

Sociophonetic variation in educated Jamaican English:

An analysis of the spoken component of *ICE-Jamaica*.

Inaugural-Dissertation

zur

Erlangung der Doktorwürde
der Philologischen Fakultät
der Albert-Ludwigs-Universität
Freiburg i. Br.

vorgelegt von

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WS 2008/2009

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Datum der Fachprüfung im Promotionsfach: 06.02.2009

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Acknowledgements

The present study owes its existence to the assistance of a number of people.

First of all, I would like to thank Prof. Christian Mair for supervising this thesis, as well as for continued encouragement, especially in the last stages of this work. I would also like to thank my colleagues at the Department of English at the University of Freiburg for helpful discussions, especially Dr. Benedikt Szmeccsanyi for inspiration on the use of logistic regression in Chapter 4.

Finally, my warmest thanks go to my parents, friends and roommates here in Freiburg, for continued emotional support and encouragement – especially Konrad.

Chapter 1

Introduction

Like many other former colonies where slaves from many different countries and language families and their masters were brought into close linguistic contact, Jamaica and its language situation are characterized by the existence of a creole continuum (DeCamp 1961, 1971). In this continuum, Standard English coexists with Jamaican Creole, the local English-lexifier creole language spoken on the island. The two language varieties form the acrolectal and basilectal endpoints of the continuum, respectively, with intermediate varieties (often called "mesolects") ranging on a continuous, finely graded and unidirectional scale in between.

As one of the largest and most influential speech communities of the region, Jamaica has been the focus of more linguistic research than most other Caribbean speech communities. However, most of this research has traditionally been devoted to the study of Jamaican Creole, a variety that is maximally distinct from standard metropolitan varieties of English and thus of considerable interest for linguistic research. Acrolectal Jamaican English, on the other hand, for a long time was assumed to be identical or near-identical with British English, which has constituted the historical linguistic norm for Jamaica due to the island's past as a former British colony. Although differences to British English were often acknowledged in descriptions of acrolectal Jamaican English, they were typically only mentioned in passing and were never elaborated or investigated in further detail (see e.g. Cassidy 1961: 33; Cassidy & LePage 1980: xi).

Recent studies of the acrolectal end of the Jamaican creole continuum, most notably Shields (1989) and Mair (2002a), have argued that following Jamaica's political independence from Britain in 1962, a change in language attitudes has taken place, which has led to greater public acceptance of local forms of (Jamaican Creole) speech and to a concomitant change in notions of "correctness" or "standardness", i.e. changing norms for what is considered to be educated Jamaican English. The emergent local standard of English in Jamaica has been shown to differ from standard metropolitan varieties of English both on the lexical and morphosyntactic, as well as on the phonetic and phonological level (Shields 1989, Sand 1999, Mair 2002a; Irvine 2004; Deuber 2009; Jantos 2010a, 2010b). Besides influence from Jamaican Creole, other factors mentioned in these studies as influential in the shaping of the emergent Jamaican standard are American English, which has been repeatedly described as increasingly influential in the region, as well as independent developments (Mair 2002a).

The present study aims to contribute to this emerging body of research by investigating in further detail the phonetics and phonology of the Jamaican acrolect. Using as a data base the Jamaican component of the *International Corpus of English (ICE)*, the study examines sociophonetic variation in educated (acrolectal) Jamaican English with respect to three selected variables: rhoticity, linking /r/, as well as the phonetic and phonological patterning of the Jamaican non-high vowels.

The aims of this study are threefold: firstly, to fill existing gaps in the literature with respect to the phonetic and phonological patterns of the proposed emergent local standard, leading to a more detailed and accurate description of educated Jamaican English. Secondly, the study examines the selected variables with regard to possible evidence for an emerging, distinctly Jamaican standard. Finally, it also aims to assess the relative strength of the influence of competing norms in the shaping of this variety: these competing norms being British English, which has been the historical norm due to Jamaica's colonial past; Jamaican Creole, features of which have been shown to become increasingly acceptable and used in the speech of educated Jamaican and formal situations, and American English. The influence of this latter variety of English on Jamaican English has been attributed to the

popularity of American media and popular culture, the political influence of the United States in the Caribbean, tourism and trade between the two countries, and the large number of Jamaicans migrating to the United States and back for job opportunities and family ties.

The study is structured as follows: Chapter 2 describes the language situation in Jamaica, starting with an overview of the the island's history in order to to gain a understanding of the social, cultural and economic conditions under which contemporary language use and language attitudes have developed. This is followed by a short summary of the most important phonetic and phonological characteristics of Jamaican Creole, which differ markedly from metropolitan standard varieties of English and thus constitute one of the directions along which potential influences on the emerging Jamaican standard could manifest themselves. In addition, the chapter describes the current language situation in Jamaica with respect to the status, use and attitudes towards Jamaican Creole and (Jamaican) English, the changes that have taken place in these domains over the past decades, as well as evidence for changing norms for what is considered to be “standard” or “correct” English in Jamaica.

The data material used in the present study is presented in Chapter 3, which provides background information on the history and composition of the *International Corpus of English (ICE)*, as well as on the criteria used for selecting speakers and material from the corpus for the analyses.

The next three chapters consist of empirical investigations of the phonetic and phonological patterning of three hitherto uninvestigated variables. Rhoticity, or the realization of /r/ in postvocalic contexts, is examined in Chapter 4. This feature has been shown to be one of the most important features for the classification of varieties of English (see e.g. McMahon *et al.* 2007). In the Caribbean context, the (presumed) rhoticity of Jamaican English not only distinguishes it from other varieties of English in the Caribbean, which are predominantly non-rhotic, but also contrasts with non-rhotic Jamaican Creole and British English, the historical norm for Jamaica. Although rhoticity in Jamaican English has been repeatedly described as highly variable, literature about this feature, especially at the acrolectal end of

the continuum, is relatively sparse, being limited to impressionistic descriptions, small sets of data, or articles with a more theoretical than descriptive focus. To date, this variable has not yet been investigated empirically on the basis of larger amounts of material, making it a fruitful candidate for linguistic research.

The same holds true for the second variable in the present study, linking /r/, analyses of which are presented in Chapter 5. Linking /r/, and the related /r/ sandhi phenomenon of “intrusive /r/” are closely connected to the question of rhoticity. Although the incidence of linking /r/ in the Jamaican speech continuum has not yet been described in the literature, an impressionistic survey of the data showed it to be highly variable as well, which led to its inclusion for further analysis in this study.

As a third variable, Chapter 6 investigates the phonetic realization of the low and back vowels, since no systematic acoustic study of vowel variation in the Jamaican acrolect has been carried out to date. The chapter presents an acoustical study of the vowels of the lexical sets of SCHWA, STRUT, TRAP, BATH, LOT, CLOTH and THOUGHT, examining not only the details of phonetic realisation of these lexical sets in educated Jamaican English, but also the presence and absence of mergers between these vowel classes. Moreover, a comparison with British and American formant measurements are carried out in order to assess the competing influences of these two varieties on contemporary educated Jamaican English.

The results of the analyses of all three variables are discussed in the wider context of World Englishes in Chapter 7, followed by a summary of the main results of the analyses in Chapter Chapter 8. It will be shown that both rhoticity and linking /r/ exhibit a high degree of variability in educated Jamaican English, contradicting traditional characterizations of this variety as predominantly rhotic. Although rhoticity is primarily influenced by phonetic and phonological factors, it is also subject to stylistic variation in the form of text categories, which are assumed to roughly correlate with the level of formality of the speech situation. In the domain of the vowels, Jamaican Creole and British English clearly constitute the two dominant influences. Vowels in educated Jamaican English will be shown to vary in their phonetic realization along a continuum between these two varieties, depending on

the degree of formality of the speech situation. An exception to these findings is the phonetic realization of the STRUT vowel, which does not exhibit stylistic variation and can thus be considered to constitute a stable feature of the emergent local Jamaican standard.

In the light of these findings, American influence on the phonetics and phonology of the emergent Jamaican standard seems highly improbable, especially in the domain of the vowel system, although it cannot be completely dismissed with regard to rhoticity. By contrast, evidence for an emerging, distinctly local standard can be found in the fact that educated Jamaican English differs vastly from other varieties of English with regard to both rhoticity and linking /r/, as well as in the phonetic realization of the vowels investigated.

The study concludes with an outlook on further perspectives for research on educated Jamaican English in Chapter 8.

Chapter 2

Language in Jamaica

2.1 Introduction

The present chapter presents an overview of both the linguistic history and the present-day language situation in Jamaica.

Since the objective of the present study is to investigate the effects and causes of a potential change in progress in the perceived norms and use of language by educated Jamaicans, it is important to gain a historical understanding of the linguistic history of the island, as well as the social, cultural and economic conditions under which language use and language attitudes developed. This is provided in section 2.2, which presents a short summary of the historical background of the island, with special regard to its cultural, social and linguistic history.

Section 2.3 presents the most important characteristics of Jamaican Creole, the English-lexifier creole spoken on the island. In addition to a short description of the Jamaican creole continuum (section 2.3.1), the features of Jamaican Creole that differ the most from metropolitan standard varieties of English in the domains of segmental and supra-segmental phonetics and phonology will be summarized in section 2.3.2 in order to give an overview of the characteristics of one of the potential influences on standard Jamaican English.

Sections 2.4 to 2.6 focus on the linguistic situation in present-day Jamaica, outlining language use and (changing) attitudes towards the two endpoints of the Creole

continuum in various domains: Section 2.4 describes the present-day language situation in Jamaica with respect to the use of Creole and English in the fields of education, law, business, government and the media. Attitudes towards Jamaican Creole and Jamaican English are outlined in section 2.5. The chapter concludes with a presentation of the evidence for changing linguistic norms in Jamaica (section 2.6).

2.2 Historical Background

Spanish Jamaica (1492-1655)

The island of Jamaica (Fig. 2.1) was first colonized by the Spanish in the sixteenth century, having been “discovered” in 1494 on Columbus’s second voyage to the Caribbean (Blouet 2007: 29, Black 1965: 25). The original inhabitants of Jamaica consisted of Arawak Indians, who had been living on the island for approximately 700 years at that time and who were exterminated almost completely through warfare, diseases and slavery within a hundred years of colonialization (Black 1965: 11-22, 32-33, Blouet 2007: 28, 30). Their language, Taino, left linguistic traces only in the form of a number of place, plant and animal names (Le Page 1960: 3, Cassidy & Le Page 1980: xl, Lalla & D’Costa 1990: 7, Patrick 2004a: 407).

The name “Jamaica” itself derives from an Amerindian word meaning ‘abundant in wood and water’ (Le Page 1960: 4) or ‘land of springs’ (Cassidy 1961: 10, Black 1965: 17). However, this etymology is not completely uncontroversial (Le Page 1960: 4, Black 1965: 17). According to Le Page (1960: 4), the name of the island is documented in the earliest Spanish spellings as *Yamaye* (in the diary of Columbus, 1493), *Xamaca*, *Jamaicha* (on a map by Bartolommeo Colombo, his younger brother), *Jamaiqua* (Cantino, 1502), *Jamaica*, *Jamica* (Peter Martyr, 1511). The island was called “St. Jago” or “Santiago” by Columbus himself (Le Page 1960: 4, Black 1965: 16).

Spanish settlement began in 1509 under Columbus’ son Diego and Juan de Esquivel, who became the first Spanish governor of Jamaica (Black 1965: 31, Senior 2003: 451, Howard 2005: 17). The island was given to the Colón family by the Span-

ish Crown as a recompense for Columbus' discoveries, and settlements and townships were established, mostly on the south side of the island (Black 1965: 31-38, Senior 2003: 451-452). The new colony became one of the staging posts and supply bases of the Spanish in the Greater Antilles, its settlers raising cattle, horses, donkeys and mules, as well as exporting agricultural products such as sugar, cotton, spices, and some hardwoods (Blouet 2007: 30, Senior 2003: 451). As the native Arawak population declined, cutting short the native supply of forced labor, African slaves began to be imported from West Africa to work on the plantations and cattle farms and in mining (Lalla & D'Costa 1990: 9/10, Cassidy 1961: 15, Black 1965: 32-33). The slave trade gained official approval by the Spanish Crown in 1518, even though slaves had been imported to the island for some time earlier (Randall 2009: 54, Howard 2005: 17, Senior 2003: 5).

The majority of the slaves imported to Jamaica in the first half of the sixteenth century were from the area between Senegal and Sierra Leone, substantial proportions coming also from the Congo-Angola and the Slave and Gold coasts (Lalla & D'Costa 1990: 14, Senior 2003: 5). With the growth of the slave population, a shift towards an African majority probably took place towards the end of the sixteenth century (Lalla & D'Costa 1990: 10/11). It is likely that many slaves were bilingual in Spanish, and contact with Taino, the language of the Arawaks, is also highly probable, as evidenced by intermarriages (Lalla & D'Costa 1990: 11).

During this period, runaway and freed slaves called the *Maroons* (from the Spanish word *cimarrón* 'wild, untamed') established the first Maroon settlements in the mountainous parts of Jamaica (Black 1965: 75, Senior 200: 5). They were later joined by large numbers of slaves that were freed by the Spanish upon the attack of the English in 1655, and the Maroon culture, which was influenced by the Akan and other African traditions, probably took shape in the second half of the seventeenth century (Lalla & D'Costa 1990: 13/14). Ethnically, the Maroons were "a mixture of Congo, Angolan, Akan and mixed-race people of Taino and Spanish origin", and it is likely that they spoke a Spanish creole (Senior 2003: 5). Towards the end of the sixteenth century, the population of Jamaica declined (Lalla & D'Costa 1990: 11).



Figure 2.1: **Map of Jamaica.** (Source: *Jamaica Maps - Perry-Castañeda Library Map Collection*. The University of Texas at Austin. <<http://www.lib.utexas.edu/maps/americas/jamaica.jpg>>. [Accessed August 28, 2008])

The colony never prospered, due to low population numbers and very little efforts on the side of the Spanish to develop it (Senior 2003: 451).

The British conquest (1655 to the end of the 17th century)

Jamaica came under British rule in 1655, when an expedition led by Admiral William Penn and General Robert Venables landed in present-day Kingston Harbour on the south coast of the island. The conquering expedition was part of Cromwell's "Western Design" campaign to challenge the Spanish hegemony in the Caribbean (Black 1965: 42-45, Pollard 2007: 97, Blouet 2007: 33, Senior 2003: 95). Jamaica was taken "as a consolation prize" by the British after an attack on Santo Domingo, the capital city of Hispaniola and the original target of the expedition, had failed (Blouet 2007: 33, see also Black 1965: 44, Senior 2003: 95). It was selected in part because it was known to be poorly defended, lacking fortifications and containing only a very small number of men who could bear arms (Senior 2003: 452, 95, Black 1965: 45). Moreover, Spanish settlements in Jamaica had been weakened by internal squabbles, and by the continued need to fight off French, Dutch, Italian, Portuguese and English pirates and adventurers (Black 1965: 38-41).

By the time Jamaica was conquered, the island had a population of about 8,000 inhabitants, approximately 1,500 of which were Spanish (Lalla & D'Costa 1990: 13, Black 1965: 45). Although the Spanish forces were quickly defeated and most of the population either fled or had to leave the island as part of the terms of surrender, a number of Spanishmen under the leadership of Don Cristobal Arnaldo de Ysasi, aided by the Maroons, kept up guerilla warfare against the British for several years following the British invasion (Senior 2003: 96, Black 1965: 45-46). Spanish resistance ended in 1660 after the Maroons and their leader Juan de Bolas went over to the British side, and the last Spanish left the island, leaving behind as their legacy some 250 Maroons, but hardly any linguistic traces (Black 1965: 45-49, Cassidy & Le Page 1980: xl, Lalla & D'Costa 1990: 6, 13, 16). The Treaty of Madrid (1670) officially established the island as a English possession (Black 1965: 49, Senior 2003: 96).

The conquering force of the British settling the island consisted of approximately 7,000-8,000 men. Approximately half of them were from England; the other half had been recruited in Barbados and the Leeward Islands of St. Kitts, Nevis, and Montserrat, where a creole was probably already in existence, either by independent development or as a successor of an earlier Pidgin English used in the slave trade influenced in turn by an earlier Portuguese-based pidgin (Black 1965: 44, Cassidy & Le Page 1980: xl). Among these West Indian recruits, servants from the west of England, Ireland, and, to a lesser extent, Scotland, probably formed the majority. Large numbers of Irish had been forcibly shipped to Barbados and other colonies by Cromwell following the conquest of Ireland in the middle of the seventeenth century (Cassidy & Le Page 1980: xl, Senior 2003: 245).

Settlement was encouraged by Cromwell, and civil government was established under the first British governor, D'Oyley, in 1660 (Black 1965: 46-47, Senior 2003: 96). Between 1655 and 1700, large-scale immigration to Jamaica took place. As a first compoment, there was a continued influx of settlers, and also of some slaves, from St. Kitts, Nevis, Montserrat and, notably, Barbados, which served as "the principal supplier of white colonists of all classes as well as creole blacks and transshipped Africans." (Lalla & D'Costa 1990: 16, see also Cassidy & Le Page 1980: xl/xli,

Cassidy 1961: 12). Moreover, white speakers of predominantly Western, Irish and Northern dialects of Early Modern English came to Jamaica as “indentured servants, artisans and adventurers”, as well as a “floating population of soldiers, sailors and privateers” (Cassidy 1961: 12/13, Cassidy & Le Page 1980: xli, Lalla & D’Costa 1990: 15). These immigrants for the most part had little education and tended to come from the lower classes of society (Cassidy 1961: 12/13, Lalla & D’Costa 1990: 15). Some of them were widows, orphans, and paupers from Ireland, who were shipped to the colonies “willingly or unwillingly” (Senior 2003: 245), others Scottish prisoners of war taken during the uprisings against Cromwell in the middle of the seventeenth century (Pollard 2007: 97), as well as “unsavoury characters” such as “beggars, gypsies and criminals” and “enslaved convicts” from Scotland and England (Pollard 2007: 98, Senior 2003: 434). The linguistic consequence of this was that the variety of Early Modern English that was imported to the Caribbean at this period “came [...] in the form of regional and nonstandard dialects, highly conservative for the most part” (Lalla & D’Costa 1990: 6). A few immigrants also came from Surinam, as well as from Bermuda, New England, and Virginia (Cassidy 1961: 12, Lalla & D’Costa 1990: 14).

In addition to the white settlers, there was also a continuous importation of new slaves, causing the black segment of the Jamaican population to grow much faster than its white counterpart, as forced labor for the plantation system by white indentured servants was replaced by the economically much cheaper institution of slavery (Cassidy & Le Page 1980: xlii, Senior 2003: 434). Thus, while the year 1658 saw a ratio of 4,500 whites vs. 1,400 blacks, these figures rose to 8,564 and 9,504, respectively, in 1673. By 1690, roughly the same number of whites but approximately 40,000 slaves lived in Jamaica; in 1734, 7,644 whites and 86,546 blacks. From 1740 onwards, the ratio of white to black people on the island stayed approximately constant at about 1:30 (Cassidy 1961: 16, Lalla & D’Costa 1990: 16).¹ The imported slaves came from the coast of West Africa, mainly from the Gold Coast and Southern Nigeria, and also from the westward equatorial coast, speaking Niger-

¹A more detailed description of the numbers and origins of the imported African slaves during various periods can be found in Le Page (1960).

Congo languages such as Akan-Ashanti and Ewe (Cassidy 1961: 17, Cassidy & Le Page 1980: xli).

Linguistically, this situation led to creolization due to the intensive contact between large numbers of African slaves speaking a variety of different languages on the one hand, dominated by speakers from the Twi-Fante-Ga-Ewe family of languages, and white servants, bookkeepers and overseers on the plantations on the other (Cassidy & Le Page 1980: xli): “Scholars have tended to hypothesize that Jamaican Creole took shape in the period 1660 to 1700. No seventeenth-century texts have been found to confirm or disprove this hypothesis, however, and regrettably, no descriptions of seventeenth-century speech behavior have been uncovered” (Lalla & D’Costa 1990: 16). Both Jamaican-born as well as newly imported slaves from Africa attempted to learn English on the models of the speech patterns of those whites with whom they came into direct contact (Cassidy 1961: 15, 18/19), which must have exhibited both regional and non-standard features: “the kind of English [the slaves] had to imitate was ‘colonial’ – that is, a speech mostly of middle-class origin but with some admixture of both upper- and lower-class features, and drawn from every part of the British Isles and the previously established colonies of North America and the Caribbean” (Cassidy 1961: 15). Moreover, the speech of many whites was influenced by the fact that many of them had lived earlier in the Leewards Islands or Barbados, where creole forms of English were probably spoken (Cassidy & Le Page 1980: xli/xlii). In addition, the possible influences from a Portuguese pidgin dating back to fifteenth century (Lalla & D’Costa 1990: 21), as well as from a pidgin English used on the West African Coast by slave traders, which had developed in the English trading posts along the coast of Guinea in the seventeenth and eighteenth centuries (Cassidy & Le Page 1980: xli/xlii, Lalla & D’Costa 1990: 20), have to be taken into account in this process of creolization.

Jamaica experienced a severe decline of its white population at the end of the seventeenth century due to natural disasters such as a cacao blight (1680s) and an earthquake (1692) which destroyed Port Royal, “a notorious pirate base” on the Palisadoes spit sheltering the Kingston Harbor, which led to the foundation of

Kingston on the north side of the harbor (Blouet 2007: 18, see also Black 1965: 62-63, and Howard 2005: 20, 32, 35-44).

The 18th century

During the eighteenth century, a large plantation culture developed, contrasting with small and interspersed settlements earlier (Blouet 2007: 33, Lalla & D'Costa 1990: 22). Jamaica began to prosper economically, and a rich cultural life developed for members of the wealthy classes, especially in Kingston (Black 1965: 74). As the demand and prices for sugar rose, it became “the crop which determined the economic value of the region and governed social structure from the mid-seventeenth century” (Thomas-Hope 1985: 290, Blouet 2007: 33). The large supply of labor needed for the cultivation of sugar led to the continued importation of African slaves, whose numbers on the island did not increase naturally due to harsh labor conditions, diseases, food deficits and high rates of infant mortality (Senior 2003: 447, Blouet 2007: 34). In Jamaica, many of the slaves imported during the eighteenth century came from the Bight of Benin, the Congo and Angola (Cassidy & Le Page 1980: xli).

British immigrants who came to Jamaica during this period consisted of “[c]onvict labor, political prisoners (some of them Scots), other Scots seeking work as book-keepers on the plantations, indentured servants (many of whom were Irish Catholics), as well as tradespeople from the hinterland of Bristol and, later, Liverpool” (Lalla & D'Costa 1990: 26). Loyalists from the southern USA who left after the Revolutionary war also brought their slaves with them (Pollard 2007: 98). Most notably, there was an increasing percentage of Scots among the white immigrants, who were in high demand by Jamaican planters as skilled laborers and servants (Cassidy 1961: 13, Senior 2003: 434). Some of these Scottish immigrants were transported to Jamaica forcibly “after the failure of the last Jacobite uprising” (Senior 2003: 434), but others came voluntarily in search of economic fortune, religious freedom or adventure (Pollard 2007: 96). Those who were from the higher strata of society often came with the intention of making their fortune and returning to their homeland, while the Scottish immigrants from the lower classes were more likely to settle in Jamaica per-

manently (Senior 2003: 434, Pollard 2007: 99). According to one eighteenth-century author (Long 1774, quoted in Pollard 2007: 98), by the second half of the eighteenth century, Scots made up approximately one third of the European population of Jamaica (Senior 2003: 434, Pollard 2007: 98). Their predominance in numbers was reflected in their cultural influence on other segments of the Jamaican society, with free coloreds and slaves reported as “tend[ing] to imbibe Scottish customs” (Senior 2003: 435).

Between 1791 and 1798, there was an influx of French-speaking refugees and their slaves from Haiti, who were fleeing the slave revolution under Toussaint L’Ouverture and Jean-Jacques Dessalines there which had been sparked by the ideas and ideals of the French revolution (Randall 2009: 58-59, Lalla & D’Costa 1990: 30, Black 1965: 118). Jamaica, too, saw repeated attempts at slave rebellions and uprisings in the course of the eighteenth century (Blouet 2007: 34, Black 1965: 85, 104-105).

Cultural ties with England were kept during this period, as all segments of the Jamaican population oriented themselves along the lines of European culture to a greater or lesser degree: “the free people of colour (and the blacks), while orienting themselves towards Europe, combined the behaviour of masters and slaves; and the whites practiced a creole version of eighteenth-century European culture” (Clarke 1985: 318). Many wealthy whites aspired to be absentee planters, living off the profits of their Jamaican plantations overseas, or to make their fortunes in the West Indies and return home prosperous (Black 1965: 91, Pollard 2007: 99). An important mechanism in this continued cultural connection was education, the children of affluent whites being taught by English tutors and governesses, or sent to boarding schools and universities in England (Lalla & D’Costa 1990: 23, Black 1965: 91, Senior 2003: 172).

At the same time, with the “rise in power and wealth of the island-born or *creole* proprietors” (Black 1965: 74), there was an emergence of local patriotism, with a “strong Jamaican identification” of the white segment of the population (Lalla & D’Costa 1990: 23): “By 1900, middle-class Jamaicans felt themselves a nation, a proud part of the British empire” (James 1999: 46). Moreover, with a slowly growing creole population, a gradual shift took place from an earlier African to a creole majority of the population (Lalla & D’Costa 1990: 25/26). By this

time, Jamaican Creole was firmly established and was gaining ground as means of communication:

During this period the Creole English became the accepted *lingua franca* of the island among the slaves, between Creole whites and the slaves, in the growing community of free people of colour, and – in a less extreme form – among many of the Creole whites themselves. The use of metropolitan dialects of English was confined to expatriates, among whom the bookkeepers and artisans would soon get into the habit of using Creole. (Cassidy & Le Page 1980: xlii)

The 19th century

The first decades of the nineteenth century saw a growing opposition to the institution of slavery, especially in Britain and among the Quakers and other religious groups, who had been fighting for the abolition of slavery since the late seventeenth century (Blouet 2007: 34, Black 1965: 134). Organizations like the Society for the Abolition of the Slave Trade, founded in 1787 under the leadership of William Wilberforce, continued to lobby against slavery with renewed forces, resulting in the passing of the Abolition Bill both in the House of Commons and in the House of Lords in 1807, which made the slave trade – but not slavery itself – illegal from January 1, 1808 onwards (Black 1965: 138-139, Randall 2009: 61).

However, other nations continued to trade in slaves, even though the British tried to enforce the new legislation through navy patrols in the Caribbean (Thomas-Hope 1985: 291, Randall 2009: 61-62). Eventually, on August 29, 1833, the Emancipation Act was passed, freeing all slaves in the British colonies from August 1st, 1834 onward but requiring them to undergo a period of “apprenticeship” to their former masters (who were compensated monetarily for their loss) for another four years (Blouet 2007: 38, Clarke 1985: 318, Thomas-Hope 1985: 291).²

At the time of emancipation, “some 300,000” slaves lived in Jamaica (Randall 2009: 63).³ Many of them moved away from the plantations and established free peasant villages all over the island wherever they could find land to buy, often with

²A distinction was originally made between field workers (“predial”) and non-fieldworking slaves, the former required to remain apprenticed for a period of six years, while the latter’s period of apprenticeship ended after four years. This distinction, however, was given up under confusion about the details of category membership in 1838, and all slaves received full freedom from August 1st, 1838 onward (Black 1965: 145, 153).

³It is estimated that around that time the total population of the island consisted of approxi-

the help of missionaries who bought and parceled up old estates for sale to the newly-freed peasants (Black 1965: 155, 157, Thomas-Hope 1985: 291, Senior 2003: 199-200, Randall 2009: 63).

Linguistically and socioeconomically, the abolition of slavery led to the decline of immigration and interisland trade, and also to the decline of multilingualism (Lalla & D'Costa 1990: 32/33). In the years following Emancipation, the rise in the cost of the production of sugar due to the necessity to pay wages to plantation workers now, heavy debts incurred by many planters, a financial crisis and the end of protective duties for import to Britain caused a decline of the Jamaican plantation culture and the near-collapse of the sugar industry (Black 1965: 157-159, Conway 2009: 373). Immigration was encouraged to supply the much-needed labor for the sugar plantations to replace the loss of the African slaves. The newly-imported indentured laborers included Africans, Europeans (Scots, Irish, and Portuguese), and a number of Indians and Chinese (Blouet 2007: 39, Senior 2003: 243, 245, Pollard 2007: 99, Randall 2009: 63, Black 1965: 150). The latter groups, however, were too small in numbers to leave any significant linguistic imprints on the language situation of the island (Lalla & D'Costa 1990: 36).

Although a new influx of indentured Africans from Sierra Leone and Central Africa, many of them speakers of Yoruba, occurred during this period as well, linguistically, the end of the slave trade marked the beginning of the decline of direct African influence in Jamaica (Cassidy & Le Page 1980: xlii; Lalla & D'Costa 1990: 26, 33). Another linguistic effect of Emancipation was that conservative forms of Jamaican Creole came to be preserved in the small rural communities of peasants in the interior of the country to which many of the former slaves had moved (Cassidy & Le Page 1980: xlii).

During the course of the nineteenth century, Jamaican Creole was becoming increasingly influenced by contact with English, mainly due to Christianization and increased educational opportunities, for which Christian missionaries played an important role (Cassidy & Le Page 1980: xlii, Lalla & D'Costa 1990: 29/30). Chris-

mately 340,000 blacks (some of them enslaved, some of them free), 40,000 "coloureds" and 25,000 whites (Clarke 1985: 317).

tianization by Moravian and Baptist missionaries had begun in the early eighteenth century (Black 1965: 88, see also Senior 2003: 319-322), causing Creole speakers to come into direct contact with middle-class varieties of English as spoken by many northern or midland speakers (Lalla & D'Costa 1990: 30), as well as with biblical and prayer-book language. Further contact by Creole speakers with English was in the domain of education. In the second half of the nineteenth century, literacy rates doubled from around 30 per cent to approximately 60 per cent of the Jamaican population (Senior 2003: 173). British-based school curricula and teaching staff imported from Britain were further factors causing English to become “the model language towards which the Creole moved” (Cassidy & Le Page 1980: xlii, see also Senior 2003: 174).

An important political event in the second half of the nineteenth century was the Morant Bay Rebellion in 1865, following which the planter-dominated Jamaican Assembly, fearing further rebellions and wanting a strong external government to protect the minority white ruling class, ceded its right to self-government to direct “Crown Colony” government, by which the island was directly ruled from London (Black 1965: 171-183, Clarke 1985: 317, D’Agostino 2009: 108). A number of reforms in the years following the Morant Bay Rebellion led to improved conditions for the masses of the population, especially in the domains of health and education (Black 1965: 184-190).

The end of the nineteenth century was also marked by a growing importance and influence of the United States in the entire Caribbean region (Thomas-Hope 1985: 292, Blouet 2007: 41).

The 20th century

Following the collapse of the sugar economy, from the end of the 19th century onwards Jamaicans attempted to diversify the Jamaican economy by introducing the cultivation of bananas, which became a major export factor (Randall 2009: 67-68, Black 1965: 191-193). Bauxite mining also began, with a “significant level of Canadian and US investment” (Randall 2009: 68).

During the Great Depression the already problematic state of the Jamaican

economy was worsened by rapid increases in population, a lack of opportunities for out-migration and the forced returns of emigrants from other countries, worsening the already dismal social conditions. This led to labor unrest, strikes, and violence (Blouet 2007: 45-46, D'Agostino 2009: 97, Black 1965: 208), contributing to the rise of trade unions associated with the major political parties (Randall 2009: 74). These included the *Bustamante Industrial Trade Union (BITU)*, which was founded by Alexander Bustamante in 1938 and came to be allied with the Jamaican Labour Party (JLP), and the *National Workers Union (NWU)*, founded as the Trade Union Advisory Council in 1939, which became allied with the People's National Party (PNP) (Senior 2003: 493, D'Agostino 2009: 109).

The Second World War strengthened the Jamaican industry through an increased demand for Jamaican exports (Randall 2009: 75, Blouet 2007: 47). At the same time, the weakening of European powers by the war led to an increased presence of the US in the Caribbean, several American military bases being established throughout the Caribbean during this period (Black 1965: 210). This development also contributed to a "growing sense of nationalism and demands for reform" (Randall 2009: 76), as well as an increasing desire for independence (D'Agostino 2009: 107).

In Jamaica, these demands for governmental reforms led to the introduction of a new constitution in 1944, which for the first time in Jamaican history extended the right to vote to all segments of the population (Randall 2009: 76, D'Agostino 2009: 108-109). The elections were run for the first time "on a party basis", the two main parties being the JLP and the PNP (Black 1965: 212), which alternated as government and opposition between 1944 and 1959 (D'Agostino 2009: 109, Collier 1985: 294). In the years to follow, successive amendments were introduced to the Jamaican constitution in the direction of full self-government (Black 1965: 213-215, D'Agostino 2009: 97-98). Following a brief episode as a member of the West Indies Federation from 1958 to 1962, Jamaica achieved independence from Britain and full self-government in 1962 (Collier 1985: 294, Thomas-Hope 1985: 293, D'Agostino 2009: 107). Alexander Bustamante became Jamaica's first Prime Minister (Howard 2005: 160).

One of the most important characteristics of Jamaica in the twentieth century

was large-scale emigration of the Jamaican population to other countries, which became “the dominant trend” (Blouet 2007: 104) of Jamaican demographics: “[I]n the first half of the twentieth century, [...] emigrations and wide-flung diasporas overtook immigration as the most significant demographic force” (Conway 2009: 369).

Emigration from Jamaica had started as early as the late nineteenth century, with large numbers of Jamaicans (an estimated 84,000) leaving the country to work on the construction of the Panama Railroad, the Panama Canal, as well as for work on banana plantations and railroads in South America (Brodber 1989: 63). The return of these laborers to Jamaica constituted an early instance of American influence on Jamaican culture, the migrant workers proudly bringing home with them “American values, speech patterns, gestures and commodities” (Senior 2003: 122). Later streams of emigration (roughly 121,000) in the first three decades of the twentieth century went to Cuba to work on the sugar plantations and factories there (Brodber 1989: 63, Conway 2009: 374).

After World War II and throughout the 1950s and 1960s, the main channel of emigration was to Britain: “[I]n 1960, 32 060 Jamaicans of a population of about one million migrated there and in 1961, 39 203, or about 4 out of every 100, left for that point. [...] 11 148 Jamaicans sought entry permits to Britain in 1971-4. [...] Of these, 3 856 were Jamaicans who had lived in Britain before” (Brodber 1989: 63, see also Blouet 2007: 104). However, changing legislation soon impeded the easy transfer of workers to the mother country, and the United States (and, to a lesser extent, Canada) replaced Britain as the main destination for Jamaican emigrants seeking work (Conway 2009: 375-376, Black 1965: 198-199, Blouet 2007: 104-105, Brodber 1989: 60). Large Caribbean immigrant communities established themselves in Boston, Baltimore, Philadelphia and New York, as well as Toronto, Miami and Los Angeles (Black 1965: 198, Akers 1981: 8, Conway 2009: 384). Migration became a permanent way of life for many Jamaicans: “Some commentators talk of the circulation of Caribbean populations because people are extremely mobile, moving backwards and forwards between job opportunities (frequently overseas) and family responsibilities in the islands. Migration, often temporary, is seen as a strategy for economic survival” (Blouet 2007: 104).

One of the major factors motivating mass emigration were the problematic economic and social conditions in Jamaica in the second half of the twentieth century. After two decades of rapid economic growth in the 1950s and 1960s, the Jamaican economy continued to decline throughout the following decades (Davies & Witter 1989: 78-83, D'Agostino 2009: 112, Howard 2005: 162). This development was accompanied by consistently high rates of unemployment,⁴ inflation, and an economy that was highly indebted externally (Davies & Witter 1989: 97, Blouet 2007: 83). With the change of the relative importance of the primary, secondary and tertiary economic sectors following the 1960s, tourism became a significant economic factor and another channel of growing US influence, with the majority of tourists to Jamaica coming from the United States (Blouet 2007: 82, 92).

The increasing influence of the United States during this period also manifested itself in the political and economic domains. Not only has the US been described as “exerting influence in the entire contemporary Caribbean” (Blouet 2007: 13) both culturally and politically, it has also become Jamaica’s most important trading partner since the 1960s, receiving about one third of all Jamaican exports and providing forty per cent of its imports (Blouet 2007: 95, see also Davies & Witter 1989: 87): “The United States is hegemonic in the [Caribbean], while providing aid, markets and a destination for migrants. The influence of the US is everywhere, from merchandise and shopping malls, to cell phones, movies, the media and McDonald’s. The US has intervened directly in the region, has manipulated political events and has financial and economic oversight through the World Bank and International Monetary Fund” (Blouet 2007: 130).

The 1960s and 1970s were also marked by a drastic increase in urban violence, often with political background and caused by worsening socioeconomic conditions for the poor majority of the Jamaican population. A number of riots erupted, especially during election campaigns, as both the JLP and the PNP and their supporters fought over control in Kingston’s urban ghettos (Blouet 2007: 71-72, Howard 2005: 128-131, see also Gunst 1995). Inner-city violence was exacerbated by continuing urbaniza-

⁴In 1985, for example, the rate of unemployment among Jamaican youth (14-19 years) was approximately 54 per cent (Davies & Witter 1989: 82).

tion, with more and more Jamaicans moving to the greater Kingston area in search of better job and living opportunities (Howard 2005: 59, Blouet 2007: 102). Illegal trafficking of drugs also played a major role in the gang warfare, which extended even into diaspora communities on the North American continent (Gunst 1995).

Internally, the rise of nationalism and the Black Power movement have led to the search for a new, post-colonial identity and caused “a major reversal of racial attitudes” (Thomas-Hope 1985: 292), which has been characteristic of most of the Caribbean region: “The brown and black middle stratum, which has filled the political and administrative vacuum left by the whites, has carefully created symbols of national unity. Local heads of state are usually black, local art forms receive government patronage, and annual celebrations of independence provide a holiday from the poverty which engulfs the lower stratum” (Clarke 1985: 319). There has also been a marked advancement of women, especially in the domains of education and the civil service (Brodber 1989: 66, Blouet 2007: 110). A notable example of this is Jamaica’s first female Prime Minister, Portia Simpson-Miller, who became the head of the Jamaican government in 2006 (Blouet 2007: 73, D’Agostino 2009: 125).

2.3 Jamaican Creole

This section gives an overview of the creole continuum that characterizes the language situation in Jamaica. Furthermore, the most important phonological features of the endpoint farthest away from metropolitan standard English, Jamaican Creole, will be presented in order to outline the main directions of phonetic and phonological variation along this continuum.

2.3.1 The creole continuum

The Jamaican language situation is characterized by the presence of a (post-)creole continuum (DeCamp 1961, 1971), in which a creole language (in this case, Jamaican Creole) coexists with its corresponding lexifier language (English), with fine gradations in intermediate varieties in between. Following Stewart (1965, cited in Akers 1981: 3), the endpoints of the continuum are labelled *basilect* (designating the creole

variety) and *acrolect* (designating its lexifier language), while intermediate varieties constitute one or several *mesolect(s)*.

Rickford (1987, cited in Patrick 1999: 7) identifies two fundamental postulates of the continuum model: (non-)discreteness and unidimensionality. (Non-)discreteness refers to the existence of continuous variation between the endpoints of the continuum, the creole and its standard lexifier language, and originally entailed strict implicational relations between the productions of speakers, in that certain features of their speech can be ordered so that the presence of one feature necessarily implies the presence of all others before in the hierarchy. Unidimensionality, on the other hand, refers to the fact that linguistic variation in the continuum can be ordered along a single scale, such as standardness vs. creoleness (Patrick 1999: 7-11).

The (post-)creole continuum, as postulated by DeCamp (1961), was originally seen as “a possible late stage of development in the pidgin-creole life-cycle” (Patrick 1999: 21), describing the result of a diachronic process in which the variation contained within the continuum emerges due to the standardizing pressure exerted by English on the creole, causing the creole to move in the direction of its lexifier language and to progressively decreolize. However, as has been pointed out by Patrick (1999: 21), “[t]hese ideas, once generally accepted, are now discarded or controversial”, as evidence from earlier stages of Jamaican Creole appears to point to the existence of variation from early on (Alleyne 1971, Lalla & D’Costa 1990). Thus, while the use of the continuum model still appears appropriate as a description of the variation in synchronic terms, the prefix *post-* is commonly omitted nowadays.

