice, P. (1957). Meaning. *The Philosophical Review*, *66*(3), 377–388.

Gussenhoven, C. (2004). *The Phonology of Tone and Intonation*: *Research Surveys in Linguistics*. Cambridge and New York: Cambridge University Press.

Gussenhoven, C. (2002). Intonation and Interpretation: Phonetics and Phonology. *Speech Prosody 2002*.

Haugh, M., & Chang, M. W.-L. (2019). "The apology seemed (in)sincere": Variability in perceptions of (im)politeness. *Journal of Pragmatics*, *142*, 207–222.

Hellbernd, N., & Sammler, D. (2016). Prosody conveys speaker's intentions: Acoustic cues for speech act perception. *Journal of Memory and Language*, *88*, 70–86.

Hellier, E., Edworthy, J., Weedon, B., Walters, K., & Adams, A. (2002). The perceived urgency of speech warnings: Semantics versus acoustics. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, *44*(1), 1–17.

Henton, C. D. (1986). Creak as a sociophonetic marker. *The Journal of the Acoustical Society of America*, *80*(S50).

Hidalgo Navarro, A. (2009). Modalización (des)cortés y prosodia: Estado de la cuestión en el ámbito hispánico [(Im)polite models and prosody: State of the art in the Hispanic sphere]. *Boletin De Filologia*, *44*(1), 161–195.

Hidalgo Navarro, A. (2006). La expresión de cortesía en español hablado: Marcas y recursos prosódicos para su reconocimiento en la conversación colloquial [The expression of politeness in spoken Spanish: Marks and prosodic resources for its recognition in colloquial conversation]. In M. Villaynadre Llamazares (Ed.), *Actas del XXV Simposio internacional de la Sociedad Espanola de Linguistica* [Proceedings of the XXV International Symposium of the Spanish Society of Linguistics] (pp. 957–979). Leon: University of Leon.

Hidalgo Navarro, A., & Cabedo Nebot, A. (2014). On the importance of the prosodic component in the expression of linguistic im/politeness. *Journal of Politeness Research*, *10*(1), 5–27.

Hirst, D. J. (2011). The analysis by synthesis of speech melody: From data to models. *Journal of Speech Sciences*, *1*(1), 55–83.

Hirst, D. J. (2007). A Praat plugin for Momel and Intsint with improved algorithms for modelling and coding intonation. *ICPhS, XVI*, 1233–1236.

Hirst, D. J. (2005). Form and function in the representation of speech prosody. *Speech Communication*, *46*(3-4), 334–347.

Hollien, H. (1972). On vocal registers. *Communication Sciences Laboratory Quarterly Report*, *10*(1).

Hollien, H., Moore, P., Wendahl, R. W., & Michel, J. F. (1966). On the nature of vocal fry. *Journal of Speech and Hearing Research*, *9*(2), 245–247.

Holmes, J. (1995). *Women, Men, and Politeness* (Real language series). London and New York: Routledge.

Holmes, J. (1990). Apologies in New Zealand English. *Language in Society*, *19*(2), 155–199.

Holmes, J. (1989). Sex differences and apologies: One aspect of communicative competence. *Applied Linguistics*, *10*(2), 194–213.

Holmes, J. (1984). Modifying illocutionary force. *Journal of Pragmatics*, *8*(3), 345–365.

Hurley, S. H. (1992). Issues in teaching pragmatics, prosody, and non-verbal communication. *Applied Linguistics*, *13*(3), 259–280.

Ishi, C. T., Ishiguro, H., & Hagita, N. (Eds.) (2006). Evaluation of prosodic and voice quality features on automatic extraction of paralinguistic information. In: *2006 IEEE/RSJ International Conference on Intelligent Robots and Systems*. Beijing, China.

Johnston, B., Kasper, G., & Ross, S. (1998). Effect of Rejoinders in Production Questionnaires. *Applied Linguistics*, *19*(2), 157–182.

Jones, J. F., & Adrefiza (2017). Comparing apologies in Australian English and Bahasa Indonesia: Cultural and gender perspectives. *Journal of Politeness Research*, *13*(1), 89-119.

Jones, B. C., Feinberg, D. R., DeBruine, L. M., Little, A. C., & Vukovic, J. (2008). Integrating cues of social interest and voice pitch in men's preferences for women's voices. *Biology Letters*, *4*(2), 192–194.

Kamiyama, H., Ando, A., Masumura, R., Kobashikawa, S., & Aono, Y. (2019). Urgent Voicemail Detection Focused on Long-term Temporal Variation. In *2019 Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC)* (pp. 917–921). IEEE.

Kasper, G. (2008). Data collection in pragmatics research. In H. Spencer-Oatey (Ed.), *Culturally Speaking: Culture, Communication and Politeness Theory* (2nd edition) (pp. 279–304). London and New York: Continuum.

Klofstad, C. A., Anderson, R. C., & Peters, S. (2012). Sounds like a winner: Voice pitch influences perception of leadership capacity in both men and women. *Proceedings of the Royal Society B. Biological Sciences*, *279*(1738), 2698–2704.

Knowles, G. (1987). *Patterns of Spoken English: An Introduction to English Phonetics* (Learning About Language). Oxfordshire, England and New York, New York: Routledge.

Labov, W. (1984). Intensity. In D. Schiffrin (Ed.), *Meaning, Form, and Use in Context: Linguistic Applications* (pp. 43–70). Washington, DC: Georgetown University Press.

Ladd, D. R. (1981). On Intonational Universals. *Advances in Psychology. The Cognitive Representation of Speech*, *7*, 389–397.

Ladd, D. R. (1978). Stylized intonation. *Language*, *54*(3), 517–540.

Lakoff, R. T. (2001). Nine Ways of Looking at Apologies: The Necessity for interdisciplinary Theory and Method in Discourse Analysis. In D. Tannen, H. E. Hamilton & D. Schiffrin (Eds.), *The Handbook of Discourse Analysis* (pp. 199–214). Malden, MA: Blackwell Publishing Ltd.

Lakoff, R. T. (1975). *Language and Woman's Place.* New York: Harper.

LaPolla, R. J. (1994). An Experimental Investigation into Phonetic Symbolism as It Relates to Mandarin Chinese. In L. Hinton, J. Hichols, & J. J. Ohala (Eds.), *Sound Symbolism* (pp. 130–147). Cambridge: Cambridge University Press.

Laver, J. (1980). *The Phonetic Descriptions of Voice Quality*. Cambridge: Cambridge University Press.

Leech, G. (2014). *The Pragmatics of Politeness*. New York: Oxford University Press.

Leech, G. (2007). Politeness: Is there an East-West divide?. *Journal of Politeness research*, *3*(2), 167–206 (Revised version of Leech 2005).

Leech, G. (2005). Politeness: Is there an East-West divide. *Journal of foreign languages*, *6*(3), 1–30.

Leech, G. (1983). *Principles of Pragmatics* (Longman linguistics library: title no. 30). London and New York: Routledge.

Limberg, H. (2016). Teaching how to apologize: EFL textbooks and pragmatic input. *Language Teaching Research*, *20*(6), 700–718.

LimeSurvey GmbH. (2019). LimeSurvey [An open-source survey tool]. Hamburg, Germany: LimeSurvey GmbH. Retrieved from http://www.limesurvey.org [Last accessed: May 2021]

Lin, H. Y., Tse, K. P. J., & Fon, J. (Eds.) (2006). An Acoustic Study on the Paralinguistic Prosody in the Politeness Talk in Taiwan Mandarin. *ITRW on Experimental Linguistics*. Athens, Greece.

Lindsey, G. (1981). Intonation and pragmatics. *Journal of the International Phonetic Association*, *11*(1), 2–21.

Lindström, O. (1976). *Aspects of English intonation* (Gothenburg Studies in English: Volume 39). Göteborg: Acta Universitatis Gothoburgensis.

Locher, M. A., & Watts, R. J. (2005). Politeness theory and relational work. *Journal of Politeness Research, 1*(1), 9–33.

Loveday, L. (1981). Pitch, politeness and sexual role: An exploratory investigation into the pitch correlates of English and Japanese politeness formulae. *Language and Speech, 24*(1), 71–89.

Lubecka, A. (2000). *Requests, Invitations, Apologies and Compliments in American English and Polish: A Cross-Cultural Communication Perspective*. Kraków: Ksiegarnia Akademicka.

Maeshiba, N., Yoshinage, N., Kasper, G., & Ross, S. (2006). Transfer and proficiency in interlanguage apologizing. In S. M. Gass, & J. Neu (Eds.), *Speech Acts Across Cultures: Challenges to Communication in a Second Languag*e (Studies on Language Acquisition [SOLA]: Volume 11) (pp. 155–190). Berlin/Boston: De Gruyter Mouton.

del Mar Vanrell, M., Feldhausen, I., & Astruc, L. (2018). The Discourse Completion Task in Romance Prosody Research: Status Quo and Outlook. In I. Feldhausen, J. Fliessbach, & M. del Mar Vanrell (Eds.), *Methods in Prosody: A Romance Language Perspective* (pp. 191–228). Berlin: Language Science Press.

Martínez-Flor, A., & Usó Juan, E. (2010a). The Teaching of Speech Acts in Second and Foreign Language Instructional Contexts. In A. Trosborg (Ed.), *Handbooks of pragmatics: Pragmatics across Languages and Cultures* (2nd edition) (pp. 423–442). Berlin, New York: De Gruyter Mouton.

Martínez-Flor, A., & Usó-Juan, E. (2010b). Pragmatics and Speech Act Performance. In A. Martínez Flor & E. Usó Juan (Eds.), *Speech Act Performance: Theoretical, Empirical and Methodological Issues* (pp. 4–20). Amsterdam and Philadelphia: John Benjamins Publishing Company.

McGlone, R. E., & Shipp, T. (1971). Some physiologic correlates of vocal-fry phonation. *Journal of Speech and Hearing Research, 14*(4), 769–775.

Michel, J. F., & Hollien, H. (1968). Perceptual differentiation of vocal fry and harshness. *Journal of Speech and Hearing Research, 11*(2), 439–443.

Microsoft Corporation (2018). Microsoft Excel [Computer software]: Microsoft Corporation. Retrieved from https://office.microsoft.com/excel

Miller, R. S. (1992). The nature and severity of self-reported embarrassing circumstances. *Personality and Social Psychology Bulletin, 18*(2), 190–198.

Mills, S. (2003). *Gender and Politeness.* Cambridge: Cambridge University Press.

Momel/Intsint Plugin (2018). [SOFTWARE]. https://github.com/danijel3/SpeechProsody [Last accessed: December 2018].

Mozziconacci S. J. L., & Hermes D. J. (1999). Role of intonation patterns in conveying emotion in speech. *Proceedings of the 14th International Congress of Phonetic Sciences (ICPhS) 1999,* 2001–2004.

Nadeu, M., & Prieto, P. (2011). Pitch range, gestural information, and perceived politeness in Catalan. *Journal of Pragmatics*, *43*(3), 841–854.

Navarro, T. T. (1974). *Manual de Entonación Espaňol* [Intonation Manual for Spanish]. Madrid: Guadarrama.

Nilsenová, M. (2006). *Rises and Falls: Studies in the Semantics and Pragmatics of Intonation* (Published Doctoral Dissertation). Amsterdam: University of Amsterdam.

O'Connor, J. D., & Arnold, G. F. (1963). *Intonation of Colloquial English: A Practical Handbook* (1st publication). London: Longmans.

Ofuka, E., McKeown, J.D., Waterman, M. G., & Roach, P. J. (2000). Prosodic cues for rated politeness in Japanese speech. *Speech Communication*, *32*(3), 199–217.

Ogden, R. (2011). Prosodic Constructions in Making Complaints. In D. Barth-Weingarten, E. Reber, & M. Selting (Eds.), *Prosody in Interaction* (pp. 81–104) Amsterdam [etc.]: John Benjamins Publishing Company.

Ogden, R. (2006). Phonetics and social action in agreements and disagreements. *Journal of Pragmatics*, *38*(10), 1752–1775.

Ogiermann, E. (2018). Discourse Completion Tasks. In A. H. Jucker, K. P. Schneider, & W. Bublitz (Eds.), *Handbooks of Pragmatics: Methods in Pragmatics* (Volume 10) (pp. 229–255). Berlin and Boston: De Gruyter Mouton.

Ogiermann, E. (2015). Apology Discourse. In K. Tracy, T. Sandel, & C. Ilie (Eds.), *The International Encyclopedia of Language and Social Interaction*. Wiley.

Ogiermann, E. (2009). *On Apologising in Negative and Positive Politeness Culture* (Pragmatics & Beyond: New Series, Volume 191). Amsterdam: John Benjamins Publishing Company. https://benjamins.com/catalog/pbns.191

Ohala, J. J. (1995). The Frequency Code Underlies the Sound Symbolic Use of Voice. In L. Hinton, J. Nichols, & J. J. Ohala (Eds.), *Sound Symbolism* (pp. 325–347). Cambridge: Cambridge University Press.

Ohala, J. J. (1984). An ethological perspective on common cross-language utilization of f0 of voice. *Phonetica*, *41*(1), 1–16.

Olshtain, E. (1989). Apologies across Languages. In S. Blum-Kulka, J. House, & G. Kasper (Eds.), *Cross-Cultural Pragmatics: Requests and Apologies* (pp. 155–173). Ablex Publishing Company.

Olshtain, E., & Cohen, A. (1990). The learning of complex speech act behaviour. *TESL Canada Journal*, *7*(2), 45–65.

Olshtain, E., & Cohen, A. D. (1983). Apology: A Speech Act Set. In N. Wolfson & E. Judd (Eds.), *Sociolinguistics and Second Language Acquisition* (pp. 18–36). Rowley, Mass.: Newbury House.

Owen, M. (1983). *Apologies and Remedial Interchanges: A Study of Language Use in Social Interaction*. Berlin: Walter de Gruyter & Co.

Parker, M. A., & Borrie, S. A. (2018). Judgments of intelligence and likability of young adult female speakers of American English: The influence of vocal fry and the surrounding acoustic-prosodic context. *Journal of Voice: Official Journal of the Voice Foundation*, *32*(5), 538–545.

Pennock, B. (2005). The Changing Voice of Women. In *Actas del XXVII congress internacional de AEDEAN* (pp. 407–415). Valencia: Dept. de Filologia Anglesa I Alemanya, Universitat de Valencia.

Pisanski, K., Bhardwaj, K., & Reby, D. (2018). Women's voice pitch lowers after pregnancy. *Evolution and Human Behavior*, *39*(4), 457–463.

Prieto, P. (2015). Intonational meaning. *Wiley Interdisciplinary Reviews. Cognitive Science*, *6*(4), 371–381.

Prieto, P., & Rigau, G. (2012). Prosody and Pragmatics. In L. Payrató, & J. Cots (Eds.), *The Pragmatics of Catalan* (pp. 17–48). Berlin, Boston: De Gruyter.

Prieto, P., & Rigau, G. (2007). The syntax-prosody interface: Catalan interrogative sentences headed by que. *Journal of Portuguese Linguistics*, *6*(2), 29–59.

Prolific (2019 [2014]). Prolific (Version 2017) [Computer software]. Oxford, UK: Prolific. Retrieved from www.prolific.co [Last accessed: January 2021]

Quilis, A. (1988). *Fonética Acústica de la Lengua* Española [Acoustic Phonetics of the Spanish Language]. Madrid: Gredos.

Raso, T., & Rocha, B. (2016). Illocution and attitude: On the complex interaction between prosody and pragmatic parameters. *Journal of Speech Sciences*, *5*(2), 5–27.

Redi, L., & Shattuck-Hufnagel, S. (2001). Variation in the realization of glottalization in normal speakers. *Journal of Phonetics*, *29*(4), 407–429.

Reed, M., & Levis, J. M. (Eds.) (2015). *Blackwell Handbooks in Linguistics*. *The Handbook of English Pronunciation* (First edition). Malden, MA: Wiley Blackwell.

Reed, M., & Michaud, C. (2015). Intonation in Research and Practice: The Importance of Metacognition. In M. Reed, & J. M. Levis (Eds.), *The Handbook of English Pronunciation* (pp. 454–470). Hoboken, NJ: John Wiley & Sons, Inc.

Rigoulot, S., Fish, K., & Pell, M. D. (2014). Neural correlates of inferring speaker sincerity from white lies: An event-related potential source localization study. *Brain Research*, *1565*, 48–62.

Risen, J. L., & Gilovich, T. (2007). Target and observer differences in the acceptance of questionable apologies. *Journal of Personality and Social Psychology*, *92*(3), 418–433.

Roever, C. (2013). Assessment of Pragmatics. In C. A. Chapelle (Ed.), *The Encyclopedia of Applied Linguistics*. Blackwell Publishing Ltd.

Rosenberg, A., & Hirschberg, J. (2005). Acoustic/prosodic and lexical correlates of charismatic speech. *Interspeech*, 513–516.

Sag, I., & Liberman, M. (1975). The Intonational Disambiguation of Indirect speech acts. In *Proceedings of the Chicago Linguistics Society* (Volume 11), 487–497.

Salehi, R. (2014). A comparative analysis of apology strategy: Iranian EFL learners and native English speakers. *Procedia - Social and Behavioral Sciences, 98*, 1658–1665.

Scherer, K. R. (1979). Acoustic Concomitants of Emotional Dimensions: Judging Affect from Synthesized Tone Sequences. In S. Weitz (Ed.), *Non-Verbal Communication: Readings with Commentary* (pp. 105–111). New York: Oxford University Press.

Scherer, K. R., Ladd, D. R., & Silverman, K. E. A. (1984). Vocal cues to speaker affect: Testing two models. *The Journal of the Acoustical Society of America, 76*(5), 1346–1356.

Schiffer, S. R. (1972). *Meaning*. Oxford: Clarendon Print.

Schneider, K. P. (2011). Imagining conversation: How people think people do things with words. *Sociolinguistic Studies*, *5*(1), 15–36.