A controversial topic with respect to the linguistic analysis of the Jamaican language situation is the question of whether the varieties of speech found in the continuum should be modelled as separate linguistic systems, and, if so, whether the mesolect should be regarded as an independent system on its own. Akers (1981) sees the Jamaican language situation as diglossic (Ferguson 1964), with Jamaican Creole constituting the low (L) and English the high (H) variety, maintaining that there is “no unitary linguistic code. Rather, there are two opposing sets of values and two distinct codes, and intermediate stages through which individuals pass in switching from one to another.” (Akers 1981: 10). A similar approach is taken by

Devonish & Harry (2004), who analyze Jamaican Creole and Jamaican English as two separate subsystems, with conversion rules being variably applied to produce Jamaican English output from underlying Jamaican Creole representations. On the other hand, Patrick (1999, 2004a), analyzes the mesolect as a separate subsystem, arguing that “[i]t cannot be successfully maintained that mesolectal speakers [...] spend most of their speaking time vacillating between codes without establishing autonomous norms for their own intermediate vernacular, or possessing their own grammar” (Patrick 1999: 11). According to Patrick (1999), while the basilect is distinct and clearly separate from the mesolect, the same does not hold true for mesolect and acrolect, continuous variation existing between these two varieties. The mesolect also emerges as a separate subsystem in Meade (2001), who categorizes his speakers as mono-, bi- and multilingual speakers of the three distinct varieties acrolect, mesolect, and basilect. Finally, Hinrichs (2006) argues that the variation observed in his study of computer-mediated communication (CMC) should be better analyzed as code-switching.

2.3.2 Jamaican Creole: phonology

The vowel system

Compared to metropolitan varieties of English, Jamaican Creole has a very reduced vowel system, especially with respect to complex vowel nuclei (long vowels and diphthongs). An overview of the Jamaican Creole inventory of vowels and diphthongs is given in Table 2.1. As can be seen from the table, all authors agree in their analysis with respect to the Jamaican Creole system of short vowels, for which five phonemes, designated by varying phonological symbols (mainly /i, e, a, o, u/) are postulated. In contrast, considerable differences emerge with respect to the long vowels, the number of which ranges from one (Lalla & D’Costa 1990) to five (Akers 1981). More agreement can be observed with respect to the number (and to a more limited extent, the phonological representation) of the diphthongs. With the exception of DeCamp (1969) and Akers (1981), this subsystem of the vowel inventory is typically analyzed as consisting of four phonemes: /ie/, as in /fies/ ‘face’; /uo/, as in /guot/ ‘goat’; /ai/, as in /grain/ ‘grind’ and /bwai/ ‘boy’; and /ou/, as in /hous/

Jamaican Creole vowels and diphthongs								
De Camp (1960)	Lawton (1963)	DeCamp (1969)	Wells (1973)	Cassidy & Le Page (1980)	Akers (1981)	Lalla & D'Costa (1990)	Meade (2001) & Harry (2004)	Harry (2006)
Short vowels								
i	i	i	i	i	i	i	i	i
e	e	e	e	e	e	e	e	e
a	a	a	a	a	a	a	a	a
o	o	o	o	o	o	o	o	o
u	u	u	u	u	u	u	u	u
Long vowels								
ii	i:	i:	i:	ii	i:	i:	ii	ii
					e:			
	a:		a:	aa	a:	a:	aa	aa
					o:			
uu	u:	u:	u:	uu	u:	u:	uu	uu
Diphthongs								
ie	ie̞		ie	ie	ie	ie	ie	ia
					ei			
uo	uo̞		uo	uo	uo	uo	uʌ	ua
ai	ai̞	ay	ai	ai	ai	ai	ai	ai
ou	ou̞	aw	ou	ou	ou	ou	au	au

Table 2.1: **The vowels and diphthongs of Jamaican Creole.** Data from De Camp (1960), Lawton (1963), DeCamp (1969), Wells (1973), Cassidy & Le Page (1980), Akers (1981), Lalla & D'Costa (1990), Meade (2001), Devonish & Harry (2004) and Harry (2006).

‘house’.⁵ In addition, the following phonological processes and alternations are also observed in the Jamaican Creole vowel system:⁶

Nasalization occurs in vowels which are preceded or followed by a nasal (Wells 1973: 12/13, Akers 1981: 28, Devonish & Harry 2004: 454/455). Moreover, word-final nasals can be deleted, leaving only the nasalized vowel (compensatory nasalization), as in [ã ï: se:] ‘and she (him) said’ (Akers 1981: 28, Devonish & Harry 2004: 454/455). In addition, Devonish & Harry (2004) also postulate the existence of a distinct nasal phoneme /ãã/ in words whose standard English equivalents comprise “the vowel /aa/ or /ɔɔ/ and a post-vocalic /nt/ cluster” (Devonish & Harry 2004: 454/455).

Word such as *snake* with /s/ + consonant in word-initial position in standard English exhibit vowel epenthesis between these first two consonants in Jamaican Creole, the inserted vowel consisting of either /i/ or /u/ as determined by the following phonological environment: “The epenthetic vowel may be [u:] only if the immediately following consonant is labial, or if the vowel in the following syllable is [round]. Otherwise the epenthetic vowel is [i:]. Note that the epenthetic vowel may be [i:], even if the conditions for [u:] are satisfied” (Akers 1981: 28, see also Devonish & Harry 2004: 455/456). Thus, standard English *snake*, for example, corresponds to the Jamaican Creole form /si:niek/ ‘snake’ (Akers 1981: 28). Alternatively, the /s/ may be realized as a syllabic consonant (De Camp 1960: 137, Akers 1981: 31).

After final consonants, a vowel may be inserted, for example in words like /ta:ki:/ ‘talk’ (Akers 1981: 28/29). (This process is described as belonging to “[t]he older stages of Jamaican folk English” by Cassidy (1961: 47).) Moreover, word-final vowels may be merged with the initial vowel of a following word, as in /yi:r/ ‘you hear’ (Akers 1981: 29), and rounded vowels change to glides when preceding other vowels, as in /gwe:/ ‘go away’ (Akers 1981: 30, see also Devonish & Harry 2004: 457/458).

⁵Devonish (2006) argues that the Jamaican diphthongs should be analyzed as underlyingly symmetric /ai/ and /au/ (for Cassidy & LePage’s /ai/ and /ou/), and /ia/ and /ua/ (for Cassidy & LePage’s /ie/ and /uo/), as evidenced by language play in the lyrics of a popular Jamaican dancehall song.

⁶Please note that examples are given in the phonological transcription systems used by the respective authors.

Jamaican Creole consonants				
<i>Nasals</i>	m	n	(ɲ)	ŋ
<i>Stops</i>	p	t	(kj)	k
	b	d	(gj)	g
<i>Affricates</i>		tʃ		
		dʒ		
<i>Fricatives</i>	f	s	ʃ	(h)
	(v)	z		
<i>Liquids</i>		r		
		l		
<i>Glides</i>	w		j	

Table 2.2: **The consonant phonemes of Jamaican Creole.** Data from De Camp (1960), Lawton (1963), Wells (1973), Cassidy & Le Page (1980), Akers (1981), Lalla & D’Costa (1990), Allsopp (1996), Meade (2001), Devonish & Harry (2004) and Harry (2006). Shown in parantheses are sounds which are variably analyzed as phonemic by different authors.

The consonant system

An overview of the consonant inventory of Jamaican Creole, as analyzed by De Camp (1960), Lawton (1963), Wells (1973), Cassidy & Le Page (1980), Akers (1981), Lalla & D’Costa (1990), Allsopp (1996), Meade (2001), Devonish & Harry (2004) and Harry (2006), is given in Table 2.2. Except for the phonemes /ʒ, ð, θ/, which do not occur in Jamaican Creole,⁷ the inventory of consonants is similar to that of standard varieties of English. As can be seen from Table 2.2, while there is an overall good agreement between the different authors in terms of the consonants of Jamaican Creole,⁸ the phonemic status of a number of them – the palatals /ɲ, kj, gj/, /v/, and /h/ – remains controversial.

Jamaican Creole is analyzed by some authors (Lawton 1963, Akers 1981, Lalla & D’Costa 1990) as lacking the phoneme /v/ basilectally. This phoneme did not exist in older forms of Jamaican Creole, /v/ in standard English corresponding to /b/ in the respective Jamaican Creole words. Devonish & Harry state that

⁷While this holds true for the basilectal end of the creole continuum, Allsopp (1996: xlv) analyzes “middle-level or mesolectal or ‘standard average Caribbean’ usage” as having /ʒ/.

⁸Devonish & Harry (2004) have ɲ listed as a phoneme; this is probably a printing error for an intended ŋ. Allsopp (1996: xlv) notes that ŋ “is commonly replaced” by /n/ in mesolectal varieties of Jamaican Creole.

“/v/ is a relatively recent entrant into the phoneme inventory of [Jamaican Creole], imported with modern loan words from [Jamaican English]. The result is that some older [Jamaican Creole] forms with /b/ have a reflex in [Jamaican English] with /v/. These forms allow for /v/ ~ /b/ variation in modern [Jamaican Creole]. However, more recent loans with a [Jamaican English] /v/ reflex only allow for /v/ in [Jamaican Creole]” (Devonish & Harry 2004: 467, see also Wells 1973: 11).

According to Cassidy & Le Page (1980), Akers (1981) and Devonish & Seiler (1991, cited in Harry 2006: 126), [h] does not have phonemic status in Jamaican Creole. Word that have initial /h/ in metropolitan standard varieties of English can occur without /h/ in Jamaican Creole, as in /im/ ‘him’ (Akers 1981: 32). Conversely, [h] can occur freely before word-initial vowels “as a marker of emphasis” (Devonish & Harry 2004: 466).⁹ The phonemic status of /h/ has been further claimed to distinguish Eastern and Western varieties of Jamaican Creole, occurring phonemically in the Western variety (in the parishes of Manchester, St. Elizabeth and Westmoreland according to Wells (1973: 12)), but not in varieties of Creole from the eastern half of the island (Wells 1973: 12, Devonish & Harry 2004: 457, Harry 2006: 125). Thus, words such as /hi:t/ ‘hit’ and /i:t/ ‘eat’ are phonemically distinguished by the occurrence of [h] in the Western varieties but occur in free variation [hi:t ~ i:t] ‘hit, eat’ in the east (Harry 2006: 126).

/k/ and /g/ are palatized before low central vowels (/a, a:/) which are the reflexes of historical /a, a:/, e.g. [kʲat, gʲa:dn] ‘cat, garden’, as opposed to unpalatized stops before /ɔ/ (Akers 1981: 33/34, Cassidy & Le Page 1980: lviii). This has the effect of preserving the phonemic opposition between word with historical /a(:)/ and /ɔ/, both of the vowels merging into a single phoneme /a/ in basilectal Jamaican Creole. The *Dictionary of Jamaican English* (Cassidy & Le Page 1980: lviii) describes the history of these sounds as follows:

The palatized /ky/ and /gy/ before front vowels were first noticed in England at the beginning of the seventeenth century, became the accepted polite usage in the eighteenth century, and survived in old-fashioned speech until the beginning of the present [twentieth] century [...]. It is assumed that they are retained in [Jamaican Creole] before /a/ and /aa/, whilst disappearing in other contexts, because of the coalescence in

⁹These phenomena are also noted by Allsopp (1996: xlvi), who nevertheless appears to analyze /h/ as phonemic (Allsopp 1996: xlv).

[Jamaican Creole] of the two English vowel phonemes; the existence of palatal /ky/ and /gy/ in Twi was undoubtedly of importance in their retention.

In phonemic terms, the palatalized stops [k^j, g^j] (also, ɲ) are analyzed as separate phonemes (Akers 1981: 25), or as “marked allophones” (Meade 2001: 38) in some accounts. The sociolinguistic conditioning of the occurrence of these palatal glides has been investigated in the speech of Kinston mesolectal speakers by Patrick (1999).

In addition to the variability observed in the above-mentioned consonants, a number of other processes of consonantal variation can be observed in Jamaican Creole, many of which occur not only at the basilectal end of the creole continuum but at various meso- and acrolectal levels as well:

As has been noted above, the phonemes /v, ð, θ/ of standard English varieties do not occur in Jamaican Creole, being replaced by the homorganic stops /b, d, t/ instead (Akers 1981: 33). (In the acrolect, the sociolinguistic details of the replacement of the labiodental fricatives /ð, θ/ in the speech of employees of a government agency have been investigated by Irvine (2004).)

According to Devonish & Harry (2004: 465/466) and Harry (2006: 127), the voiced stops /b, d, g/ are articulated as implosives ([ɓ, ɗ, ɠ]) “whenever they occur as onsets of ‘prominent’ syllables, particularly when in word-initial position” (Harry 2006: 127), such as in /bi:t/ [ɓi:t] ‘beat’. The egressive stops [b, d, g] are used in all other environments (Devonish & Harry 2004: 465).

Word-initial /t/ is sometimes affricated if followed by /r/, e.g. /tʃru:/ ‘true’. /r/ may be deleted in this environment, leading to forms such as /tʃu:/ ‘true’ (Akers 1981: 34, see also Wells 1973: 10). Obstruents such as /p/ and /b/ are labialized before the diphthong /ai/ (Devonish & Harry 2004: 467), as in [b^wai] ‘boy’ (Harry 2006: 127). Before syllabic /l/, the alveolar stops /t/ and /d/ become /k, g/, respectively: /baki/ ‘bottle, /likl/ ‘little’ (Harry 2006: 127).

Final consonant deletion¹⁰ commonly occurs, especially in consonant clusters, leading to forms such as /sal/ ‘salt’ (Akers 1981: 30/31). (Detailed investigations of

¹⁰“Deletion” is meant here as compared to the standard English forms; it can be argued that these lexical items are represented underlyingly without the final consonant in question.

this phenomenon in its occurrence across the Jamaican creole continuum have been conducted by Akers (1981) and Patrick (1991, 1999).)

Moreover, the reflexes of words with word-initial /s/ + obstruent in metropolitan standard varieties of English can occur without /s/ in Jamaican Creole, e.g. in /tan/ ‘stand’ (Akers 1981: 31). Word-initial liquids (/l/, /r/) are also sometimes replaced by /y/ in archaic forms of Jamaican Creole and special registers such as “Rasta talk”, as in /yedi:/ ‘ready’ (Akers 1981: 31). Finally, word-initial glides /w/ and /y/ may be deleted “before high vowels agreeing in their value for the feature front”, leading to forms such as /u:man/ ‘woman’ (Akers 1981: 31/32).

Suprasegmentals

Only very little is known about the exact suprasegmental properties of Jamaican Creole. Suprasegmental phenomena are treated in the literature, although in most cases only very briefly, by Lawton (1963), Wells (1973), Alderete (1993), Gooden (2003), Devonish & Harry (2004), and Harry (2006).

One major feature that all authors agree upon is the survival of tonal distinctions in Jamaican Creole, originally carried over from West African languages. These lexical tones distinguish between words and phrases, albeit “only in highly specialised areas” (Lalla 1986: 120). For instance, according to Lalla (1986: 120), proper nouns such as *Taylor* and *Sister* (as a form of address) are characterized by low (non-high) tone on both syllables, whereas a high tone occurs on the last syllable of common nouns such as *tailor* and *sister*.

Tone has also been claimed to distinguish meaning at the morphosyntactic level, e.g. between the phrases /mieri bróun/ ‘Mary Brown’ and /miéri broun/ ‘Mary is brown’ (Lalla 1986: 120), or between the negative and affirmative senses of /kyan/ ‘can/can’t’ (Lalla 1986: 120, Harry 2006: 129).

A more detailed investigation of tone and intonation in Jamaican Creole can be found in Lawton (1963) and Gooden (2003).

2.4 Language use today

The following section presents an overview of the contemporary language situation in Jamaica. The first two subsections discuss the official status of English and Jamaican Creole, and outline the use of the two language varieties by various segments of the Jamaican population. The following subsections describe the use of English and Jamaican Creole in the domains of the government and the law, the educational system, the mass media and popular culture, both with respect to the present-day situation and the changes that have taken place in these domains over the last few decades.

2.4.1 Official status

English is the official language of Jamaica (Devonish 1986: 24). It is not, however, the mother tongue of the large majority of the population, who speak some form of Jamaican Creole or another as their first language:

JamC [Jamaican Creole] is natively available to nearly all Jamaicans, but Standard Jamaican English (StJamE), the acrolect, is not – it is a home language for a small minority, and learned as a second language of school, literacy, mass media and work by others. This is a result of the colonial distribution of power in earlier centuries, which worked to create and maximize the norms that still devalue JamC and elevate StJamE. (Patrick 2004a: 408, see also Akers 1981: 8)

The official status of Jamaican Creole and the language policies accompanying this question remain a hotly debated issue. Proponents of Creole as an official language alongside English argue that communication barriers cause large portions of the Jamaican society to be excluded from participation in the social and political life of the country. In order to overcome this problem, Jamaican language activists have proposed that “[t]he sensible position [...] would be to give recognition to both English and Creole as official languages” (Devonish 1986: 42).

In 2001, a Joint Select Committee of the Jamaican House of Parliament discussed a proposed amendment guaranteeing freedom from discrimination on the grounds of language. An outcome of this discussion was the decision to establish an agency prior to deciding on the proposed constitutional changes to set the “standards for public organizations involved in the provision of health services, social services, education

and public information” for better communication with all segments of the Jamaican society (Christie 2003: 6). These standards were to include a system of orthography for Jamaican Creole (Devonish 2003: 168). Thus, advocates for Jamaican Creole as an official language were to content themselves with the short-term goal of the agency, which confines itself to making Jamaican Creole “the major language of official internal communication in these countries” (Devonish 1986: 42). The reason behind this stepwise approach in giving Jamaican Creole more official recognition lies in the fact that negative attitudes towards Jamaican Creole still prevail in Jamaican society, denying it the status of a separate language (see also section 2.5 on language attitudes):

[G]iven the invisibility of L [Jamaican Creole] in the society, the jump from denying its existence to declaring it an official language is too big for the legislature or the country to make at a single go. The constitutional reform route outlawing discrimination on the grounds of language allows for an intermediate step. This step allows the previously invisible L language variety to remain unnamed in the legislation, while yet making it visible in official discourse and concerns. (Devonish 2003: 171)

Another major obstacle to giving Jamaican Creole official recognition as a national language is the lack of an established writing system for the variety. Jamaican Creole is usually written with ‘eye dialect’ modifications to standard English spelling (Morris 1999: 9-10). As mentioned in section 2.4.4, a linguistically consistent writing system exists but its use has been mainly confined to specialists (Devonish 2007: 178).

2.4.2 Social distribution and domains of use

English enjoys high prestige in Jamaica and is primarily associated with being spoken by the elite (Akers 1981: 9). With respect to its social distribution, use of English in terms of ethnicity “is still associated with the elite, which up to approximately fifty years ago consisted of mainly the white and near-white members of the population” (Christie 2003: 2). This historical background is also responsible for the high social and economic status that is attributed to speakers with proficiency in English (Akers 1981: 8/9). However, use of English correlates not only with ethnicity and social class, but also with the level of education attained. As has been noted by Christie (2003), “[t]he ability to read and write Standard English remains the

mark of an educated person [...]. Mastery of [English] is the most usual route to the acquisition of social status” (Christie 2003: 5, 39). Within Jamaica, these correlations are known and inverse judgments can be drawn, judging “an individual’s educational level [...] from the degree of his/her proficiency in English” (Christie 2003: 39). English therefore can be used by Jamaican speakers to consciously convey the impression of education and higher social status: “it is the language we use when we wish to signal our membership of a higher social class and in doing so to distance ourself from those Jamaicans who speak only Creole” (Christie 2003: 5).

The high prestige accorded to the use of English as opposed to Creole has led to the emergence of a characteristic style of speech known as “Speaky-Spoky”, which is used by speakers in “an attempt to claim the social status which normally accompanies standard speech in Jamaica” (Patrick 1997: 46). In this style of speech, the speakers’ attempt to use forms of speech typically used by those higher up on the social scale and thus to present themselves as belonging to this group leads to overuse of these forms and hypercorrection. Besides the use of certain lexical items, typical features of this kind of speech on the level of pronunciation include the hypercorrect insertion of word-initial /h/, and the overuse of /ɔ/ in forms where Jamaican Creole has /a/ or /ɑ/ (Patrick 1997: 45). “Speaky-Spoky” has been claimed to be most often used with other speakers from a similar social level (Patrick 1997: 47/48): “It is a style performed in public for the benefit of the onlookers; it is intended to convey the impression that the speaker is socially “elevated”; it is stereotypically, though not exclusively, female speech behavior; and it draws on associations with the written standard language, for which polite British English was and still is the highest model” (Patrick 1997: 45).

Jamaican Creole, on the other hand, is associated with rural origins and low levels of formal education or even illiteracy (Akers 1981: 8/9). With respect to ethnicity and social class, it is typically spoken by “the poorest members of the society, who are mostly black”, these being “labourers, small farmers, domestic helpers, small craftsmen and others belonging to the same social class as these” (Christie 2003: 2, see also Akers 1981: 8). Due to these typical associations, prejudices exist within the Jamaican society against the use of Jamaican Creole, which is perceived as “indicating a lack of intelligence” (Christie 2003: 5), as well as “illiteracy and

ignorance” (Christie 2003: 39). However, the distinction in social distribution with regard to the use of Jamaican Creole is not as rigid as outlined above. Creole can also be used as a stylistic device by members of all social classes:

In reality, the use of Creole is not confined to the groups with which it has traditionally been associated, as it is also used on occasion by members of all classes in moments of relaxation, as a vehicle for the expression of emotions (eg joy, anger, surprise, excitement, pain), the description of personal experiences and the exchange of jokes, among other things. (Christie 2003: 2)

Moreover, Jamaican Creole is increasingly perceived as “a symbol of national identity” and used to indicate national pride, particularly by members of exile speech communities outside of Jamaica wishing to signal group membership and solidarity among Jamaican emigrants: “Jamaicans abroad deliberately use [Jamaican Creole] to remind themselves of home and to set themselves apart from others around them” (Christie 2003: 63, see also Shields 1989: 44). Notable exile speech communities of Jamaican emigrants exist in New York, Toronto and London (Akers 1981: 8), whose linguistic situation has been analyzed from a phonetic and phonological point of view by Wells (1973) and Patrick (2004b), as well as in terms of code switching by Sebba (1993).

Current data on the actual facts of language use in Jamaica are best represented by the findings from an empirical survey conducted by the *Jamaican Language Unit (JLU)* in the Department of Language, Linguistics and Philosophy at the University of the West Indies, Mona, Jamaica. *The Language Competence Survey of Jamaica (JLU 2007)* analyzes data from 1,000 Jamaican informants, stratified with respect to region of origin, rural/urban background, speaker age and sex. The data was collected in 2006 in interviews by two fieldworkers, who tested their subjects’ linguistic proficiency in the two varieties by attempting to engage their informants in conversations conducted in Jamaican Creole and English, respectively (*JLU 2007*: 5, 23/24). The results show that nearly half of the informants (46.4%) interviewed were able to conduct a conversation in both Jamaican Creole and English, “therefore demonstrat[ing] bilingualism” (*JLU 2007*: 5). Slightly more than half of the majority of speakers interviewed were monolingual (53.6%): 17.1% of all respondents in English, and more than one third (36.5%) in Jamaican Creole (*JLU 2007*: 5, 12).

These findings confirm Akers' (1981) observation that "[w]ithin Jamaica, English monolingualism is less common than Creole monolingualism" (Akers 1981: 8) but contradict the high figure ("approximately 94%") claimed to speak Jamaican Creole only.

Regional variation with regard to language use also emerged, with bilingualism in Jamaican Creole and English more pronounced in informants from eastern and urban regions (*JLU* 2007: 6). Monolingual speakers of English also predominantly came from eastern and urban areas (*JLU* 2007: 6, 14), while monolingualism in Jamaican Creole was higher in speakers from western parishes of the island (*JLU* 2007: 14). Moreover, urban speakers were less likely to be monolingual in Jamaican Creole (*JLU* 2007: 14) than speakers from rural parts of the country. With regard to the social distribution of Jamaican Creole and English, bilingualism was found to be associated with informants from higher skilled or professional classes. Speakers who are monolingual in English also mainly came from this group: "as the level of skill (or education required) for the job increased or the occupational categories become more service-oriented, respondents were more likely to either be English-speaking monolingual or bilingual rather than a Patwa-speaking monolingual" (*JLU* 2007: 6, 14).

A special case is constituted by the language of the Rastafari (Pollard 1986, 2003), a religious group whose language is generally based on Jamaican Creole, but features some unique lexical innovations that are used in order to "articulate in [...] everyday language the religious, social, cultural and philosophical positions" (Pollard 1986: 158) of their members. Lexical items coined by the Rastafari have not only spread within Jamaica and become "part of the Jamaican vocabulary" (Senior 2003: 276, Morris 199: 6) but have also been adopted by Rastafari communities abroad as the Rastafari movement has spread to other countries (see Pollard 2006).

According to Pollard (1986, 2003), lexical items of Rastafari speech can be classified into four categories: Category I, items with extended meanings, comprises English words to which a special meaning has been assigned, as in *sufferer* 'poor ghetto dweller' (Pollard 1986: 160/161). Category II consists of words that "bear the weight of their phonological implications" (Pollard 2003: 64). This means that

parts of the words have been adjusted in their phonological and/or morphological structure to more accurately reflect the meanings and feelings associated with them. An example of this is the word *downpress*, in which *down* is substituted for the first syllable of the original *oppress*, which is homophonous with *up* in Jamaican Creole and therefore judged to misrepresent the inherent meaning of the word (Pollard 1986: 160). Words in category III constitute the so-called “Iyaric” (Birhan 1983, quoted in Pollard 1986: 158), in which individual sounds or whole syllables are replaced by the phoneme /ai/, “which has a strong and positive sound in the speech of Rasta” (Pollard 1986: 159) and is also associated with the *eye* as the organ of sight (Pollard 1986: 158, Pollard 2006: 234). An example from this category is the use of *I and I* in place of other pronouns such as *you* or *they*. The last category (category IV) contains words that have undergone other processes of word-formation, such as *freenana* for ‘banana’ or *backative* ‘stamina, strength’ (Pollard 1986: 161, Pollard 2006: 236).

2.4.3 Government and legal institutions

Standard English is used and “expected” (Christie 2003: 2) in the domain of the Jamaican legal system. Devonish (1986) states that “there seems to be a general consensus among legal practitioners as well as the population at large that English is the language of the law” (Devonish 1986: 29), and it is this language which is used, for example in court proceedings or legal documents. However, problems may occur with this approach, as witnesses who are speakers of the more basilectal ranges of the creole continuum may fail to understand or misinterpret court proceedings or questions directed at them which are phrased in English. In practice, therefore, “Creole is often used in the Court since its use serves the double function of saving time and ensuring clarity” (Devonish 1986: 29).

English also predominates in the domain of politics and government. Having remained the official language in Jamaica after political independence from Britain in 1962, it is the language in which parliamentary debates and speeches, government administration and “the formal political life” of the country in general is conducted (Devonish 1986: 36, see also Christie 2003: 2). However, although there appears

to be a general consensus that the use of English is appropriate in these domains, actual practices may diverge from this conception. Christie (2003: 2) points out that

it is not unusual nowadays for even well educated Members of Parliament to intersperse their speeches in the House with Creole and, more often than not, their informal asides are also in Creole. Few, however, are conscious of the extent to which their actual linguistic behaviour contrasts with the traditional ideal that they would very likely claim to uphold. (Christie 2003: 2)

Creole, too, is occasionally used in the domain of politics, mostly as a stylistic device for “sloganeering, telling jokes, abuse, and as an emotional rhetorical device” (Devonish 1986: 36). This latter deliberate use of Creole elements or code-switching by politicians in political campaigns occurs as a means of identifying with the masses and expressing solidarity with their audience (Christie 2003: 2, 4). Akers (1981) claims that this “political use of the basilectal code reflects the growth of nationalism” (Akers 1981: 9), and goes so far as to state that the use of British English forms of speech may even constitute a distinct “handicap” for politicians: “Fluency in a prestige variety of English, such as Received Pronunciation (RP), was once a distinct political advantage. Now it may be a handicap, since the use of RP is regarded by a large proportion of the population as reflecting colonial values” (Akers 1981: 9). The default code for transmitting meaning, however, is still standard English. As has been pointed out by Devonish (1986: 36), “to the extent that many political speeches can be said to have content, this content is expressed in English” (Devonish 1986: 36).

2.4.4 Education

The Jamaican educational system has historically been strongly oriented towards British cultural norms. In colonial times, parents who could afford it sent their children back to England for their education, or hired private tutors or governesses from England (Senior 2003: 172). Local schools in Jamaica did not become established until the 18th and early 19th century, often under the auspices of churches and missionaries, who played a central role in establishing and running the school system (Senior 2003: 172, Moore & Johnson 2004: 206). The government did not fully take

over the educational system until 1892 (Senior 2003: 173). Education, especially for the lower classes and newly-freed slaves, was also used as “a form of social control” (McCourtie 1998: 110), perpetuating the social structures of the old colonial society, with schools being the institutions “to provide the lower classes in particular with the ideological tenets to become civilized, loyal British colonial subjects, and to equip them with the basic skills of literacy and numeracy to function at the bottom of society in their presumed role of dependent agricultural labourers.” (Moore & Johnson 2004: 205).

The resulting Jamaican educational system closely followed the British model. Not only did the large majority of teachers and school administrators consist of British expatriates,¹¹ who served as native-speakers models for their students (Miller 1989: 206, Shields-Brodber 1997: 58, Christie 2003: 12), but they also taught a curriculum which was “simply imported [from Britain], without regard for its (un)suitability” (Moore & Johnson 2004: 220) and not adapted to local conditions. At the end of secondary education, students sat external examinations given by British universities, the results of which were marked by English examiners (Senior 2003: 174).

Linguistically, a direct consequence of the close educational ties with Britain is that it is Standard English that has traditionally been used as a medium of instruction in schools and at the university level: “English is the prestige code used in formal settings; it is the official language which is taught in the schools” (Akers 1981: 8/9). *Received Pronunciation* and “standard British usage” were held up as the models to aspire to (Cassidy & Le Page 1980: xxxvii), while Jamaican Creole was dismissed as a “corrupted” form of English that would hopefully be eliminated by increased exposure to education:

Within the anti-colonialist movement, the few who displayed any form of language consciousness at all viewed Creole as simply another form of the unfortunate by-products of colonialism. According to this position, the use of ‘broken forms of English’, i.e. English-lexicon Creole languages, would cease in the post-colonial period as a result of the exposure of the mass of the population to ‘proper English’. This was to be achieved by way of an improved education system, increased access to written material and information in English, etc. (Devonish 1986: 23)

¹¹This was partly due to the fact that there was no local institution in Jamaica offering teacher training for secondary school (Miller 1989: 206-207).

The post-independence period has seen a democratization of the educational system, with efforts made by the government to facilitate access to higher education for an increasing number of people (Miller 1989: 219, McCourtie 1998: 114-115). With the University of West Indies established in 1948, teachers and school administrators nowadays mostly come from Jamaica itself or from neighboring Caribbean countries (Christie 2003: 13, Miller 1989: 224-225). There has also been an steady increase in the number of female teachers, a development that began in colonial times but has become even more pronounced since independence (Miller 1989: 209, 226). Teaching materials and the curriculum have been changed to reflect Jamaican conditions more closely, and works of Caribbean literature have been included in school textbooks, which often contain passages written in Creole (Senior 2003: 171, Miller 1989: 225, Devonish 2007: 177). Locally-based exams administered by the Caribbean Examination Council (CXC), which was established in 1973, have replaced the external exams administered by British universities that were formerly taken by students at the end of their high school years (Senior 2003: 176, Miller 1989: 213). English, however, is still taught as subject and an important part of the curriculum. In fact, it is the only compulsory subject required in the CXC examinations at the end of high school (Miller 1989: 221).

One of the biggest changes that has taken place in the Jamaican educational system since independence, however, has been in the attitude and official language policies with regard to the question of whether or not Jamaican Creole should be used as a medium of instruction in Jamaican schools. This topic has been the subject of scholarly investigations for a long time (see e.g. Craig 1971, 1976), and the extent to which Jamaican Creole should be used in schools remains a hotly debated issue, one scholar even calling it “without any doubt [...] the most sensitive language issue in Jamaica today” (Christie 2003: 43).

The debate has been sparked by two big problems of the Jamaican school system, which are high levels of illiteracy and imperfect mastery of English even by secondary students at the end of their schooling: “A high proportion of [secondary students] end up failing not only English but other subjects as well after five years of secondary education. Fewer than half of the CXC [Caribbean Examinations Council] candidates from Jamaica had received a passing grade on average up to 1988.”

(Christie 2003: 40, see also McCourtie 1998 for a more detailed exposition of the problems involved). In fact, even primary teachers, who are supposed to teach and (traditionally) interact with their students in English, are often not proficient in Standard English themselves (Mccourtie 1998: 122). Critics have repeatedly pointed out the inefficiency of teaching Creole-speaking children in English, arguing for some kind of teaching strategy that makes use of Jamaican Creole in order to facilitate general comprehension in the classroom, as well as the acquisition of English:

The fact that more than half of the children in today's high schools lack adequate exposure to Standard English on entering school and never achieve satisfactory command of it is only one source of many children's failure in school. The fact that the language spoken by many of them at home has traditionally been stigmatized in the school environment is another relevant factor. To claim that one way to promote proficiency in English is to stop rejecting the mother tongue of the majority of our children is neither illogical nor hypocritical as has been claimed. It could at least lead to a lessening of the culture shock experienced by some children when they first arrive at school and the feeling of alienation this often engenders. [...] If children do not feel at home in school, some of them reject it and simultaneously set up a block against learning English which is associated in their minds with school." (Christie 2003: 40, see also Craig 2006)

However, some degree of hostility towards Creole and its use in schools remains, especially since English is still perceived as "the language of social mobility" (Morris 1999: 7, Craig 2006: 101-103). Parents and educators are afraid that teaching Jamaican Creole instead of or at the expense of English will limit children's chances of upward mobility or economic opportunities, for which parents have traditionally been willing to make great sacrifices (Senior 2003: 177). While there seems to be a general consensus concerning the teaching of English in that everybody agrees that students need to be taught and reach proficiency in Standard English (Taylor 2001: 109), widely differing opinions exist on how to best achieve this; whether or to which extent Jamaican Creole should be included in the curriculum, and, if so, at which level of the educational system (Craig 2006: 104, 109).

Nevertheless, the debate has resulted in a slow change in both attitudes towards the use of Jamaican Creole in schools, and official language policy:

There is widening recognition within official circles that Creole-speaking children do come into the education system with a linguistically valid

language variety. It is also becoming accepted that the native language of such children should be respected within the school, and that English should be taught as an additional language rather than as a replacement for their native language. [...] [T]his recognition of Creole is seen purely as a means of facilitating the acquisition of English. A knowledge of the pupils' language background makes it easier to design materials and methods for effectively teaching them English. Also, pupils who are not made to feel linguistically insecure because of their Creole language background are more likely to acquire an effective command of English. (Devonish 1986: 26, see also Christie 2003: 40, 44-48 for a more detailed discussion of various teaching strategies)

This change in attitudes towards the use of Jamaican Creole in education appears to have expanded to wider public circles as well: The overwhelming majority (71.1%) of the participants interviewed in a language attitude survey in 2005 (*JLU* 2005, see also section 2.5 below) stated that, given the choice between an "English Only school" and an "English and Patwa School", they considered the latter to be "better for a Jamaican child" (*JLU* 2005: 32). Interestingly, age was found to be a significant predictor for the outcome of these answers, older respondents being far less likely to hold a favorable view of bilingual education than the younger age groups (*JLU* 2005: 33). Moreover, a small majority of respondents (57.3%) stated that they would like to see the use of written forms of Jamaican Creole in school books (*JLU* 2005: 35). These findings strongly support the notion of an ongoing change in attitudes towards bilingual education in Jamaican schools, and stand in contrast to earlier (1999) findings, where use of Creole in the classroom was acknowledged but "mixed responses" emerged in answer to the question of whether Creole should actually be used in the schools (Beckford-Wassink 1999: 70).

One major obstacle towards the use of Creole in schools has been the lack of an official system of orthography for writing Jamaican Creole. Although a phonemic writing system was developed by Cassidy (1961), its present-day use is mostly confined to linguists (Devonish 1986: 43), the large majority of the population using modified English spellings when writing Jamaican Creole: "Especially in the last decade or so, there have been sporadic efforts [...] to write Creole using ad hoc spelling. This has been manifested in posters on public display, billboards, news-



Figure 2.2: A writing system for Jamaican Creole devised for the use in primary schools in Jamaica. The system represents a slightly revised form of the orthography used in Cassidy & Le Page's (1967) *Dictionary of Jamaican English*. (Image retrieved from John Wells's *phonetic blog – archive 1-15 August 2008*, Department of Phonetics and Linguistics, University College London. <<http://www.phon.ucl.ac.uk/home/wells/blog0808a.htm>> [Accessed August 28, 2008]. Image originally supplied by Rocky Meade, University of the West Indies, Mona, Jamaica.)

paper columns, occasional newspaper headlines and letters in the press” (Christie 2003: 3).

Currently, a pilot project for the use of both Jamaican Creole and English as a means of teaching in primary schools is under way,¹² for which a system of orthography, reprinted in Fig. 2.2, has been developed.

2.4.5 Media

Standard English is the usual variety used in the mass media (Christie 2003: 2, Devonish 1986: 31). It is spoken “in the majority of programs on radio and television” (Akers 1981: 9). In newspapers, English is the default variety as well, although switches to Creole occasionally occur as a stylistic device in “cartoons, satirical and gossip columns” (Devonish 1986: 31). Creole, on the other hand, may be used for stylistic effects “for the purposes of realism and authenticity” (Devonish 1986: 32) in radio dramas, advertisements, in the reporting of the statements of eye-witness, as well as in interviews (Devonish 1986: 32, Akers 1981: 9, Christie 2003: 2/3). It is also used in “public service messages produced for the Jamaica Information Service” (Akers 1981: 9) for the purposes of ensuring better communication between government bodies and the general public.

As with other domains of language use, a change has taken place in the Jamaican media in the post-independence period with respect to the respective roles of Jamaican Creole and English. Traditionally, English predominated in this domain, which was heavily British-oriented both in terms of the moderators and anchormen working in this field, as well as with respect to the content of the programs: “Media personnel were largely British or British-trained, and there were many canned programmes from Britain” (Shields-Brodber 1997: 60, see also MockYen 2002: 22). Participants who took part in public discussions typically mastered standard English and had high levels of education (Shields-Brodber 1997: 60). Public-participation programmes were rarer than today and “linguistically restrictive” (Devonish 1986: 37), there being “a shared norm among all those involved that English is the language

¹²See the *JLU* “Bilingual Education Project” website for further details: <<http://www.mona.uwi.edu/dllp/jlu/projects/index.htm>>.

which ought to be used in such situations, when and where possible” (Devonish 1986: 37). Thus, English was the only accepted language variety, and Jamaican Creole would only be used in the media at that time if speakers were unable to express themselves in English (Devonish 1986: 31, 37). In this case, media personnel intervened and regulated the use of language. Callers in the early phone-in talk shows “who did not suitably acquit themselves would have their contributions translated instantly, by their hosts, into what was considered more appropriate language for airplay. Letters which were sent were routinely edited for Standard English form” (Shields-Brodber 1997: 60).

Although producers and managers of Jamaican radio programs began to move away from imported material and towards locally-produced content in the decades after the Second World War, the use of Jamaican Creole on the radio was still frowned upon. In her recollection of her career in radio and broadcasting in Jamaica, MockYen (2002: 45-47) recalls that one of the earliest programs “scripted and spoken in the Jamaican dialect”, a sitcom entitled *Life With The Morgan Henrys*, was met with disgust by her aunt, who viewed Jamaican Creole as an inferior form of language “degrading” proper English. Although the program proved to be popular with general audiences, this view of Jamaican Creole was still shared by many at the time (MockYen 2002: 47). Similarly, the reporter was met with mixed reactions when she unconsciously shifted to Jamaican Creole while reporting on the “royal visits” of Princess Margaret and Queen Elizabeth II of the island in 1953 and 1955. While the local newspaper approved of the language choice, her superiors at the radio station were more critical (MockYen 2002: 75).

In the decades preceding and following independence, larger segments of the Jamaican population had access to the mass media, especially the radio, forcing the media, in turn, “to aim their message at a much wider cross-section of the population than previously” (Devonish 1986: 31). The amount of locally-produced programs was increased, which led to greater presence of Jamaican Creole on the radio, with pieces such as the first locally written and produced radio soap opera *Shadows of the Great House* (aired from 1959-1960); Louise Bennett’s popular commentary on current affairs, *Aunty Roachy Seh*; or *The Lou and Ranny Show*, a popular Jamaican

comedy show (MockYen 2002: 214, 250-253). In the 1970s, there was an expansion of phone-in programs by the media, leading to more participation by the public and to an increased use of Creole on the radio: “Many callers became more relaxed and began to use the language with which they were most comfortable in expressing their views, as moderators increasingly focussed more on issues and less on form” (Shields-Brodber 1997: 62, see also MockYen 2002: 330-332). These developments also led to the increased use of code-switching between Jamaican Creole and English, to the extent that “today, code-switching has become the norm for educated and non-educated participants alike” (Shields-Brodber 1997: 62/63). Jamaican Creole is also sometimes employed deliberately in order to facilitate communication and reach wider audiences, even when not necessitated by the interaction with a particular caller, as by the doctor (talk show host) of a popular call-in radio program dispensing medical advice (Shields-Brodber 2006).

In newscasts, Creole was introduced in verbatim statements of e.g. protesters, although English was still used in the main body of the message (Shields-Brodber 1997: 62). A few radio stations also experimented with newscasts entirely in Jamaican Creole, which proved to be quite popular with the general public (MockYen 2002: 318, 336; Devonish 2007: 179).

Today, English is still used on the radio in “scripted programmes such as news broadcasts, news commentaries, commentaries in documentaries, death announcements etc.”, as well as for “formal interviews, discussions of ‘serious’ topics, speeches, etc.” (Devonish 1986: 32). In contrast to these genres, Creole occurs in phone-in programs or talk shows, to the extent that Christie (2003: 2) claims that “Creole speakers dominate in talk shows on radio”. Advertisements, however, have been observed to vary in their use of language according to the audience targeted (Christie 2003: 3). A detailed investigation of the current use of language in Jamaican radio broadcasts and newspapers can be found in Sand (1999).

In the newspapers, whose default language has traditionally been Standard English, an increased proportion of Creole content has been observed, with Creole nowadays being used “deliberately [...] in advertisements in the press and in posters on public display” (Christie 2001: 7). Newspaper columns written in Jamaican Creole

have become more common, and letters to the editor frequently employ Jamaican Creole as a deliberate means of expressing solidarity with other Jamaicans, alongside with Standard English (Devonish 2007: 178, Christie 2001: 7).

In the new electronic media, such as online discussion forums or e-mail messages, Jamaican Creole has been observed to be used to an astonishing degree, given the fact that, so far, no agreed-upon orthography exists for its use, and that “a long-standing and traditional reluctance to use Creoles, prototypical “oral” languages” in a written medium has had to be overcome in order for this development to happen (Mair 2002b: 253). As a consequence, “a hybrid form of written Creolized English which is modelled on the spoken Creole-English continuum” (Mair 2002b: 254) has emerged in the electronic domain. This newly-emerged use of the two language varieties has been investigated in detail in a Jamaican e-mail corpus by Hinrichs (2006).

2.4.6 Culture

In the domains of literature and poetry, English has traditionally predominated, and still does, although Jamaican Creole has begun to be used increasingly in works of literature since the middle of the 20th century.

Jamaican Creole first began to be used in writing at the beginning of the 20th century, by writers such as Claude McKay, Thomas Henry MacDermott and H. G. De Lisser. However, attitudes towards the literary use of Creole at that time were mixed, as can be seen from the controversy that arose from the publication of a literary magazine in 1915 which contained several pieces composed entirely in Jamaican Creole and produced an outcry from some segments of the population, who were “ashamed of the language and its portrayal abroad” and advocated boycotting the magazine (Moore & Johnson 2011: 92).

Acceptance slowly increased over the course of the next century, with a number of writers including elements of Jamaican Creole in their writings, particularly for local color and more naturalistic portrayal of the characters in dialogue, or for humorous purposes (Senior 2003: 285). Sporadic attempts were also made to publish works of literature entirely in Jamaican Creole or modified varieties thereof, such as V.S.

Reid's novel *New Day*, published in 1949, or Trevor Rhone's satirical 1971 play *Smile Orange* (James 1999: 54, 57). However, the primary language of most writings by Jamaican authors remains Standard English (Morris 1999: 9).

Since the middle of the 20th century, a "distinct Jamaican literature in English" (Senior 2003: 285) has emerged, where writers frequently switch between Standard English and Jamaican Creole, and the two language varieties often appear in texts side by side and on equal footing (Lalla 2006: 183, 178). Moreover, the use of Jamaican Creole in literature today is no longer confined to dialogs or for purposes of comic relief, but has come to be freely used for all kinds of genres and discourse types, often carrying "the full weight of narrative perspective" (Lalla 2006: 183, 176).

Jamaican Creole has also been used in poetry, an early example of which were Claude McKay's *Songs of Jamaica* and *Contab Ballads*, published in 1912 (Morris 1999: 9). An important contributor to the more contemporary Jamaican literary scene is Louise Bennett, also commonly known as "Miss Lou", who is especially noted for her 'dialect' poetry, often humorous and inspired by the oral culture of the Jamaican folk tradition. Her poems first appeared in the newspaper *The Gleaner* in the 1930s, but, while immensely popular with the general population, were not taken seriously as "literature" until the 1960s. She has performed her stories and poems on the radio and TV, as well as at local festivals (Senior 2003: 287, James 1999: 53, 58). Lousie Bennett has often been acknowledged as a source of literary inspiration for the so-called "dub poets" or performance poets, who perform their works to the beat of an instrumental reggae rhythm (Senior 2003: 287, 412).

A problem faced by Jamaican writers attempting to use Creole in their works is that there is no standardized system of Creole orthography that is widely used and recognized by their readers, so that many of them resort to using variant spellings of the corresponding Standard English words so as not to alienate potential readers (Morris 1999: 9-10). Writers also must decide on a trade-off between accurate representation of Creole and its usage and intelligibility, which may affect the marketability of their works to non-Creole speaking audiences outside of Jamaica (Lalla 2006: 179-183, Senior 2003: 290).

Literary representations of the Jamaican language situation can be astonishingly accurate, as has been demonstrated by an analysis of the literary dialect of the Micheal Thelwell's (1980) novel *The Harder They Come* (Schneider & Wagner 2006).

In the theater, Creole is used deliberately as a stylistic element in plays that are set in Jamaica or that feature Jamaican characters who would normally speak Creole in order to reflect social realities more accurately (Christie 2003: 2/3). Creole has become increasingly used in plays, to the extent that, according to Christie (2003: 2), it "has almost superseded English in the theatre". Contrary to earlier works, which used Jamaican Creole in a "tradition of mocking comedy" (Moore & Johnson 2011: 91), it is "no longer confined to comedy on stage" (Christie 2003: 2), and may even be used for the adaptation of foreign works for local audiences (Christie 2001: 7).

On the radio, plays that make use of Jamaican Creole have also been produced: "Under the direction of the distinguished writer and performer Louise Bennett, a complete range of speech varieties are effectively presented in the National Pantomime. As of 1974, three half-hour radio programs, 'Dulcinea: Her Life in Town', 'Life in Content Gap', and 'A Time to Remember', have been produced using Creole dialogue" (Akers 1981: 9). Similarly, Jamaican Creole is represented in the cinema, in films with a Jamaican setting. The most famous example of this is the 1972 movie *The Harder They Come*, produced by Perry Henzell, in which Jamaican Creole was used extensively in dialogue, together with English subtitles and a reggae soundtrack (Akers 1981: 9, see also Christie 2003: 4; Howard 2005: 213).

Creole also occurs in the lyrics of Reggae music (Christie 2003: 2), which has is particularly influential among younger people (Akers 1981: 9, Christie 2001: 5).

In the domain of religion, Standard English is traditionally expected in religious worship (Christie 2003: 2), as can be seen by the heated controversies sparked by recent plans for translating the Bible into Jamaican Creole.¹³ A similar Bible translation project had already been undertaken in the late 1990s, the work being "confined to audiocassettes" due to the lack of an established writing system for

¹³See, e.g. *The Jamaica Observer*, June 16, 2008 (Tomlinson 2008); *Jamaica Gleaner*, June 19, 2008; *Jamaica Gleaner*, July 16, 2008 (Espeut 2008), and *The Daily Telegraph*, July 3, 2008.

Jamaican Creole at the time (Christie 2003: 6). These creole translations of portions of the New Testament were broadcast on the radio and, according to Devonish (2007: 179), were met with “what might be termed qualified public acceptance.”

2.5 Attitudes towards Jamaican Creole and Jamaican English

In the public perception, a dichotomy exists between Jamaican Creole, which is also popularly called “Patois”, and English, in the sense that the two varieties are seen as “two separate psychologically real systems of language” (Shields 1989: 44) in the minds of speakers. The existence of the creole continuum between basilectal Jamaican Creole and acrolectal Jamaican English is usually not perceived: “Jamaicans are not normally aware of the range of intermediate varieties to be heard all around them from which they themselves often make unconscious choices” (Christie 2003: 34). Mutual intelligibility between the two endpoints of the Jamaican continuum, however, appears to be perceived as somewhat asymmetric: While a majority of respondents in a language attitude survey conducted in the 1990s thought that speakers of Jamaican Creole could understand English (Beckford-Wassink 1999: 69), respondents were divided in their opinion as to whether “a Jamaican [can] learn English if they never went to school”, 55% of the respondents answering this question in the negative (Beckford-Wassink 1999: 69). The existence of distinct regional varieties of Jamaican Creole, as well as between urban and rural speech (Beckford-Wassink & Dyer 2004: 18), is also popularly acknowledged (by an overwhelming majority of 92% of all respondents in the case of Beckford-Wassink’s (1999: 67) study).

Language attitudes in colonial and post-colonial times reflected “the colonial distribution of power in earlier centuries” (Patrick 2004a: 408). Jamaicans from all walks of life saw themselves as English-speaking, denying Jamaican Creole the status of a language and dismissing it as imperfectly-learned English:

Jamaicans of all levels of education and social status [...] avowed categorically that they spoke only English, although conceding a distinction between what they labelled “good” and “bad” (“broken”, “corrupt”) English, generally corresponding [...] to [Standard English] and [Jamaican Creole] respectively. (Shields-Brodber 1997: 58)

In terms of the domains of language use, a diglossic situation traditionally existed in Jamaica, with Jamaican Creole in the role of the “low” (L) and English in the role of the “high” (H) variety: “It was Jamaican Creole which [was] used for personal and informal experience: with friends, at leisure, to express profound political or religious fervour. English, learned at school, was the language of formal oral and written expression” (Shields-Brodber 1997: 59). These association still persist to the present day and have led to “ambivalent attitudes” (Christie 2003: 5) towards the two varieties, Jamaican Creole being the language of close personal contacts and representing national identity; English, on the other hand, being valued and sometimes consciously chosen for its associations with high prestige and social status but lacking the afore-mentioned positive characteristics of Jamaican Creole (Christie 2003: 5, see also Boufof-Bastick 2009: 205).

The decades following Jamaica’s political independence from Britain in 1962, however, saw a change in language attitudes, Jamaican Creole now being regarded as a language by large portions of the Jamaican population. In Beckford-Wassink’s (1999) language attitude survey, only 5 out of 51 respondents did not volunteer Jamaican Creole as an one of their answers when asked to specify which languages were spoken in Jamaica (Beckford-Wassink 1999: 66). Moreover, 90% of all respondents explicitly stated that they thought Jamaican Creole was a language (Beckford-Wassink 1999: 71). However, her findings also showed that a large majority was convinced that Jamaican Creole differs from English only at the level of “accent” (35%), or at the level of “accent and vocabulary” only (47%). Respondent who saw Jamaican Creole as differing in “structure” as well formed a minority (18%).

Jamaican Creole is more positively-valued today, being seen as a symbol of national identity and pride (Shields 1989: 44). Moreover, positive evaluations of Jamaican Creole emerged among the respondents in Beckford-Wassink’s (1999) language attitude survey, 82% of them believing that knowing Jamaican Creole “is an asset” (Beckford-Wassink 1999: 71). Conversely, it has been claimed by some authors that British English appears to have lost some of its prestige, “the use of RP [being] regarded by a large proportion of the population as reflecting colonial values” (Akers 1981: 9). The social evaluation of certain basilectal linguistic fea-

tures such as the linguistic variable (KYA) has also been demonstrated to have changed in a positive direction (Beckford-Wassink & Dyer 2004), a development which has been explained by “the recent valorization of creole culture and identity” (Beckford-Wassink & Dyer 2004: 24).

These recent changes, however, have also engendered strong reactions by the more conservative segments of Jamaican society, which are described as being in a “sheer panic [...] from the perception that English in Jamaica is being threatened by Creole” (Christie 2003: 35). Moreover, older language attitudes, especially the with regard to the nature of Jamaican Creole, still persist to some extent in present-day Jamaica, “although to a lesser extent than before” (Shields-Brodber 1997: 62, see also Christie 2003: 4). Thus, a language survey conducted in the late 1990s showed the majority of respondents from the oldest age group, as well as a number of informants from the second oldest age group, to “believe[] “Patois” and “broken English” to be synonymous” (Beckford-Wassink 1999: 68).

Present-day language attitudes toward the use of English and Jamaican Creole can best be illustrated by the results of the *Language Attitude Survey of Jamaica*, which was undertaken in 2005 by the *Jamaican Language Unit* (hereafter cited as *JLU*) at the University of the West Indies, Mona, Jamaica, by means of a questionnaire (*JLU 2005*: 6/7). Respondents to the survey were 1,000 male and female Jamaicans from three regions of the country, three age groups (18-30 years, 31-50 years, 51-80+ years), and both urban and rural origins.

The majority of informants identified themselves as speakers of both languages (78.4%). 10.9% said that they spoke English only, as opposed to 10.5% who claimed to be monolingual in Jamaican Creole (*JLU 2005*: 8), which is in broad accordance with the descriptions and empirical findings on actual language use (see section ?? above). With respect to the domains of language use, the results show that English is spoken mostly to strangers or co-workers (57.1%), or “everyone” (26.2%) (*JLU 2005*: 8), whereas the use of Jamaican Creole is reserved for interactions with friends and family members (62.9%), or everyone (28.5%), only 3.2% of the respondents stating that they would speak Patwa to strangers or co-workers (*JLU 2005*: 8). These

results reflect the traditional roles of the two varieties, English being associated with the public, and Jamaican Creole with the private sphere.

Sociolinguistic analysis of the responses revealed that men are more likely than women to speak only Jamaican Creole, whereas women are more likely than men to speak both language varieties (*JLU* 2005: 10). Women were found to switch to English in more formal situations (with strangers and co-workers), reserving the use of the low-status variety for informal interactions (friends and family) (*JLU* 2005: 13). Male respondents, on the other hand, were found to differ less between the use of English and Jamaican Creole in the different domains, being more likely than women to speak Jamaican Creole to everybody (*JLU* 2005: 13). These findings are in accordance with well-known sociolinguistic principle that women's speech tends to be more status-oriented than men's (see e.g. Labov 2001: 266).

Evidence for a changing language situation can be found in the fact that younger speakers were more likely than older speakers in claiming to speak both languages (*JLU* 2005: 11), whereas older speakers tended to describe themselves monolingual in either English or Jamaican Creole (*JLU* 2005: 11). The increasing acceptability of the use of Jamaican Creole in all social domains is reflected by the finding that speakers from the older age groups were also more likely to say that they spoke English to everyone (*JLU* 2005: 13).

Some of the old language stereotypes, however, were found to persist: Thus, 57.8% of the respondents stated that they would judge an English speaker to be more intelligent, as opposed to only 7.7% who would say the same for a speaker of Jamaican Creole. Interestingly, 34.6% were divided in their opinion, indicating that both or neither of the speakers would be seen as more intelligent (*JLU* 2005: 19). Similarly, 61.7% of the sample would perceive a speaker of English to be more educated, compared with 6.6% of the respondents who would say the same for a speaker of Jamaican Creole (*JLU* 2005: 19/20). Speakers of English were also perceived as being financially better off (44.7% of responses, as opposed to 8.8% for speakers of Jamaican Creole), although almost half of the respondents (46.5%) were divided in their opinion, judging neither or both of them to have more money (*JLU* 2005: 19/20).

On the other hand, speakers of English and speakers of Jamaican were judged to be equally honest and helpful (roughly one third of respondents each; *JLU* 2005: 19), while Jamaican Creole speakers were perceived as friendlier (39.8% as opposed to 25.5% for English speakers; *JLU* 2005: 19/20).

With regard to the public perception of the two varieties and their official status, nearly four fifths (79.5%) of the respondents stated that they saw Jamaican Creole as “a language”; slightly lower percentages (68.5%) were in favor of making it an official language of Jamaica (*JLU* 2005: 35). Age was significant in respect to these views, with speakers from the oldest age group being less likely to grant Jamaican Creole the status of an independent language (*JLU* 2005: 36/37), a finding which again reflects the change in attitudes towards Jamaican Creole. Use of Jamaican Creole in the domain of government and public administration was generally approved of. The result show that “if a minister made a speech in Patwa”, he would be seen as trying to “communicate better with the public” by 67.8% of the survey participants, while 20.6% would interpret this as trying to “talk down to the masses” (*JLU* 2005:16). (These findings proved to be independent of gender, age, or urban/rural origin of respondents.)

Finally, with respect to the written use of Jamaican Creole in everyday life, slightly less than half of the informants (approximately 44-49%) stated that they would want to see Jamaican Creole written on road signs, medicine bottles, government forms, and weed spray (*JLU* 2005: 35). A somewhat higher level of agreement (57.3%) was reached for the use of written forms of Jamaican Creole in school books (*JLU* 2005: 35).

2.6 Evidence for changing norms in Jamaican English

Changing attitudes towards the use of Jamaican Creole and Jamaican English in various domains, as outlined in the previous sections, have been found to go in hand with changes in what is considered “correct” or “standard” English in Jamaica. Historically, especially before Jamaica’s political independence from Britain in 1962,

British English was taken by Jamaicans to constitute the model for “correct” or “standard” English usage that was to be aimed at:

The social *moeurs* and attitudes which prevailed in Jamaica in the 1940s and 1950s allowed for unquestioning uni-directional acrolectal English focussing, and a target of speech which, primarily in its syntactic features, was closely allied to – if not identical to – [Standard English] in the mother country as presented, for example, in the BBC overseas broadcasts. The failure of speakers to produce this standard [...] was interpreted as being indicative of their inability to grasp its intricacies. (Shields 1989:43)

In contrast, Jamaican Creole was regarded as an inferior form of language and subject to language prejudices, being often seen as “no more than mish-mash ‘broken’ English” (Shields 1989: 43). As outlined above, however, a change in language attitudes has taken place since independence.

Evidence for changing norms for what is considered standard English in Jamaica comes from a number of recent studies, most notably Shields (1989, 1997), who argues that “the diglossia of the past, on the one hand, is being steadily eroded, as Jamaican Creole [...] – the first language of the majority, and traditionally functioning as the “low” (L) language – gradually usurps the function of the “High” (H) language, conventionally the domain of English; English itself, on the other, is undergoing transformation” (Shields-Brodber 1997: 57). These observations are also supported by Mair (2002a), who notes that “the most conspicuous sociolinguistic development over the past few decades has clearly been that the creole has challenged English in the public space” (Mair 2002a: 32). This development has led the Jamaican language situation to be characterized by the existence of “dual standards: the one acknowledged traditionally and reflecting metropolitan norms, the other, actually emergent, promulgated in the writing and speech of the majority of prominent, educated Jamaicans” (Shields 1989: 42). In Shields’ view, the English spoken by large portions of the population is characterized by features that deviate from metropolitan standard norms but are neither noticed, commented upon or stigmatized due to their frequent occurrence in the speech of even highly educated Jamaicans:

there are usages which are not overtly Creole but which differ subtly enough from standard metropolitan varieties of English in either structure or meaning as to be a hindrance to communication with a native speaker. These often escape the critics notice as well as the teacher’s corrective net; and even recur so regularly in the output of a wide variety

of speakers with a post secondary level of education that they become reinforced in usage purporting to be ‘standard’. (Shields 1989: 45)

Incidentally, Shields’ observation is also supported by Christie, who remarks that “there are some political representatives whose attempts at Standard English regularly fall short of the mark” (Christie 2003: 2). This variety of English, then, being spoken by “persons of high repute and social and educational status” (Shields 1989: 47), serves as the new local model towards which Jamaican learners of English orient themselves.

Besides direct influence from Jamaican Creole, distinctive characteristics of this “emergent standard” (Shields 1989: 46) can be attributed to the fact that English is an adoptive variety for many speakers, whose contact with English has primarily been through the educational system, resulting in a limited competence in the use of different registers and a recourse to mechanisms such as spelling pronunciation (Shields 1989: 45/46). Shields mentions the following features as characteristic for the emerging Jamaican standard: in the domain of phonetics and phonology, differences in the stress system, lack of spectral reduction of unstressed vowels, avoidance of reduced consonant clusters, and higher degree of rhoticity; in the grammar, differences in the use of prepositions, non-marking of the plural in partitive constructions, lack of distinction between the pronunciations of *been* and *being*, zero-marked subordination of embedded questions, and differences in the use of tense and aspect (Shields 1989: 47-50).

Shield’s observations are supported by Mair (2002a), who, in addition to noting the change in attitude towards Jamaican Creole in the past decades, also claims that a “shift in the definition of what (standard) “English” means in the Jamaican context” has occurred (Mair 2002a: 32). However, the extent of the influence of Jamaican Creole on standard Jamaican English is “drastically different for the written and spoken language”, showing no evidence of converging (Mair 2002a: 36/37). On the one hand, a diglossic situation applies in most written texts, where Creole is used for special purposes only and clearly marked off from the main (English) text, effectively limiting the influence of Jamaican Creole on English usage. On the other hand, Jamaican Creole is “clearly the dominant shaping influence” (Mair 2002a: 36)

in spoken English, both on the level of phonetics, syntax and the lexicon. However, other possibly shaping factors should also be taken into account, such as universal tendencies in the development of New Englishes, the influence of American English, or independent Jamaican developments (Mair 2002a: 53/54).

The occurrence of non-standard features in the educated Jamaican English has been demonstrated in a number of empirical studies. Mair (2002a) has demonstrated the influence of Jamaican Creole in written texts in a number of examples from the domains of lexicon and grammar. In the domains of morphology and syntax, relatively high proportions of non-standard, Creole-influenced structures have been shown to occur in the speech of educated Jamaicans by Deuber (forthc.) and Jantos (forthc.). In addition, a number of phonetic and phonological variables were investigated by Irvine (2004), who found high degrees of interdental fricative stopping and palatalization of velar stops in the speech of members of a government agency.

Chapter 3

Data material and speakers

3.1 Introduction

This chapter presents background information on the data material analyzed in the present study, which comes from the spoken portion of *ICE-Jamaica*, the Jamaican component of the *International Corpus of English* (Greenbaum 1996). *ICE-Jamaica* has been compiled and annotated at the University of Freiburg in co-operation with the University of the West Indies (Mona, Jamaica), and was released in its final form in 2009.

3.2 The *International Corpus of English (ICE)*

The *International Corpus of English (ICE)* (Greenbaum 1996) is a supra-national corpus consisting of 23 parallel corpora of varieties of English around the world. Originally proposed by Sydney Greenbaum in 1988 (Greenbaum 1996: 3), the corpus currently includes the following 23 national or regional subcorpora, with new corpora continually being added:

Australia, the Bahamas, Canada, East Africa, Fiji, Ghana, Great Britain, Hong Kong, India, Ireland, Jamaica, Malaysia, Malta, Namibia, New Zealand, Nigeria, Pakistan, the Phillipines, Singapore, South Africa, Sri Lanka, Trinidad & Tobago, and the U.S.A.¹

¹Of these, the following subcorpora were available at the time of writing, the other national corpora still being in the process of being sampled, compiled and annotated: Australia, Canada, East Africa, Great Britain, Hong Kong, India, Ireland, Jamaica, New Zealand, the Philippines, and Singapore (see the *ICE* homepage for further details: <<http://ice-corpora.net/ice/avail.htm>>).

The primary purpose of *ICE*, as envisioned by Greenbaum (1996), is to provide an electronic collection of spoken and written text which can serve as a resource for comparative and contrastive studies of varieties of World Englishes (Greenbaum 1996: 3), such as descriptive studies of the national varieties of English represented in the subcorpora, typologies of national varieties of English, or a search for a ‘common core’ of World Englishes (Greenbaum 1996: 10). Included in the corpora are countries where English is the first language of the majority of the population, or where it functions as an official language of the country (Greenbaum 1996: 3). The variety of English sampled in the *International Corpus of English* is the speech of educated speakers of the respective national varieties of English:

ICE is investigating ‘educated’ or ‘standard’ English. However, we do not examine the texts to decide whether they conform to our conception of ‘educated’ or ‘standard’ English. To do so would introduce a subjective circularity that would downplay the variability among educated speakers and the variation due to situational factors. Our criterion for inclusion is not the language used in the texts but who uses the language. The people whose language is represented in the corpora are adults (18 or over) who have received formal education through the medium of English to the completion of secondary school, but we also include some who do not meet the education criterion if their public status (for example, as politicians, broadcasters, or writers) makes their inclusion appropriate. (Greenbaum 1996: 6)

Moreover, the speakers included in the corpora must be “natives of the country” (Nelson 1996a: 28); “native” being defined as speakers having “either [been] born in the country concerned, or if not, [having] moved there at an early age and received their school education through the medium of English in that country” (Nelson 1996a: 28).

For the purpose of comparability, all subcorpora are compiled according to a common design. Each national or regional subcorpus comprises 500 texts of roughly 2,000 words each, yielding a total of approximately 1 million words. The corpora are composed of a spoken and a written component, which are further subdivided in a hierarchical structure into dialogues and monologues, and manuscripts and printed material, respectively (Greenbaum 1996: 5/6, see also Nelson 1996b for further details). An outline of the structure of the spoken and written components of the *ICE* corpora can be found in Tables 3.1 and 3.2. For each text category, the number

<i>The International Corpus of English (ICE) – text categories and codes</i>	
SPOKEN (300)	
DIALOGUE (180)	S1
Private (100) direct conversations (90) distanced conversations (10)	S1A S1A-001 to S1A-090 S1A-091 to S1A-100
Public (80) class lessons (20) broadcast discussions (20) broadcast interviews (10) parliamentary debates (10) legal cross-examinations (10) business transactions (10)	S1B S1B-001 to S1B-020 S1B-021 to S1B-040 S1B-041 to S1B-050 S1B-051 to S1B-060 S1B-061 to S1B-070 S1B-071 to S1B-080
MONOLOGUE (120)	S2
Unscripted (70) spontaneous commentaries (20) unscripted speeches (30) demonstrations (10) legal presentations (10)	S2A S2A-001 to S2A-020 S2A-021 to S2A-050 S2A-051 to S2A-060 S2A-061 to S2A-070
Scripted (50) broadcast news (20) broadcast talks (20) speeches (not broadcast) (10)	S2B S2B-001 to S2B-020 S2B-021 to S2B-040 S2B-041 to S2B-050

Table 3.1: *The International Corpus of English (ICE) – text categories, spoken component*. Shown are text categories, numbers of texts per category (in parentheses), and text codes.

of 2,000 word texts contained within the category is given in parentheses, as well as the text code used for identification within the corpus.

Corpus texts are annotated using textual as well as bibliographic and biographical markup (Nelson 1996b). Textual markup encodes “features of the original text that would otherwise be lost” (Greenbaum 1996: 7), such as formatting information for the written texts, or pauses and sections of overlapping speech in the spoken material. The markup uses an SGML (Standard Generalized Markup Language)-based system of tags enclosed in angled brackets. Spoken material is transcribed in orthographic form, not in phonetic transcription. Bibliographic and biographical markup is not included directly in the texts but uses separate file headers or an external database to store background information on the texts or recordings

<i>International Corpus of English (ICE) – text categories and codes</i>	
WRITTEN (200)	
NON-PRINTED (50)	W1
Non-professional writing (20)	W1A
student untimed essays (10)	W1A-001 to W1A-010
student examination essays (10)	W1A-011 to W1A-020
Correspondences (30)	W1B
social letters (15)	W1B-001 to W1B-015
business letters (15)	W1B-016 to W1B-030
PRINTED (150)	W2
Informational (learned) (40)	W2A
humanities (10)	W2A-001 to W2A-010
social sciences (10)	W2A-011 to W2A-020
natural sciences (10)	W2A-021 to W2A-030
technology (10)	W2A-031 to W2A-040
Informational (popular) (40)	W2B
humanities (10)	W2B-001 to W2B-010
social sciences (10)	W2B-011 to W2B-020
natural sciences (10)	W2B-021 to W2B-030
technology (10)	W2B-031 to W2B-040
Informational (reportage) (20)	W2C
press news reports (20)	W2C-001 to W2C-020
Instructional (20)	W2D
administrative/regulatory (10)	W2D-001 to W2D-010
skills/hobbies (10)	W2D-011 to W2D-020
Persuasive (10)	W2E
press editorials (10)	W2E-001 to W2E-010
Creative (10)	W2F
novels/short stories (20)	W2F-001 to W2F-02

Table 3.2: *The International Corpus of English (ICE) – text categories, written component.* Shown are text categories, numbers of texts per category (in parentheses), and text codes.

and their respective writers/speakers, such as the date of recording or publication, speaker age, educational level etc. (see Nelson 1993, 1996b for further details).

Texts included in the *International Corpus of English* were originally designed to date from the period 1990-1994 (Greenbaum 1996: 6). However, due to initial difficulties in obtaining adequate material, a much broader time range is spanned by the material included in *ICE-Jamaica*.²

The material used in the present study uses sound files from the spoken component of *ICE-Jamaica*. For most of the files, this data was originally tape-recorded and subsequently converted into digital *.wav* format at a sampling rate of 22,500 Hz.

3.3 Speakers selected

For the analyses in the next three chapters, 55 speakers were selected from the existing material of the spoken section of *ICE-Jamaica*, and grouped into five broad text categories: *conversations*, *interviewees*, *radio hosts*, *speeches*, and *news*.

Speakers were chosen with respect to several criteria: First of all, the recordings of potential speakers had to yield adequate amounts of data, i.e. their contributions to the texts had to be sufficiently long (also, preferably uninterrupted and without overlaps with other speakers). Secondly, the date of recording of all speakers was constrained to lie between the years 1999 to 2004. The selected texts are thus sufficiently close in time to constitute a proper synchronic “snapshot” of the language situation in Jamaica during this period. Although it was originally attempted to

²Work on the Jamaican subcomponent of *ICE* started in the early 1990s, when first contacts were established between Sidney Greenbaum, coordinator of the *ICE* project, and Katherine Shields-Brodber at the University of the West Indies (Mona, Jamaica), with the help of Prof. Christian Mair (University of Freiburg). After starting an informal collaboration on the *ICE-Jamaica* project, most of the written material, as well as some of the spoken texts were collected between 1994 and 1996 by Prof. Mair and Andrea Sand (University of Freiburg). Further data for the corpus was collected in the beginning of the 2000s by Lars Hinrichs and Dagmar Deuber (University of Freiburg), and in 2005 by Hubert Devonish (University of the West Indies, Mona, Jamaica) and students, who contributed most of the spontaneous spoken material. From 2005 to 2008, the project of completing the corpus and investigating changing norms in Jamaica with the help of the data material collected was funded by the German Research Foundation (*Deutsche Forschungsgemeinschaft*). The corpus was released in its final form in 2009. Detailed information about the texts included in *ICE-Jamaica* can be found in the *ICE-Jamaica* manual (Rosenfelder et al. 2009).

<i>Text category</i>	<i>ICE-JA text categories</i>	<i>Speakers</i>	
		<i>Male/female</i>	<i>Total</i>
Conversations	Direct conversations (S1A-001 - 040)	9/11	20
Interviewees	Broadcast discussions (S1B-021 - 040)	7/3	10
	Broadcast interviews (S1B-041 - 050)		
Radio hosts	Broadcast discussions (S1B-021 - 040)	4/1	5
	Broadcast interviews (S1B-041 - 050)		
Speeches	Speeches (not broadcast) (S2B-041 - 050)	5/5	10
	Broadcast talks (S2B-021 - 040)		
	Unscripted speeches (S2A-021 - 050)		
News	Broadcast news (S2B-001 - 020)	6/4	10

Table 3.3: **Speakers and text categories.** Shown from left to right are the text categories used in the present study, their corresponding text categories and text codes in *ICE-Jamaica*, the number of male and female speakers within each text category, as well as the total number of speakers.

include approximately equal proportions of male and female speakers within each text category, it was not always possible to strictly adhere to this criterion due to limitations in the amount of data available at the time of the study, most notably the restrictions imposed on the date of recording. This is most conspicuous in the category of *radio hosts*, where only one female speaker could be found satisfying all criteria for inclusion.

An overview of the distribution of speakers across text categories and speaker sex, together with the corresponding *ICE-Jamaica* text categories from which the recordings were selected, can be found in Table 3.3. Further details on the sociolinguistic background of individual speakers are given in Appendix A.

Text categories are assumed to correlate with increasing degrees of formality of the speech situation, with *conversations* being the least, and *news* being the most, formal speech setting.

The category of *conversations* consists of recordings from the *direct conversations* category of *ICE-JA* (text codes S1A-001 to S1A-090), which contain face-to-face interactions between two or more friends or acquaintances in a friendly, casual setting. These texts are classified as “private dialogues” in the *ICE* hierarchy, being distinguished from their counterparts in the “public dialogues” section by the fact that interactions of this kind typically have no audience, and contributions by the speak-

ers are intended only for the speakers present (Nelson 1996a: 31). A large number of speakers in this category are students at the University of the West Indies, where most of the recordings were made.

Radio hosts and their interview partners (*interviewees*) are the participants in broadcast programs featuring discussions, often on rather controversial topics, between figures of public interest such as government officials, politicians, businessmen, or lawyers moderated by the radio host(s) (*ICE-JA* text codes S1B-021–040), or critical interviews of public figures by one or several radio hosts (S1B-041–050). Interactions of this kind, which belong to the *ICE* category of “public dialogues”, are typically intended not only for the participants present at the discussion, but for a larger audience of listeners, and the topic of discussion is known in advance by all speakers (Nelson 1996a: 31). With the debates in the present recordings tending to become quite heated, the two categories lie somewhere in between on the continuum between conversational free speech on the one hand and public speech settings on the other.

The category of *speeches* comprises a variety of scripted and unscripted speeches and broadcast talks (*ICE-JA* text codes S2B-021–050, S2A-021–050), covering topics as diverse as the role of women in the Jamaican music industry, the legal basis for reparations for the descendants of slavery, the resurrection of Christ, or the job opportunities available to university graduates of English. Text from this category range fairly high on the scale of formality, being produced in rather formal speech settings and being directed at large audiences.

Finally, radio newscasts (*news* – *ICE-JA* text codes S2B-001–020), composed of previously written and sometimes rather formulaic texts read out by professional speakers and directed at the general public over the radio, were included as the most formal text category.

Age is problematic in the present study for a number of reasons. Speakers included the *ICE* corpora are usually classified as belonging to one of three age groups: speakers between the ages of 17-25, 26-45, and >46. Unfortunately, however, reliable age information was not always available for many speakers from *ICE-JA*. An attempt was made to estimate speaker ages based on internet research, as almost

all of the speakers with missing age information are persons of public repute in Jamaica, and approximate age information could be found for most of them. However, this estimated age information still has to be regarded as somewhat uncertain and should be treated with appropriate caution.

A second effect that renders age problematic as an independent variable is its interrelation with text category. Ideally, it would have been desirable to have speakers stratified with respect to age within all text categories. However, with speakers from the youngest age group (17-25) virtually restricted to the text category of *conversations*, and *interviewees* constituted exclusively of speakers of the age of 46 and older, this was clearly not the case. Thus, there is an interrelationship between the two variables that will have to be taken into account in the analyses.

Chapter 4

Rhoticity

4.1 Introduction

The present chapter examines educated Jamaican English with regard to its rhoticity, or the incidence of /r/ in postvocalic position.

Jamaican English has generally been described as rhotic in the existing literature, contrasting in this respect not only with non-rhotic Jamaican Creole, but also with most other varieties of English in the Caribbean, which are predominantly non-rhotic. Indeed, rhoticity is sometimes mentioned explicitly as one of the characteristics distinguishing Jamaican English from other varieties of English in the Caribbean (with the exception of Barbadian English, which is rhotic), as well as from British English *Received Pronunciation* (RP):

[T]here are certain characteristically Jamaican pronunciations that have come to be taken for granted by all Jamaicans speaking English. Significant among these is the pronunciation of *r* in *cart*, *prok*, *far*, *hair*, *pear*, for example, a characteristic which is described by linguists as rhoticity. Within the Caribbean it distinguishes Jamaican pronunciation of English, and also Barbadian English, from Trinidadian English, for example. (Christie 2003:14/15).

Nevertheless, literature on and empirical studies of rhoticity in the Jamaican continuum, and especially in (acrolectal) Jamaican English, are relatively sparse. Existing studies for the most part either limit themselves to impressionistic descriptions of the phenomenon, with no further empirical grounding of these claims (Wells 1982, Shields-Brodber 1989), or, if quantitative investigations have been carried out, it is only on very small sets of data (Akers 1981, Irvine 1994). Another problem with the existing descriptions of postvocalic /r/ in Jamaican English is that a number

of these articles or studies are written with a highly theoretical focus, seeking to describe the role of /r/ within a given theoretical system rather than describing the details of actual variation (Akers 1981, Devonish & Harry 2004). Although some variability in the incidence of postvocalic /r/ is usually acknowledged in all descriptions for both basilect and acrolect, there is a lack of systematic investigations based on larger amounts of data for this variable. To date, no large-scale empirical study exists examining the use of postvocalic /r/ in Jamaica.

A further question to be addressed is that the individual authors differ with respect to a number of details concerning the realization of postvocalic /r/ in the Jamaican creole continuum. This concerns not only the question of which phonetic conditioning factors are considered relevant, and the nature and degree of their respective influence. Discrepancies also arise between different authors with respect to what is regarded as the relevant phonological domain (syllable, morpheme or word) for this phenomenon, due to the different theoretical frameworks within which they are operating. Again, these discrepancies and limitations make it highly desirable to empirically investigate postvocalic /r/ realization in Jamaican English systematically and in further detail.

The aim of the present chapter therefore is to fill this gap in the literature by providing a systematic investigation of the phonological and sociolinguistic factors influencing rhoticity in educated Jamaican English.

The structure of the present chapter is as follows: Section 4.2 gives an overview of the existing descriptions and studies of rhoticity in the Jamaican creole continuum, outlining the distribution of postvocalic /r/ in basilectal Jamaican Creole and acrolectal Jamaican English. Specifically, this literature review includes a summary of the language-external (social) and language-internal (phonetic) factors that have been described as relevant in determining the incidence of postvocalic /r/ in Jamaica. Section 4.3 outlines the methodology used in the present analyses, giving an overview of the research questions to be answered, as well as describing the analysis procedures, factors investigated and the nature of the statistical analyses. The results of these analyses are presented and discussed in section 4.4. This includes both the overall degree of rhoticity of educated Jamaican English, as well as the

degree of inter- and intraspeaker variability found in the present data. In addition, those factors that emerged as relevant predictors of the incidence of postvocalic /r/ in educated Jamaican English in the statistical models are further analyzed with respect to their influence and discussed individually in section 4.4.3. The chapter concludes with a short summary of the most important results.

4.2 Rhoticity in the Jamaican continuum

A number of phonetic descriptions exist of rhoticity in the Jamaican creole continuum. While there is a broad consensus among the different authors about the major facts of postvocalic /r/ distribution, a substantial number of differences emerges in the details of their respective descriptions of the incidence of postvocalic /r/. In the following sections, the details of these more fine-grained differences will be summarized separately for the two endpoints of the Jamaican Creole continuum, basilectal Jamaican Creole and acrolectal Jamaican English. The influence of extralinguistic factors on postvocalic /r/ production in the Jamaican continuum will be treated in section 4.2.3.

4.2.1 Basilect (Jamaican Creole, “Patois”)

With regard to the basilectal end of the continuum (Jamaican Creole, or “Patois”), the broad consensus among all authors appears to be that ‘broad’ or basilectal Jamaican Creole is non-rhotic, with one further qualification: While /r/ is categorically absent before following consonants, it may be present word-finally under certain conditions, which are a matter of dispute among the various authors. The details of these differences are as follows:

Cassidy (1960: 40) notes that “Jamaican speech at all levels loses *r* before consonants and at the end of words.” This categorical statement, however, is further qualified by adding that “[s]ome *r*’s, however, are retained, or are coming back, after /ie/” (Cassidy 1960: 41). Similarly, Akers (1981), writing within a framework of implicationally ordered admissibility conditions describing phonetic environments for the gradual spread of /r/, has categorical non-rhoticity in stage 1 of his continuum,

which represents “the unmonitored allegro speech of the most conservative basilect speakers”, but admits word-final /r/ in the next stage of his continuum “in a small set of frequent words” (Akers 1981: 74, see also Fig. 4.1). Unfortunately, no further details on the nature and/or distribution of these “frequent words” are given by the author.

Both Wells (1973, 1982) and Devonish & Harry (2004) agree that “final” /r/ occurs in the basilect, with the additional constraint of occurring “only after certain vowels[, these being] /ie:, a:, uo/ and /o/” (Wells 1973: 16/17), or “/ia/, /ua/, /aa/ or /o/”, in Devonish & Harry’s notation (Devonish & Harry 2004: 470). However, as the phonemes /ia, aa, ua/ and /o/ in Jamaican English map unto the lexical sets of NEAR/SQUARE, NORTH/START, FORCE and LETTER/NURSE, respectively (Devonish & Harry 2004: 453/454), thus covering all lexical sets in which postvocalic /r/ is attested in the metropolitan standard English accents, this is tantamount to stating that /r/ can occur in Jamaican Creole lexical items in exactly the same positions as in its (rhotic) metropolitan standard English counterparts. (Similarly, the constraint postulated by the same authors that “[t]he phoneme /r/ is blocked from occurring after nuclei consisting of /a/, /ii/, /uu/, /ai/ and /au/” (Devonish & Harry 2004: 471) is somewhat redundant, as postvocalic /r/ is not contained in any of the respective lexical sets corresponding to this set of vowels.)