Schneider, K. P. (2008). Small talk in England, Ireland, and the USA. In A. Barron, & K. P. Schneider (Eds.), *Variational Pragmatics: A Focus on Regional Varieties in Pluricentric Languages* (Pragmatics & Beyond New Series: Volume 178) (pp. 99–138). Amsterdam, Philadelphia: John Benjamins.

Scott, M. B., & Lyman, S. M. (1968). Accounts. *American Sociological Review*, *33*(1), 46–62.

Searle, J. R. (1976). A classification of illocutionary acts. *Language in Society*, *5*(1), 1–23.

Searle, J. R. (1975). Indirect Speech Acts. In J. R. Searle (Ed.), *Expression and Meaning* (pp. 30–57). Cambridge University Press.

Searle, J. R. (1969). *Speech acts: An Essay in the Philosophy of Language*. Cambridge: Cambridge University Press.

Searle, J. R., & Vanderveken, D. (1985). *Foundations of Illocutionary Logic*. Cambridge: Cambridge University Press.

Selting, M. (1994). Emphatic speech style – With special focus on the prosodic signaling of heightened emotive involvement in conversation. *Journal of Pragmatics*, *22*(3-4), 375–408.

Silverman, K., Pitrelli, J. F., Beckman, M., & Hirschberg, J. (1992). ToBI: A Standard for Labeling English prosody. *Second International Conference on Spoken Language Processing*.

Smiljanić, R., & Bradlow, A. R. (2008). Stability of temporal contrasts across speaking styles in English and Croatian. *Journal of Phonetics, 36*(1), 91–113.

Smiljanić, R., & Bradlow, A. R. (2005). Production and perception of clear speech in Croatian and English. *The Journal of the Acoustical Society of America*, *118*(3 Pt 1), 1677–1688.

Smith, B. L., Brown, B. L., Strong, W. J., & Rencher, A. C. (1975). Effects of speech rate on personality perception. *Language and Speech*, *18*(2), 145–152.

Spencer-Oatey, H. (2011). Conceptualising 'the relational' in pragmatics: Insights from metapragmatic emotion and (im)politeness comments. *Journal of Pragmatics*, *43*(14), 3565–3578.

Spencer-Oatey, H. (2008). *Culturally Speaking: Managing Rapport through Talk across Cultures* (2nd edition). London and New York: Continuum.

Stathopoulos, E. T., Huber, J. E., & Sussman, J. E. (2011). Changes in acoustic characteristics of the voice across the life span: Measures from individuals 4–93 years of age. *Journal of Speech, Language, and Hearing Research, 54*(4), 1011–1021.

Stadler, S. A. (2006). *Multimodal (Im)politeness: The Verbal, Prosodic and Non-Verbal Realization of Disagreement in German and New Zealand English.* Hamburg: Kovač.

Street, R. L., Brady, R. M., & Putman, W. B. (1983). The influence of speech rate stereotypes and rate similarity of Listeners' evaluations of speakers. *Journal of Language and Social Psychology*, *2*(1), 37–56.

Sturman, B., & Rett, J. (2018, October). *Exclamation intonation*, University of California, Berkeley. Retrieved from http://linguistics.berkeley.edu/cusp11/pdf/sturman.pdf [Last accessed: 7 March 2021].

Surana, K. & Slifka, J. (2006). Is irregular phonation a reliable cue towards the segmentation of continuous speech in American English? *Speech Prosody 2006*, paper 117.

Syrdal, A. K., & Jun Kim, Y. (2008). Dialog speech acts and prosody: Considerations for TTS. *Proceedings of Speech Prosody*, 661–665.

Szameitat, D. P., Alter, K., Szameitat, A. J., Darwin, C. J., Wildgruber, D., Dietrich, S., & Sterr, A. (2009). Differentiation of emotions in laughter at the behavioral level. *Emotion (Washington, D.C)*, *9*(3), 397–405.

Szczepek Reed, B. S. (2010). *Analysing Conversation - An Introduction to Prosody*. Basingstoke, Hampshire, England: Palgrave Macmillan.

Terkourafi, M. (2005). Beyond the micro-level in politeness research. *Journal of Politeness Research*, *1*(2), 237–262.

Terkourafi, M. (2001). *Politeness in Cypriot Greek: A Frame-Based Approach* (Published Doctoral Dissertation). Cambridge: University of Cambridge.

Traunmüller, H., & Eriksson, A. (1995). The frequency range of the voice fundamental in the speech of male and female adults. *Unpublished Manuscript*. Retrieved from https://www2.ling.su.se/staff/hartmut.old/f0_m&f.pdf [Last accessed: 7 March 2021].

Thomas, J. A. (1995). *Meaning in Interaction: An Introduction to Pragmatics* (Learning About Language). Hoboken: Taylor and Francis.

Trosborg, J. A. (1987). Apology strategies in natives/non-natives. *Journal of Pragmatics*, *11*(2), 147–167.

Truckenbrodt, H. (2015). Intonation Phrases and Speech Acts. In M. Kluck, D. Ott, & M. Vries de (Eds.), *Parenthesis and ellipsis: Cross-linguistic and theoretical perspectives* (Studies in Generative Grammar: Volume 121) (pp. 301–349). Berlin: De Gruyter Mouton.

Trudgill, P. (1974). *The Social Differentiation of English in Norwich*. Cambridge: Cambridge University Press.

Turnbull, W. (2001). An appraisal of pragmatic elicitation techniques for the social psychological study of talk: The case of request refusals. *Quarterly Publication of the International Pragmatics Association (IPrA)*, *11*(1), 31–61.

Vaissiere, J. (2008). Perception of Intonation. In D. B. Pisoni, & R. E. Remez (Eds.), *The Handbook of Speech Perception* (Blackwell handbooks in linguistics) (pp. 236–263). Hoboken: John Wiley & Sons Ltd.

Vergis, N., & Terkourafi, M. (2015). The role of the speaker's emotional state in im/politeness assessments. *Journal of Language and Social Psychology*, *34*(3), 316–342.

Vollmer, H. J., & Olshtain, E. (1989). The Language of Apologies in German. In S. Blum-Kulka, J. House & G. Kasper (Eds.), *Cross-Cultural Pragmatics: Requests and Apologies* (pp. 197–218). Norwood, N.J.: Ablex

Waltereit, R. (2005). La polifonía prosódica: Copiar un patrón entonativo [Prosodic polyphony: Copying an intonation pattern]. *Revista Internacional De Lingüística Iberoamericana*, *3*(2), 137–150.

Watts, R. J., Ide, S., & Ehlich, K. (1992). *Politeness in Language: Studies in its History, Theory and Practice* (Mouton Textbook). Berlin, New York: Mouton de Gruyter.

Wells, J. C. (2006). *English Intonation: An Introduction*. Cambridge, UK and New York: Cambridge University Press.

Wells, J. C. (1982). *Accents of English* (Volume 1, An Introduction). Cambridge: Cambridge University Press.

Wichmann, A. (2015). Functions of Intonation in Discourse. In M. Reed, & J. M. Levis (Eds.), *The Handbook of English Pronunciation* (Blackwell Handbooks in Linguistics) (pp. 175–189). Malden, MA: Wiley Blackwell.

Wichmann, A. (2004). The intonation of *please*-requests: A corpus-based study. *Journal of Pragmatics*, *36*(9), 1521–1549.

Wichmann, A. (2002). Attitudinal intonation and the inferential process. *Speech Prosody 2002*.

Wichmann, A., & Blakemore, D. (2006). The prosody-pragmatics interface. *Journal of Pragmatics*, 38(10), 1537–1541.

Winter, B., & Grawunder, S. (2012). The phonetic profile of Korean formal and informal speech registers. *Journal of Phonetics*, *40*(6), 808–815.

Winter, B., & Grawunder, S. (2011). The polite voice in Korean: Searching for acoustic correlates of *contaymal* and *panmal*. *Japanese/Korean Linguistics*, *19*, 419–431.

Wolfson, N., Marmor, T., & Jones, S. (1989). Problems in the Comparison of Speech Acts across Cultures. In S. Blum-Kulka, J. House, & G. Kasper (Eds.), *Cross-Cultural Pragmatics* (pp. 174–196). Ablex Pub.

Wolk, L., Abdelli-Beruh, N. B., & Slavin, D. (2012). Habitual use of vocal fry in young adult female speakers. *Journal of Voice*, *26*(3), 111–116.

Wouk, F. (2006). The language of apologizing in Lombok, Indonesia. *Journal of Pragmatics*, *38*(9), 1457–1486.

Yuasa, I. P. (2010). Creaky voice: A new feminine voice quality for young urban-oriented upwardly mobile American women? *American Speech*, *85*(3), 315–337.