However, the two sets of authors differ with respect to what they consider the relevant phonological domain for this phenomenon. While Devonish & Harry (2004: 470/471) take the above-mentioned “final” to mean “syllable-final”, formulating their description in terms of syllable boundaries, Wells (1982: 576/577; 1973: 16/17) implicitly considers morpheme boundaries to be the deciding phonological factor.

In contrast to domain-final position, both sets of authors agree that postvocalic /r/ is not permitted in preconsonantal position in basilectal Jamaican Creole (Devonish & Harry: 471; Wells 1982: 576/577). Wells (1973: 18) additionally acknowledges “stylistic alternation” in a number of words with /r/ in word-final position.

4.2.2 Acrolect (Jamaican English)

Jamaican English, on the other hand, is described as “generally rhotic” by Devonish & Harry (2004: 476). Similarly, Allsopp’s *Dictionary of Caribbean English Usage* lists Jamaica as one of the countries with categorical rhoticity in the mesolect: “Pre-consonantal /r/ (as in *hard, word, organ, bird* etc.) and word-final /r/ as in *car, hear, fire*, etc. are always pronounced in middle-level and usually in upper-level speech in [...] Jamaica” (Allsopp 1996: xlvi).¹ However, some variability has been noted, conditioned by a number of phonological and sociolinguistic factors.

One of these, according to Devonish & Harry (2004), is position of /r/. Some variability is attested for the realization of /r/ “in the environment of a following tautosyllabic consonant” (Devonish & Harry 2004: 476).² Thus, according to the authors’ analysis, postvocalic /r/ is assumed to be generally present word-finally but only variably so in pre-consonantal, word-internal position. Similarly, Irvine (1994: 67) found postvocalic /r/ to be favored word-finally in the speech of Jamaican speakers with variable rhoticity: “Generally, three broad groupings emerged among my informants. [...] [The] second group showed some degree of r-colouring, specifically in all word-final positions or before [+coronal] consonants.”

Variable rhoticity is elaborated in more detail by Wells (1982), who describes the incidence of /r/ in the Jamaican continuum in terms of ‘lexical sets’, i.e. depending on the nature of the preceding vowel. Starting from the assumption that /r/ is retained basilectally in morpheme-final position for all lexical sets except LETTER (i.e. words with unstressed final /ə(r)/), he describes rhoticity as “extended [mesolectally] by some speakers to all NEAR, SQUARE, FORCE and CURE words (as well as, as we have seen already, to NURSE words)” (Wells 1982: 576). Higher up in the Jamaican

¹The use of “usually” in reference to rhoticity in the acrolect in this description begs the question of whether this is meant to imply categorical occurrence of postvocalic /r/ in the mesolect but variability in the acrolect. Unfortunately, this is not further elaborated.

²In full detail, the authors describe this variability as follows: “There is a degree of variability in the realization of postvocalic /r/, usually in the environment of a following tautosyllabic consonant. As has been pointed out by Alison Irvine (p.c.), however, this inconsistency only occurs in relation to /r/ preceding another consonant in the coda” (Devonish & Harry 2004: 476). However, it is not quite clear from their description how the two environments in question actually differ, as any “following tautosyllabic consonant” must needs entail “/r/ preceding another consonant in the coda”.

continuum, “sporadic preconsonantal rhoticity” is attested for “many mesolectal and some acrolectal speakers” in tokens from the START and NORTH lexical sets. LETTER words are described as generally non-rhotic: “the usual unmonitored pronunciation for all social classes in Jamaica is non-rhotic in respect of *letter* words” (Wells 1982: 576). According to Wells, the situation is further complicated by sporadic (and apparently random) loss of final /r/ after some lexical sets: “As a last complication, some speakers may lose final /r/, particularly after /e:/ and /o:/, so that non-rhotic pronunciations of words such as *beer* and *four* (and, less commonly, of words such as *star* and *fur*) are sometimes encountered. It seems, though, that Jamaicans never make pairs such as *beer* and *bay*, *four* and *foe* homophonous” (Wells 1982: 577). Unfortunately, it is not quite clear from the description to which part of the creole continuum this is meant to apply (nor which domain exactly is indicated by “final”); whether it applies to the mesolectal/acrolectal range described directly before the paragraph in question, or whether sporadic /r/ loss after these lexical sets should be seen as a feature of the whole Jamaican speech continuum.

Another phonological factor that has been described as influencing the realization of postvocalic /r/ in Jamaican English is the nature of the following consonant. Akers’ (1981) stages 3-5 of his continuum model of the gradual spread of /r/ comprise four consonantal categories: following sonorants and continuant coronals, following coronals, as well as other consonants (Akers 1981: 69-75, see Table 4.1). Akers agrees with Wells in treating tokens from the LETTER lexical set, or “word-final syllabic /r/” in his terms, as distinct, representing the last stage of his scale (Akers 1981: 75). Following coronal consonants are also mentioned by Irvine (1994: 67) as favoring rhoticity in Jamaican English.

4.2.3 Sociolinguistic background

Besides the language-internal factors outlined in the preceding section, a number of extralinguistic factors have been described as influencing the realization of postvocalic /r/ in Jamaican English. These include monitoring of speech and speech rate, speaker characteristics such as socio-economic status, level of education and

Stage	Environment	
0	V__V	intervocally
1	#__V	word-initially
2	--#	word-finally “in a small set of frequent words”
3	-- [+son]	before sonorants: /l/, /m/, /n/
	-- [+cons, +cont, +cor]	before continuant coronals: /s/, /z/, /ʃ/
4	-- [+cons, +cor]	before coronals: /t/, /d/, /tʃ/, /dʒ/
5	-- [+cons]	before remaining consonants: /p/, /b/, /f/, /v/, /k/, /g/
6	ər#	word-final syllabic /r/

Table 4.1: **Continuum model of rhoticity in Jamaican speech (Akers 1981: 69-75).** /r/ realization spreads through successive stages of the continuum.

speaker age, as well as American English pronunciation patterns, the influence of Jamaican Creole pronunciation, and the mechanism of spelling pronunciation.

Monitoring of speech is mentioned repeatedly as an influencing factor by a number of authors. In addition to speech rate (“allegro tempo of [...] speech”), Akers (1981) describes the deletion of word-final /r/ as favored in “unmonitored speech” in stage 2 of his continuum, in opposition to “monitored speech styles” favoring the realization of word-final /r/ in tokens from the LETTER lexical set (Akers 1981: 74/75). Rhoticity in this latter set of words is also mentioned as determined by speech style (“careful” vs. “unmonitored pronunciation”) by Wells (1982: 576). In a similar vein, Shields-Brodber (1989: 48) attributes higher degrees of rhoticity to “spelling pronunciations and careful, somewhat measured articulation”.

Socio-economic status also has an effect on rhoticity, a “more affluent” social background having been found to correlate inversely with post-vocalic /r/ realization (Irvine 1994: 71). In addition, speakers with higher degrees of rhoticity tend to have higher levels of education (Irvine 1994: 71/72). As these speakers with higher degrees of rhoticity are also characterized as “speakers of the emergent standard” (Shields-Brodber 1989, see discussion below), age is implicitly assumed to play a role as well. While these findings may appear contradictory at a first glance, they can be plausibly explained by the mechanism of distancing from (non-rhotic) Jamaican Creole pronunciation patterns. As pointed out by Irvine (1994: 71/72), “[u]se of English has always been a marker of education in Jamaica, and it is not inconceivable that overtly Creole structures were avoided, particularly among groups who

were on the move socially. [...] People already at the top of society would be less concerned with distancing themselves from Creole.” Thus, speakers from the upper classes would feel linguistically less insecure and use non-rhotic forms of pronunciation more freely in their speech, while others would be more likely to orient themselves along the norms transmitted in the educational system, where higher levels of rhoticity appear to be prevalent. The issue is further complicated by the socioeconomic background of school teachers themselves, who are often “likely to be rhotic, as most would have come from less affluent backgrounds. Therefore the JE variety of the classroom, where most Jamaicans learn much of their English, would have *r*-colouring” (Irvine 1994: 71/72).

Rhoticity or non-rhoticity in Jamaican English is also connected to the question of changing norms for what is considered ‘Standard’ English in Jamaica. With respect to rhoticity, three sources of influence need to be taken into account: non-rhotic British English Received Pronunciation (RP), rhotic American English, and non-rhotic Jamaican Creole. While Jamaica as a former British colony has traditionally been oriented towards British norms of writing and speaking, thus favoring non-rhoticity in spoken English, evidence has been found in a number of domains for an emerging independent standard (see e.g. Mair 2002). Thus, Shields-Brodber (1989) sees Jamaican English as oriented towards “dual standards: the one acknowledged traditionally and reflecting metropolitan norms, the other, actually emergent, promulgated in the writing and speech of the majority of prominent, educated Jamaicans” (Shields-Brodber 1989: 42). More specifically, and relevant to the present chapter, it has been claimed that a high degree of rhoticity is typical for the latter group of speakers (Shields-Brodber 1989: 48).

The emerging Jamaican standard has been claimed to be influenced by a number of factors, most notably substrate influence from Jamaican Creole, but also by American English (Mair 2002: 54). As Christie (2003) puts it,

Jamaica’s geographical proximity to the USA makes it particularly open to the influence of US English. This is fostered by both formal and informal contacts including business and cultural interchanges of various kinds, business and vacation travel as well as travel for purposes of study, employment and professional contacts, for example. Family ties are also an important source of influence. Almost every Jamaican has at least

one relative who resides permanently in the USA with whom more or less regular contact is maintained. The most direct cultural influences stem from popular entertainment, tourism, and goods and services that reflect US industry and lifestyles (Christie 2003: 20).

High degrees of rhoticity in the speech of Jamaicans are therefore often seen as a result of American influence by some authors: “American speech - indeed, everything American - is held in generally high prestige in Jamaica. Among pronunciation features which may be due to American influence are the pronouncing of an /r/ in words like *park*” (Wells 1973: 6, see also Akers 1981: 69). However, this explanation is by no means uncontroversial. Other factors that may be at work in this respect is the mechanism of using postvocalic /r/ pronunciations as a means of distancing the speaker from Jamaican Creole, as mentioned above (see also Irvine 1994: 67), or possibly the influence of Barbadian English (Wells 1973: 6 (footnote)). The latter variety is “the only West Indian accent which is fully rhotic at all levels of society” (Wells 1982: 584, see Blake 2004: 503) and is furthermore held in high prestige within the Caribbean, “Barbadians [being] in demand as schoolteachers in other islands, inasmuch as they enjoy a reputation for speaking good English” (Wells 1982: 583). On the other hand, Shields-Brodber (1989: 48) attributes this feature of educated Jamaican speech to spelling pronunciation: “Although the influence of American television has been suggested as a possible explanation, I have observed that Jamaicans at home do not pattern, with any consistency, American phonology. It is my view, therefore, that the rhoticity which is a regular feature of the output of group two is more accurately attributed to spelling pronunciation” (Shields-Brodber 1989: 48).

4.3 Methodology

4.3.1 Research Questions

Bearing in mind the findings in the literature outlined in the preceding section, the present chapter attempts to shed new light on the following questions:

Which phonetic and sociolinguistic factors influence rhoticity in educated Jamaican English? Can earlier, impressionistic claims about rhoticity in Jamaica be

substantiated or contradicted? How much of the variation in the data is attributable to inter-, how much to intra-speaker variation? What does that tell us about the nature of the Jamaican continuum? How does the observed variation relate to British, American, and Jamaican Creole norms of pronunciation? And finally, is there evidence for an emerging new standard in the realm of spoken Jamaican English, parallel to the written domain?

4.3.2 Analysis procedures

In order to ensure natural speech, especially for the more informal text categories, analysis procedures were begun 3 minutes after the beginning of the recording, when conversation was well under way and any initial self-consciousness with regard to the recording situation was likely to have disappeared.

Tokens with potential underlying postvocalic /r/ were coded auditorily as either not realized/vocalized (‘0’) or realized/constricted (‘r’) in a *Praat TextGrid* editor (Boersma & Weenink 2007), together with background information on the speaker, text category, and phonetic context. If, after repeated re-hearings, it was not possible to determine unambiguously whether an /r/ was present or not in a token, it was discarded as unclear and not included in the final counts. Annotations were then extracted and summarized automatically with the help of various *Praat* and *Perl* scripts, yielding a total of 1954 potential post-vocalic /r/ tokens.

Not included in the analysis either are instances of self-corrections or repetitions (coded <->...</-> in the corpus data), quotes (<quote>...</quote>) and imitations, as well as proper names. In addition, tokens occurring in overlapping speech, tokens with a low signal-to-noise ratio (SNR) (due either to poor quality of recording or to background noise), as well as unclear and uncertain transcriptions (<unclear>...</unclear>, <?>...</?>) were also excluded from the analyses. Difficulties in determining the presence or absence of /r/ in contracted forms such as *you’re*, *they’re* etc. led to the exclusion of these forms as well. Moreover, in order to prevent lexical bias, no more than two tokens of same lexeme were included in the analysis.

4.3.3 Factors investigated

Table 4.2 presents an overview of the factors included as independent variables in the analyses. They comprise a total of eleven factors investigated with regard to their potential influence on rhoticity. Included are both language-external/sociolinguistic factors (*text category*, *sex* and *age*, as discussed in the preceding section), as well as a number of language-internal/phonological factors, which were defined as follows:³

- **Position:**

Two values are possible for this independent variable, which indicates the position of /r/ within the word: /r/ is either situated word-finally ('/--#'), or followed by a consonant within the same word ('/--C').

- **Word stress:**

Stress was included as an independent variable because of its influence on syllabification (see Wells 1990, and the discussion below). For the sake of simplicity, stress was taken to be binary, with reference to stress placement as in metropolitan standard accents. Syllables were therefore classified as being either unstressed ('0'), or bearing some degree of (primary or secondary) stress ('1'). It should be noted that this is not a claim that these syllables are actually stressed in this way in Jamaican English, as divergent stress patterns in Jamaican English have been repeatedly commented on in the literature (Wells 1973: 22/23, Wells 1982: 572/573, Devonish & Harry 2004: 478). However, as there is no general agreement on the exact nature of stress differences between Jamaican and other varieties of English, and as it is by no means clear whether this is a tonal phenomenon in which high tone on the syllable in question is merely perceived as shifted stress by the listener (Wells 1973: 22/23)⁴, this

³The motivation for including phonological factors in such detail arose after a first analysis focussed primarily on sociolinguistic factors (as well as position of /r/ within the word and the syllable) yielded only unsatisfactory and inconclusive results.

⁴These tonal patterns are most likely carried over from basilectal Jamaican Creole, which, in turn, has been described as having retained lexical tone (Harry 2006: 129, Devonish & Harry 2004: 477, Lalla & D'Costa 1990: 65, 218/219 (footnote 5), Lawton 1963: 19) due to the substrate influence of African tonal languages (Lalla 1986: 120/121, Cassidy 1961: 32).

<i>Sociolinguistic factors:</i>	
Text category	conversations interviewees radio hosts speeches news
Speaker sex	male (m) female (f)
Speaker age	17 - 25 26 - 45 > 46
<i>Phonological factors:</i>	
Position	word-final (/__#) before consonant (/__C)
(Word) stress	unstressed (0) stressed (primary/secondary stress) (1)
Text frequency of token	<i>per 1,000 words</i>
Preceding vowel	NEAR SQUARE CURE PRICE MOUTH START NORTH FORCE NURSE LETTER SCHWA
Following consonant	sonorant continuant coronal coronal (other than continuant coronal) other
Syllable boundary	tautosyllabic following consonant (/__C.) intervening syllable boundary (/__C)
Morpheme boundary	tautomorphemic following consonant (/__C+) intervening morpheme boundary (/__+C)
Following pause	following pause (/__#P) no pause following (/__#C)

Table 4.2: **Factors included in the logistic regression models.** Shown are all eleven sociolinguistic and phonological factors together with their possible values.

operational definition provided the best means of objectifying the potential effects of stress on the incidence of postvocalic /r/ in Jamaican English.

- **Text frequency of token:**

Text frequencies of individual tokens were determined with the help of a *Perl* script and counted across the whole *ICE-JA* corpus as available at the time of the study (1,062,013 words).

- **Preceding vowel:**

Preceding vowels were classified according to Wells' (1982) lexical sets. In addition to the NEAR, SQUARE, CURE, START, NORTH, FORCE, NURSE and LETTER lexical sets, for which the incidence of rhoticity has been described in Wells (1982), the present analysis was supplemented by three additional categories: MOUTH and PRICE represent the diphthongs /aʊ/ and /aɪ/ in words such as *hour* or *fire*, respectively. SCHWA indicates unstressed word-internal /ə/, in contrast to the category LETTER, which is limited to occurrences of word-final /ə(r)/ (Wells 1982: 166).

- **Following consonant:**

Following Akers (1981), consonants after /r/ were divided into four classes: *sonorants* (/l/, /m/, /n/), *continuant coronals* (/s/, /z/, /ʃ/), other *coronal* consonants (/t/, /d/, /tʃ/, /dʒ/) and *others* (/p/, /b/, /f/, /v/, /k/, /g/, /θ/, /ð/).

- **Syllable boundary:**

Preconsonantal /r/ can be positioned in two ways with respect to syllable boundaries: The following consonant either belongs to the same syllable as the /r/ in question ('/_C'), or it is separated from it by an intervening syllable boundary ('/_C'). As syllabification in English is by no means an uncontroversial topic, it was decided to follow the syllabification principles outlined by Wells (1990) for the *Longman Pronunciation Dictionary* (Wells 2000). As the author is not a native speaker of English, this approach had the advantage of providing a reference work for unclear cases.

- **Morpheme boundary:**

In analogy with syllable boundaries, preconsonantal /r/ can either belong to the same morpheme as the consonant that is following (‘/–C+’), or it can be separated from it by an intervening morpheme boundary (‘/–+C’). As presence or absence of morpheme boundaries had an influence on the syllabification of entries in the *Longman Pronunciation Dictionary* (Wells 1990: 81/82), this factor is not independent from the factor *syllable boundary*.

- **Following pause:**

This factor becomes relevant for tokens with potential /r/ in word-final position. Presence (‘/–#P’) or absence (‘/–#C’) of a following pause were determined by the criteria used for marking pauses in the *ICE-JA* corpus, where pauses are marked as such if their duration corresponds approximately to (at least) the duration of one syllable at the speakers current tempo of speech (Nelson 1993: 3). Note that absence of a following pause implies the presence of a consonant at the beginning of the following word in the context of these analyses, as even in non-rhotic varieties of English ‘linking /r/’ would be expected to occur otherwise. (However, see Chapter 5 for an empirical investigation of this assumption.)

4.3.4 Statistical Analysis

Statistical analyses of the results proceeded as follows: All 1954 tokens were analyzed using the *Binary Logistic Regression* procedure of the *SPSS* statistics software package. Seven logistic regression models (see Table 4.3) were run for different combinations of factors and subsets of the data, as not all factors could be included in all analyses.

Model 1 comprises all cases, i.e. all 1954 tokens of the data, investigating the effect of the ‘general factors’ *text category*, *speaker sex*, *preceding vowel*, *position*, *stress* and *text frequency of token*, i.e. those factors that have valid values for all tokens.⁵ *Age* is added to these six factors in model 2. Model 3 represents an attempt

⁵As opposed to, e.g. the factor *following consonant*, which applies only to tokens with /r/ in preconsonantal position.

Logistic regression models		
<i>Model</i>	<i>Selected cases</i>	<i>Focus on</i>
1	all	general factors
2	all	general factors plus age
3	<i>conversations</i> only	reliable age information, no interaction with category
4	/__C	syllable boundary
5	/__C	morpheme boundary
6	/__C or /__#C	word boundary
7	/__#	following pause

Table 4.3: **Overview of logistic regression models.** Shown for each model are the cases analyzed (all; tokens from the text category of *conversations* only; tokens with preconsonantal /r/ only (/__C); tokens with word-final /r/ only (/__#)), as well as the general focus of that model. A more detailed overview of the factors included in the regression equation of each model can be found in Table 4.4.

to determine the significance or non-significance of age more precisely, limiting itself to tokens from the text category of *conversations*, the only text category with reliable age information for all its speakers, and, moreover, reasonable stratification of speakers with respect to age. The influence of syllable and morpheme boundaries on the realization of /r/ in preconsonantal position (/__C) is tested in models 4 and 5. Factors included in these models are *text category*, *speaker sex*, *preceding vowel*, *following consonant* and *text frequency of token*, as well as *syllable boundary*, or *morpheme boundary* and *stress*, respectively.⁶ Model 6 investigates the influence of word boundaries on rhoticity, comparing tokens with (word-internal) /r/ in preconsonantal position with those where /r/ is in word-final position and the following word begins with a consonant (/__C or /__#C). For this, *position* is the determining factor, in addition to *text category*, *speaker sex*, *preceding vowel*, *following consonant*, *stress* and *text frequency of token*. Finally, model 7 is concerned with the effect of a following pause on tokens with word-final /r/.

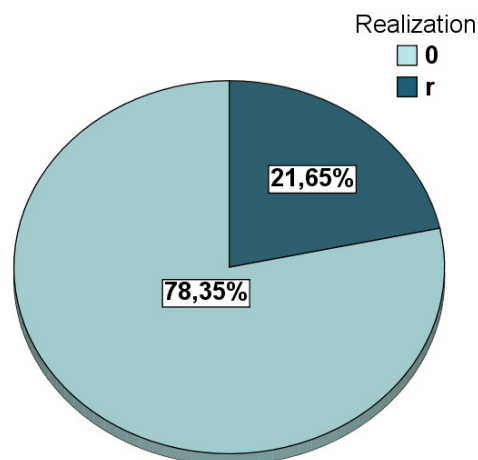


Figure 4.1: **Overall degree of rhoticity.** Shown is the percentage of /r/ realizations for all speakers, all text categories, all phonetic environments.

4.4 Results and discussion

4.4.1 Overall degree of rhoticity

Overall degree of /r/ realization proved to be rather low, with /r/ being realized in only 21.65% of all cases (see Figure 4.1). This clearly contradicts the traditional characterization of the educated Jamaican standard as predominantly rhotic.

The discrepancy between the empirical data presented in this study and accounts in the literature describing Jamaican English as rhotic can be attributed to the choice of theoretical framework within which the authors in question are operating, namely, the analysis of Jamaican English and Jamaican Creole as two separate linguistic subsystems. As has been noted already by Irvine (2004), Jamaican English has often been described in terms of structural opposition to the basilect rather than on the basis of linguistic criteria of its own: “What seems to have emerged is a kind of circularity in the definition of the polar varieties on the (Jamaican) continuum that, typically, takes this form: a) Since the acrolect is not unlike other standard Englishes

⁶Because both factors influence syllabification (see Wells 1990), *stress* and *morpheme boundary*, cannot be included in the same model as *syllable boundary*, as this would make the variables mutually dependent.

[...]; then b) the basilect reflects structures that are maximally divergent from the acrolect [...]; as such, c) acrolectal speech is maximally non-basilectal” (Irvine 2004: 45). With regard to the question of rhoticity, the implication of this circularity in definition is that, since Jamaican Creole can be characterized as non-rhotic, and instances of postvocalic /r/ are observed as one moves towards the acrolectal end of the Jamaican continuum, it may have seemed a natural step for many authors to analyze Jamaican English in exactly these terms of maximal structural opposition to the basilect, and thus describe it as a rhotic variety.⁷ Indeed, authors treating Jamaican Creole and Jamaican English as two separate subsystems connected by means of conversion rules tend to downplay variability with respect to rhoticity as a negligible irregularity in an otherwise clear-cut systematic framework (Devonish & Harry 2004: 476; also, though to a lesser extent, Wells 1973: 26/56). However, as can be seen in the discussion of individual factors below, the actual patterns of incidence of postvocalic /r/ are described much more accurately in accounts that abstain from trying to fit the variability in the data into the categorical concepts of ‘rhotic’ or ‘non-rhotic’, respectively.

While it is true that some degree of abstraction must be present in all analyses of this kind, and whatever the theoretical merits of an analysis in terms of two separate, rhotic and non-rhotic, linguistic systems may be in other respects, analyses of this degree of abstraction are disadvantageous in that they fail to capture more intricate variability such as is displayed in the data presented in this study, and run the danger of removing themselves too far from the reality that they aim at describing. With an overall degree of rhoticity of slightly more than 20%, a characterization of Jamaican English as ‘rhotic’ is definitely not warranted. As a matter of fact, “variable semi-rhoticity”, a term proposed by Wells (1982: 570) for the *whole* of the Jamaican continuum, seems to be a much better label for describing the use of postvocalic /r/ in educated Jamaican English.

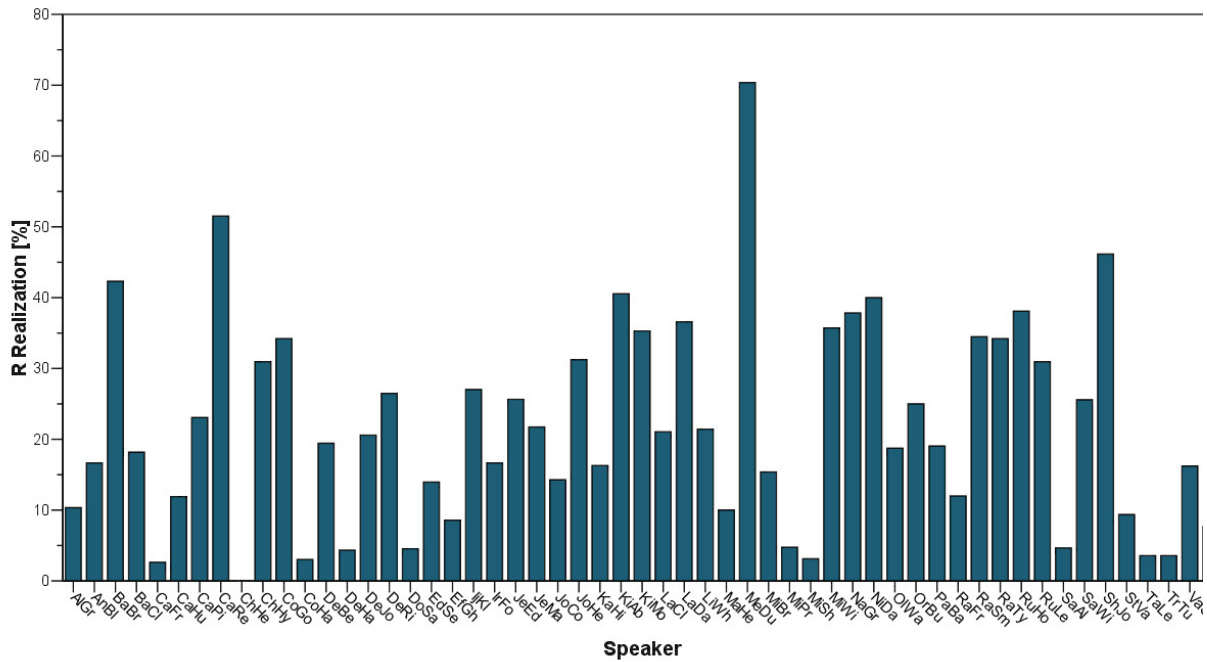


Figure 4.2: **Inter- and intra-speaker variation.** Shown are overall percentages of /r/ realization for each individual speaker. Speakers are arranged alphabetically along the x axis according to their speaker ID.

4.4.2 Inter- and intra-speaker variation

Inter- and intra-speaker variation of rhoticity in educated Jamaican English is illustrated in Figure 4.2, which shows the overall degrees of /r/ realization for each individual speaker analyzed in the present study. Speakers are arranged alphabetically along the x axis according to their internal speaker ID.

As can be seen from Figure 4.2, a large amount of both inter- and intra-speaker variation is present with respect to rhoticity in educated Jamaican English. On the one hand, considerable differences in rhoticity emerge between individual speakers, ranging from categorical non-rhoticity in the speech of speaker *ChHe* to percentages of /r/ realization of more than 70% in the idiolect of speaker *MeDu*. On the other hand, a histogram of the distribution of individual speakers with respect to their overall degree of rhoticity fitted with a corresponding Gaussian normal curve reveals that the distribution clusters around a mean rhoticity value of roughly 20%, with a

⁷As a matter of fact, Akers' (1981) description of /r/ in the Jamaican continuum is mentioned by Irvine as one of the examples of this kind of analysis (Irvine 2004: 44/45).

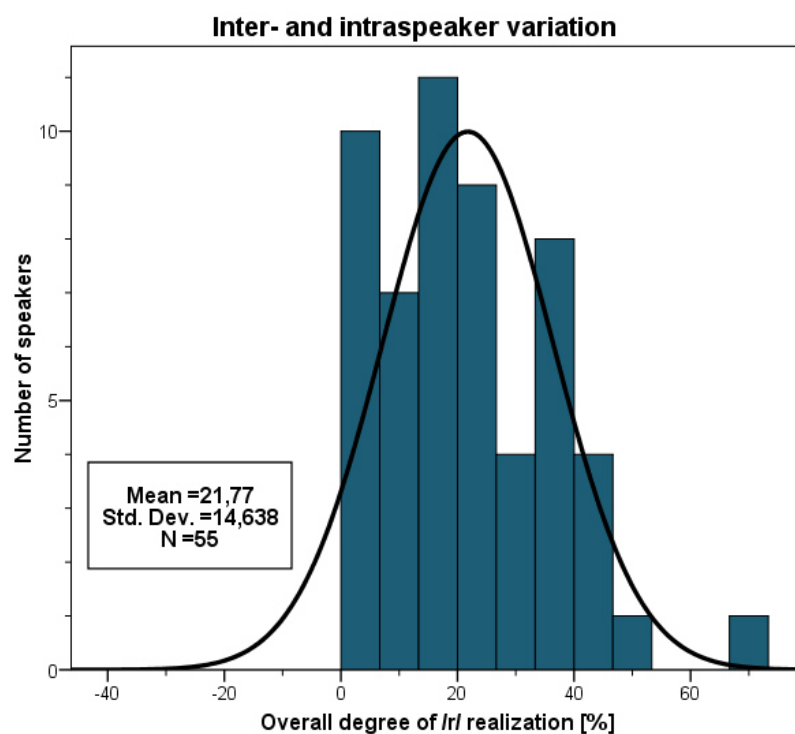


Figure 4.3: **Inter- and intra-speaker variation.** Shown is a histogram of the distribution of speakers with regard to their overall degree of rhoticity. Fitted to the histogram is a Gaussian normal curve with a mean of 22.8 % and a standard deviation of 14.6 %.

Logistic regression models – significance of factors											
	<i>Cat.</i>	<i>Sex</i>	<i>Age</i>	<i>Pos.</i>	<i>Vowel</i>	<i>Cons.</i>	<i>Morph.</i>	<i>Syll.</i>	<i>Pause</i>	<i>Stress</i>	<i>Freq.</i>
1	***	–	n/a	***	***	n/a	n/a	n/a	n/a	–	**
2	***	–	**	***	***	n/a	n/a	n/a	n/a	–	**
3	n/a	–	–	***	***	n/a	n/a	n/a	n/a	–	**
4	**	–	n/a	n/a	***	*	n/a	–	n/a	n/a	–
5	**	–	n/a	n/a	***	**	–	n/a	n/a	–	–
6	***	–	n/a	***	***	**	n/a	n/a	n/a	–	*
7	***	–	n/a	n/a	***	n/a	n/a	n/a	***	*	***

Table 4.4: **Logistic regression models – significance of factors.** Asterisks indicate $p < .001$ (***), $p < .01$ (**), and $p < .05$ (*). ‘–’ indicates non-significance, ‘n/a’, non-inclusion in the model.

standard deviation of approximately 15% (see Figure 4.3). Thus, a large majority of speakers fall somewhere in the range from approximately 5% to 35% of overall /r/ realizations. This demonstrates that the “variable semi-rhoticity” attested by Wells (1982: 570) for Jamaican English does not stem from a mixture of speakers with differing internal categorical (fully rhotic or non-rhotic) norms. Instead, inherent variability with respect to this variable is present to a large degree within the linguistic systems of individual speakers.

4.4.3 Factors influencing rhoticity

An overview of the factors that were found to be significant in the seven logistic regression models is given in Table 4.4. Asterisks represent $p < .001$ (***), $p < .01$ (**), and $p < .05$ (*). A dash (–) indicates that the respective factor was not significant in the model; ‘n/a’, that it was not included as a factor in the regression equation.

As can be seen from the table, significances (and even corresponding levels of significance) tend to be quite consistent across all models tested. With the exception of age and text frequency (see discussion below), no factor came out as significant in one model but not significant in another, and vice versa. reliability of the results.

Text category, *position* of /r/ and *preceding vowel* were highly significant ($p < .001$, or $< .01$ for *text category* in models 4 and 5) across all logistic regression models, as was *following consonant*, although to a lesser overall degree, especially in model

4. The effect of a *following pause* on tokens with word-final /r/ proved to be highly significant in the only model in which this factor was explicitly tested (model 7). *Text frequency* was a significant factor for rhoticity in all models except models 4 and 5. *Speaker sex* was not a significant factor in either of the models; thus, no gender differences emerge with respect to the realization of postvocalic /r/ in educated Jamaican English. Similarly, neither *syllable* nor *morpheme boundaries* are influential in this respect (see models 4 and 5). *Stress* also does not play a significant role in any of the models, with the exception of model 7. However, the marginal significance of the factor *stress* in this model is probably due to differences in stress between the LETTER and all other lexical sets. As can be seen in Figure 4.5, the LETTER lexical set, which is limited to tokens with unstressed word-final /ə(r)/, exhibits an extremely small degree of overall rhoticity. This is in sharp contrast with the values obtained for the other lexical sets, which are composed of tokens containing stressed vowels. Thus, the significance ascribed to the factor *stress* in model 7 very likely reflects this differentiation with respect to vowel class, and not stress as an independent determining factor.

Speaker age is problematic as a factor and contradictory in its results, which can be seen from Table 4.4, where it is shown as significant at the .01 level in model 2, but not significant at all in model 3. Recall that model 3 was designed to specifically test the effect of speaker age by excluding the interrelationship between age and text category that was present in the overall data set by limiting the data analyzed to tokens from the one text category (*conversations*) for which both consistent and reliable age information is available for all speakers, and which is moreover reasonably stratified with respect to speaker age and sex. Given these facts, it seems reasonable that model 3 should be considered the more reliable of the two competing models. Due to the interrelationship in the data set between *text category* and *age*, it is very likely that the significant effect detected in model 2 is a carry-over from the consistently highly significant effect of *text category*. Hence, there is no conclusive evidence that age plays a significant role in favoring or disfavoring rhoticity in educated Jamaican English.

An overview of all significant and non-significant factors is given in Table 4.5.

Logistic regression models – significant and non-significant factors	
<i>Significant</i>	<i>Not significant</i>
Text category	Speaker sex
Preceding vowel	Syllable boundary
Following consonant	Morpheme boundary
Position	Stress
Following pause	(Age)
Text frequency of token	

Table 4.5: **Logistic regression models – significant and non-significant factors.**

4.4.4 Individual factors

Text category

No clear picture emerges with respect to text category, the only language-external/sociolinguistic variable found to be significant in all logistic regression models.

Highest percentages of /r/ realizations are found in the the category of *conversations*, where /r/ is pronounced in approximately one third (30.31%) of all cases. Somewhat lower values emerge for the categories *interviewees* and *speeches*, with an overall degree of rhoticity of approximately one fifth (18.87% and 19.61%, respectively). *Radio hosts* and *newscasters* are lowest in their use of postvocalic /r/, realizing the variable as constricted in only 12.07% and 14.01% of all cases, respectively.

An overview of degrees of /r/ realizations by text category is shown in Figure 4.4.

Overall, there seems to be a general (though admittedly very rough) pattern that shows /r/ realization as decreasing with increasing level of formality. However, as this pattern is interrupted by the low incidence of /r/ in the category of *radio hosts*, and with *interviewees* and *speeches* showing comparable levels of rhoticity, it should be regarded as a tentative tendency only. Also, this pattern is in clear contrast to what would be expected by taking into account the two postulated norms for the Jamaican continuum only, namely, (predominantly) non-rhotic Creole, and (predominantly) rhotic Jamaican English: In this case, a cline in the opposite

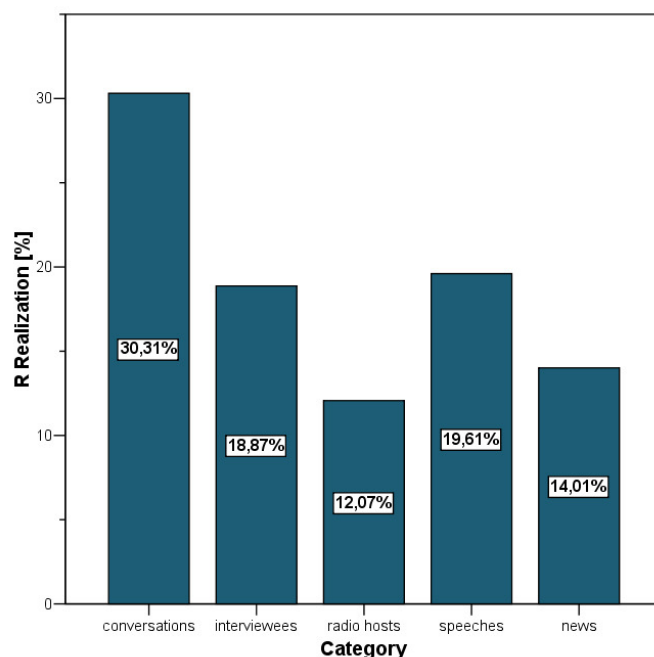


Figure 4.4: **Overall degree of rhoticity – influence of text category.** Shown are overall percentages of /r/ realizations for speakers from the *conversations*, *interviewees*, *radio hosts*, *speeches* and *news* text categories.

direction would be expected, with rhoticity *increasing* with increasing formality of the speech situation, as speakers would tend to orient their pronunciation more toward the norm of the high-prestige variety, Jamaican English, or, conversely, avoid patterns of pronunciation associated with Jamaican Creole. The opposite tendency in the data clearly indicates that some other factors must be involved here. In fact, use of rhoticity in Jamaican speech has often been remarked upon as being influenced by the two external norms of (traditional, non-rhotic) British English pronunciation on the one hand, as well as (rhotic) American English on the other, with the influence of the latter claimed to be increasing (Christie 2003: 20) or even “dominant” (Akers 1981: 69) in Jamaica.

Low percentages of /r/ realization in the two text categories that are associated with the media, *radio hosts* and *news*, suggest that RP as the historical norm may still be prevalent in this context. Differences in rhoticity between the speech of the speakers in the category of *interviewees* as opposed to that of the *radio hosts* might be attributed to more self-conscious, monitored speech on the part of the former

group of participants, for whom appearance on the radio may be perceived as a more formal speech setting than for the latter group of speakers, for whom this is part of their daily bread. On the other hand, many *interviewees* are persons of public repute and high social standing in Jamaica (politicians, government officials, lawyers, media officials, doctors etc.), which one might presume to have attained a high level of linguistic security. As has been pointed out by Irvine (1994) with respect to rhoticity, “[p]eople already at the top of society would be less concerned with distancing themselves from Creole” (Irvine 1994: 71/72). However, the correlation found in Irvine’s study was not between higher degrees of rhoticity and the socio-economic status of the speakers themselves, but rather with that of their parents. Thus, speakers which originally came from less affluent backgrounds might still feel the need to signal their improved social status by means of linguistic features such as rhoticity.

Higher percentages of /r/ realization in the category of *speeches* are probably due to the relatively high level of formality of this speech situation. In addition, these results may also be influenced by spelling pronunciations, as this text category is composed to a large extent of written material read out in front of a public audience.