Appendices

A. Methodology-related data

i. Results for Rating scales Pre-study

Scratched Car		Heavy door		Unpunctual		Bus Directions		Borrowed Book		Newspaper	
Severe	Natural	Severe	Natural	Severe	Natural	Severe	Natural	Severe	Natural	Severe	Natural
5	4	5	4	4	1	4	4	2	3	2	1
4	4	4	3	4	5	3	4	1	5	1	5
5	4	5	2	4	4	2	2	2	3	2	3
5	4	2	3	3	2	5	5	3	4	3	3
4	5	4	5	4	5	5	5	3	5	3	4
1	4	1	2	3	3	3	2	1	4	1	5
5	3	5	3	3	4	4	3	2	5	3	4
5	2	5	2	2	2	2	2	1	5	1	5
5	4	5	3	3	4	2	4	2	5	1	2
4	3	1	2	1	3	2	4	3	5	3	5
3	3	4	3	3	3	1	3	1	4	1	3
4	3	5	5	4	4	4	4	2	2	2	3
4	1	4	2	2	4	2	5	1	5	1	5
5	2	4	2	2	3	2	4	2	5	1	5
4	4	5	2	1	4	3	2	1	4	2	3
4	4	4	4	3	5	1	5	4	4	2	4
5	3	5	2	5	3	5	4	4	4	4	4
4	5	4	5	1	4	2	4	3	5	3	5
4	4	5	3	2	3	2	2	1	2	2	3
5	3	5	3	5	5	5	3	4	4	2	4
4	4	4	3	3	5	2	4	2	4	1	5
5	5	5	5	5	5	5	5	2	4	1	2
4	4	5	2	3	4	4	3	3	5	2	4
4	4	5	4	3	4	3	4	1	4	2	4
4	5	5	3	4	3	4	4	2	5	2	4
5	5	4	3	2	4	2	5	1	4	3	5
4	4	1	1	2	5	3	5	1	5	1	2
4.26	3.7	4.1	3	3	3.7	3	3.74	2.04	4.22	1.93	3.78

B. Additional data related to function, form and position

i.Most often used strategies and their position

Most often used strategies and their position - HS-HD

Position	CONCERN FOR THE HEARER	IFID	EXCLAMATION
1	0 (0%)	6 (14%)	37 (86%)
2	10 (23.3%)	24 (55.8%)	4 (9.3%)
3	13 (30.2%)	8 (18.6%)	1 (2.3%)
4	8 (18.6%)	5 (11.6%)	1 (2.3%)
5	5 (11.6%)	2 (4.7%)	2 (4.7%)
6	2 (4.7%)	1 (2.3%)	1 (2.3%)
7	2 (4.7%)	1 (2.3%)	1 (2.3%)
8	2 (4.7%)	1 (2.3%)	1 (2.3%)
9	1 (2.3%)	2 (4.7%)	0 (0%)
10	1 (2.3%)	2 (4.7%)	0 (0%)
11	0 (0%)	1 (2.3%)	0 (0%)
12	0 (0%)	1 (2.3%)	0 (0%)
13	2 (4.7%)	0 (0%)	0 (0%)
14	0 (0%)	1 (2.3%)	0 (0%)
Number of apologies	43 (100%)	43 (100%)	43 (100%)

Most often used strategies and their position - HS-SC

Position	EXCLAMATION	OFFER OF REPAIR	IFID	TAKING ON RESPONSIBILITY
1	20 (50%)	0 (0%)	15 (37.5%)	2 (5%)
2	0 (0%)	7 (17.5%)	19 (47.5%)	8 20%)
3	1 (2.5%)	10 (25%)	4 (10%)	6 (15%)
4	3 (7.5%)	7 (17.5%)	3 (7.5%)	6 (15%)
5	1 (2.5%)	5 (12.5%)	2 (5%)	2 (5%)
6	2 (5%)	2 (5%)	3 (7.5%)	1 (2.5%)
7	0 (0%)	2 (5%)	2 (5%)	0 (0%)
8	0 (0%)	1 (2.5%)	0 (0%)	2 (5%)
9	2 (5%)	1 (2.5%)	1 (2.5%)	1 (2.5%)
10	0 (0%)	1 (2.5%)	2 (5%)	1 (2.5%)
11	0 (0%)	0 (0%)	1 (2.5%)	0 (0%)
Number of apologies	40 (100%)	40 (100%)	40 (100%)	40 (100%)

Most often used strategies and their position - MS-BD

Position	EXCLAMATION	OFFER OF REPAIR	IFID	TAKING ON RESP.
1	21 (50%)	0 (0%)	17 (40.5%)	1 (2.4%)
2	0 (0%)	2 (4.8%)	20 (47.6%)	11 (26.2%)
3	0 (0%)	6 (14.3%)	6 (14.3%)	10 (23.8%)
4	0 (0%)	3 (7.1%)	2 (4.8%)	6 (14.3%)
5	2 (4.8%)	2 (4.8%)	4 (9.5%)	2 (4.8%)
6	0 (0%)	1 (2.4%)	2 (4.8%)	0 (0%)
7	0 (0%)	1 (2.4%)	0 (0%)	0 (0%)
Number of apologies	42 (100%)	42 (100%)	42 (100%)	42 (100%)

Most often used strategies and their position - MS-UP

Position	APPEASER	HESITATION	IFID	OTHER	PROMISE OF FORBEARANCE	TAKING ON RESPONSIBILITY
1	0 (0%)	0 (0%)	25 (69.4%)	3 (8.3%)	0 (0%)	2 (5.6%)
2	2 (5.6%)	1 (2.8%)	11 (30.6%)	2 (5.6%)	1 (2.8%)	17 (47.2%)
3	1 (2.8%)	4 (11.1%)	6 (16.7%)	1 (2.8%)	1 (2.8%)	11 (30.6%)
4	1 (2.8%)	1 (2.8%)	5 (13.9%)	2 (5.6%)	4 (11.1%)	4 (11.1%)
5	1 (2.8%)	1 (2.8%)	2 (5.6%)	1 (2.8%)	2 (5.6%)	3 (8.3%)
6	1 (2.8%)	0 (0%)	2 (5.6%)	1 (2.8%)	0 (0%)	2 (5.6%)
7	1 (2.8%)	0 (0%)	2 (5.6%)	2 (5.6%)	1 (2.8%)	0 (0%)
8	1 (2.8%)	1 (2.8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
9	0 (0%)	1 (2.8%)	0 (0%)	0 (0%)	1 (2.8%)	0 (0%)
10	1 (2.8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (2.8%)
11	0 (0%)	1 (2.8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
12	1 (2.8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
13	0 (0%)	0 (0%)	1 (2.9%)	0 (0%)	0 (0%)	0 (0%)
14	0 (0%)	1 (2.8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
15	1 (2.8%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
	36 (100%)	36 (100%)	36 (100%)	36 (100%)	36 (100%)	36 (100%)

Most often used strategies and their position - LS-BB

Position	ANSWER	EXCLAMATION	HESITATION	OFFER OF REPAIR	IFID	TAKING ON RES.
1	9 (23.1)	16 (41)	1 (2.6)	0 (0)	9 (23.1)	1 (2.6)
2	2 (5.1)	1 (2.6)	0 (0)	0 (0)	12 (30.8)	21 (53.8)
3	0 (0)	1 (2.6)	2 (5.1)	8 (20.5)	4 (10.3)	18 (46.2)
4	0 (0)	0 (0)	6 (15.4)	9 (23.1)	1 (2.6)	3 (7.7)
5	0 (0)	0 (0)	1 (2.6)	8 (20.5)	1 (2.6)	4 (10.3)
6	0 (0)	0 (0)	1 (2.6)	3 (7.7)	2 (5.1)	1 (2.6)
7	0 (0)	0 (0)	0 (0)	3 (7.7)	2 (5.1)	0 (0)
8	0 (0)	1 (2.6)	0 (0)	0 (0)	0 (0)	0 (0)
9	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.6)	0 (0)
10	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2.6)
11	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
12	0 (0)	0 (0)	1 (2.6)	0 (0)	0 (0)	0(0)
	39 (100%)	39 (100%)	39 (100%)	39 (100%)	39 (100%)	39 (100%)

Most often used strategies and their position - LS-NP

Position	ANSWER	EXCLAMATION	OFFER OF REPAIR	TAKING ON RESPONSIBILITY	IFID
1	9 (19.6%)	18 (39.1%)	0 (0%)	8 (17.4%)	8 (17.4%)
2	3 (6.5%)	1 (2.2%)	2 (4.3%)	22 (47.8%)	14 (30.4%)
3	0 (0%)	1 (2.2%)	5 (10.9%)	17 (37%)	14 (30.4%)
4	0 (0%)	0 (0%)	11 (23.9%)	5 (10.9%)	1 (2.2%)
5	0 (0%)	0 (0%)	5 (10.9%)	1 (2.2)	3 (6.5%)
6	0 (0%)	0 (0%)	3 (6.5%)	0 (0%)	1 (2.2%)
7	0 (0%)	0 (0%)	2 (4.3%)	0 (0%)	2 (4.3%)
8	0 (0%)	0 (0%)	0 (0%)	1 (2.2%)	0 (0%)
	46 (100%)	46 (100)	46 (100%)	46 (100%)	46 (100%)

ii. Hesitation devices found in the apologies

Observed factor	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
HESITATIONS within the strategies	11.6 (5)	17.5 (7)	4.8 (2)	16.7 (6)	17.9 (7)	4.3 (2)
'Strategy' HESITATION	30.2 (13)	30 (12)	14.3 (6)	30.6 (11)	30.8 (12)	19.6 (9)
Apologies with a HESITATION in % (n)	41.8 (18)	47.5 (19)	19.1 (8)	47.3 (17)	48.7 (19)	23.9 (11)