Rhoticity is most markedly present in the text category of *conversations*, the interpretation of which is difficult. On the one hand, it might be possible to see the high degree of postvocalic /r/ realization in this category as an indicator of changing norms for Standard English in Jamaica, as a large proportion of speakers in this category comes from the youngest age group, while the majority of speakers in the other text categories is from the ‘older’ two groups. Again, with respect to the two local norms only, one would have expected to find lower averages in this category, it being the most informal speech setting, for which pronunciations would be likely to be closer to Creole. As this is clearly not the case, it might well be that Jamaican English is thus in the process of developing its own, more fully rhotic norm, either influenced by American norms of pronunciation, or independently. However, it should be kept in mind this ‘apparent time’ interpretation of the data rests on somewhat shaky foundations insofar as no direct correlations were found in the logistic regression model that tested for the effect of age explicitly (see

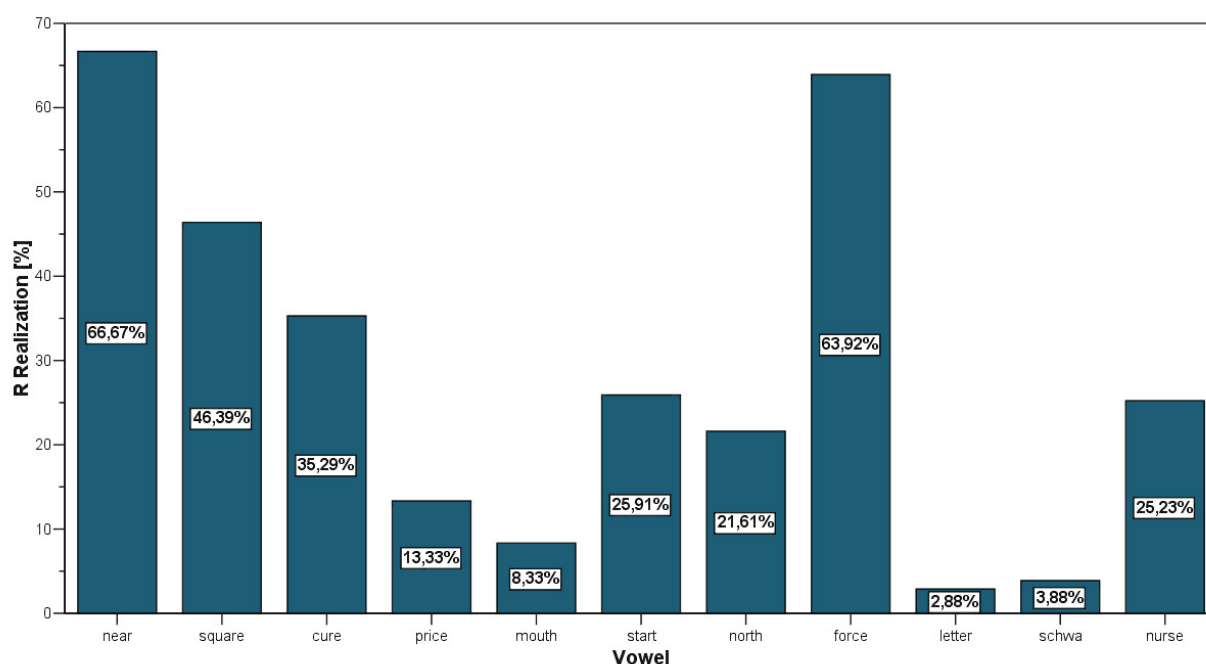


Figure 4.5: **Overall degree of rhoticity – influence of preceding vowel.** Shown are percentages of /r/ realization for each of Wells' (1982) lexical sets.

section 4.4.3). Another possible factor in this respect is that the category comprises mainly university students, which might be seen as being upwardly mobile, and thus more concerned with distancing themselves from Creole. In addition, a high degree of rhoticity has been found to be associated with the educational system, possibly due to rhotic teachers as role models (Irvine 1994: 71/72).

Preceding vowel

Figure 4.5 shows the effect of the nature of the preceding vowel on the realization of postvocalic /r/ in educated Jamaican English. Overall, the findings of this empirical study confirms Wells' (1982) impressionistic description of rhoticity in Jamaica, while providing a more fine-grained picture of the situation.

Highest percentages of /r/ realizations are found for the lexical sets NEAR and FORCE, in which /r/ is pronounced approximately two thirds of the time (66.67% and 63.92%, respectively). Progressively lower degrees of rhoticity characterize the lexical sets of SQUARE and CURE, with 46.39% and 35.29% of all /r/s being pronounced in these categories. /r/ realizations drop to roughly a quarter of all in-

stances in START, NORTH, and NURSE (25.91%, 25.23%, and 21.61%, respectively). Constricted /r/ is rare following the diphthongs /aɪ/ and /aʊ/ in the lexical sets of PRICE and MOUTH (13.33% and 9.33%), and close to non-existent after /ə/ in SCHWA and LETTER words (3.88% and 2.88%).

The ordering of lexical sets with respect to degrees of rhoticity outlined above agrees well with Wells' (1982) account of the incidence of postvocalic /r/ in the Jamaican continuum. Starting from the assumption that /r/ is retained basilectally in morpheme-final position for all lexical sets except LETTER, he describes rhoticity to be "extended [mesolectally] by some speakers to all NEAR, SQUARE, FORCE and CURE words (as well as, as we have seen already, to NURSE words)" (Wells 1982: 576). Thus, highest incidences of postvocalic /r/ should be expected for tokens from these lexical sets, as is indeed the case in the data presented here. The only exception is the lexical set of NURSE, which, featuring an overall degree of rhoticity comparable to and even slightly lower than that of START and NORTH, should be more realistically grouped together with the latter two lexical sets, for which "sporadic preconsonantal rhoticity" is attested to be "characteristic of many mesolectal and some acrolectal speakers" (Wells 1982: 576).

No mention is made in Wells' (1982) – or any other – description of the pronunciation of /r/ after the diphthongs /aʊ/ and /aɪ/ (indicated by the lexical sets PRICE and MOUTH), for which empirical data is presented here for the first time. As can be seen from Figure 4.5, /r/ is realized at a comparable rate in these two phonetic environments, but the overall degree of rhoticity is rather low (13.33%/9.33%).

The extremely low rate of post-vocalic /r/ realization in tokens of the SCHWA/LETTER type corresponds well to what has been reported in the literature, namely, that /r/ pronunciation is extremely uncommon in words from these lexical sets. Wells (1982) observes that "final /r/ is quite common in careful pronunciation of *letter* words [in the lower mesolect]. Nevertheless, the usual unmonitored pronunciation [of these words] for all social classes in Jamaica is non-rhotic" (Wells 1982: 577). Akers (1981), too, has "word-final syllabic /r/" as the last stage of his continuum of admissibility conditions, "in at least monitored styles" (Akers 1981: 73-75).

Nonetheless, some monitoring of speech would be expected to occur in the data

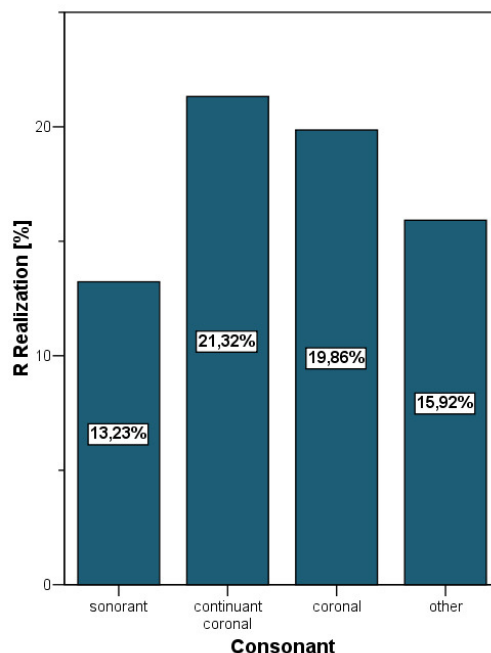


Figure 4.6: **Overall degree of rhoticity – influence of following consonant.** Shown are overall degrees of /r/ realization for tokens with /r/ in all positions, followed by either *sonorants*, *continuant coronals*, *coronals*, or *other* consonants.

presented here, at least for speakers from the more formal text categories, *speeches* and *news*. The low degree of rhoticity for the two lexical sets therefore leaves open two possible interpretations: Either the speakers in question for some reason did not perceive the speech setting as formal, as might be the case for experienced radio broadcasters or politicians habituated to giving speeches, thus feeling no need to monitor their speech in the recordings analyzed here, or, this non-rhotic pronunciation of LETTER words has become part of the educated Jamaican standard and is therefore acceptable even in formal acrolectal speech, as has been reported for a number of other phonological variables (Irvine 2004). Indeed, pronunciation of /r/ in this type of words in “the speech of some educated Jamaicans, especially some schoolteachers” has been remarked upon as a typical spelling pronunciation and hypercorrection, used as a means of distancing from Creole (Christie 2003: 19).

Following consonant

The effect of the nature of the following consonant on /r/ in preconsonantal position is displayed in Figure 4.6. Following *continuant coronals* are the leading environment favoring the realization of preconsonantal /r/, which is pronounced in 21.32% of all cases. A similar value is obtained for the ‘remaining’, i.e. non-continuant, *coronal* consonants, which feature a constricted realization of /r/ in 19.86% of all cases. On the other side of the scale, rhoticity is disfavored before *sonorants*, with only 13.23% of all postvocalic /r/s being realized in this environment. ‘*Other*’, i.e. neither coronal nor sonorant, consonants fall somewhere in between, with an overall degree of rhoticity of approximately 16%.

As can be seen from Figure 4.6, there is a cline from *continuant coronals* over *coronals* to *other* consonants, with /r/ being realized progressively less across these environments. This fits in well with the known literature reporting rhoticity to be favored by following coronal consonants (Akers 1981: 69-75, Irvine 1994: 67). In particular, the ordering of these three phonetic environments is in accordance with Akers’ (1981) continuum model, which describes rhoticity in the Jamaican continuum in terms of implicationally ordered admissibility conditions. These admissibility conditions describe phonetic environments (stages) for the gradual spread of /r/, in which “any phonological sequence admitted at a later stage will occur at an equal or lower frequency than sequences admitted at an earlier stage” (Akers 1981: 70). This prediction is indeed borne out by the above-described decrease of rhoticity, as the three phonetic environments discussed here correspond to stages 3-5 of his continuum (73/74).

Stage 3 of Akers’ continuum model, however, is partly contradicted by the low percentage of /r/ realizations before *sonorants* – a category that, in Akers’ model, should feature as high a degree of rhoticity as before *continuant coronals* (Akers 1981: 73/74). With an actual value of slightly more than half of that found for the latter category, this is clearly not the case. It is interesting to note here that while Irvine (1994: 67) agrees with Akers in describing following coronal consonants as

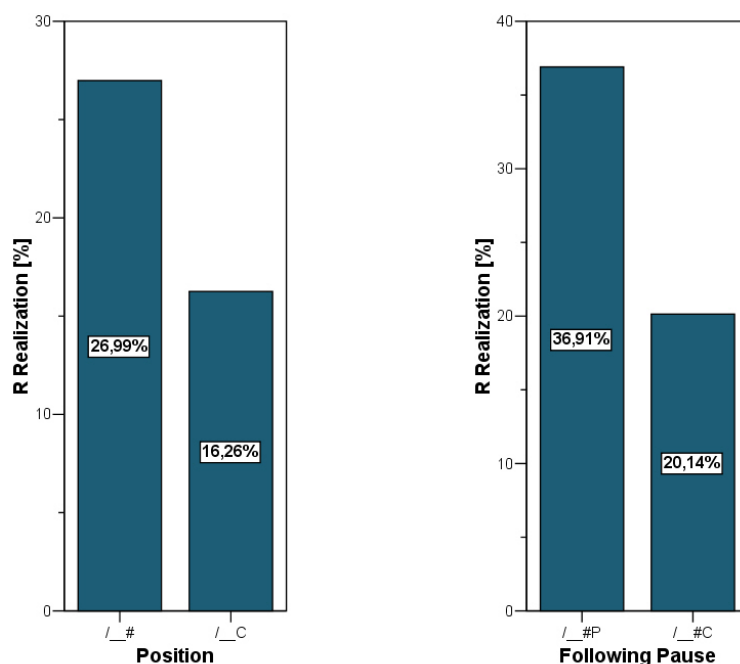


Figure 4.7: **Overall degree of rhoticity – influence of position and following pause.** Shown on the left are overall degrees of rhoticity for /r/ in preconsonantal (/_C) and word-final (/_#) position. Shown on the right are percentages of /r/ realization for tokens with word-final /r/ in the presence (/_#P) or absence (/_#C) of a following pause.

favorable to rhoticity, no mention is made of sonorants. Indeed, compared to all other classes of consonants, rhoticity is actually *disfavored* in this environment.

Position and following pause

The influence of position (preconsonantal vs. word-final) on the realization of postvocalic /r/ is shown in Figure 4.7. While 26.99% of all /r/ are realized in word-final position, the same is true for only 16.26% of all preconsonantal /r/s. With an odds ratio of $\exp(B) = 3.375$ (model 1), /r/ is nearly four times as likely to be realized in word-final position than preconsonantly. The fact that rhoticity is favored word-finally might reflect the higher incidence of /r/ in this position in basilectal Jamaican Creole.

Also shown in Figure 4.7 is the effect of a following pause on tokens with /r/ in word-final position. For this variable, an odds ratio of $\exp(B) = 5.464$ (model 7)

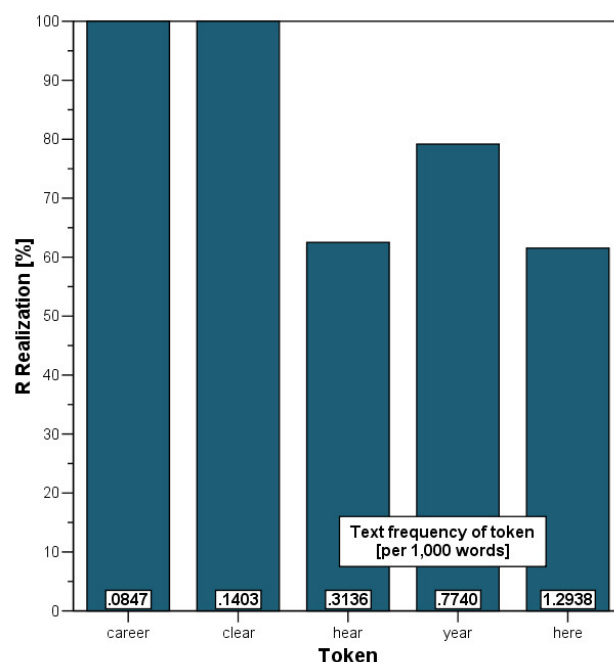


Figure 4.8: **Overall degree of rhoticity – influence of text frequency.** Shown are degrees of rhoticity for five selected items from the NEAR lexical set. Text frequency of token increases along the x-axis.

reveals that /r/ realization to be more than five times as likely when followed by a pause than when followed by another word beginning in a consonant.

Text frequency of token

Text frequency of token was another factor that was repeatedly emerged as significant in the logistic regression models, though not as consistently as other factors. An illustration of the effect of text frequency is given in Figure 4.8 for five selected items from the NEAR lexical set.⁸

With an odds ratio of .873 (model 1), the likelihood of /r/ realization increases with decreasing text frequency of the token in question. Thus, the more familiar a token, the less likely it is to have its /r/ realized. This can be interpreted as a fallback on Jamaican Creole (non-rhotic) norms of pronunciation in a situation where the speaker is at ease and feels no need to exert exceptional control over his or her speech

⁸The influence of the vowel preceding the /r/ in question being substantially greater (effect sizes) than that of text frequency, this has to be discounted first in order to avoid distortions in the data.

patterns. Tokens that are less familiar to a speaker are more likely to evoke more monitored speech, with speakers orienting themselves more along the lines of (rhotic) Jamaican English pronunciation norms. In extreme cases, where speakers may be completely unfamiliar with the words in question, they may also be influenced by the orthography, producing spelling pronunciations such as described by Christie (2003: 19), or by Shields-Brodber for speakers of the “emergent Standard”, for whom English is typically “adoptive” (Shields-Brodber 1989: 46-48).

4.5 Chapter summary

The present chapter has demonstrated that rhoticity in educated Jamaican English is influenced by a number of both language-external and language-internal factors.

Most importantly, the findings of the present study show that the traditional characterization of Jamaican English as “generally rhotic” is clearly not warranted. With an overall degree of rhoticity of slightly more than 20 per cent, the realization of postvocalic /r/ constitutes the exception, rather than the norm, in educated Jamaican English.

With respect to the phonetic factors found to be significant in influencing rhoticity, the findings of the present study mostly confirm earlier impressionistic descriptions, providing a firm empirical basis for these earlier claims. In addition, the present analysis provides much more fine-grained information on the Jamaican rhoticity situation, some details of which disagree with previous descriptions, e.g. regarding the low degree of /r/ realization before following sonorants, or the slightly lower-than-expected occurrence of r-colored vowels in words from the NURSE lexical set. Interestingly, the influence of the phonetic factors on rhoticity in Jamaican English seems to take place on the segmental level, as suprasegmental factors such as stress, syllable or morpheme boundaries do not play a role. This strongly suggests that the relevant phonological domain for rhoticity in educated Jamaican English is not syllables or morphemes, but the word.

Overall, phonetic factors appear to be more influential than extra-linguistic ones.

No differences were found between the speech patterns of male and female speakers; nor was there any conclusive evidence that age plays a significant role in influencing rhoticity in educated Jamaican English, and hence, no evidence for an emerging spoken standard parallel to that which has been postulated for the written domain. However, with text category a highly significant factor in all of the logistic regression models analyzed in the present study, the variable does exhibit a high degree of stylistic and sociolinguistic variation. In addition, a substantial amount of both inter- and intraspeaker variation was found to be present in the data analyzed.

Chapter 5

Linking /r/

5.1 Introduction

Closely connected to the question of rhoticity is the phenomenon of linking /r/, whose occurrence in educated Jamaican English will be examined empirically in the present chapter. As with rhoticity, there is a gap in the existing literature in that this phenomenon is neither mentioned nor studied in any of the studies or phonological descriptions that exist for Jamaican English (e.g. Irvine 2004, Devonish & Harry 2004, Wells 1982).¹ An impressionistic survey of the data showed linking /r/ to be highly variable as well, which led to its selection for further analysis. The related /r/ sandhi phenomenon of “intrusive /r/”, whereby /r/ is inserted after the vowels /ɑ:/, ɔ:/ and /ə/ in words that did not historically contain /r/ (and thus do not contain *r* orthographically either), is not investigated in the present chapter because it is not attested in the data and appears to be non-existent in educated Jamaican English.

This chapter is structured as follows: Section 5.2 provides an overview of the status of linking and intrusive /r/ in varieties of English, as well as a summary of known studies dealing with variability in linking /r/ realization. The methodology of the present study is outlined in Section 5.3. Results of the analyses are presented and discussed in Section 5.4: first for the occurrence of linking /r/ on its own, and subsequently for the use of glottalization as a substitute for constricted /r/

¹Linking /r/, or “sandhi alternation due to preservation before a vowel *vis-a-vis* loss before a consonant” is mentioned to occur “sometimes” in Jamaican Creole by Cassidy & LePage (1980). However, no further details are given as to its distribution or relative regularity.

realizations in linking /r/ contexts. Finally, a summary of the main findings of the chapter will be provided.

5.2 /r/ sandhi in varieties of English

The phenomena of “linking /r/” and “intrusive /r/”, often subsumed under the heading of /r/ sandhi, or the alternation of /r/ and zero forms across word and morpheme boundaries, have been extensively described and served as input for various models in phonological theory (see e.g. Wells 1982, Harris 1994, Durand 1997, McMahon 2000, Teeple 2005, Heselwood 2006, Uffmann 2007). As the debate over how to best analyze these phenomena in phonological terms seems to be far from settled, this section will attempt to present the underlying empirical facts as theory-neutrally as possible.

Linking /r/ in non-rhotic accents is usually defined as the realization of etymological word- or morpheme-final /r/ before a following vowel:

English dialects containing /r/-sandhi exhibit alternations between r-ful and r-less realizations at certain boundaries. A distinction is generally made between linking /r/ and intrusive /r/. The term LINKING /r/ is used to refer to cases in which /r/ is orthographically present and surfaces across a morpheme or word boundary when followed by a vowel [...]. INTRUSIVE /r/ refers to the production of nonorthographic /r/ in the same environments. (Hay & Sudbury 2005: 799/800)

This phenomenon does not apply to rhotic accents where /r/ is categorically pronounced in all positions, making the use of the term *linking r* redundant. Thus, in a fully rhotic accent, /r/ would be expected to generally occur in all possible “linking /r/” positions. (It should be noted, however, that sporadic word-internal intrusive /r/ in selected lexical items has been reported to occur in some rhotic dialects of North American English as well (Gordon 2004: 342; Clarke 2004: 377).) On the other hand, linking /r/ does not necessarily occur in all non-rhotic varieties of English. For example, Harris (1994: 232) distinguishes between four different systems of English accents with respect to their rhoticity: System A, which is fully rhotic (most North American accents) ; system B, which is non-rhotic and exhibits linking /r/ but not intrusive /r/ (the traditional variety of Received Pronunciation (RP)

described and recommended to foreign learners of English by Jones (1956: 198) and Gimson (1970: 212)); system C, which is non-rhotic and features both linking and intrusive /r/ (most present-day RP speakers, see e.g. Upton 2004); as well as system D, which is non-rhotic but lacks both linking and intrusive /r/ (some dialects in the American South, see e.g. Thomas 2004).

In many analyses, the two phenomena of linking /r/ and intrusive /r/ are assumed to be the same phenomenon synchronically, constituting a general /r/-insertion rule across word boundaries following the vowels /ɑ:/, /ɔ:/ and /ə/ (see e.g. Trudgill 1974: 164, Wells 1982: 222/223). The use of intrusive /r/, however, is socially stigmatized: “Because there is no r in the spelling, intrusive /r/ has often been frowned upon by school teachers and others as being ‘incorrect’” (Hughes & Trudgill 2003: 60, see also Gimson 1970: 209, Wells 1982: 224). This stigmatization is especially strong in word-internal contexts, before a following vowel-initial suffix (Cruttenden 2001: 189). As a consequence, speakers sometimes attempt to avoid using intrusive /r/, an act which often causes the suppression of linking /r/ in their speech as well (Gimson 1970: 210; Cruttenden 2001: 189; Wells 1982: 224). This has been seen as further evidence by many authors for the interdependence of the two phenomena. As a means of avoiding linking and intrusive /r/, speakers often insert a glottal stop or a pause between the two succeeding vowels (see e.g. Foulkes 1997: 262 (footnote), Spencer 1996: 236, Cruttenden 2001: 289).

Linking /r/ is often assumed to be categorical in those non-rhotic accents where it occurs, and variation is acknowledged with respect to intrusive /r/ only due to its stigmatization: “Other than as a result of avoidance by these means [i.e. as a by-product of the suppression of intrusive /r/], it is widely assumed that linking [r] is categorical for most non-rhotic speakers, and it therefore contrasts with the variable nature of intrusive [r]” (Foulkes 1997: 76). A consequence of this widely-held view is that empirical studies on actual variability in the occurrence of linking /r/ are extremely rare. As has been pointed out by Foulkes,

researchers have have tended to rely on a combination of their own intuitions and informal observations, supported by the standard works of reference on English such as Jones, Gimson and Wells. [...] As a result, few theoreticians (with the notable exception of Harris 1994)² have acknowledged variation in [r]-sandhi (Foulkes 1997: 76)

²It should be pointed out that variability in the occurrence of linking and intrusive /r/ is

Factors influencing the variability of both /r/ sandhi phenomena include both language-internal and language-external factors. One relevant factor mentioned repeatedly by a number of authors, albeit with differing consequences, is the nature of the preceding vowel. While Jones (1956: 197/198) and Gimson (1970: 209) maintain that intrusive /r/ is more likely to occur after /ə/ than after /ɑ:/ and /ɔ:/, the opposite is claimed by Brown (1988: 149, cited in Foulkes 1997: 75) and Spencer (1996: 235), who state that intrusive /r/ is more likely to be produced after /ɔ:/. Moreover, Wells (1982: 225) contends that intrusive /r/ is more stigmatized after /ɔ:/ because it represents a later innovation in this context. In addition to these factors, greater rates of /r/ sandhi have also been asserted to occur before stressed then before unstressed vowels (Jones 1956: 197), and /r/-insertion is said to be more likely when the words in question belong to the same phonological phrase (Joseph 1999, cited in Hay & Sudbury 2005: 802). On the other hand, the presence of a nearby /r/ has been claimed to disfavor intrusive /r/ (e.g. Jones 1956: 197, Wells 1982: 224). Intrusive /r/ has also been described as being affected by the frequency of occurrence, with intrusive /r/ being more stigmatized in more frequent words (Brown 1988, cited in Hay & Sudbury 2005: 802). Moreover, it has been claimed to occur less frequently, due to its greater stigmatization in this context, in word-internal position before a suffix (Cruttenden 2001: 289). Finally, stylistic variation is sometimes acknowledged as well, with Brown (1988: 145, cited in Hay & Sudbury 2005: 802) asserting that “[t]here is also clearly stylistic variation in the phenomenon; use of linking/intrusive /r/ is a feature of fluent colloquial style, and is not so common in careful declarative style.”³

To date, only four empirical studies exist on the use of linking /r/ in a number of different varieties of English: Bauer’s (1984) study on linking /r/ in Received Pronunciation, Foulkes’ (1997) investigation on the use of linking and intrusive /r/ in the British cities of Newcastle upon Tyne and Derby, Hay & Sudbury’s (2005) study

also acknowledged by Wells (1982: 224): “Across word boundaries, R Insertion is usually not a categorical rule: typically it is sometimes applied, sometimes not, depending on speech rate, contextual style, and no doubt also random factors.”

³See, however, the counterevidence with respect to intrusive /r/ in Foulkes 1997. Moreover, Cruttenden (2001: 294) claims that “linking /r/ is frequent in all styles of speech [...]. Its occurrence is of no stylistic significance.”

on the historical development of rhoticity, linking and intrusive /r/ in early New Zealand English, and Britain & Fox (2009), who investigated the use of linking /r/ as one of a number of hiatus resolution strategies in Fenland and London English.⁴

Bauer (1984) investigated the frequency of linking /r/ in a corpus of 37 speakers of RP, recorded between 1949 and 1966, in a reading passage containing eight potential sites for the occurrence of linking /r/ and two potential sites for intrusive /r/. His results showed a total rate of 80.2% of linking /r/ realizations (162 out of a total of 202 potential linking /r/ tokens, leaving out the two environments in which unstressed and possibly dropped /h/ was present in the onset of the following word (*his*, *him*); Bauer 1984: 79). Moreover, while there was no evidence for the influence of rate of utterance on linking /r/ realization, nor for a postulated decline in the use of linking /r/ in RP, a small but only marginally significant difference ($p = .0644$) showed women to use linking /r/ slightly less often than men (75.5% – 83 out of 110 instances vs. 85.9% – 79 out of 92 instances, respectively). Bauer further noted that “a glottal stop is infrequent except when followed immediately by a stressed vowel” (Bauer 1984: 76), and that the syntactic environment also exerted an influence on the presence of absence of linking /r/: “It is in cases where there is a preposition followed by an indefinite article or an unstressed pronoun [...] that linking /r/ is most frequent” (Bauer 1984: 77).

Foulkes (1997) found English /r/ sandhi phenomena to differ widely, both with respect to actual levels of realization and conditioning sociolinguistic factors, between the two cities of Newcastle upon Tyne and Derby. His study analyzed the production of linking /r/ and intrusive /r/ in conversational speech by 32 adult speakers in each city, stratified with respect to speaker sex, age and socioeconomic class. Generally, consistently higher levels of linking /r/ than of intrusive /r/ emerged in both cities. With respect to linking /r/, the results showed “effectively categorical usage” (Foulkes 1997: 80) in Derby, with seven out of eight speakers producing linking /r/ rates of around 90%. In contrast to Newcastle, where “marked sociolinguistic

⁴Empirical investigations of intrusive /r/ so far include Hay & Warren (2002) and Hay & MacLagan (2010) on intrusive /r/ in New Zealand English, as well as the investigation of intrusive /r/ as a variable in Norwich (Trudgill 1974), where, however, it was found to occur categorically (Trudgill 1974: 162). However, these will not be of interest for the present study, focussing as it does on the phenomenon of linking /r/ only.

patterning” (Foulkes 1997: 81) was found to occur for linking /r/, no significant influence of social factors was found for Derby (Foulkes 1997: 81). The factors of age and social class proved to be highly significant in Newcastle, in the direction that more instances of linking /r/ were found in the speech of older speakers and speakers from the middle class. Speaker sex, however, was not significant. Thus, a phonological change appeared to be in progress for speakers in Newcastle, with linking /r/ realization decreasing over apparent time.

Variable rhoticity, together with the occurrence of linking and intrusive /r/, was investigated by Hay & Sudbury (2005) for late nineteenth and early twentieth century New Zealand English, i.e. that period of time during which New Zealand English was becoming non-rhotic. Analyzing the recordings of 65 speakers stratified with respect to speaker age, sex and geographical origin, they found linking /r/ (in a total of 3,394 tokens) to be influenced by the following factors: backness of the preceding and following vowels (with backness favoring the production of linking /r/), lexical frequency of the following word and frequency of the collocation (with common collocations favoring linking /r/ production but high lexical frequency of the following word disfavoring it), overall level of rhoticity of the speaker (with linking /r/ production disfavored by low levels of rhoticity), as well as speaker sex (with women using less linking /r/ than male speakers) (Hay & Sudbury 2005: 807). Moreover, speakers were found to produce high rates of linking /r/, ranging between 70% to 90%, even for very low (0-20%) levels of overall rhoticity (Hay & Sudbury 2005: 809). In the light of the diachronic change from variably rhotic early New Zealand English to a categorically non-rhotic variety, the authors concluded that “[t]he analysis reveals that production of /r/ in linking positions declined along with nonprevocalic /r/, but that its decline was much less dramatic. Thus, by the time speakers were completely nonrhotic in nonprevocalic positions, they were still producing linking /r/ at fairly high rates” (Hay & Sudbury 2005: 820).

Linking /r/ was also examined as one out of five hiatus resolution strategies in varieties of British English by Britain & Fox (2009). Comparing the speech of three groups of speakers – rural adolescents in the English Fens, older speakers of traditional London Cockney English and that of adolescents from the East End of

London–, they found striking differences between the three systems, with a radical reorganisation (in the direction of regularization of the hiatus system by a global use of glottal stops) in the latter. With respect to linking /r/, their data showed almost categorical levels of linking /r/ for the informants from the Fens (95.6%), as well some variation with ethnicity in adolescent London Cockney English, with high levels of linking /r/ production for white girls and white and mixed race boys (97% and 94%, respectively) but significantly lower rates for Bangladeshi boys (55%). In all of these cases, a glottal stop was substituted in place of linking /r/.

5.3 Methodology

Data in the present chapter comes from the same set of 55 speakers as analyzed in Chapter 4. For each speaker, ten possible sites for linking /r/ were identified in the recordings and marked in a *Praat TextGrid*.⁵ Linking /r/ realizations were coded auditorily as either ‘0’ or ‘r’ for vocalic (no constricted /r/ present) and constricted realizations, respectively. Unclear cases which could not be classified unambiguously after repeated listening were discarded and not included in the analyses.⁶

In addition to the binary variable of linking /r/ realization, another factor was also coded for in the analyses. As glottalization was observed to occur often in conjunction with a omitted linking /r/, and as this phenomenon has in fact been described as an alternative to constricted /r/ production in linking /r/ contexts (see e.g. Britain & Fox (2009)), the realization of this variable was also investigated in the analyses. Following Dilley, Shattuck-Hufnagel & Ostendorf (1996: 428-430), glottalization was defined as the presence of substantial irregularity in the speech waveform. This could take the form of highly irregular spacing or even the complete absence of regular pitch periods (supported by the glottal pulses displayed in the speech waveform by *Praat*’s *Show pulses* function), in the direction of longer pitch periods with increasing degree of glottalization, or of a relatively rapid dip in fun-

⁵I would like to thank Julia Pauli for help with locating potential linking /r/ sites and entering these into the respective *TextGrids*.

⁶These unclear cases were mostly due to the presence of high levels of background noise in the recordings.

damental frequency (F_0) (checked visually via the fundamental frequency displayed by *Praat*'s *Show pitch* function) while still maintaining periodic pitch periods. A third possibility mentioned by Dilley, Shattuck-Hufnagel & Ostendorf is a dip in amplitude of the speech signal. While this so-called “virtual glottalization” (Houde & Hillenbrand 1994, cited in Dilley, Shattuck-Hufnagel & Ostendorf 1996: 430) resulted in a strong perceptual effect of glottalization, it was nevertheless rejected as “questionable” in their study (Dilley, Shattuck-Hufnagel & Ostendorf 1996: 430), as well as in the present analyses.

For the sake of simplicity, glottalization was coded as a binary variable in the present analyses, being labelled ‘0’ in cases in which no traces of glottalization could be observed, and ‘g’ (glottalization) for those cases in which some degree of glottalization could be discerned in the spectrogram and/or waveform. This binary coding was adopted mainly in order to avoid subjective decisions between varying degrees of glottalization, ranging from slightly disturbed F_0 to full-blown glottal stops, and to give a quick and easy overview of the proportion of glottalized intervals used as a substitute for linking /r/ in educated Jamaican English. Somewhat surprisingly, however, glottalization was observed to occur concomitantly with phonetically realized linking /r/ as well. Glottalization was therefore coded for ‘r’ tokens as well, with the difference that constricted ‘r’ tokens were coded ‘g’ for glottalization only if clearly discernible traces of glottalization could be observed in the speech signal. Thus, counts for glottalized linking /r/s are likely to be more conservative than counts for those tokens in which linking /r/ is absent.

An illustration of two configurations of linking /r/ and glottalization can be found in Fig. 5.1.

For the quantitative analyses, linking /r/ realization, glottalization and token, as well as background information such as speaker ID, speaker sex and text category were entered into annotation tiers of a *Praat TextGrid* and extracted with the help of various *Praat* and Perl scripts written by the author. Further statistical analyses were conducted using the *SPSS* statistics software package. All in all, the analyses yielded a total of 505 tokens to be analyzed with respect to the presence or absence

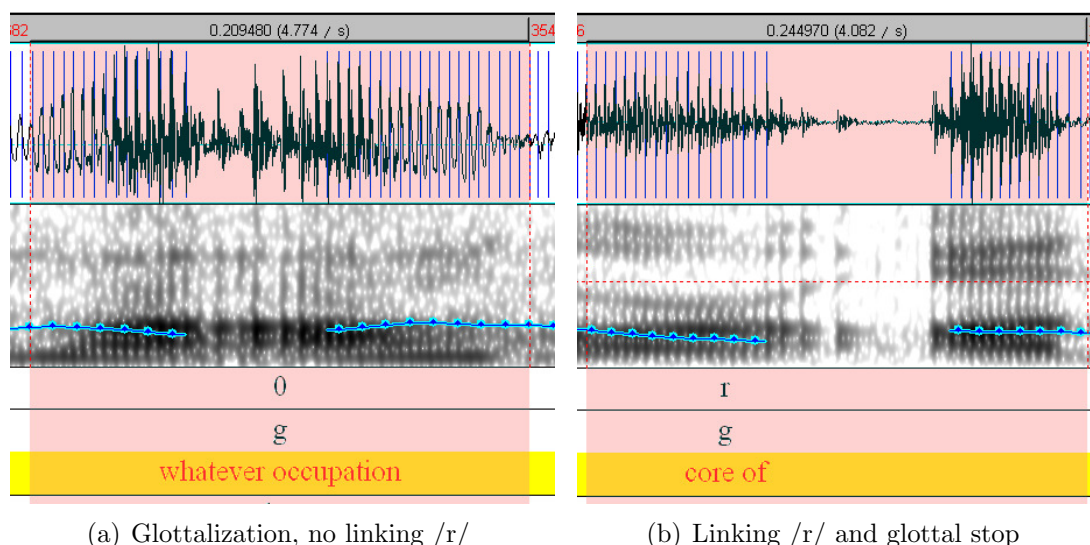


Figure 5.1: **Glottalization in linking /r/ contexts.** (a) glottalization as a substitute of linking /r/; (b) linking /r/ and glottal stop. Shown are speech waveforms and spectrograms, together with glottal pulses and pitch contours, as well as the first three annotation tiers of the *TextGrid*.

of linking /r/, with 474 of these coded unanimously with respect to the presence or absence of glottalization.

5.4 Results and discussion

5.4.1 Linking /r/

Crosstabulations for the rates of occurrence of linking /r/ and glottalization can be found in Table 5.1, with the results further visualized in Fig. 5.2. With respect to the presence or absence of /r/ across word boundaries in educated Jamaican English, the data show that this is indeed highly variable and far from categorical, occurring in less than half of all tokens analyzed (43.2%). Conversely, more than half (56.8%) of all tokens lack /r/ word-finally when followed by vowel. Given the fact that the Jamaican standard is usually described as rhotic (although, as has been demonstrated in the previous chapter, this characterization is not supported by actual empirical facts and should thus be regarded as an idealization), these results are surprising. Not only does educated Jamaican English fall short of the

mark of being a fully rhotic variety of English, it also exhibits strikingly low levels of linking /r/ realization.

With intrusive /r/ practically zero in the present Jamaican English data, these results also confirm the finding by Foulkes (1997: 84), who found linking /r/ to occur at consistently higher levels than intrusive /r/ for both of his data sets. Given the fact that intrusive /r/ is usually characterized as an extension or overgeneralization of the linking /r/ mechanism of /r/ insertion to unetymological contexts, this is hardly surprising. With generally less than half of all potential linking /r/s realized phonetically, it is not plausible to expect speakers to further expand the relevant contexts for this /r/ insertion rule. Equally, in an exemplar model of rhoticity (as e.g. advocated by Hay & Sudbury 2005: 818/819), speakers can be expected to have stored roughly equal proportions of /r/-ful and /r/-less tokens in hiatus contexts, further lowering the overall proportion of tokens stored with /r/ and thus making generalizations as to the universal occurrence of this consonant unlikely.

Text category

Levels of realization of linking /r/ across the five text categories analyzed in the present study can be found in Fig. 5.3. *Conversations* and *interviewees* exhibit rates around the mean rate of linking /r/ realization found for all tokens analyzed, with 44.3% and 44.6% of all potential linking /r/s being produced in these two text categories. A slightly lower rate is found in the text category of *news*, where 36.7% of all linking /r/s are produced. By contrast, speakers in the *speeches* text category yielded degrees of linking /r/ realization slightly above average, featuring an overall rate of 52.0% of constricted linking /r/s. The text category with the lowest degree of linking /r/ realization is that of the *radio hosts*, who pronounced a linking /r/ in less than a third (27.5%) of all cases. Thus, linking /r/ realization strongly varies with text category in the present Jamaican data. A binary logistic regression analysis for all tokens with linking /r/ realization as the dependent variable and *text category*,

Linking /r/ and glottalization			
Linking /r/ Realization	Glottalization		
	0	glottalized	Total
0	53.5% (N=144)	46.5% (N=125)	56.8% (N=269)
r	71.7% (N=147)	28.3% (N=58)	43.2% (N=205)
Total	61.4% (N=291)	38.6% (N=183)	100.0% (N=474)

Table 5.1: **Realization of linking /r/ and glottalization.** Shown are absolute numbers (N) as well as within-group percentages, for all speakers, all text categories.

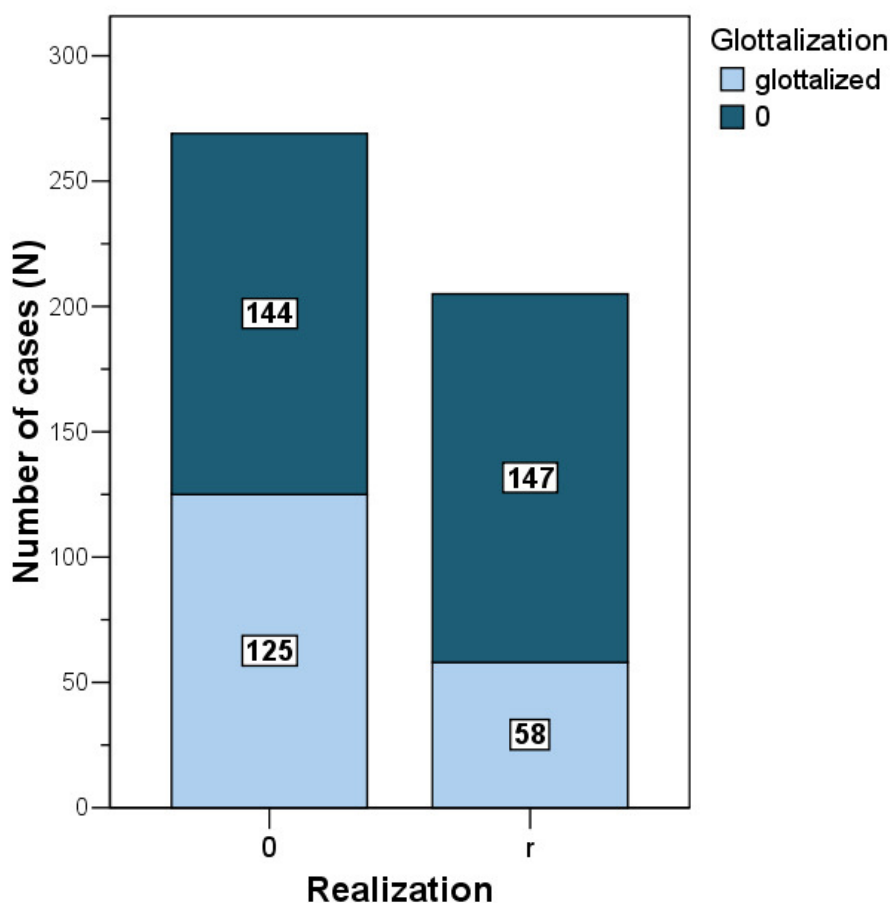


Figure 5.2: **Realization of linking /r/ and glottalization.** Shown are absolute token numbers (N) for constricted (r) and unrealized (0) linking /r/, glottalized and non-glottalized (0) tokens. (This graph is a visualization of Table 5.1.)