iii. Frequency apologies which ended in the respective strategy

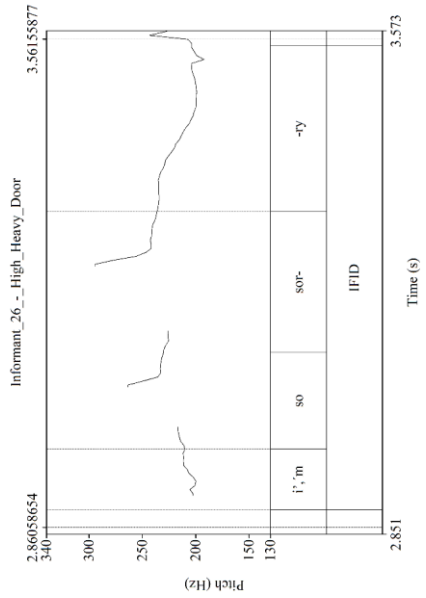
Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
APPEASER	0%	10%	2.4%	22.2%	2.6%	0%
CONCERN FOR THE HEARER	27.9%	10%	2.4%	0%	2.6%	2.2%
EXCLAMATION	2.3%	5%	0%	0%	0%	0%
EXPLANATION OR ACCOUNT	0%	0%	0%	0%	0%	2.2%
HESITATION	0%	0%	2.4%	0%	0%	0%
IFID	18.6%	30%	21.4%	27.8%	15.4%	19.6%
MINIMISING	0%	0%	4.8%	0%	0%	0%
OFFER OF REPAIR	30.2%	30%	28.6%	5.6%	48.7%	45.7%
OTHER	4.7%	7.5%	11.9%	8.3%	2.6%	2.2%
PROMISE OF FORBEARANCE	0%	0%	2.4%	19.4%	15.4%	0%
TAKING ON RESPONSIBILITY	16.3%	7.5%	23.8%	16.7%	12.8%	28.3%

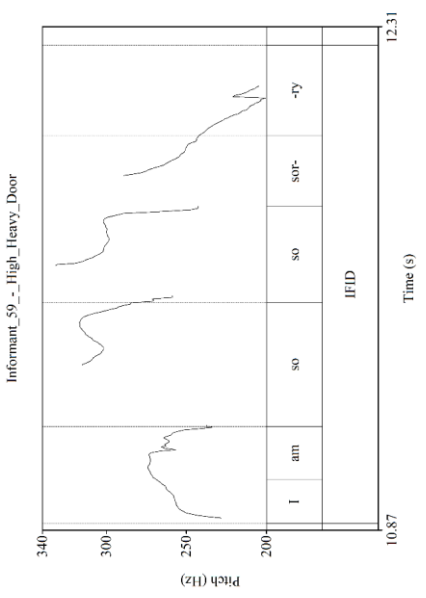
iv. Frequency of strategies per apology

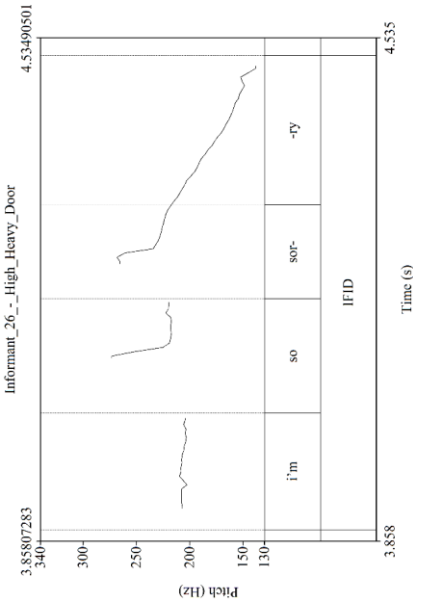
Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
ANSWER	0	0	0	0	0.3	0.3
APPEASER	0	0.2	0	0.3	0	0
CONCERN FOR THE H	1.1	0.2	0.1	0.1	0.1	0
EXCLAMATION	1.1	0.7	0.5	0.1	0.5	0.4
EXPLANATION OR ACCOUNT	0	0	0	0.1	0	0
HESITATION	0.3	0.3	0.1	0.3	0.3	0.2
OFFER OF RESTORATION	0.6	0.9	0.4	0.1	0.8	0.9
IFID	1.3	1.3	1.2	1.5	0.8	0.9
MINIMISING	0	0	0.1	0.1	0	0
OTHER	0.1	0.2	0.3	0.3	0.1	0.1
PROMISE OF FORBEARANCE	0	0	0	0.3	0.3	0
TAKING ON RESPONSIBILITY	0.4	0.7	0.7	1.1	1.3	1.2

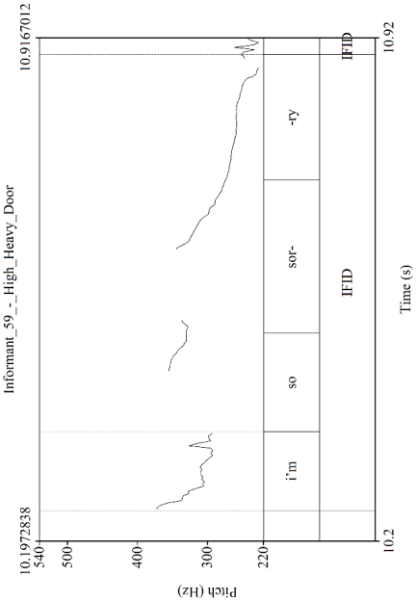
C. Coding scheme

i. Examples FALLING intonation

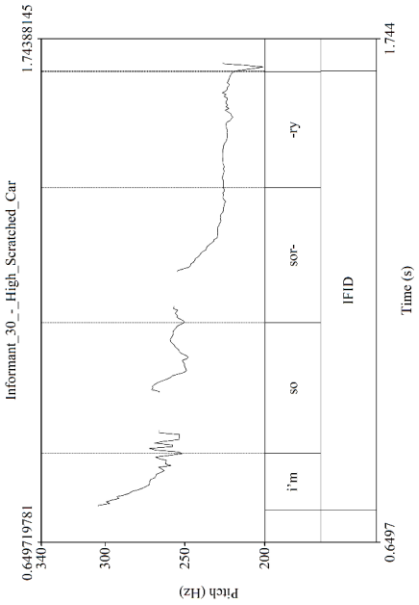


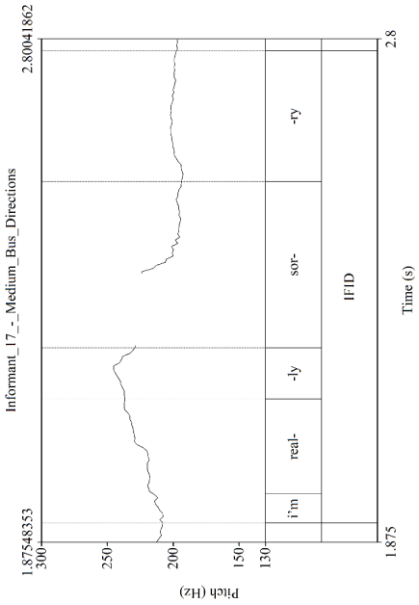




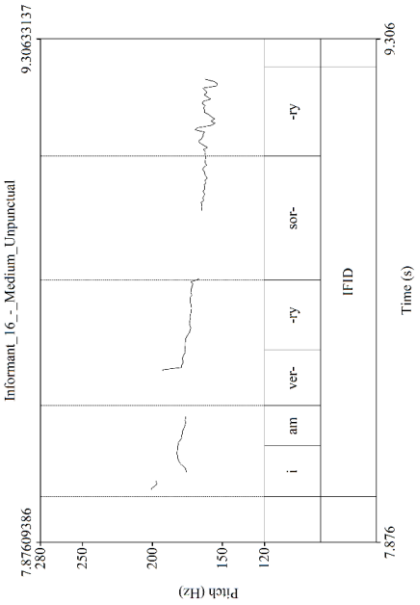


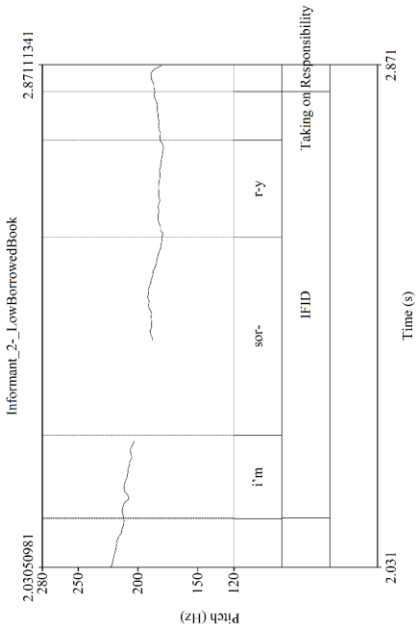
ii. Examples FALL-LEVEL intonation



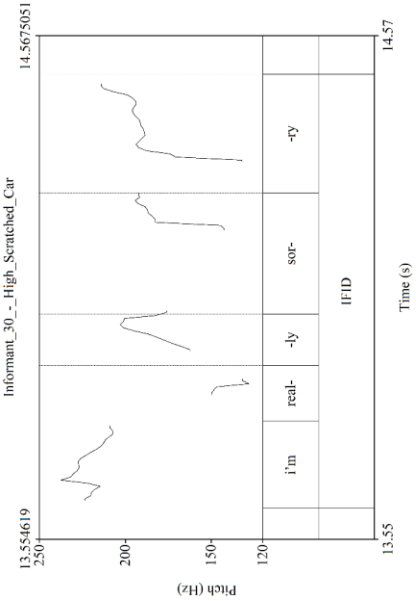


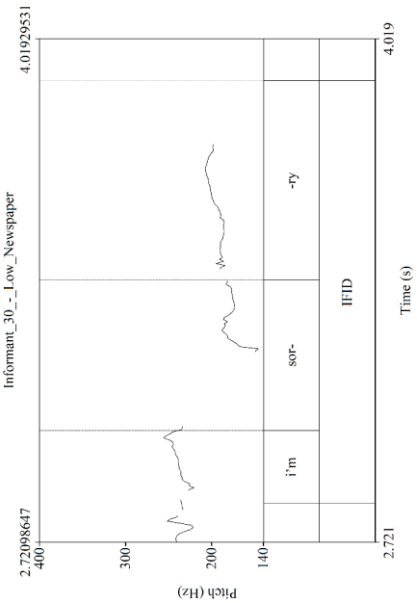
iii. Examples LEVEL intonation



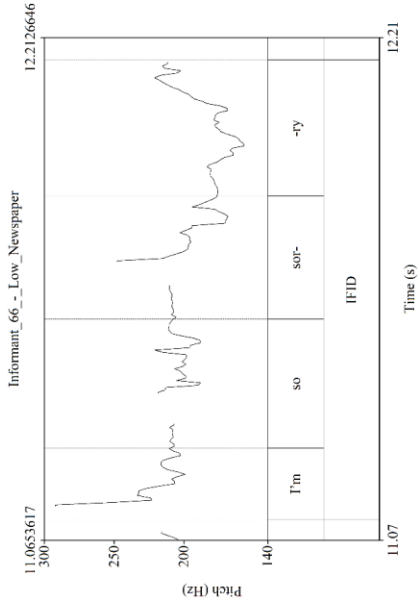


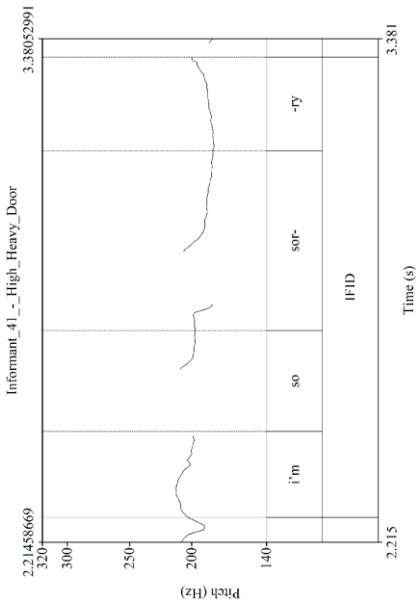
iv. Examples RISE intonation





v. Examples FALL-RISE intonation





D.Additional Tables for Prosodic Measurement and Coding

i. Different intonation contours per strategy and situation

LEVEL contour by strategy and situation

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	1/3 (33.3%)	0/1(0%)	0/1 (0%)
IFID	3/55 (5.5%)	4/52 (7.7%)	4/51 (7.8%)	6/54 (11.1)	3/32 (9.4%)	4/43 (9.3%)
OFFER OF REPAIR	1/26 (3.8%)	3/36 (8.3%)	0/15 (0%)	0/2(0%)	1/31 (3.2%)	1/28 (3.6%)
PROMISE OF F.	-	-	0/2 (0%)	2/10 (20%)	1/10 (10%)	-
TAKING ON RES.	2/16 (12.5%)	0/29 (0%)	2/30 (6.7%)	3/40 (7.5%)	1/49 (2%)	6/54 (11.1%)
OTHER STRATEGIES						
ANSWER	-	-	-	0 (0%)	0/11 (0%)	2/12 (16.7%)
APPEASER	-	0/7 (0%)	0/1 (0%)	0 (0%)	0/1 (0%)	1/1 (100%)
CONCERN FOR THE HEARER	1/46 (2.2%)	0/9 (0%)	0/3 (0%)	1/2 (50%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	5/48 (10.4%)	2/29 (6.9%)	1/23 (4.3%)	2/4 (50%)	3/19 (15.8%)	1/20 (5%)
HESITATION	7/13 (53.8%)	0/12 (0%)	4/6 (66.7%)	3/11 (27.3%)	3/12 (25%)	5/6 (83.3%)
MINIMISING THE DEGREE	-	-	2/4(50%)	0/2(0%)	-	-
OTHER	0/4 (0%)	1/8 (12.5%)	0/14 (0%)	1/12 (8.3%)	0/5 (0%)	0/4 (0%)

FALL-LEVEL intonation per strategy

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	0/1 (0%)	0/1 (0%)
IFID	10/55 (18.2%)	7/52 (13.5)	4/51 (7.8)	8/54 (14.8)	4/32 (12.5)	4/43 (9.3)
OFFER OF REPAIR	2/26 (7.7%)	2/36 (5.6)	0/15 (0%)	0/2 (0%)	1/31 (3.2)	2/28 (7.1)
PROMISE OF F.	-	-	1/2 (50%)	1/10 (10)	1/10 (10)	-
TAKING ON RES.	1/16 (6.3%)	0/29 (0%)	1/30 (3.3)	5/40 (10.2)	3/49 (6.1)	2/54 (3.7)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	1/12 (8.3)
APPEASER	-	1/7 (14.3)	0/1 (0%)	1/11 (9.1)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	3/46 (6.5%)	1/9 (11.1)	0/3 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	1/48 (2.1%)	0/29 (0%)	0/23 (0%)	0/4 (0%)	0/19 (0%)	0/20 (0%)
HESITATION	0/13 (0%)	0/12 (0%)	0/6 (0%)	0/11 (0%)	0/12 (0%)	0/6 (0%)
MINIMISING THE DEGREE	-	-	0/4 (0%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	0/14 (0%)	0/12 (0%)	0/5 (0%)	0/4 (0%)

LEVEL-FALL intonation per strategy

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	1/1 (100%)	0/1 (0%)
IFID	0/55 (0%)	0/52 (0%)	0/51 (0%)	0/54 (0%)	0/32 (0%)	0/43 (0%)
OFFER OF REPAIR	0/26 (0%)	1/36 (2.8%%)	0/15 (0%)	0/2 (0%)	0/31 (0%)	0/28 (0%)
PROMISE OF F.	-	-	0/2 (0%)	0/10 (0%)	0/10 (0%)	-
TAKING ON RES.	0/16 (0%)	2/29 (6.9%)	0/30 (0%)	0/40 (0%)	0/49 (0%)	0/54 (0%)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	1/12 (8.3%)
APPEASER	-	0/7 (0%)	0/1 (0%)	0/11 (0%)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	0/46 (0%)	0/9 (0%)	0/3 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	0/48 (0%)	1/29 (3.5%)	0/23 (0%)	0/4 (0%)	0/19 (0%)	0/20 (0%)
00HESITATION	0/13 (0%)	0/12 (0%)	0/6 (0%)	1/11 (9.1%)	0/12 (0%)	0/6 (0%)
MINIMISING THE DEGREE	-	-	0/4 (0%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	0/14 (0%)	0/12 (0%)	0/5 (0%)	0/4 (0%)

OTHER intonation per strategy

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	0/1 (0%)	0/1 (0%)
IFID	2/55 (3.6%)	2/52 (3.9%)	2/51 (3.9%)	1/54 (1.9%)	2/32 (6.3%)	2/43 (4.7%)
OFFER OF REPAIR	3/16 (11.5%)	6/36 (16.7%)	1/15 (6.7%)	2/2 (100%)	1/31 (3.2%)	4/28 (14.3%)
PROMISE OF F.	-	-	½ (50%)	2/10 (20%)	0/10 (0%)	-
TAKING ON RES.	1/16 (6.3%)	2/29 (6.9%)	3/30 (10%)	4/40 (8.2%)	4/49 (8.2%)	5/54 (9.3%)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	1/12 (8.3%)
APPEASER	-	0/7 (0%)	0/1 (0%)	0/11 (0%)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	4/46 (8.7%)	0/9 (0%)	0/3 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	4/48 (8.3%)	2/29 (6.9%)	0/23 (0%)	0/4 (0%)	3/19 (15.8%)	4/20 (20%)
HESITATION	0/13 (0%)	1/12 (8.3%)	0/6 (0%)	2/11 (18.2%)	2/12 (16.7%)	1/6 (16.7%)
MINIMISING THE DEGREE	-	-	¼ (25%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	0/14 (0%)	4/12 (33.3%)	0/5 (0%)	0/4 (0%)