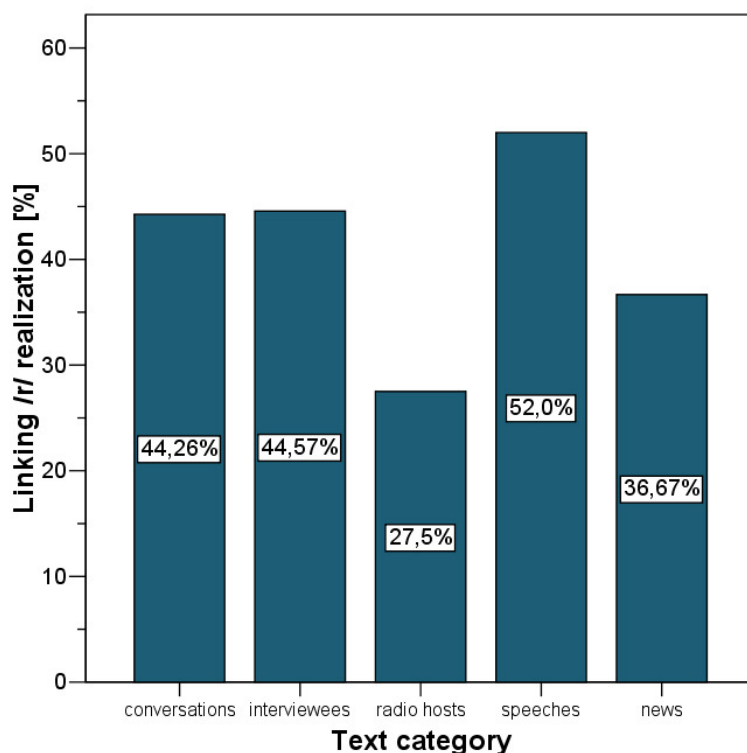


Figure 5.3: **Realization of linking /r/, by text category.** Shown are overall percentages of linking /r/ realizations for speakers from the *conversations*, *interviewees*, *radio hosts*, *speeches* and *news* text categories.

speaker sex and *speaker age* as independent variables confirms that this factor is indeed significant, albeit at the $p < .01$ level only.⁷

A convincing explanation of the stylistic variability of linking /r/ in the present study is difficult to find. While the comparatively high incidence of linking /r/ in the text category of *speeches* might be explained by the relatively high formality of this speech situation, with more attention being paid to speech production under these circumstances, this theory is flatly contradicted by the low degree of linking /r/ occurrence in the text category of *news*, which exhibits an even lower average value than the most informal text category, *conversations*. (The relative difference between the two most formal speech categories might, however, be due to the fact that newscasters routinely perform before large audiences and might therefore feel more comfortable with this formal speech situation, whereas this is not the case for

⁷It should be noted, however, that the goodness of fit for this model is extremely weak, with an adjusted (Nagelkerke's) r^2 of .056 only.

the majority of the speakers in the *speeches* text category.⁸) Similarly, the comparatively low incidence of linking /r/ in the speech of the *radio hosts* relative to that found in the *interviewees* text categories might be explained along the same lines, with generally low levels of linking /r/ realization due to the lively, animated nature of the discussions and concomitant low degree of attention paid to details in phonetic production. Feeling at ease in their normal work setting, the speakers in the *radio hosts* text category monitor their speech even less than their interview partners, lowering their levels of linking /r/ production even further. However, this explanation cannot account for the comparatively high levels of linking /r/ realization in the text category of *conversations*. As speech production in this text category took place in an intimate, informal setting, consisting mainly of conversational exchanges between friends, family members or acquaintances, speakers would be expected to feel quite relaxed in this speech situation as well, which should lead to lower, not higher, levels of linking /r/ production. Thus, while this theory (of monitoring of speech being primarily responsible for the stylistic variation displayed in Fig. 5.3) may well explain relative differences in average linking /r/ realization between individual text categories, it cannot account for the roughly equal overall proportions of linking /r/, as in fact a cline in linking /r/ realization would be expected according to this hypothesis, with linking /r/ being increasingly used with increasing level of formality. As has been pointed out above, however, this is manifestly not the case.

A comparison with the values obtained for overall degree of rhoticity in Chapter 4 (see Fig. 4.4) confirms that linking /r/ realization levels are consistently higher than overall levels of postvocalic /r/ realization, a finding which also holds true separately for each text category. In this respect, the Jamaican English data in the present study show the same patterning as the data for early New Zealand English, for which Hay & Sudbury found high rates of linking /r/ (approximately 70-90%) even for very low levels of overall rhoticity (0-20%) (Hay & Sudbury 2005: 809). However, the correlation found by Hay & Sudbury whereby linking /r/ production was favored

⁸In an online newspaper review of one of the occasions at which one of the speeches (by speaker CaHu) was given, nervousity of the speaker is even explicitly mentioned: “Next up was [speaker CaHu]. The bespectacled young lady seemed somewhat nervous at first, but she soon warmed to her task [...]” (*Jamaica Gleaner* 2002).

by overall higher levels of rhoticity cannot be observed in the present Jamaican English data. While the correlation appears to hold true for the *radio hosts*, who of all text categories are least likely to produce both linking and postvocalic /r/ (see Figs. 5.3 and 4.4), it breaks down for the other text categories. As can be seen from Figs. 5.3 and 4.4, the text category with the highest overall degree of rhoticity was that of *conversations*, which exhibits average degrees of linking /r/ production only. Conversely, the category with the highest incidence of linking /r/ in the present data, *speeches*, is only average with respect to its overall degree of postvocalic /r/ production. Moreover, while parallels in patterning between the two studies are certainly interesting, it should be kept in mind, however, that the language situation in New Zealand around the turn of the century described in Hay & Sudbury differs substantially from the Jamaican situation examined in the present study, with a sound change in progress observed in one case but not in the other.

In conclusion, while it has been stated for RP that “the use of linking /r/ does not vary with formality” (Ramsaran 1983, cited in Bauer 1984: 77), this statement does not seem to hold for educated Jamaican English, where stylistic variation can in fact be observed, although the effect of this variability appears to be by no means unilinear.

Speaker sex

The influence of speaker sex on the realization of linking /r/ in educated Jamaican English is illustrated in Fig. 5.4. As can be seen from the graph, male speakers are slightly more likely to use linking /r/ in the appropriate contexts than their female counterparts, producing linking /r/ on average in 47.5% of all tokens, as opposed to 37.8% for female speakers. This difference between the two sexes is also confirmed in the logistic regression model, where men are 1.6 times as likely to produce constricted linking /r/s than women, all other things being equal (odds ratio: $\exp(B) = 1.590$).

These results agree with the findings by Bauer (1984: 76) and Hay & Sudbury (2005: 807), who found linking /r/ to be used slightly less often in the speech of female than in the speech of male speakers. Again, the similarity in patterning

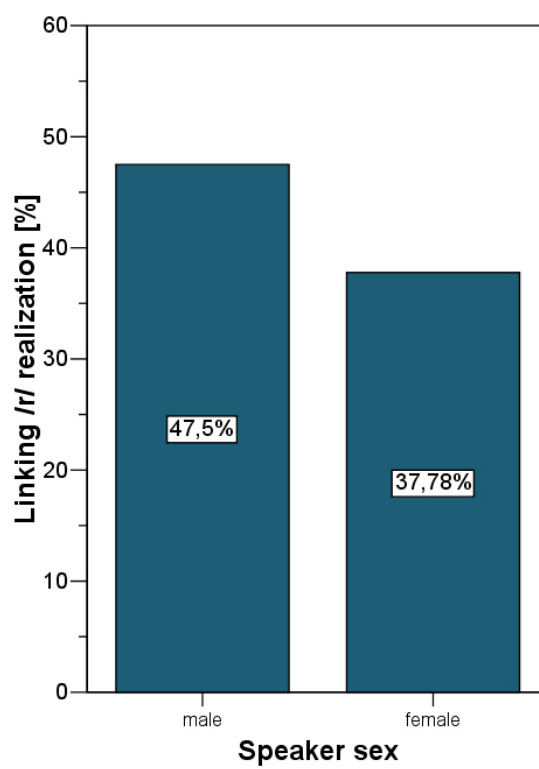


Figure 5.4: **Realization of linking /r/, by speaker sex.** Shown are overall percentages of linking /r/ realizations for male and female speakers.

observed between the three studies is striking because of the difference in varieties and situations described: While the New Zealand English data analyzed in Hay & Sudbury are an example of sound change in progress, from a variably rhotic variety of English to a fully non-rhotic one, the rhoticity situation in Jamaica appears to be one of stable variation (as evidenced by the correspondence between the results in Chapter 4 and Wells' (1982) description of the Jamaican language situation, which dates back over 25 years by now.). On the other hand, Bauer's data for RP described a firmly non-rhotic variety, in which linking /r/ has often been described as near-categorical and recommended for foreign learners (see e.g. Hughes & Trudgill 2003: 41, Gimson 1970: 212).

Given the fact that female speakers normally use forms of speech closer to the standard than men (see e.g. Labov 2001: 266), these results are somewhat surprising. For other varieties of English, especially Received Pronunciation, the historical norm for educated Jamaican English pronunciation, linking /r/ has traditionally been regarded as the norm (with the exception of those – rare – non-rhotic varieties of English lacking both /r/ sandhi phenomena described by e.g. Thomas (2004)). Thus, one would expect women to use more, not less, linking /r/ in educated Jamaican English as well. The discrepancy evinced in the Jamaican data with respect to this postulated norm therefore leads to the conclusion that the consistent production of linking /r/ does not seem to constitute a part of the educated Jamaican standard.

Speaker age

Fig. 5.5 shows the degree of use of linking /r/ in relation to speaker age. Linking /r/ realization rates vary around 40-50 % for all age groups. Lowest degrees of linking /r/ are found in the middle age group (26-45 years), with linking /r/ being used in approximately 40% of all tokens. A slightly higher rate is exhibited in the younger age group (18-25 years), where linking /r/ is pronounced in 41.1% of all cases. Finally, the oldest speaker group (46-65 years) in the present study also features the highest degree of linking /r/ realization: approximately 50%. Although speaker age was found to be marginally significant in the logistic regression model

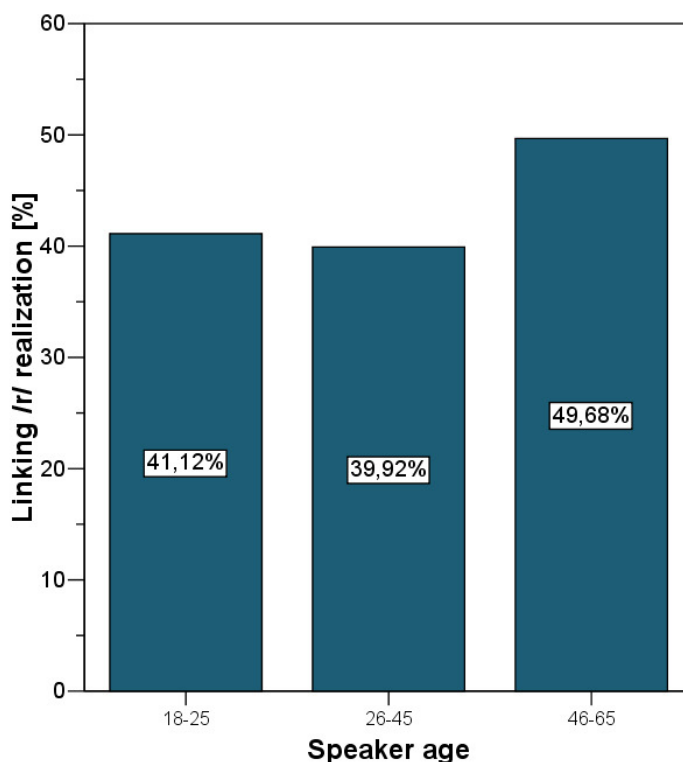


Figure 5.5: **Realization of linking /r/, by speaker age.** Shown are overall percentages of linking /r/ realizations for speakers from the younger (18 – 25), middle (26 – 45) and older (46 – 65) age groups.

mentioned above ($p < .05$), with speakers in the younger two age groups being almost half as likely to pronounce their linking /r/s than speakers in the oldest age group, the strong interaction between text category and speaker age outlined in Chapter 3 should be kept in mind. Indeed, the significance of speaker age disappears in a separate regression model for tokens from the text category of *conversations* only, the sole text category in the present data reasonably stratified with respect to speaker age and speaker sex. This supports the interpretation of this marginal significance being a statistical artefact rather than any independent effect on its own.

5.4.2 Glottalization in linking /r/ contexts

This section analyses the second variable investigated in conjunction with linking /r/, glottalization of word-initial vowels in linking /r/ contexts. As can be seen from Table 5.1, glottalization of word-initial vowels in linking /r/ contexts occurs in approximately one third (28.3%) of all cases. Conversely, smooth transitions (i.e., no

glottalization) occur between either the two vowels or the preceding linking /r/ and the following vowel in approximately two thirds (61.4%) of all cases. Moreover, there is a pronounced interaction between the realization of linking /r/ and the occurrence of glottalization in the following vowel. While glottalization is approximately equally frequent or absent in the absence of linking /r/, with rates of occurrence of 53.5% and 46.5%, respectively, this is manifestly not the case for those tokens in which linking /r/ is realized, where glottalization occurs in only 28.3% of all cases. This interrelationship between the two variables is confirmed by a χ^2 test, yielding a level of significance below .001,⁹ but may be partly due to the analysis methods adopted, with more conservative coding of the glottalization variable in contexts where linking /r/ is realized phonetically (see section 5.3).

What remains surprising, though, is that high levels of glottalization are displayed even for those cases where linking /r/ is produced. This means that glottalization is used in addition to, and not as a substitute for, linking /r/ as a hiatus breaker in these contexts, and is an interesting discovery in light of the fact that glottal stops or glottalization have hitherto been described as a means of avoiding linking /r/ (Gimson 1970: 210, Cruttenden 2001: 289, Wells 1982: 224). Glottalization of the following vowel in spite of the presence of a linking /r/ has not yet been described in the literature. Equally interesting, for quite a large proportion of tokens – in fact, slightly more than half of all tokens in which linking /r/ is not realized – there appears to be a smooth transition from preceding to following vowels, with no trace of glottalization in between.

Text category

The influence of text category on glottalization in educated Jamaican English is illustrated in Fig. 5.6. Marked differences occur between the different text categories, with *speeches* and *news* showing the highest rates of glottalization (51.5% and 45.2%, respectively), and *radio hosts* the lowest (22.2%). The two text cat-

⁹Moreover, linking /r/ realization was found to be a highly significant ($p < .001$) predictor for glottalization in a logistic regression analysis in which *text category*, *speaker age*, *speaker sex* and */r/ realization* were included as factors, with the following vowel being approximately 2.3 times as likely to be glottalized when not preceded by a linking /r/ (odds ratio $\exp(B) = 2.293$)

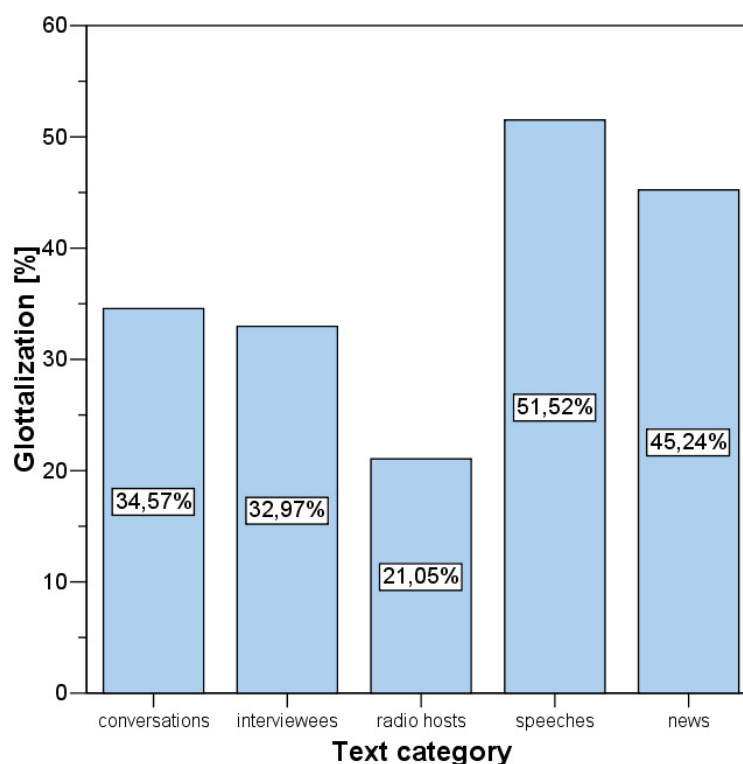
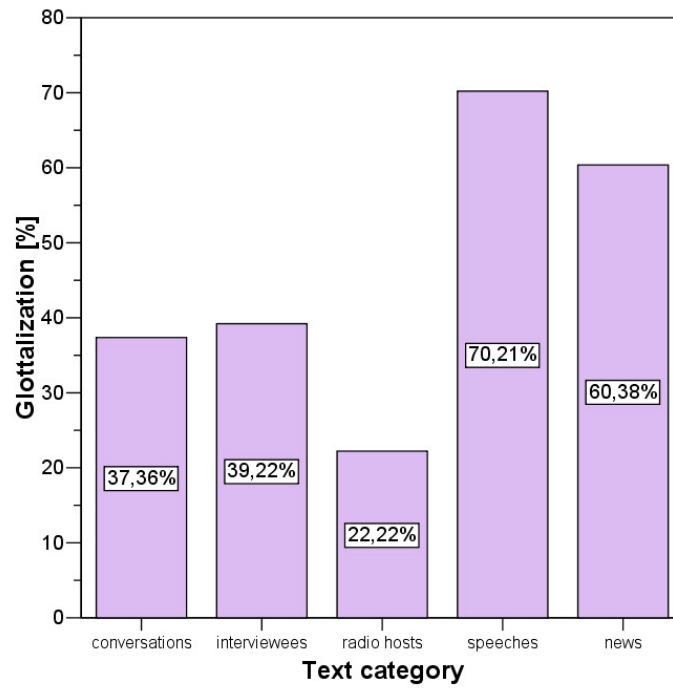


Figure 5.6: **Glottalization in linking /r/ contexts, by text category.** Shown are overall percentages of glottalization in linking /r/ contexts for speakers from the *conversations*, *interviewees*, *radio hosts*, *speeches* and *news* text categories.

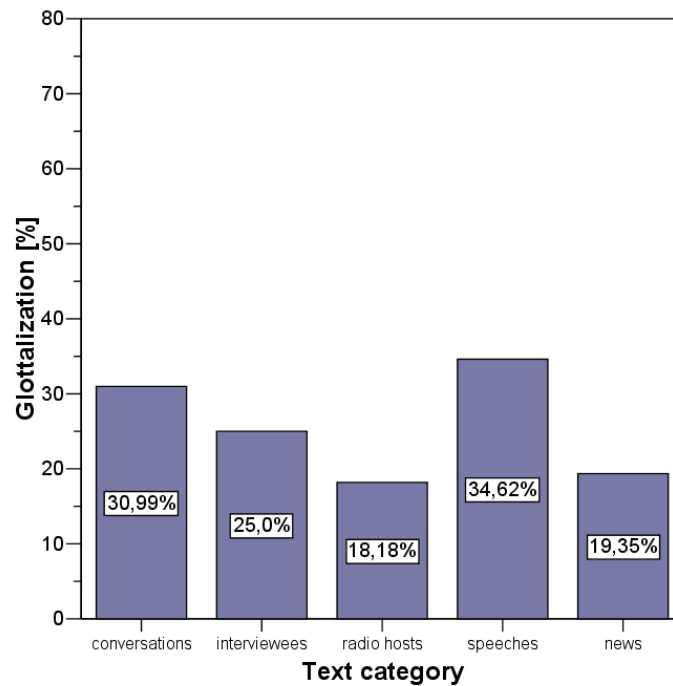
egories of *conversations* and *interviewees* lie between these extremes, with overall glottalization rates of 37.4% and 39.2%, respectively.

As patterns of glottalization have been shown to differ significantly for tokens with and without linking /r/ (see above), a further subdivision of the data according to realization or non-realization of linking /r/ appears appropriate. Glottalization rates for individual text categories for these two separate sets of data are illustrated in Fig. 5.7.

For those tokens in whichn no linking /r/ is produced ('0'), the sharp division between the two text categories of *speeches* and *news*, on the one hand, and the other three more informal text categories, on the other, remains, this division being even more accentuated now, with rates of glottalization around 60-70% in the former two text categories (*speeches*: 70.2%; *news*: 60.4%) but ranging from approximately 20% to 40% only in the latter (*conversations*: 37.4%; *interviewees*: 39.2%; *radio hosts*: 22.2%). By contrast, the pattern for those tokens in which linking /r/ is produced



(a) Linking /r/ = '0'



(b) Linking /r/ = 'r'

Figure 5.7: **Glottalization in linking /r/ contexts, by text category and linking /r/ realization.** (a) Linking /r/ not realized ('0'); (b) Linking /r/ realized ('r'). Shown are overall percentages of glottalization in linking /r/ contexts for speakers from the *conversations*, *interviewees*, *radio hosts*, *speeches* and *news* text categories.

appears much more uniform, ranging from roughly 20% to 35% overall. Thus, the patterning observed for the entire data set is mostly due to differences in the tokens lacking linking /r/. This difference in patterning is also confirmed by the results of the statistical analyses. While a logistic regression analysis of all tokens (with and without linking /r/ present) with the factors of *text category*, *speaker age* and *speaker sex* found only *speaker sex* to be a (highly significant, $p < .001$) predictor of glottalization, *text category* emerged as a second (weakly significant, $p < .05$) predictor in a similar analysis for linking /r/ = ‘0’ tokens only. By contrast, no significant predictors were found at all for tokens in which linking /r/ is realized.¹⁰

The higher rates of glottalization displayed in Fig. 5.7(a) for *speeches* and *news* are probably due to the slower tempo of speech in these categories, plus the read-out nature of the texts. Speakers in these categories, especially in the category of *speeches*, were much more apt to insert pauses between individual words, and to employ a more emphatic style of reading. It is also possible that the need for some kind of hiatus breaker is felt more strongly in more formal speech situations, whereas this is not the case in more informal speech. However, given the relatively high degree of glottalization overall, the question remains of whether glottalization of word-initial vowels is a phenomenon specific to linking /r/ contexts, or a general feature of educated Jamaican speech.

Speaker sex

Differences between male and female speakers in the mean degree of glottalization for all tokens are displayed in Fig. 5.8. Overall, glottalization is used in 49.3% of all cases by the female speakers, but in only 30.0% of all cases by the men. A logistic regression analysis (see above) confirms *speaker sex* to be a highly significant ($p < .001$) predictor for glottalization, with male speakers being approximately half as likely as female speakers to glottalize the onset of the following vowel (odds ratio: $\exp(B) = .478$).

As with text category, patterns of glottalization diverge sharply once separate

¹⁰Again, it should be noticed that the actual fit of all three models was rather poor, with an adjusted Nagelkerke’s r^2 of .088, .186 and .025, respectively.

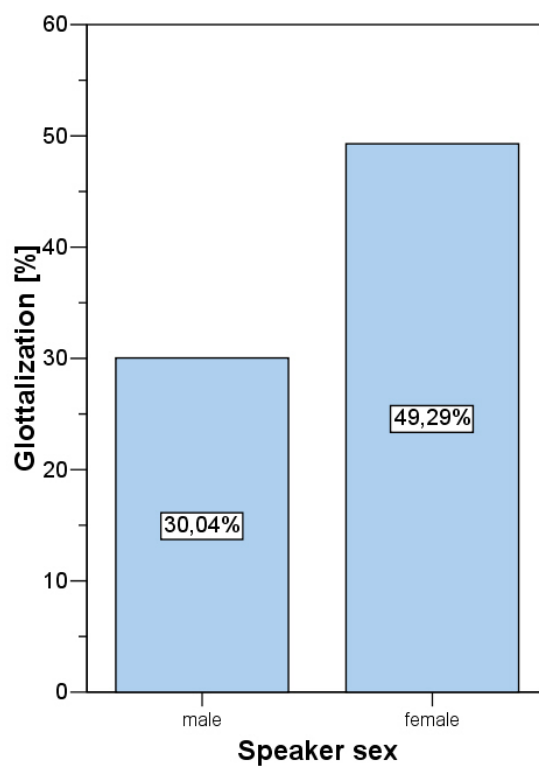


Figure 5.8: **Glottalization in linking /r/ contexts, by speaker sex.** Shown are overall percentages of glottalization in linking /r/ contexts for male and female speakers.

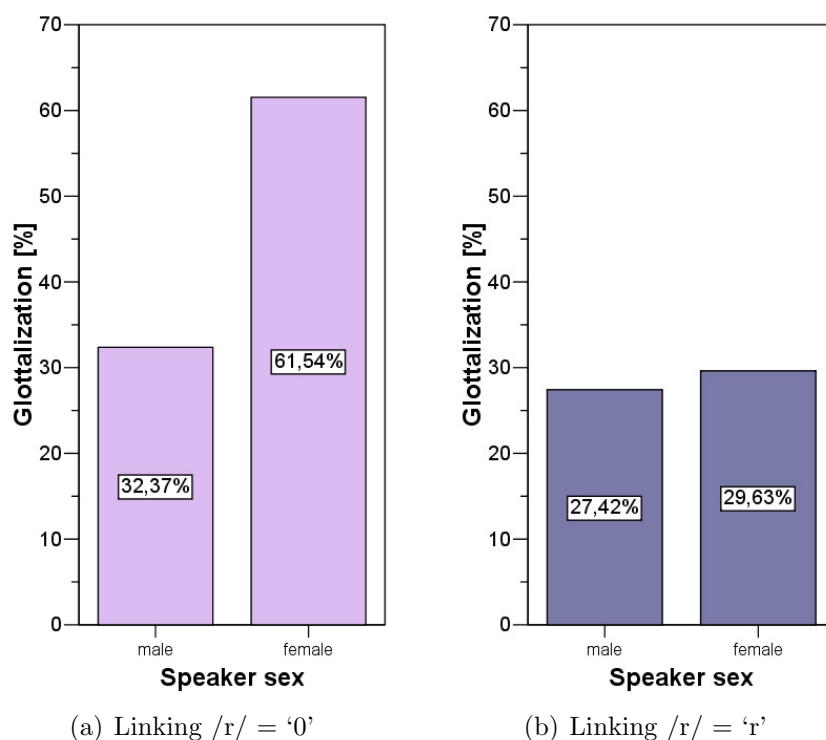


Figure 5.9: **Glottalization in linking /r/ contexts, by speaker sex and linking /r/ realization.** (a) Linking /r/ not realized ('0'); (b) Linking /r/ realized ('r'). Shown are overall percentages of glottalization in linking /r/ contexts for male and female speakers.

analyses of tokens with and without linking /r/ are carried out. An illustration of the different patterns can be found in Fig. 5.9.

For those tokens in which linking /r/ is realized, no difference appears between male and female speakers, both exhibiting an overall rate of glottalization of approximately 30% (men: 27.4%; women: 29.6%). This is further confirmed by the results of a separate logistic regression analysis for these tokens, in which no factor emerged as significant.

By contrast, there is a marked difference in glottalization between male and female speakers for those tokens where linking /r/ is missing, with female speakers glottalizing the following vowel almost twice as much as male speakers (61.5% and 32.4%, respectively). Moreover, *speaker sex* emerged as a highly significant ($p < .001$) factor in a separate logistic regression analysis for linking /r/ = '0' tokens only, with female speakers being almost 2.6 times more likely to use glottaliza-

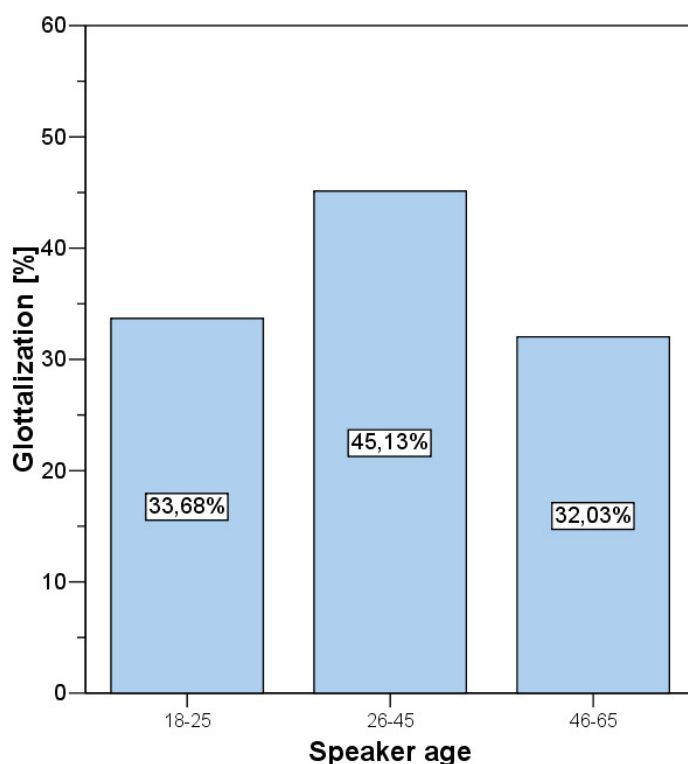


Figure 5.10: **Glottalization in linking /r/ contexts, by speaker age.** Shown are overall percentages of glottalization in linking /r/ contexts for speakers from the younger (18 – 25), middle (26 – 45) and older (46 – 65) age groups.

tion in the onset of the following vowels than their male counterparts (odds ratio: $\exp(B) = .375$). If, in the absence of a phonetically realized linking /r/, some kind of hiatus breaker is nevertheless felt to be required by speakers of educated Jamaican English, a possible interpretation of these findings is that female speakers are again more norm-conforming, using glottal stops or some degree of glottalization as a substitute for the “missing” linking /r/.

Speaker age

Glottalization rates for speakers in the three age groups 18 – 25, 26 – 45 and 46 – 65 are illustrated in Fig. 5.10, and separately for tokens with and without linking /r/ in Fig. 5.11. Overall, speakers in the middle age group (26 – 45) were slightly more likely to glottalize the onset of a following vowel in linking /r/ contexts, with a mean glottalization rate of 45.1%, as opposed to 33.7% and 32.0% for the youngest and oldest speakers, respectively. This difference, however, is not significant.

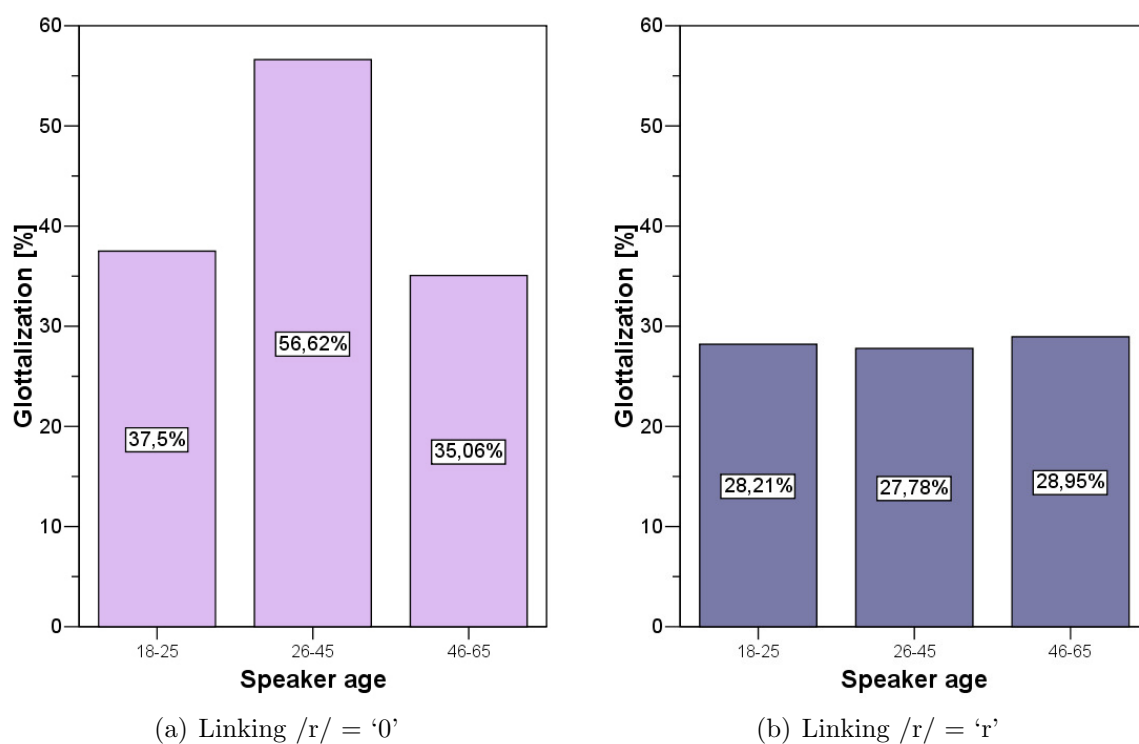


Figure 5.11: **Glottalization in linking /r/ contexts, by speaker age and linking /r/ realization.** (a) Linking /r/ not realized ('0'); (b) Linking /r/ realized ('r'). Shown are overall percentages of glottalization in linking /r/ contexts for speakers from the younger (18 – 25), middle (26 – 45) and older (46 – 65) age groups.

Separate analyses for tokens with and without linking /r/ again show a uniformly flat pattern for tokens in which linking /r/ is realized, with averages around 30% in all age groups. For the tokens without linking /r/, speakers in the middle age group show more glottalization than speaker in the other two groups. However, this effect is most likely an artefact of the data, as speakers from this age group are mostly represented in precisely the two text categories that were found to exhibit highest overall degrees of glottalization, *speeches* and *news*. It can therefore be concluded that age does not seem to play a role in influencing glottalization in linking /r/ contexts.

5.5 Chapter summary

The findings in the present chapter have shown linking /r/ to be highly variable in educated Jamaican English, this variable being produced in less than half (43.2%) of all tokens in potential linking /r/ contexts. These results are surprising, given the fact that first of all, educated Jamaican English is usually described as a rhotic or nearly rhotic variety (although Chapter 4 has shown this to be an idealization of the actual speech situation), for which high levels of linking /r/ occurrence would be expected in word-final position. Secondly, with a few exceptions such as conservative varieties in the American South, linking /r/ has been described as present in most non-rhotic varieties of English, in which the production of /r/ in word-final prevocalic position is reported to be the norm. Thus, much higher percentages of linking /r/ incidence would have been expected for the Jamaican English data as well.

The presence or absence of linking /r/ in educated Jamaican English is subject to stylistic variation, varying in its degree of realization between individual text category. However, no unilinear relationship between the degree of linking /r/ realization and the level of formality of the speech situation could be discerned in the present data. In addition to text category, the presence or absence of linking /r/ appears to be influenced by speaker sex, with men using linking /r/ more often than women. Speaker age, however, does not play a role. The influence of speaker

sex on linking /r/ realization in educated Jamaican English, again, is contrary to expectation, given the fact that linking /r/ is normally pronounced in Received Pronunciation, the historical norm of speech for speaker of English in Jamaica, and that sociolinguistic research has demonstrated women to use more standard variants than men. Taken together, these findings strongly suggest that linking /r/ does not form part of the local Jamaican standard.

Glottalization is a second factor analyzed in the present chapter, which was initially hypothesized to be used by speakers as a substitute in those cases where linking /r/ is not realized phonetically. However, the analyses have shown a substantial proportion of tokens to be realized with neither linking /r/ nor glottalization. On the other hand, glottalization also appears in addition to a phonetically realized linking /r/ in a substantial number of cases.

Similarly to the presence or absence of linking /r/, glottalization was found to vary with text category and speaker sex. Highest rates of glottalization were found for the two most formal text categories, *speeches* and *news*. Contrary to the results for linking /r/, it is the female speakers who are more inclined to glottalize the onset of a following vowel.

Chapter 6

Non-high vowels

6.1 Introduction

While the previous two chapters have investigated variation in educated Jamaican English in the domain of the consonants, the present chapter examines variability within the Jamaican vowel system.

Few detailed descriptions exist of the phonetics and phonology of acrolectal Jamaican English, as the historical research focus has been on the basilect, or Jamaican Creole. In many descriptions of the language situation in Jamaica, especially in older publications, Jamaican English is assumed to be identical or close to identical in its pronunciation with standard English varieties, the focus being instead on deviations from these varieties in the basilect: “[s]ince at one end of the scale there is a close approach to Standard English pronunciation, it is to the other extreme that one must look for characteristic differences” (Cassidy 1961: 33). Although variability is known to exist within the Jamaican acrolect (Irvine 2004), especially with respect to the occurrence of the phoneme [ɔ] (see e.g. Irvine 2004: 59-61), no systematic acoustic study of vowel variation in the acrolect has been carried out; descriptions of this end of the continuum ususally being impressionistic (Wells 1982), heavily theory-oriented and thus extremely abstract (Devonish & Harry 2004), or contrasting basilect and acrolect (Beckford-Wassink 2001).

The present chapter therefore presents a systematic acoustical study of the vowels of the lexical sets of SCHWA, STRUT, TRAP, BATH, LOT, CLOTH and THOUGHT, investigating not only the details of phonetic realisation of these lexical sets in

The Jamaican vowel system			
<i>Author(s)</i>	<i>Short vowels</i>	<i>Long vowels</i>	<i>Diphthongs</i>
LePage (1960)	/i, e, a, o ~ ʌ, u/	/i:, u:/	/ie, ai, ou, uo/
Lawton (1960)	/i, e, a, o, u/		/ie, ai, uo, ou/
Wells (1973)			
Jamaican Creole	/i, e, a, o, u/	/i:, ie, a:, uo, u:/	/ai, ou/
Jamaican Educated	/i, e, a, o, u, ɔ/	/i:, e:, a:, ə:, ɔ:, o:, u:/	/ai, ɔi, ou/
Akers (1981)	/i, e, a, o, u/	/i:, e:, a:, o:, u:/	/ie, ei, ai, uo, ou/
Lalla & D'Costa (1990)	/i, e, a, o, u/		/ie, ai, uo, ou/
Sebba (1993)			
Jamaican Creole	/i, e, a, o, u/	/i:, ie, a:, uo, u:/	/ai, ou/
Jamaican Educated	/i, e, a, o, u, ɔ/	/i:, e:, a:, ə:, ɔ:, o:, u:/	/ai, ɔi, ou/
Meade (2001)	/i, e, a, o, u, ɔ/	/ii, ie ~ e:, aa, ɔ:, uo ~ o:, uu/	/ai ~ ɔi, ou/
Devonish & Harry (2004)			
Jamaican Creole	/i, e, a, o, u/	/ii, aa, uu/	/ia, ai, ua, au/
Jamaican English	/i, e, a, o, u, ɔ/	/ii, ee, aa, oo, uu, ɔɔ/	/ai, au, ɔi/

Table 6.1: **The Jamaican vowel system.** (Adapted from Beckford Wassink 2001: 136.)

educated Jamaican English, but also the presence and absence of mergers between these vowel classes. Moreover, a comparison with British and American formant measurements will be carried out.

The structure of the chapter is as follows: Section 6.2 provides an overview of the Jamaican vowel system and previous research on Jamaican vowels, as well as delineating the scope of the present study. Section 6.3 outlines the methodology used in the present analyses, especially with respect to the question of vowel normalization, formant measurements and statistical tests. Results of the analyses are discussed separately for each lexical set in section 6.4, first from a structural point of view within the Jamaican vowel system itself. In a second step, formant measures from the present set of data are compared to British (section 6.4.6) and American (section 6.4.7) English formant data, in order to allow further comparison of phonetic details. The chapter concludes with a summary of the main results.

6.2 Theoretical Background and Motivation

6.2.1 The Jamaican vowel system

An overview of the vowels in the Jamaican creole continuum is given in Table 6.1. Unless indicated otherwise, most of these analyses refer to the vowel system of basilectal Jamaican Creole, the only descriptions with an explicit treatment of the acrolectal end of the Jamaican continuum being Wells (1973), Sebba (1993) and Devonish & Harry (2004).

As can be seen from the table, authors differ considerably with respect to how many vowel phonemes are analyzed to exist in Jamaican speech, especially for the basilectal end of the continuum. Moreover, no consistent standard of usage exists for the phonological symbols indicating the individual vowel phonemes. For example, the diphthong occurring in the word *mouth* is variably indicated by the symbols /au/ (Devonish & Harry 2004) and /ou/ (Wells 1973); the diphthong occurring in *goat* by even four different symbols: /uo/ (Wells 1973, Jamaican Creole), /ua/ (Devonish & Harry 2004, Jamaican Creole), /oo/ (Devonish & Harry 2004, Jamaican English) and /o:/ (Akers 1981).

Acoustic investigations of the Jamaican vowels so far have only been carried out by Beckford-Wassink (see e.g. 2001),¹ who investigated the speech of 19 speakers, divided into an acrolect- and a basilect-dominant group. She found a relatively even distribution of vowel tokens along a v-shaped portion of the vowel space for acrolect-dominant speakers, whereas vowel tokens tended to cluster in three broad regions (high front, high back, and low central) of the vowel space for basilect-dominant speakers (Beckford-Wassink 2001: 141-143). Moreover, the study measured the degree of spectral overlap for pairs of long and short vowels in order to assess the relative importance of vowel quality and length. However, this study did not investigate variation within the acrolect itself, juxtaposing two supposedly maximally distinct systems, basilect and acrolect, instead.