UNCLEAR intonation in all strategies

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	0/1 (0%)	0/1 (0%)
IFID	0/55 (0%)	0/52 (0%)	2/51 (3.9%)	2/54 (3.7%)	0/32 (0%)	0/43 (0%)
OFFER OF REPAIR	0/26 (0%)	3/36 (8.3%)	0/15 (0%)	0/2 (0%)	0/31 (0%)	0/28 (0%)
PROMISE OF F.	-	-	0/2 (0%)	0/10 (0%)	0/10 (0%)	-
TAKING ON RES.	0/16 (0%)	3/29 (10.3%)	1/30 (3.3%)	1/40 (2%)	3/49 (6.1%)	3/54 (5.6%)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	0/12 (0%)
APPEASER	-	1/7 (14.3%)	0/1 (0%)	0/11 (0%)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	1/46 (2.2%)	0/9 (0%)	1/3 (33.3%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	1/48 (2.1%)	1/29 (3.5%)	1/23 (3%)	0/4 (0%)	0/19 (0%)	0/20 (0%)
HESITATION	0/13 (0%)	0/12 (0%)	0/6 (0%)	1/11 (9.9%)	1/12 (8.3%)	0/6 (0%)
MINIMISING THE DEGREE	-	-	0/4 (0%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	0/14 (0%)	1/12 (8.3%)	0/5 (0%)	1/4 (25%)

FALL-RISE-FALL intonation per Strategy

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	0/1 (0%)	0/1 (0%)
IFID	0/55 (0%)	0/52 (0%)	2/51 (3.9%)	1/54 (1.9%)	0/32 (0%)	0/43 (0%)
OFFER OF REPAIR	1/26 (3.9%)	0/36 (0%)	0/15 (0%)	0/2 (0%)	0/31 (0%)	1/28 (3.6%)
PROMISE OF F.	-	-	0/2 (0%)	0/10 (0%)	0/10 (0%)	-
TAKING ON RES.	0/16 (0%)	0/29 (0%)	0/30 (0%)	0/40 (0%)	0/49 (0%)	0/54 (0%)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	0/12 (0%)
APPEASER	-	0/7 (0%)	0/1 (0%)	0/11 (0%)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	0/46 (0%)	0/9 (0%)	0/3 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	1/48 (2.1%)	0/29 (0%)	0/23 (0%)	0/4 (0%)	0/19 (0%)	0/20 (0%)
HESITATION	0/13 (0%)	0/12 (0%)	0/6 (0%)	0/11 (0%)	0/12 (0%)	0/6 (0%)
MINIMISING THE DEGREE	-	-	0/4 (0%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	1/14 (7.14%)	0/12 (0%)	0/5 (0%)	0/4 (0%)

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	0/1 (0%)	0/1 (0%)
IFID	0/55 (0%)	1/52 (1.9%)	1/51 (2%)	1/54 (1.9%)	2/32 (6.3%)	0/43 (0%)
OFFER OF REPAIR	0/26 (0%)	1/36 (2.8%)	0/15 (0%)	0/2 (0%)	0/31 (0%)	0/28 (0%)
PROMISE OF F.	-	-	0/2 (0%)	0/10 (0%)	0/10 (0%)	-
TAKING ON RES.	0/16 (0%)	0/29 (0%)	0/30 (0%)	0/10 (0%)	0/49 (0%)	0/54 (0%)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	0/12 (0%)
APPEASER	-	0/7 (0%)	0/1 (0%)	0/11 (0%)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	0/46 (0%)	0/9 (0%)	0/3 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	0/48 (0%)	0/29 (0%)	0/23 (0%)	0/4 (0%)	0/19 (0%)	0/20 (0%)
HESITATION	0/13 (0%)	0/12 (0%)	0/6 (0%)	0/11 (0%)	0/12 (0%)	0/6 (0%)
MINIMISING THE DEGREE	-	-	0/4 (0%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	0/14 (0%)	0/12 (0%)	0/5 (0%)	0/4 (0%)

FALL-LEVEL-FALL intonation per Strategy

NOT VISIBLE per Strategy

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	0/1 (0%)	0/1 (0%)
IFID	0/55 (0%)	1/52 (1.9%)	1/51 (2%)	0/54 (0%)	0/32 (0%)	0/43 (0%)
OFFER OF REPAIR	2/26 (7.7%)	1/36 (2.8%)	0/15 (0%)	0/2 (0%)	1/31 (3.2%)	0/28 (0%)
PROMISE OF F.	-	-	0/2 (0%)	1/10 (10%)	0/10 (0%)	-
TAKING ON RES.	0/16 (0%)	1/29 (3.5%)	0/30 (0%)	0/40 (0%)	0/49 (0%)	0/54 (0%)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	0/12 (0%)
APPEASER	-	1/7 (14.3%)	0/1 (0%)	0/11 (0%)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	0/46 (0%)	0/9 (0%)	0/3 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	0/48 (0%)	1/29 (3.5%)	1/23 (3%)	0/4 (0%)	0/19 (0%)	2/20 (10%)
HESITATION	0/13 (0%)	0/12 (0%)	0/6 (0%)	0/11 (0%)	1/12 (8.3%)	0/6 (0%)
MINIMISING THE DEGREE	-	-	0/4 (0%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	1/14 (7.1%)	0/12 (0%)	0/5 (0%)	0/4 (0%)

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	0/1 (0%)	0/1 (0%)
IFID	0/55 (0%)	1/52 (1.9%)	1/51 (2%)	0/54 (0%)	0/32 (0%)	0/43 (0%)
OFFER OF REPAIR	2/26 (7.7%)	1/36 (2.8%)	0/15 (0%)	0/2 (0%)	1/31 (3.2%)	0/28 (0%)
PROMISE OF F.	-	-	0/2 (0%)	1/10 (10%)	0/10 (0%)	-
TAKING ON RES.	0/16 (0%)	1/29 (3.5%)	0/30 (0%)	0/40 (0%)	0/49 (0%)	0/54 (0%)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	0/12 (0%)
APPEASER	-	1/7 (14.3%)	0/1 (0%)	0/11 (0%)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	0/46 (0%)	0/9 (0%)	0/3 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	0/48 (0%)	1/29 (3.5%)	1/23 (3%)	0/4 (0%)	0/19 (0%)	2/20 (10%)
HESITATION	0/13 (0%)	0/12 (0%)	0/6 (0%)	0/11 (0%)	1/12 (8.3%)	0/6 (0%)
MINIMISING THE DEGREE	-	-	0/4 (0%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	1/14 (7.1%)	0/12 (0%)	0/5 (0%)	0/4 (0%)

RISE-FALL-RISE contour per Strategy

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	0/1 (0%)	0/1 (0%)
IFID	0/55 (0%)	0/52 (0%)	2/51 (3.9%)	1/54 (1.9%)	0/32 (0%)	0/43 (0%)
OFFER OF REPAIR	1/26 (3.9%)	0/36 (0%)	0/15 (0%)	0/2 (0%)	0/31 (0%)	1/28 (3.6%)
PROMISE OF F.	-	-	0/2 (0%)	0/10 (0%)	0/10 (0%)	-
TAKING ON RES.	0/16 (0%)	0/29 (0%)	0/30 (0%)	0/40 (0%)	0/49 (0%)	0/54 (0%)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	0/12 (0%)
APPEASER	-	0/7 (0%)	0/1 (0%)	0/11 (0%)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	0/46 (0%)	0/9 (0%)	0/3 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	1/48 (2.1%)	0/29 (0%)	0/23 (0%)	0/4 (0%)	0/19 (0%)	0/20 (0%)
HESITATION	0/13 (0%)	0/12 (0%)	0/6 (0%)	0/11 (0%)	0/12 (0%)	0/6 (0%)
MINIMISING THE DEGREE	-	-	0/4 (0%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	1/14 (7.1%)	0/12 (0%)	0/5 (0%)	0/4 (0%)

Technical difficulties per Strategy

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	0/1 (0%)	0/1 (0%)
IFID	0/55 (0%)	0/52 (0%)	0/51 (0%)	1/54 (1.9%)	0/32 (0%)	1/43 (2.3%)
OFFER OF REPAIR	0/26 (0%)	0/36 (0%)	0/15 (0%)	0/2 (0%)	1/31 (3.2%)	1/28 (3.6%)
PROMISE OF F.	-	-	0/2 (0%)	0/10 (0%)	0/10 (0%)	-
TAKING ON RES.	0/16 (0%)	0/29 (0%)	0/30 (0%)	1/40 (2%)	1/49 (2%)	1/54 (1.9%)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	0/12 (0%)
APPEASER	-	0/7 (0%)	0/1 (0%)	0/11 (0%)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	0/46 (0%)	0/9 (0%)	0/3 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	0/48 (0%)	0/29 (0%)	0/23 (0%)	0/4 (0%)	0/19 (0%)	0/20 (0%)
HESITATION	0/13 (0%)	0/12 (0%)	0/6 (0%)	0/11 (0%)	0/12 (0%)	0/6 (0%)
MINIMISING THE DEGREE	-	-	0/4 (0%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	0/14 (0%)	0/12 (0%)	0/5 (0%)	0/4 (0%)