¹An further acoustic study of Jamaican English vowel production in the specialized registers of infant-directed speech (“motherese”), hyperspeech and Lombard speech can be found in Beckford-Wassink, Wright & Franklin (2007). However, as these registers are by no means representative of everyday speech, the study is not directly relevant to the present analyses.

<i>Lexical sets investigated</i>	<i>Reference vowels</i>
TRAP	GOOSE
BATH	FLEECE
STRUT	
SCHWA	
LOT	
CLOTH	
THOUGHT	

Table 6.2: **Lexical sets investigated.**

Variation within the acrolect has been investigated more explicitly by Irvine (2004), who found phonological variation in the spontaneous speech of 82 informants employed in a government agency that explicitly emphasizes high levels of competence in English in its job advertisements. Of the six variables investigated (TH-stopping, H-dropping, palatalization of /k, g/, alternation between the low central and the low back vowel, mid-vowel/diphthong alternation, and alternation of palatized stops and affricates), all showed high percentages of variation even by the so-called “frontline staff”, i.e. those members of the agency interacting with the public. With regard to the low vowels, considerable variation was found in the incidence of [a], [ʌ] and [ɔ], with frontline staff using clearly more of the latter variant than of the preceding two. Unfortunately, the study does not make it completely clear which words or types of words were selected for this analysis, citing only examples of the occurrence of these variants (“[a]lternation between the low central vowel and the low back vowel, as in *not* [nat ~ nɔt] and in *-tion* words [ʃan ~ ʃʌn ~ ʃɔn]” (Irvine 2004: 52)) as the object of investigation.

This study nevertheless demonstrates that considerable variation seems to exist in the Jamaican acrolect in the region of the low and low back vowels. However, the precise phonetic details of this variability have not yet been investigated.

6.2.2 Scope of the present study

The present study has as its scope of analysis the phonetic and phonological realization of the lexical sets of SCHWA,² STRUT, TRAP, BATH, LOT, CLOTH and

²This lexical set, comprising the unstressed vowel [ə], was not included in the original definition of lexical sets by Wells (1982).

THOUGHT (see Wells 1982), which are summarily grouped together under the heading of “non-high vowels”. In addition, the lexical sets of FLEECE and GOOSE are also included in the analyses, as they are necessary as the corner points of the vowel system in the vowel normalization procedure adopted (see section 6.3.3 for further details.) An overview of the lexical sets investigated is given in Table 6.2.

The lexical sets in Table 6.2 were chosen for analysis due to the great differences in the phonology of the non-high vowels between Jamaican Creole, British English, and American English, making this area of the vowel quadrilateral an ideal testing ground for disentangling the hypothesized influence of American English on educated Jamaican English from the relative influences of Standard British English and the Jamaican basilect, respectively. Not only do British and American English differ significantly in terms of the phonetic realizations of the various vowel phonemes in this part of the vowel space, but also in the lexical incidence of these phonemes. While the lexical set labelled the “BATH” set by Wells (1982: 133-135) is merged with the TRAP lexical set in American English and realized as the phoneme /æ/ (Wells 1982: 129/130), this is not the case for British English, where the two lexical sets remain clearly distinct, belonging to the phonemes /ɑ:/ and /æ/, respectively. Similarly, the three lexical sets of LOT, CLOTH and THOUGHT behave quite differently in British and American English with respect to their respective mergers. While LOT and CLOTH are merged into the phoneme /ɒ/ in British English, THOUGHT remaining distinct and belonging to the phoneme /ɔ:/, in American English, on the other hand, it is CLOTH and THOUGHT which are merged (representing the phoneme /ɔ/), while LOT remains distinct and is realized as /ɑ/ (Wells 1982: 130/131, 136/137, 144-146). By contrast, all five lexical sets would be merged into the two phonemes /a/ and /ɑ:/ in basilectal Jamaican Creole (Devonish & Harry 2004: 453/454). Although these two phonemes are distinguished by differences in length in Jamaican Creole, in a purely spectral (qualitative) analysis they would coincide in the low center of the vowel space.

An overview of the phonological differences in the low vowels between British English, American English and Jamaican Creole is given in Table 6.3.

<i>Lexical set</i>	<i>BE</i>	<i>AE</i>	<i>JC</i>
TRAP	/æ/	/æ/	/a/
BATH	/ɑ:/	/æ/	/a:/
LOT	/ɒ/	/ɑ/	/a/
CLOTH	/ɒ/	/ɔ/	/a:/
THOUGHT	/ɔ:/	/ɔ/	/a:/

Table 6.3: **Phonological differences in the low vowels between British English (BE), American English (AE) and Jamaican Creole (JC).** (After Wells 1982: 130/131, 136/137, 144-146; Devonish & Harry 2004: 453/454)

6.3 Methodology

6.3.1 Research Questions

The analyses in the present chapter will attempt to answer the question of which mergers are present or absent in the vowel systems of the speakers analyzed, and whether these mergers point to influence from Jamaican Creole, or to influence from the British or American standard. More specifically, the following lexical sets will be compared with respect to merger or non-merger:

- Are TRAP and BATH merged (as in American English or Jamaican Creole), or distinct (as in British English)? If merged, are these lexical sets realized closer to /æ/ (American English) or to /a(:)/ (Jamaican Creole)?
- Are LOT, THOUGHT and CLOTH merged or distinct? (A merger of all three would correspond to the phonological patterning of Jamaican Creole. A merger of LOT and CLOTH (with THOUGHT distinct) would reflect British, a merger of CLOTH and THOUGHT (with LOT distinct) American phonological patterns.) How are these lexical sets realized phonetically?
- Are TRAP and LOT; BATH, CLOTH and THOUGHT merged (as in basilectal Jamaican Creole)?
- How are STRUT and SCHWA realized phonetically? Are they merged or distinct?

Moreover, the present chapter will also attempt to find out whether there is evidence for sociolinguistic variation with regard to the phonetic realization of the low

Jamaican vowels, i.e. whether speaker age, speaker sex, and text category/level of formality play a role in determining the phonetic output of the lexical sets investigated.

6.3.2 Analysis procedures

For the analyses in the present chapter, measurements of the first and second formants (F1/F2) were made. The general aim was to measure 10 tokens per lexical set per speaker. Identification of tokens with respect to their membership in a given lexical set was made with reference to Wells (1982), especially for those lexical sets that comprise a rather small number of lexemes, e.g. BATH or CLOTH. Tokens listed as variably belonging to two different lexical sets, such as *graph* or *plastic* (BATH vs. TRAP; Wells 1982: 135), were not selected for analysis. Vowel tokens were marked in a *Praat TextGrid* editor window (see Figure 6.1), which displays formant values computed via LPC (Linear Predictive Coding) analysis (see e.g. Kent & Read 2002: 85-87, Johnson 2003: 40-42, Atal & Hanauer 1971) superimposed on a wide-band spectrogram, together with several tiers containing the annotation information.

Where necessary, formant settings (number of formants, maximum formant frequency) were adjusted manually for individual tokens so as to yield continuous formant trajectories. Measurements were made within the steady-state portions of the vowels, excluding consonantal transitions on either end. Where possible, averages were taken over as large a portion of the steady state of the vowel as possible, rather than isolated points of measurement, in order to improve the accuracy of the formant measurements. In cases where no extended steady states were present for individual tokens, a short section around the minimum or maximum of one or both of the formant trajectories was selected for analysis, as this could be assumed to be approximate the pronunciation target as closely as possible.

Sections thus selected for analysis were marked with boundaries in the *TextGrid* and annotated with information on vowel token and lexical set, as well as possible deviations from the standard formant settings.³ Also included in the *TextGrids* was

³Standard formant settings were as follows: number of vowel formants – 5; maximum formant frequency – 5,000 Hz for male, 5,500 Hz for female speakers.

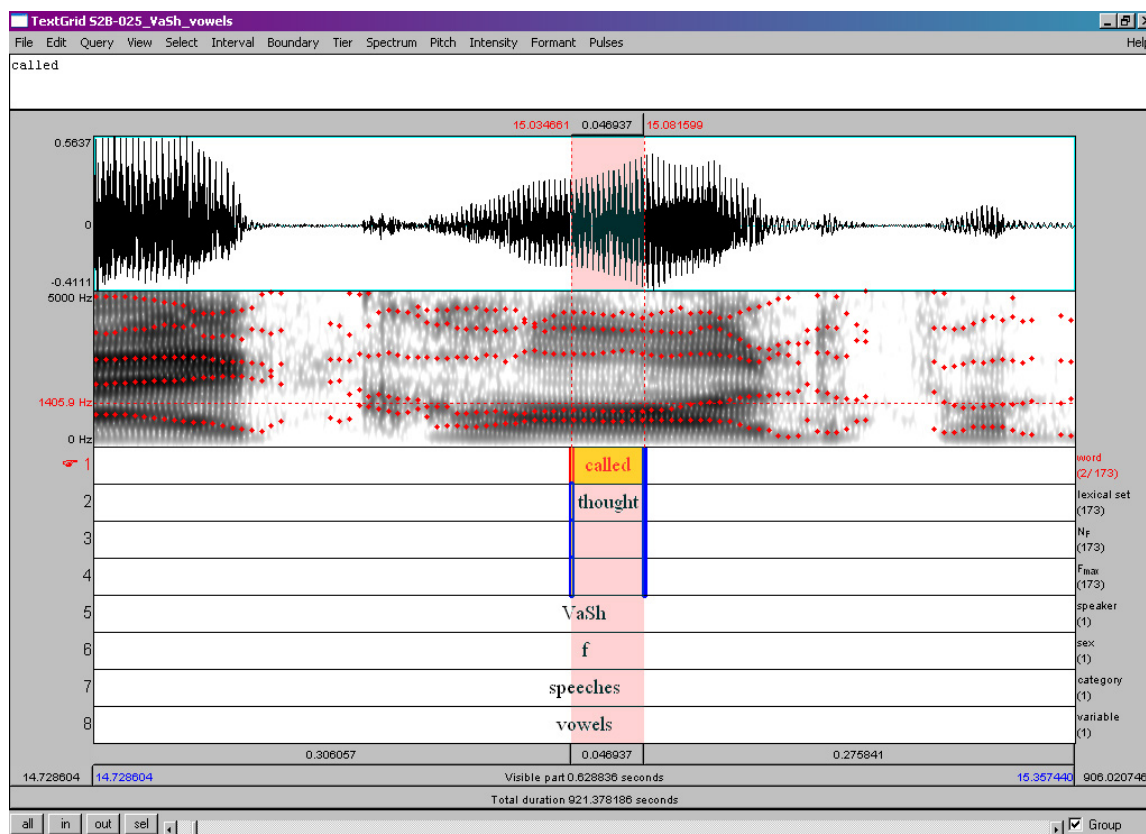


Figure 6.1: **Analysis procedures.** Shown is a *Praat TextGrid* editor window displaying annotation tiers together with the corresponding sound file. Vowel formants are displayed as red dots superimposed on a black-and-white spectrogram in the upper half of the window. The lower half displays individual tiers containing annotation information. The steady-state portion of the vowel selected for analysis is marked by boundaries in the tiers and highlighted in pink.

information on speaker ID, speaker sex, as well as the text category of the speaker. Formant values and annotation information were then extracted automatically from the *TextGrid* with the help of a *Praat* script and summarized by various *Perl* scripts written by the author.

Excluded from the analysis were tokens with variable pronunciations (both full and reduced vowels) in the standard accents (e.g. words such as *authority*, for which the *Longman Pronunciation Dictionary* (Wells 2000: 55) lists the following variant pronunciations (BE): “/ɔ: 'θɒr it i/, /ə-/ and /-rɪ t i/”), vowels before /r/, as well as the lexical set of PALM, for which tokens proved too rare for analysis. (Token counts for this lexical set typically ranged around 0-1 tokens per speaker.) Also, no more

than two tokens of the same lexeme were included in order to avoid lexical bias. Acoustically unanalyzable vowels with too low a signal-to-noise ratio, background noises or spectral distortion were excluded from the analysis as well.

Although the broad aim was to analyze 10 tokens per lexical set per speaker, some lexical sets (especially BATH, CLOTH and THOUGHT, but also occasionally GOOSE, LOT and TRAP) were so rare in the data that the targeted number of tokens could not be reached. All in all, a total of 4331 vowel tokens were analyzed, which corresponds to approximately 79 tokens per speaker, or 8.7 tokens per lexical set per speaker. Summaries of formant values for individual speakers, as well as formant plots illustrating the data thus obtained, can be found in Appendices C.3 and C.2, respectively.

6.3.3 Vowel normalization

An important issue in the use of acoustic analysis techniques with regard to vowels is the question of vowel normalization. It is well known that speakers differ in the absolute values of their formant frequencies for a given vowel, a phenomenon which can be attributed to inter-individual differences in the size of the vocal tract of speakers, which, in turn, cause differences in the resonance frequencies of the vocal tract, i.e. the vowel formants (see e.g. Stevens (2000) for a theoretical treatment of this phenomenon, and Peterson & Barney (1952: 183) for an early instance of empirical evidence for this). An illustration of the scope of variability found in the data of the present study can be found in Fig. 6.2, where formant plots are shown for two speakers, one male and one female. It is immediately visible that the extent of the female vowel space is more than twice as large as that of the male speaker in question, covering a range of approximately 1000 Hz in F1 and of approximately 2300 Hz in F2, as opposed to 400 Hz in F1 and 1000 Hz in F2 for the male speaker.

An impressive array of normalization techniques has been proposed to remedy this problem (see e.g. Disner 1980; Adank 2003; Adank, Smits & van Hout 2004 for a more detailed overview). Following Ainsworth (1975, cited in Adank 2003: 13/14, and Nearey 1989: 2090/2091; see also Adank, Smits & van Hout 2004), these techniques can be classified into vowel-intrinsic and vowel-extrinsic procedures, with

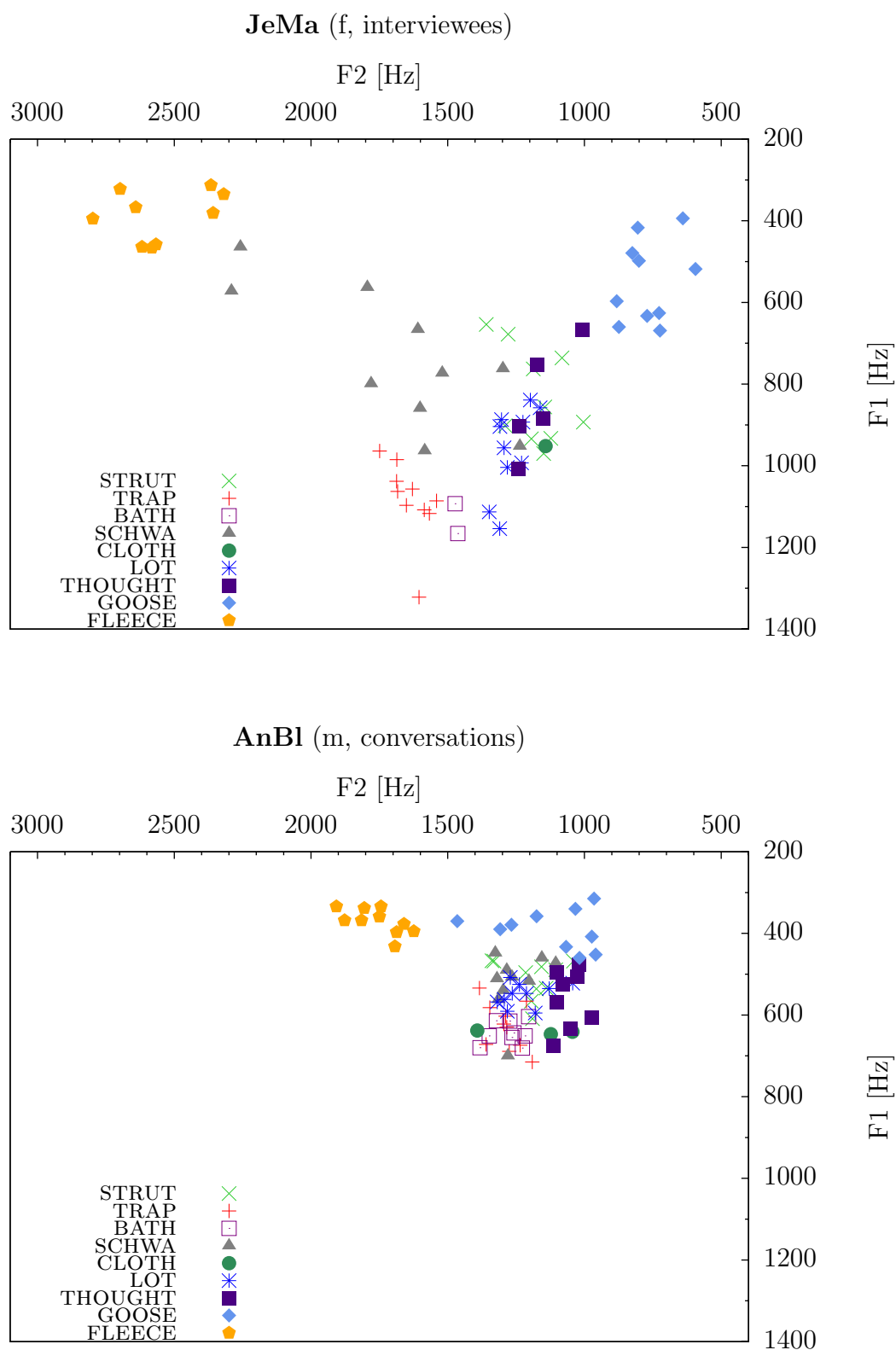


Figure 6.2: **Differences in raw formant values between individual speakers.** Shown is the extent of the vowel space for one female (top) and one male (bottom) speaker. Values for the first (F1) and second (F2) formant are given in Hz and displayed along the inverted y- and x-axis, respectively.

vowel-intrinsic methods limiting themselves to information contained within a single vowel token (thus mimicking the human ear), while vowel-extrinsic methods also make use of information that is not contained within a single vowel token, such as the extent of the entire formant space for a given speaker (Adank, Smits & van Hout 2004: 3099). Vowel-intrinsic normalization techniques typically consist of scale transformations, such as transforming “raw” frequency measures in Hz into Bark or Mel scales, whereas vowel-extrinsic normalization techniques typically attempt a transformation of the entire vowel space, transforming both the scales and the origin of the coordinate system by various methods.

The analyses in the present chapter follow the vowel normalization procedure put forth by Lobanov (1971), which, as a first step, calculates the overall mean and standard deviation for the whole of the vowel system for both F1 and F2. Formant values for each individual vowel are then converted into relative distances to this mean or “center” of the vowel system, expressed in standard deviations or z values. Graphically, this procedure fixes the vowel system at midpoint, and then expands or compresses it linearly according to the average extent of the vowel space. In addition to the advantage of being a normalization procedure that is relatively easy to implement, this procedure was also evaluated as one of the most efficient normalization procedures by Adank, Smits & van Hout (2004). Assessing the efficiency of eleven vowel normalization techniques with respect to preservation of phonemic distinctions, reduction of physiologically conditioned variation and preservation of sociolinguistic variation, the authors came to the conclusion that “[a]fter comparing the three sources of variation (vowel, region, and gender) by multivariate analysis, LOBANOV turned out to be the best procedure, although the difference with NEAREY1 is relatively small” (Adank, Smits & van Hout 2004: 3105).

This analysis procedure, however, had to be adapted in a number of ways for the purposes of the present study. As the analyses presented in this chapter encompass only a selected sub-set, and not the entire number of vowels in the Jamaican vowel system, only four reference lexical sets were selected for normalization: FLEECE, GOOSE, TRAP and LOT. Besides being linguistically meaningful in that they indicate the corner points of the vowel systems of individual speakers, the above-mentioned

reference vowels are also advantageous to use for more practical reasons, representing the most frequent lexical sets in the analysis. Thus, instead of calculating means and standard deviations for the whole of the vowel system for each individual speaker, overall means and standard deviations were limited to the values obtained from those four lexical sets. For those cases in which token counts in one of the four lexical sets were limited to numbers smaller than ten, leading to dissimilar token counts in the four reference lexical sets (e.g. only seven tokens in the GOOSE lexical set but ten tokens each in FLEECE, LOT and TRAP), the smallest number was selected and the normalization parameters were calculated from that many tokens from each lexical set, as calculating the midpoint of the vowel system from uneven numbers of tokens in the respective lexical sets obviously would have led to a distortion of the normalization procedure.

The application of this modified Lobanov vowel normalization procedure to data from the present study is illustrated in Fig. 6.3.

6.3.4 Statistical tests

A number of statistical tests were conducted on the data in order to determine the presence or absence of mergers for the lexical sets investigated, and which sociolinguistic factors affect vowel realizations.

To investigate the question of vowel (or, more accurately, lexical set) merger, a multivariate analysis of variance (ANOVA) was conducted, with *lexical set* as a factor and formant values ($F1$, $F2$) as dependent variables. Tamhane and Games-Howell post-hoc tests were conducted to assess significant differences in mean $F1$ and/or $F2$ between individual lexical sets. A clear case of merger was assumed to be present if there were no significant differences in either $F1$ or $F2$.

To investigate the question of how vowel realizations differ within educated Jamaican English, a multivariate ANOVA with *text category*, *speaker age* and *speaker sex* as factors and formant values ($F1$, $F2$) as dependent variables was conducted for each lexical set. Again, significant differences in realization were detected by means of post-hoc tests (Tamhane and Games-Howell).

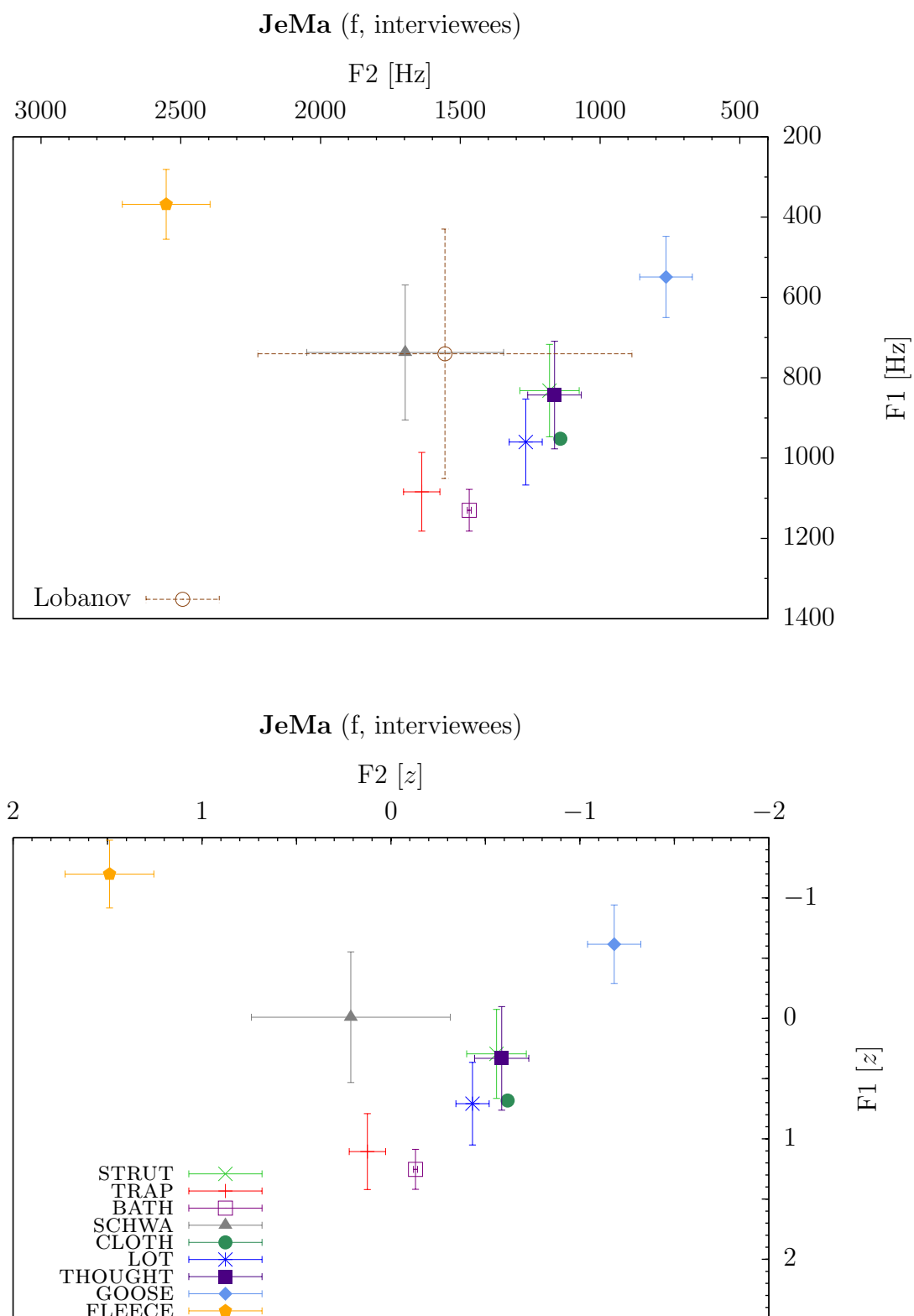


Figure 6.3: **Vowel normalization.** The formant plot in the upper half of the figure displays means and standard variations of the first (F1) and second (F2) formants for individual lexical sets in terms of raw formant values (Hz). The overall mean of the four lexical sets used for normalization (FLEECE, GOOSE, LOT and TRAP) as well as the corresponding standard deviation are labeled *Lobanov* and displayed in brown (center of the vowel system). Shown in the lower half of the figure is the same vowel system after normalization to z scores.

6.4 Results and discussion

6.4.1 SCHWA

The phonetic realization of the SCHWA lexical set in educated Jamaican English is illustrated in Fig. 6.4, which shows means and standard deviations for this lexical set highlighted in red for all five text categories against the rest of the Jamaican vowel system (plotted in grey). SCHWA is situated squarely in the center of the vowel system and remains clearly separate from all other lexical sets; a finding that is further supported by the results of the statistical analyses, which show highly significant differences ($p < .001$) between this lexical set and all others for all five text categories.

The question of whether /ə/ should be analyzed as a separate phoneme in Jamaican English has not been answered unanimously. Devonish & Harry (2004: 460) analyze the lexical set of *commA* (and also *lettER*) as belonging to the same phoneme (/o/) as the lexical set of CUP (or STRUT, in Wells' terminology). Contrary to this analysis, Wells (1982: 570/571), albeit for "popular Jamaican speech", i.e. more basilectal or mesolectal varieties, assigns these same two lexical sets to the phoneme /a/, which, in turn, comprises the lexical set of TRAP: "In popular Jamaican speech [...], words such as *letter* and *comma* are usually pronounced with final [a ~ ɐ], which there is no reason not to assign to the same phoneme /a/ as in *flat*" (Wells 1982: 570/571). (Interestingly – and also somewhat confusingly – Devonish & Harry, while assigning the two lexical sets in question together with CUP/STRUT to the same phoneme /o/ for (basilectal) Jamaican Creole, nevertheless transcribe the sound in question in the example words given with /a/: "[lɛtə] *lettER*, [kama] *commA*" (2004: 454), paralleling and contradicting Wells' analysis at the same time.)

Wells furthermore notes the existence of a continuum between /ə/- and /a/-like pronunciations:

As one progresses up the social scale, [ə]-like qualities become more common; it is very hard to find a satisfactory criterion for determining whether or not a phonemic opposition really exists between /a/ and a putative /ə/, but the existence of such a phoneme is something of a hallmark of educated Jamaican speech. (Wells 1982: 571)

While it is clear that this question cannot be answered on phonetic terms alone,

belonging more properly to the realm of phonological theory and thus being also a matter of the theoretical framework espoused, as well as of the criteria adopted for phonological analysis, the data from the present study can nevertheless attempt to shed some new light on this question in terms of empirical evidence from an acoustic point of view.

Generally, the results appear to be in better agreement with Wells' description than with the analysis by Devonish & Harry. First of all, there is no tendency for a merger of SCHWA with the lexical set of STRUT. Although, strictly speaking, this is not a necessary condition for the two lexical sets to be analyzed as variants of the same phoneme, the analysis by Devonish & Harry seems to imply free variation rather than strictly conditioned allophones in complementary distribution. Thus, some degree of overlap might be expected to occur in the data under this point of view.

Secondly, there is a tendency in the data for SCHWA to be realized more in the direction of /a/ with decreasing level of formality of the speech situation. Significant main effects for *text category* for both F1 and F2 were detected in the statistical analysis, with F1 being highly significant ($p < .001$), and F2 much less so ($p < .05$). A closer look at Fig. 6.4 confirms that the phonetic realization of SCHWA does indeed vary systematically with text category, most notably along the dimension of vowel height, which is reflected in the values for the first formant, F1. Starting with the most informal text category, *conversations*, there is a gradual cline of separation from the lexical sets at the bottom of the vowel system, with SCHWA oscillating slightly back and forth along the F2 or front-back dimension while steadily moving towards lower F1 values, i.e. higher up in the vowel space. It should also be noted that for the text category of *news*, the most formal speech situation, SCHWA is situated almost exactly at the center point (0/0) of the coordinate system, both in terms of F1 and F2, making this lexical set an almost "perfect" central vowel. (This is not an artefact of the normalization procedure, as the midpoint of the vowel system was in fact calculated from the position of the GOOSE, FLEECE, LOT and TRAP lexical sets only.) Thus, the phonetic realization of SCHWA for this text category corresponds

extremely closely to the pronunciation of this lexical set in the two metropolitan standard reference accents, British and American English.

Expressed conversely, SCHWA moves towards more open pronunciations from the text categories of *news* to *conversations*: The data show that there is an approximation of the Jamaican Creole pronunciation postulated by Wells, /a/, with decreasing level of formality of the speech situation. The fact that the data points in Fig. 6.4 do not completely reach the bottom of the vowel system also agrees well with this analysis, reflecting the nature of the data sampled, which comes from the acrolectal and upper mesolectal end of the Jamaican creole continuum but does not encompass Wells' "popular Jamaican speech" (2004: 570), i.e. more basilectal varieties of Jamaican Creole.

Also in agreement with this interpretation of the data is a second finding, a significant main effect for *speaker sex* that occurred for F1 in the statistical analyses ($p < .01$), in the direction that the SCHWA produced by female speakers is higher/closer than that produced by their male counterparts. Adopting Wells' assumption that "the existence of such a phoneme [ə] is something of a hallmark of educated Jamaican speech" (Wells 1982: 571), i.e. represents a more prestigious pronunciation variant, this tendency agrees well with findings in earlier sociolinguistic studies which showed that female speakers use fewer nonstandard forms than male speakers, exhibiting a greater linguistic conformity to speech norms than their male counterparts: "*Principle 2, the linguistic conformity of women: For stable sociolinguistic variables, women show a lower rate of stigmatized variants and a higher rate of prestige variants than men*" (Labov 2001: 266). Thus, female speakers of educated Jamaican English tend to adopt more [ə]-like realizations of SCHWA, as these realizations correspond closely to the more prestigious British and American pronunciation patterns. Further support for this interpretation of the phonetic realization of SCHWA as a stable linguistic variable in educated Jamaican English comes from the finding that speaker age does not seem to play a role with respect to the pronunciation of this lexical set, with no significant effect detected in the statistical analyses for this variable.

In conclusion, SCHWA can be said to be highly variable with respect to both

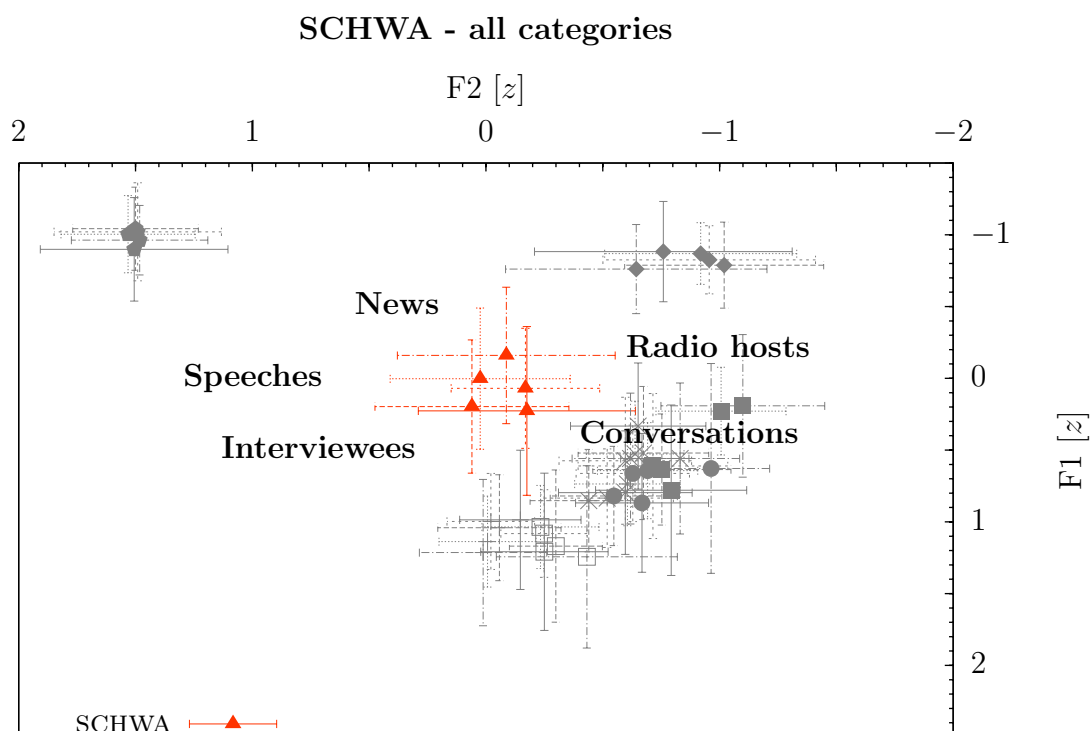


Figure 6.4: **Sociophonetic variation** – SCHWA. Shown are mean formant values (in z scores) and standard deviations for F1 and F2 for each text category. The lexical set of SCHWA is highlighted in red and can be seen to vary linearly along the vertical dimension, becoming increasingly open with decreasing level of formality.

stylistic and sociolinguistic factors. The direction of variation in its realization with decreasing formality of the speech situation points to influence from Jamaican Creole.

6.4.2 STRUT

The phonetic realization of the STRUT lexical set in educated Jamaican English is illustrated in Fig. 6.5. The statistical analyses revealed no significant main effects for *text category* in either F1 or F2 for this lexical set, which remains a firmly back and/or rounded vowel across all text categories. *Speaker sex* and *speaker age* do not have an effect on the pronunciation of this vowel, either. With the exception of the text category of *conversations*, where STRUT is slightly raised (see also Fig. 6.12 for more detail), this lexical set remains comparatively stable in its phonetic realization.

STRUT is variably merged with two of the other low back vowels: there is a

merger with THOUGHT in the categories of *interviewees* and *radio hosts*, as well as with CLOTH in *radio hosts* and *speeches*. (Moreover, a possible near-merger between CLOTH and STRUT is exhibited in the text category of *interviewees*). As can be seen from Figure 6.5 in comparison to Figures 6.9 and 6.8, this variable merging, however, is due to the mobility of the other lexical sets in the vowel space, rather than to any independent mobility of its own.

The present results agree with the findings by Beckford Wassink (2001) in that they corroborate the existence of STRUT as an independent phoneme in educated Jamaican English. Analyzing vowel tokens from a word list reading of 19 speakers from acrolect- and basilect dominant backgrounds, she found that “[s]omewhat surprisingly, the word list data provided evidence for a distinct /ʌ/ class for Jamaican speakers. Words in the CUT class exhibited either no or partial spectral overlap with neighboring /ɔ/ for all speakers except one” (Beckford Wassink 2001: 147). On the other hand, the presence of mergers and near-mergers between STRUT and other lexical sets in the present set of data at first sight appears to partly contradict her findings, STRUT remaining distinct from the neighboring vowels not only for speakers of the acrolect, but also for speakers of Jamaican Creole, in Beckford Wassink’s study. However, it is possible that the non-occurrence of mergers in the data by Beckford Wassink is due to the fact that only the two extremes of the creole continuum were sampled in that study, ignoring the mergers with STRUT caused by the movement of the other lexical sets on their way downwards in the vowel space. Thus, a sampling towards more intermediate varieties of the (upper) mesolect might have exhibited the same mergers as found in the present set of data.

Due to its pronounced backness, STRUT remains clearly distinct in its phonetic realization from both British and the American standards of pronunciation. Since neither stylistic nor sociolinguistic variation can be observed for this variable, it cannot be considered a marker of speech in the Labovian sense, which also means that this variable clearly does not carry any negative associations, i.e. it is not stigmatized.

The back pronunciation of this vowel thus is a stable feature that can be considered to form a part of the educated Jamaican standard.

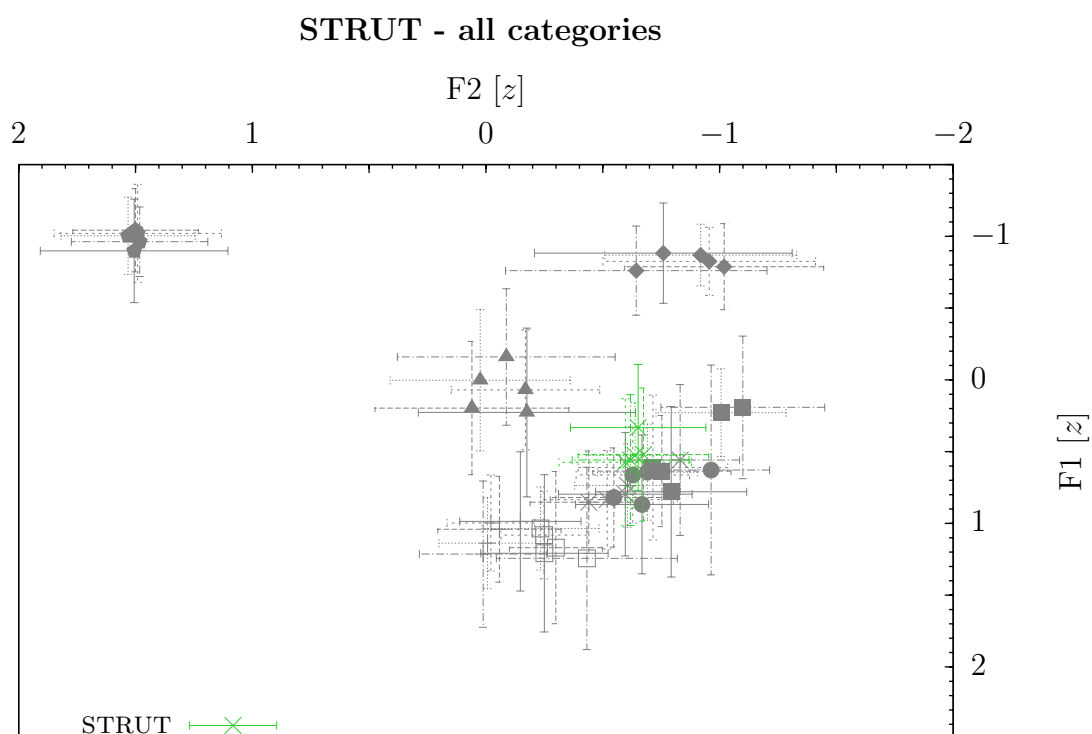


Figure 6.5: **Sociophonetic variation** – STRUT. Shown in the graph are means and standard deviations (in z values) for F1 and F2 for all five text categories. The lexical set of STRUT is highlighted in light green. With the exception of the text category of *conversations*, where STRUT is slightly raised, this lexical set remains comparatively stable in its phonetic realization.

6.4.3 TRAP and BATH

The lexical sets of TRAP and BATH are kept distinct in all text categories, a fact which points to the existence of a more British English-like pattern with respect to the phonetic realization of these two vowels in educated Jamaican English. In accordance with this pattern, TRAP is generally realized fronter and (with the exception of *speeches*) slightly higher than BATH. TRAP is situated around the center of the vowel system in terms of F2 (corresponding to a z score of approximately 0), with BATH being realized variably further back.

The two lexical sets reach their greatest distance in the most formal text category, *news*, and differences between the two fall to lower levels of significance in *conversations* and *radio hosts* ($p < .01$ for F2 in *radio hosts*, and for F1 in *conversations*; $p < .05$ in F2 for *conversations*), a finding which might point to a beginning near-merger. Thus, there is a closing of the distance between TRAP and BATH with decreasing level of formality of the speech situation, an illustration of which can be found in Fig. 6.6. As TRAP and BATH are merged with respect to their spectral properties in both American English and Jamaican Creole,⁴ it is not possible to unambiguously decide whether this process might be due to either Jamaican Creole or American influence. However, what can be stated is that the influence of a British English-like speech pattern manifestly decreases with decreasing level of formality.

Regarding the phonetic realization of the two lexical sets, significant main effects were found in the statistical analyses for *text category* for both F1 and F2 ($p < .001$) for both vowels, to the effect that TRAP is realized significantly higher in the most informal text category, *conversations* (at a level of $p < .01$ and $p < .05$, respectively, compared to *speeches* and *news*), and, conversely, lower in the most formal text category, *news* (at a level of $p < .01$ and $p < .05$, respectively, compared to *conversations* and *radio hosts*). Variation in the BATH lexical set mainly occurs in the F2 or front-back dimension, with significant differences in the means of *news* and *conversations* and *speeches* (at a level of $p < .05$ and $p < .01$, respectively). (There is also a small difference ($p < .05$) in height between *conversation* and *speeches*,

⁴There is still a difference in length between the two lexical sets in Jamaican Creole, which, however, will of course not be reflected in the formant data.