LEVEL-RISE contour per strategy

Strategy	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
STRATEGIES PROPER						
EXPL. OR ACCOUNT	-	-	-	0/3 (0%)	0/1 (0%)	0/1 (0%)
IFID	0/55 (0%)	0/52 (0%)	0/51 (0%)	1/54 (1.9%)	0/32 (0%)	1/43 (2.3%)
OFFER OF REPAIR	0/26 (0%)	0/36 (0%)	0/15 (0%)	0/2 (0%)	1/31 (3.2%)	1/28 (3.6%)
PROMISE OF F.	-	-	0/2 (0%)	0/10 (0%)	0/10 (0%)	-
TAKING ON RES.	0/16 (0%)	0/29 (0%)	0/30 (0%)	1/40 (2%)	1/49 (2%)	1/54 (1.9%)
OTHER STRATEGIES						
ANSWER	-	-	-	0/1 (0%)	0/11 (0%)	0/12 (0%)
APPEASER	-	0/7 (0%)	0/1 (0%)	0/11 (0%)	0/1 (0%)	0/1 (0%)
CONCERN FOR THE H	0/46 (0%)	0/9 (0%)	0/3 (0%)	0/2 (0%)	0/2 (0%)	0/1 (0%)
EXCLAMATION	0/48 (0%)	0/29 (0%)	0/23 (0%)	0/4 (0%)	0/19 (0%)	0/20 (0%)
HESITATION	0/13 (0%)	0/12 (0%)	0/6 (0%)	0/11 (0%)	0/12 (0%)	0/6 (0%)
MINIMISING THE DEGREE	-	-	0/4 (0%)	0/2 (0%)	-	-
OTHER	0/4 (0%)	0/8 (0%)	0/14 (0%)	0/12 (0%)	0/5 (0%)	0/4 (0%)

ii. Contours at the end of apologies

	Creak	F	L	R	FL	RF	LF	FR	Other	Uncl	FRF	FLF	Not Vis	RFR	TECH	LR	∑Apol.
HS-HD	7 (16.3%)	12 (27.9%)	0 (0%)	1 (2.3%)	2 (4.7%)	7 (16.3%)	0 (0%)	6 (14%)	4 (9.3%)	0 (0%)	0 (0%)	0 (0%)	1 (2.3%)	0 (0%)	0 (0%)	0 (0%)	43
HS-SC	8 (20%)	9 (22.5%)	4 (10%)	3 (7.5%)	1 (2.5%)	1 (2.5%)	1 (2.5%)	2 (5%)	2 (5%)	4 (10%)	0 (0%)	1 (2.5%)	1 (2.5%)	0 (0%)	0 (0%)	1 (2.5%)	40
MS-BD	7 (16.7%)	5 (11.9%)	3 (7.1%)	5 (11.9%)	1 (2.4%)	3 (7.1%)	0 (0%)	3 (7.1%)	3 (7.1%)	3 (7.1%)	0 (0%)	0 (0%)	2 (4.8%)	1 (2.4%)	0 (0 %)	0 (0%)	42
MS-UP	10 (27.8%)	7 (19.4%)	2 (5.6%)	1 (2.8%)	2 (5.6%)	1 (2.8%)	0 (0%)	5 (13.9%)	6 (16.7%)	0 (0%)	0 (9%)	0 (0%)	1 (2.8%)	0 (0%)	0 (0%)	0 (0%)	36
LS-BB	11 (28.2%)	6 (15.4%)	1 (2.6%)	4 (10.3%)	4 (10.3%)	1 (2.6%))	0 (0%)	6 (15.4%)	2 (5.1%)	0 (0%)	0 (0%)	1 (2.6%)	0 (0%)	0 (0%)	1 (2.6%)	1 (2.6%)	39
LS-NP	11 (23.9%)	5 (10.9%)	2 (4.3%)	4 (8.7%)	4 (8.7%)	3 (6.5%)	0 (0%)	6 (13%)	4 (8.7%)	1 (2.2%)	2 (4.3%)	0 (0%)	0 (0%)	1 (2.2%)	2 (4.3%)	0 (0%)	46

iii. Intonation contours for OTHER formulations of IFIDs

Contour	HS-HD	HS-SC	MS-BD	MS-UP	LS-BB	LS-NP
FALL	-	66.7% (2)	21.1% (4)	20% (4)	25% (1)	-
RISE-FALL	-	-	10.5% (2)	5% (1)	-	-
FALL-LEVEL-FALL	-	-	-	5% (1)	-	-
LEVEL	-	33.3% (1)	-	15% (3)	25% (1)	16.7% (1)
FALL-LEVEL	-	-	10.5% (2)	5% (1)	-	16.7% (1)
RISE	-	-	-	5% (1)	-	-
FALL-RISE	-	-	10.5% (2)	15% (3)	-	33.3% (2)
RISE-FALL-RISE	-	-	10.5% (2)	5% (1)	-	-
UNCLEAR	-	-	10.5% (2)	5% (1)	-	-
TECHNICAL DIFF.	-	-	-	5% (1)	-	-
NOT VISIBLE	-	-	5.3% (1)	-	-	-
CREAK	-	-	15.8% (3)	10% (2)	-	33.3% (2)
OTHER	-	-	5.3% (1)	5% (1)	50% (2)	-
Total		100% (3)	100% (19)	100% (20)	100% (4)	100% (6)

iv. Creative ways of showing CONCERN FOR THE HEARER in HS-HD

Inf.	Transcript	Position
1	IS there something i can [DO: =#217#] (0.3)	5
1	HOW can i [HELP you [○ other]] **	7
18	let me check and see if there is any [BLEEDING↘ #190-155#↗#155-167#] (0.99)	3
23	How can I [HELP you ↘#264-185#] (0.67)	4
23	what's [WRONG ↘#268-198#=#198#] **	5
40	you're NOT [Okay ↘#235-177#↗#177-244#] (0.16)	4
44	let [ME: =#210#] (0.26) eh let me - let me [LOOK ↘#207-198#] (0.5)	4
44	do you [wanna: =#211#] (0.7) get some [ICE ↗↗#239-349#] (0.5)	8
44	[what ↗#196-219#] (0.17) [what↗ #182-231#] (0.17) [WHAT can i do for you ↗#198-232#↘#232-132#] **	8
46	LET me look at your [NOSE ↘#204-150#] (0.82)	3
46	how does it [FEEL ↗#204-150#↘↘#282-137#] /	4
47	i guess we have got to go to the [DOCTOR [○ laughs]] /	3
56	i HOPE you're O[KAY ↘#250-216#] ↔	13

v. EXCLAMATIONS in later positions of the APOLOGY.

Position	Informant	Situation	Formulation	Intonation Contour
2	22	HS-HD	[oh NO NO ↗#312-374#] /	RISE
2	22	HS-HD	[oh NO NO ↗#312-374#] /	RISE
2	40	HS-HD	oh my [GOD =285↗#285-311#] /	LEVEL-RISE
2	49	HS-HD	[oh my GOSH ↘#394-262#↗#262-333#] /	FALL-RISE
2	53	HS-HD	oh my [GOSH ↘#228-208#] /	FALL
3	40	HS-HD	[OH oh [○ unclear]] ↔	UNCLEAR
4	22	HS-HD	wait your [NOSE ↗↗#258-451#↘↘#451-219#] (0.43)	RISE-FALL
5	44	HS-HD	[uh: =#202#] (0.38)	LEVEL
5	59	HS-HD	OH my [GOD ↘#310-288#] /	FALL
6	59	HS-HD	oh my [GOD ↘#305-279#] /	FALL
7	49	HS-HD	[OH my GOD [○ creaky voice] **	CREAK
8	40	HS-HD	[OH my god =#205#] ↔	LEVEL
3	59	HS-SC	[OH man ↗#220-264#=#264#] /	RISE-LEVEL
4	17	HS-SC	[oh my GOD [○ creaky voice]] **	CREAK
4	41	HS-SC	[oh my [○ creaky voice]] /	CREAK
5	66	HS-SC	uh [SHIT ↘#244-180#] (0.85)	FALL
6	22	HS-SC	oh my [GOSH [○ unclear]] **	UNCLEAR
6	59	HS-SC	OH: my [GOD ↗#215-249#↘#249-201#] /	RISE-FALL
9	63	HS-SC	[OH my WORD ↘ #232-175#] /	FALL
5	44	MS-BD	[SHIT [○ unclear] (0.24)	UNCLEAR
5	59	MS-BD	[ugh [○ no intonation]] /	NOT VISIBLE
9	66	HS-SC	[SHIT [○ no intonation]] (0.21)	NOT VISIBLE
2	6	LS-BB	[OH NO ↗#267-361#↘#361-291#] ↔	RISE-FALL
8	39	LS-BB	[GOSH =#187#] /	LEVEL
2	26	LS-NP	oh [NO ↘↘#287-196#] /	FALL
3	45	LS-NP	[ugh [○ no contour]] /	NOT VISIBLE