BATH being realized more openly in the former category.) Thus, BATH tends to be pronounced backest in the text category of *news*, and the original front-back (F2) differentiation between the two lexical sets gradually becomes one of height (F1). Moreover, the slight raising of TRAP within the text categories associated with lower levels of formality might be taken to indicate a beginning influence of American English pronunciation patterns, although further comparisons with data from this variety will be needed to assess the validity of this hypothesis (see sections 6.4.7 below).

Summing up, the phonetic realization of TRAP and BATH is a variable feature, which can be interpreted as pointing to Jamaican Creole, but also possibly to American English influence in pronunciation.

6.4.4 LOT, CLOTH and THOUGHT

The phonetic realizations of the lexical sets of LOT, CLOTH and THOUGHT in educated Jamaican English are illustrated in Figs. 6.7, 6.8, and 6.9, respectively. Variable patterns of mergers are exhibited in the data for these three lexical sets.

First of all, CLOTH and LOT are merged in nearly all text categories: The two lexical sets do not exhibit any significant differences in means in either F1 or F2 for the categories of *conversations*, *interviewees*, *radio hosts* and *speeches*. A near-merger, with no significant difference means in F1, and one significant at the $p < .05$ level only in F2, is present in *news*. This nearly universal convergence of CLOTH and LOT corresponds to what would be expected for the British English phonological pattern.

Moreover, mergers or near-mergers of CLOTH and THOUGHT can be found in the following text categories: The two lexical sets are merged in *radio hosts*, and near-mergers are also present in the text categories of *conversations* and *interviewees* (no significant difference in means for F1 but at the $p < .05$ level for F2), as well as possibly in *news* (no significant difference in means for F2 but $p < .01$ for F1). Thus, these two lexical sets appear to become increasingly merged in the three more informal text categories. Interestingly, all three lexical sets (LOT, CLOTH and THOUGHT) are firmly merged in the *radio hosts* category.

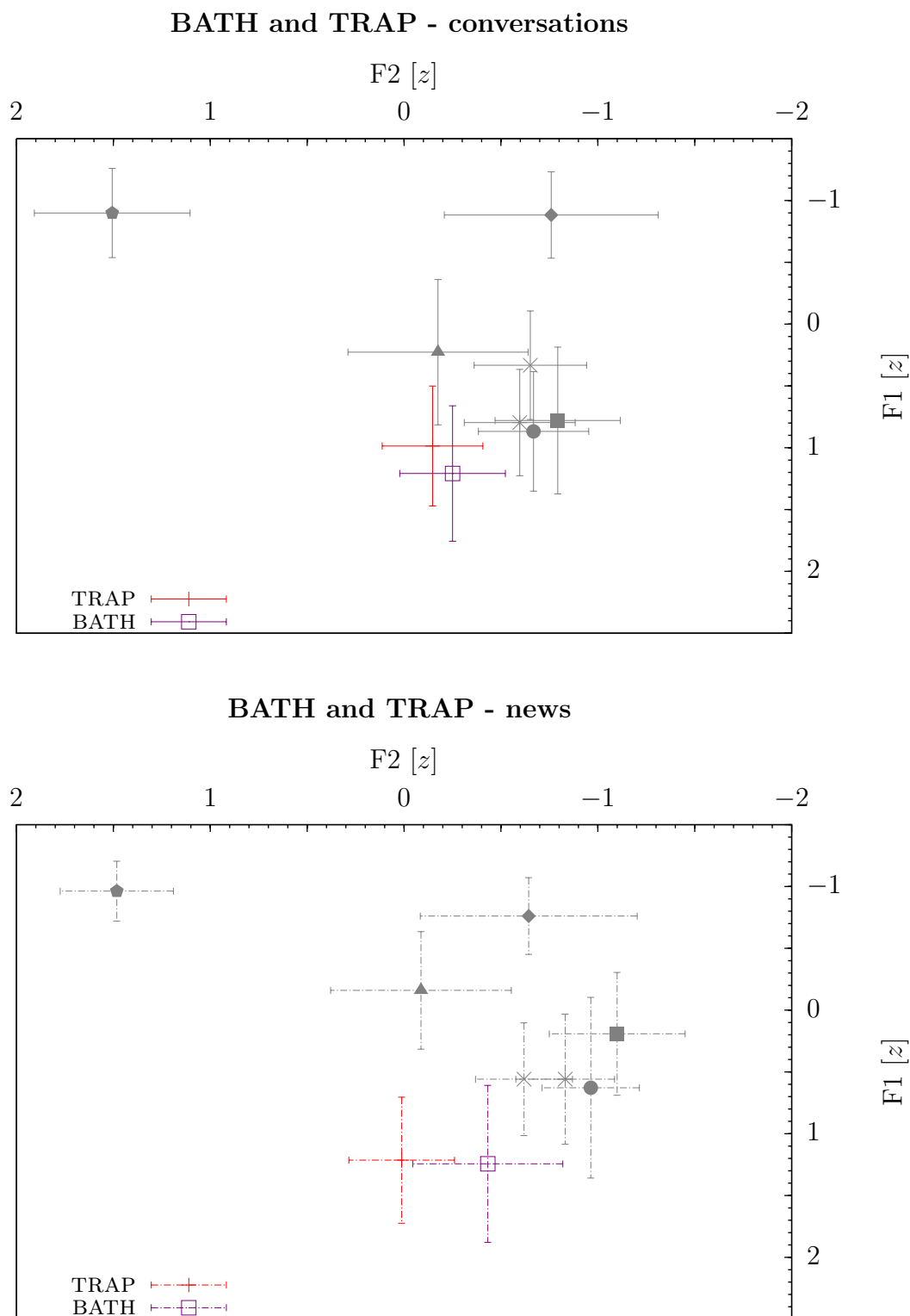


Figure 6.6: **Sociophonetic variation – TRAP and BATH.** Shown are means and standard deviations in F1 and F2 for all lexical sets for the two text categories *conversations* (informal speech situation; top) and *news* (formal speech situation; bottom), with the lexical sets of TRAP and BATH highlighted in red and purple, respectively. The two formant plots illustrate the decreasing distance between the two lexical sets with decreasing level of formality of the speech situation.

With respect to the phonetic realization of LOT, CLOTH and THOUGHT, highly significant ($p < .001$, with the exception of F1 of CLOTH, which is significant at the $p < .05$ level only) main effects were found for text category for all three lexical sets. As can be seen in Figs. 6.7, 6.8, and 6.9, there is a cline of decreasing vowel height, but also increasing degree of centralization, with decreasing level of formality for all three lexical sets. While this holds true for all vowels investigated here, this phenomenon is especially pronounced for the lexical set of THOUGHT, for which the phonetic realizations in the text categories of *news* and *speeches* are clearly separated from the data points for the other three text categories both in terms of vowel height and backness/frontness. (See also section 6.4.6 below for a more detailed analysis.)

An unambiguous interpretation of these mergers remains difficult, however. While the lowering and gradual mergers of the vowels with decreasing formality of the speech situation may be due to influence from Jamaican Creole patterns of pronunciation, these effects could also possibly be attributed to the growing influence of North American English varieties, many of which exhibit the expanding *cot* - *caught* merger (see e.g. Labov, Ash & Boberg 2006: 58-65).

In conclusion, the phonetic realization of LOT, CLOTH and THOUGHT in educated Jamaican English is a highly variable feature sensitive to stylistic variation, which may be due to the influence of Jamaican Creole pronunciation patterns, but also possibly to growing American English influence.

6.4.5 Jamaican Creole or American English influence?

Findings from the analyses of the phonetic realization of the TRAP/BATH and LOT/CLOTH/THOUGHT clusters so far have revealed pronounced stylistic variation in the phonetic realization of these lexical sets, with a tendency for the members of these clusters to converge with decreasing level of formality of the speech situation. However, as the presence of mergers between members of the lexical sets in these clusters agrees equally well with the phonological patterns of both American English and Jamaican Creole, it is difficult at this point to decide which factor this influence should be attributed to. Both American English and Jamaican Creole would have TRAP and BATH merged, the two lexical sets belonging to the phoneme /æ/ in

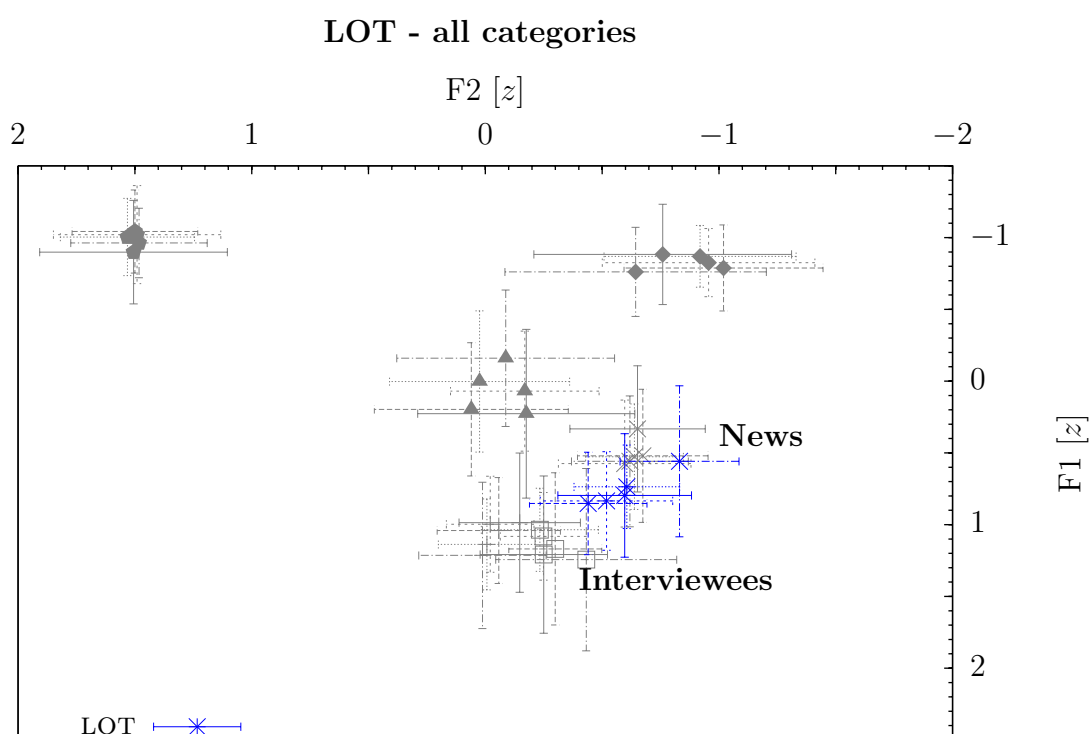


Figure 6.7: **Sociophonetic variation** – LOT. Shown are means and standard deviations (in z values) for F1 and F2 for each text category. The lexical set of LOT is highlighted in blue. Similar to THOUGHT, LOT is realized more openly and also more centrally with decreasing level of formality.

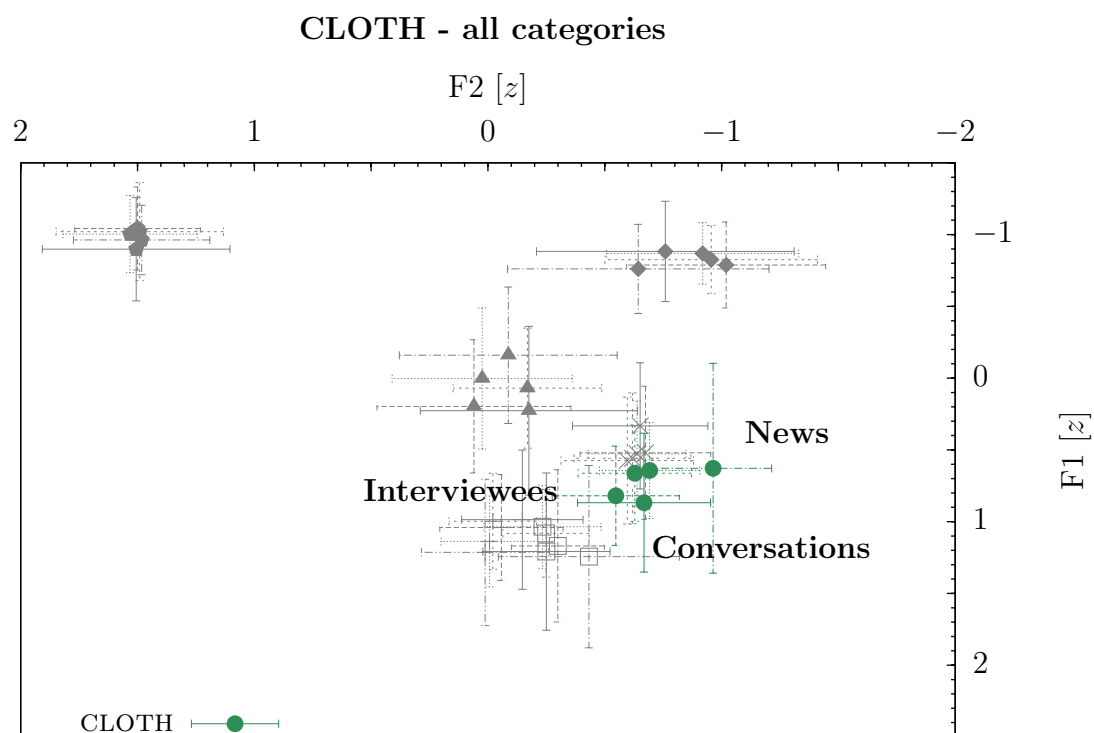


Figure 6.8: **Sociophonetic variation** – CLOTH. Shown are means and standard deviations (in z values) for F1 and F2 for each text category. The lexical set of CLOTH, highlighted in dark green, is realized more centrally and also slightly more openly with decreasing level of formality.

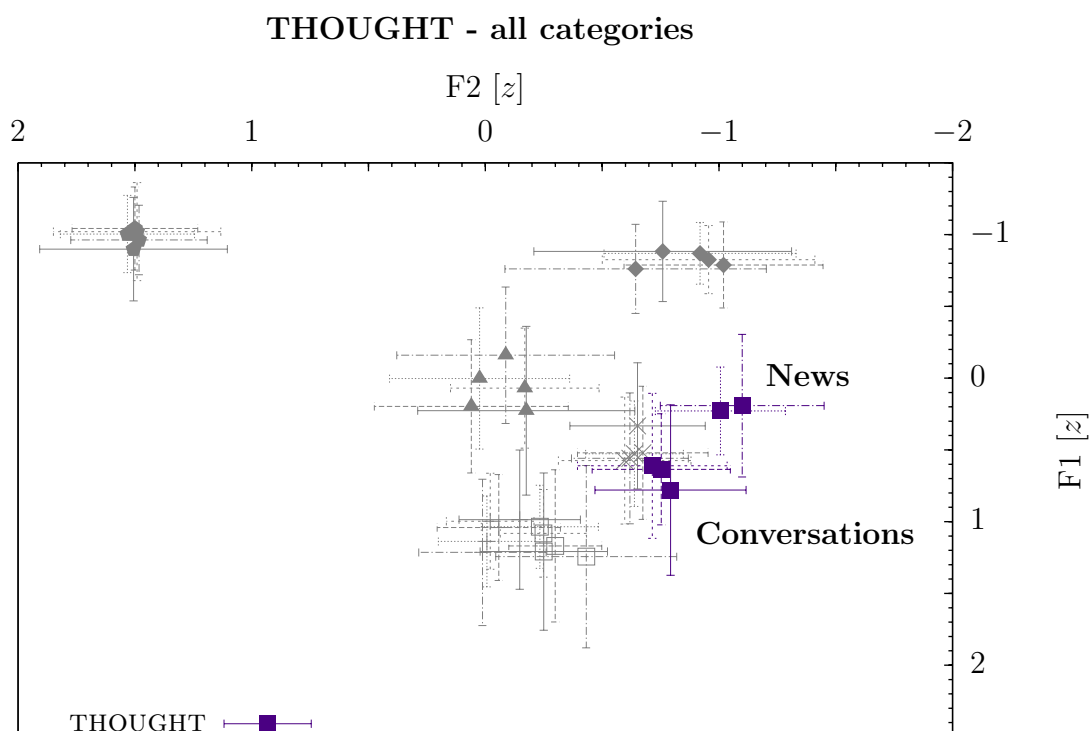


Figure 6.9: **Sociophonetic variation** – THOUGHT. Shown are means and standard deviations (in z values) for F1 and F2 for each text category. The lexical set of THOUGHT is highlighted in violet. It is strongly variable, being realized more openly and also more centrally with decreasing level of formality.

American English, but to the phoneme /a(:)/ in Jamaican Creole. Similarly, the lexical sets of LOT/CLOTH/THOUGHT converge towards /a(:)/ in Jamaican Creole, but a merger of all three of these sets is also characteristic of those varieties of American English that exhibit the *cot-caught* merger, which still in the process of expanding geographically in the United States on the North American continent (Labov, Ash & Boberg 2006: 59).

In order to address this question, it is useful to consider not only the presence or absence of mergers in these two clusters in Jamaican English, but also their positions relative to each other in the vowel space. While the hypothetical influence of Jamaican Creole patterns of pronunciations ultimately would lead to a complete convergence of all five lexical sets in the most basilectal varieties, collapsing the two clusters into a single phoneme /a(:)/,⁵ this is not the case for American English varieties, where the two clusters are kept clearly distinct, the two lexical sets TRAP and BATH belonging to the fronter and higher phoneme /æ/, whereas the lexical sets LOT, CLOTH and THOUGHT are merged into the low back phoneme /ɑ/.

Therefore, a useful means of determining whether the cluster formation outlined above is caused by the influence of Jamaican Creole or American English patterns of pronunciation is to take a closer look at the overall distance between the two clusters. The most simple metric for computing the distance between two vowel phonemes *A* and *B* in F1/F2 space is to calculate their Euclidean distance in the F1/F2 formant space:

$$d = \sqrt{(F1_A - F1_B)^2 + (F2_A - F2_B)^2},$$

where $F1_A$, $F1_B$ and $F2_A$, $F2_B$ are the F1 and F2 values, respectively, of the individual vowels in question.

Fig. 6.10 illustrates this distance between the two members of the TRAP/BATH lexical set cluster and LOT, taken as a representative of the location of the low back cluster LOT/CLOTH/THOUGHT as a whole, across the five text categories analyzed in the present study. It is clearly visible that the distance between the lexical sets in question decreases continuously from *news* to *interviewees*. This decrease in distance

⁵As already noted above, distinctions in length would still persist. However, these are not detectable in a purely qualitative, i.e. spectral, analysis such as the present study.

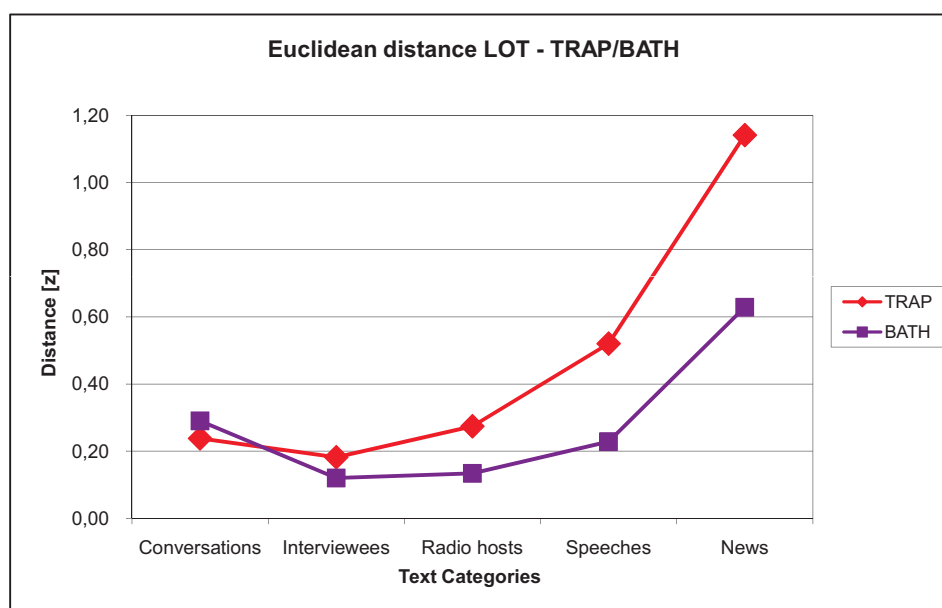


Figure 6.10: **Euclidean distance between the lexical sets of TRAP/BATH and LOT, by text category.** The two sets of clusters (TRAP/BATH and LOT/CLOTH/THOUGHT) clearly converge with decreasing level of formality of the speech situation.

between the two clusters supports the hypothesis of Jamaican Creole influence on the more informal speech of the speakers in the present study, indicating as it does a movement towards more Jamaican Creole patterns of pronunciation. Although the slight increase in distance shown in the graph for the text category of *conversations* might be tentatively taken as indicating a possible influence of American English norms of pronunciation, reflecting the raising of TRAP for this text category, this effect can be equally well attributed to the “exceptional” position of LOT for this text category, which is pronounced backer and also slightly higher than in the other more informal text categories (see section 6.4.6 and Fig. 6.15). Thus, the data so far do not yield any conclusive evidence for American English influence, but instead point to a movement towards Jamaican Creole patterns of pronunciation with decreasing formality of the speech situation.

6.4.6 Comparison with RP formant values

The analyses in the present chapter so far have looked at the realization of the various lexical sets from a structural point of view within the Jamaican vowel system

itself. However, in order to better assess postulated influences from other norms of pronunciation, such as British or American English, it is instructive to compare the measured Jamaican formant values with formant values from these other varieties.

In this subsection, each of the lexical sets investigated will be compared to its phonetic realization in British English Received Pronunciation (RP), which has served as the historical norm for Jamaican English. Formant data for comparison come from Deterding's 1997 study on Southern Standard British English monophthongs and have been subjected to the same methods of analysis as the Jamaican data (see Appendix C.4 for further details). An overview of the location of the corresponding RP lexical sets in the vowel space is given in Fig. 6.11, with RP realizations highlighted in color against the corresponding Jamaican realizations. (Means and standard deviations for all five text categories of the Jamaican data are plotted in grey).

STRUT

The phonetic realization of the STRUT lexical set in British and Jamaican English is illustrated in Fig. 6.12. As already noted in section 6.4.2, STRUT does not show any stylistic variation in the Jamaican English data analyzed in the present study and thus remains comparatively stable in its pronunciation across all five text categories. Compared to British English, there is a clear difference in the phonetic realization of this vowel in the two varieties, with STRUT being pronounced substantially higher and also somewhat backer in educated Jamaican English.

Interestingly, although no systematic patterns of phonetic variability were found for STRUT, as opposed to the other lexical sets in the present study, the Jamaican data point furthest away from the British norm of pronunciation is that of the most informal text category, *conversations*, a finding which parallels the tendency found for the other lexical sets in the present study to move away from British English realizations with decreasing level of formality, emphasizing the more closed pronunciation of STRUT in Jamaican English even further.

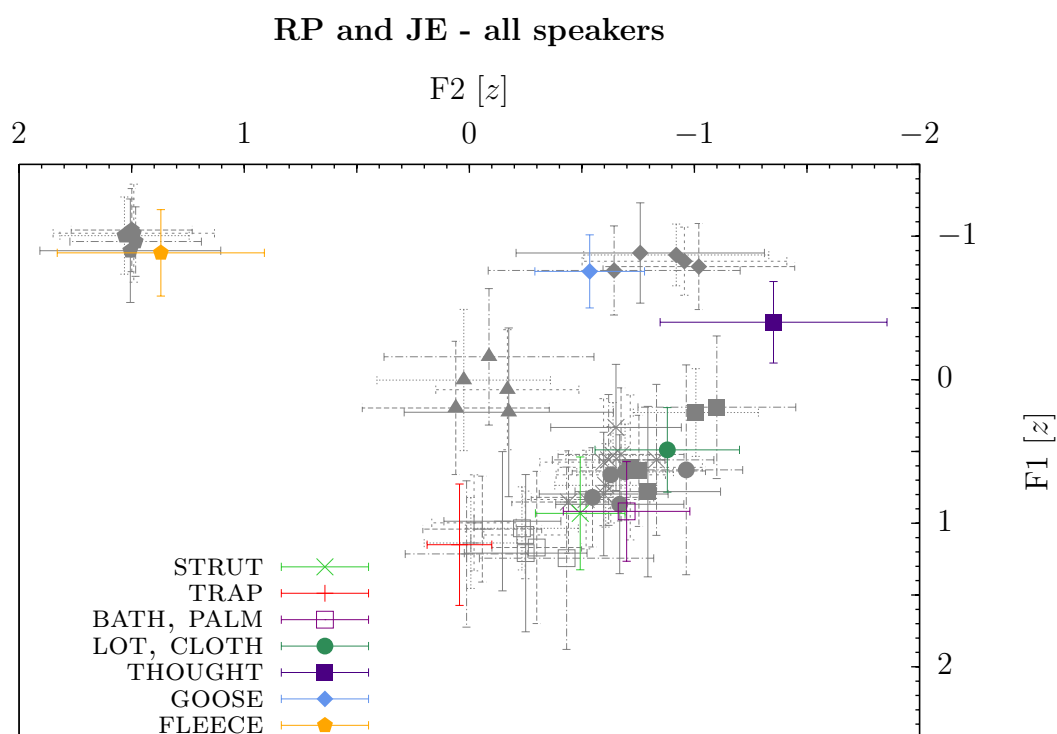


Figure 6.11: **Comparison of the Jamaican data with Received Pronunciation (RP) formant values (overview).** Shown are means and standard deviations for F1 and F2 for the seven RP vowel phonemes corresponding to the Jamaican English (JE) data analyzed in this chapter. RP realizations of lexical sets are displayed in color, superimposed on the background of the Jamaican data (plotted in grey). (Data from Deterding 1997.)

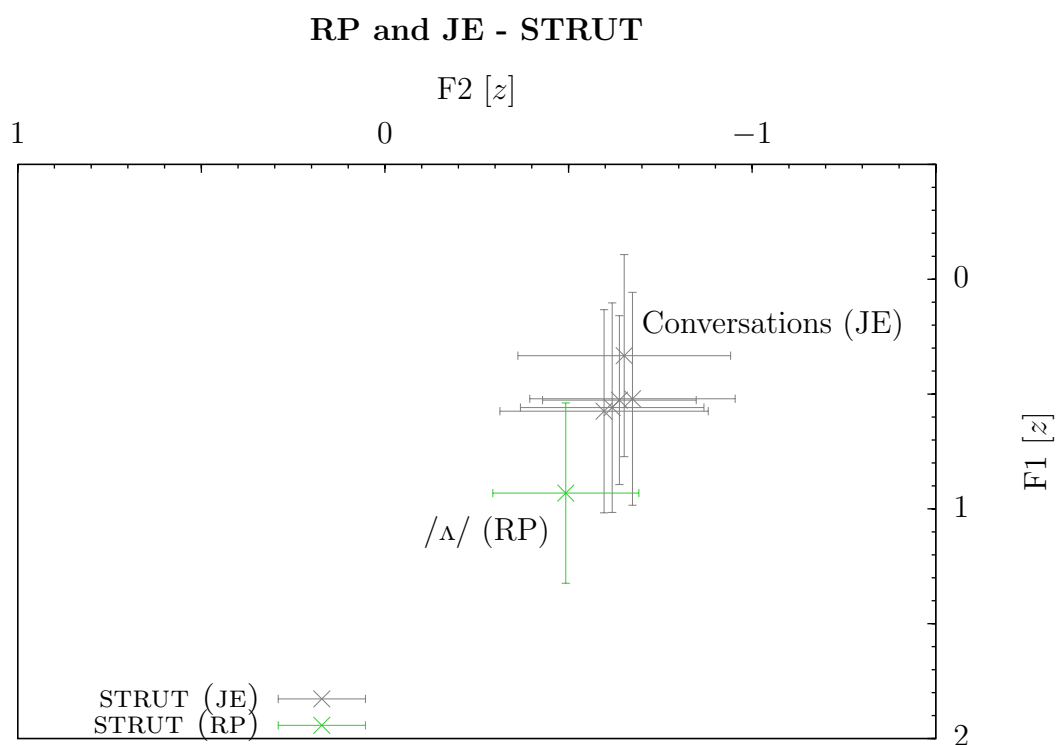


Figure 6.12: **Comparison with Received Pronunciation (RP) formant values – STRUT.** Shown are means and standard deviations for F1 and F2 for the five text categories of the Jamaican English (JE) data (grey), together with the phonetic realization of the corresponding phoneme /ʌ/ in Received Pronunciation (light green). STRUT is realized substantially higher and also slightly backer in Jamaican English. (Data from Deterding 1997.)

TRAP

A comparison of the British English Received Pronunciation of the TRAP lexical set with the Jamaican English data from the present study can be found in Fig. 6.13. As already noted in section 6.4.3 above, this vowel class displays considerable stylistic variation. A closer look at Fig. 6.13 reveals that this variation is indeed systematic, with a tendency for TRAP to approximate the British English norm of pronunciation with increasing formality of the speech situation (i.e. from *conversations* to *news*). Interestingly, and in contrast to the three other back vowels LOT, CLOTH and THOUGHT, the overall range of variation is rather small for this lexical set, and the British English norm of pronunciation is not only approximated but completely reached by the Jamaican informants, with *news* in fact exhibiting a pronunciation that is even slightly lower than the Received Pronunciation value.

Although raising of TRAP with increasing level of formality was speculated to be a possible indication of American English influence on Jamaican speech in section 6.4.3 above, a closer look at Fig. 6.13 reveals that this raising of TRAP is accompanied by a concomitant backing of the vowel, a tendency which is in fact contrary to what would be expected in accordance with this hypothesis. Moreover, the overall realization of this lexical set is squarely central in terms of the front-back dimension, clustering around the origin ('0') of the F2 axis. This stands in marked contrast to the usual American English pronunciation, where /æ/ is normally classified as a front vowel. (See section 6.4.7 for a more explicit comparison.)

BATH

The phonetic realization of the lexical set of BATH for British and Jamaican English is illustrated in Fig. 6.14. Generally, British English /ɑ:/ is realized considerably backer, and also slightly higher, than its Jamaican English counterpart. In both varieties, the vowel of BATH is articulated back of center, this being the case only slightly so for Jamaican English, but much more markedly so for the Received Pronunciation speakers.

Although sociophonetic variation is present in the Jamaican data, this variation is by no means linear, as a closer look at Fig. 6.14 reveals. With the four more

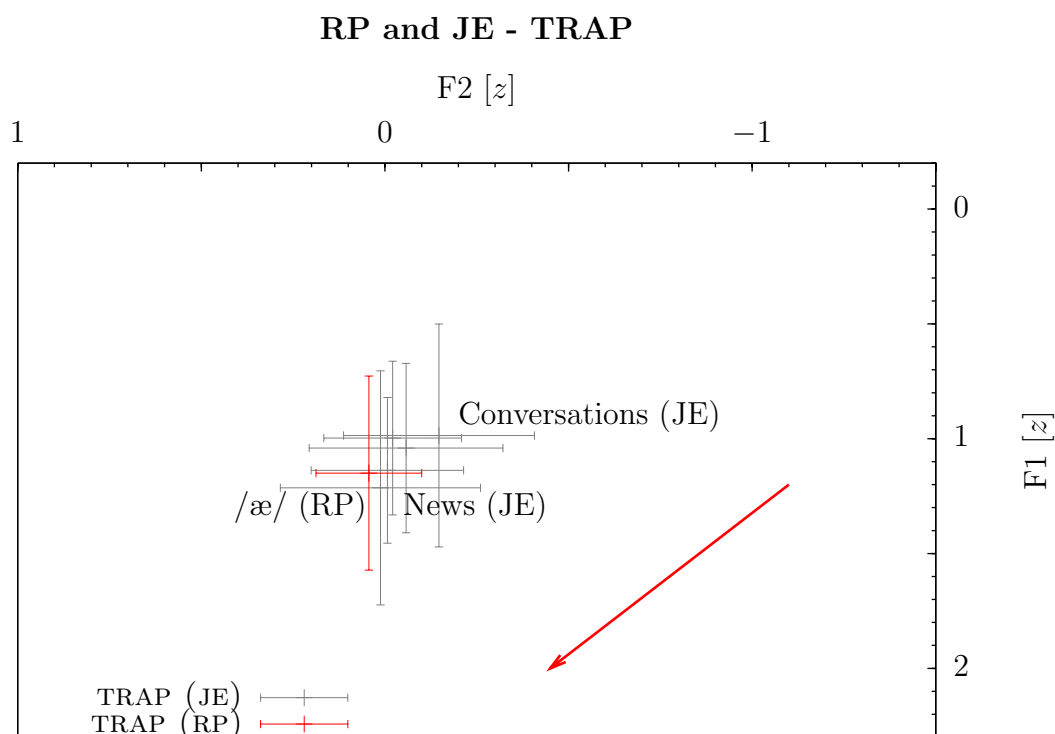


Figure 6.13: **Comparison with Received Pronunciation (RP) formant values – TRAP.** Shown are means and standard deviations for F1 and F2 for the five text categories of the Jamaican English (JE) data (grey), together with the phonetic realization of the corresponding phoneme /æ/ in Received Pronunciation (red). With increasing level of formality, the Jamaican English data points for TRAP show an almost linear progression towards the RP realization of this phoneme, as indicated by the colored arrow. (Data from Deterding 1997.)

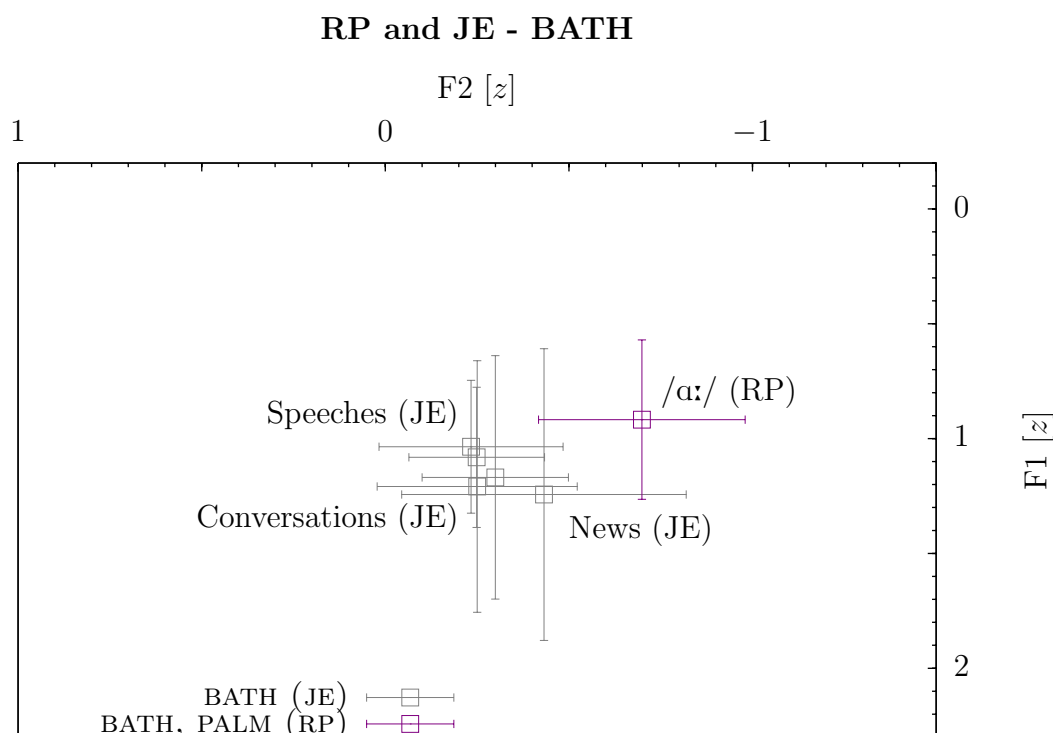


Figure 6.14: **Comparison with Received Pronunciation (RP) formant values – BATH.** Shown are means and standard deviations for F1 and F2 for the five text categories of the Jamaican English (JE) data (grey), together with the phonetic realization of the corresponding phoneme /ɑ:/ in Received Pronunciation (purple). British English /ɑ:/ is realized considerably backer, and also slightly higher, than its Jamaican English counterpart. (Data from Deterding 1997.)

informal text categories (*conversations*, *interviewees*, *radio hosts* and *speeches*) realized closely together, and only *news* differing substantially from these other four in terms of phonetic realization, no systematic patterning can be detected. Interestingly, however, it is the most formal text category, *news*, that most closely approximates the British English standard pronunciation, mainly in terms of the backness of the vowel.

LOT

A comparison of the British English Received Pronunciation of the LOT lexical set with the Jamaican English data from the present analysis can be found in Fig. 6.15. As can be seen from the graph, there is considerable variation in the pronunciation of this lexical set in Jamaican English, with the frontest and most open realization

of LOT in the text category of *interviewees*, and the backest and closest realization of this vowel in the text category of *news*. Generally, LOT is realized considerably backer and higher in its British English pronunciation than it is in the Jamaican data.

With the exception of *conversations*, which is in fact the second closest data point to the British English realization, a systematic linear relationship can be identified between text category or level of formality of the speech situation and distance from the British English realization of /ɒ/, to the effect of reducing or even closing this distance with increasing level of formality. As with the lexical sets of BATH and CLOTH (see below), there is a marked difference in the phonetic realization of LOT between *news* and the other four text categories, with *news* approximating the British standard much more closely.

CLOTH

The phonetic realization of the CLOTH lexical set for British and Jamaican English is illustrated in Fig. 6.16. As mentioned in section 6.4.4, there is considerable variation across the different text categories in the pronunciation of this vowel. Compared to its British English counterpart, Jamaican English CLOTH is generally pronounced more openly, and, with the exception of *news*, also slightly more fronted.

As with LOT and THOUGHT (see below), a clear tendency can be discerned for the Jamaican data points to approximate the British pronunciation standard with increasing level of formality of the speech situation, although this relationship is somewhat less clear-cut, exhibiting more scatter in the data points, than is that for LOT and THOUGHT. Again, the text category of *news* lies closest to the Received Pronunciation data point, while *conversations* and *interviewees* exhibit the largest distance towards this reference vowel, with the other two categories lying somewhere in between.

THOUGHT

A comparison of normalized formant values for the British and Jamaican data for the pronunciation of THOUGHT is given in Fig. 6.17. While some degree of phonetic

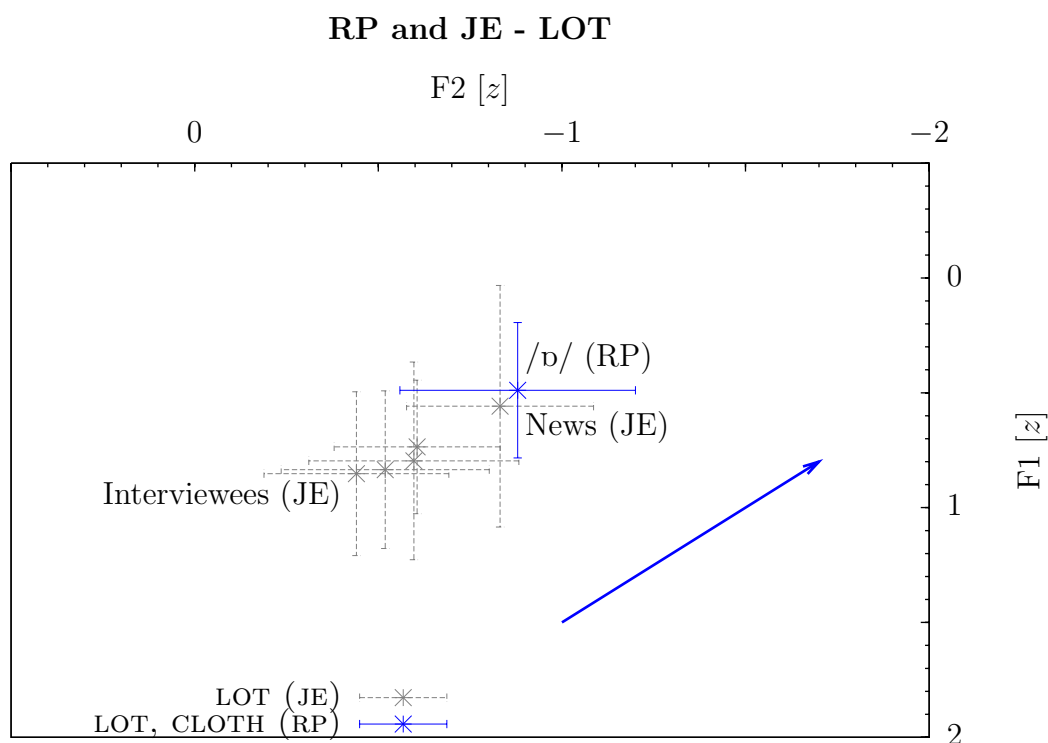


Figure 6.15: **Comparison with Received Pronunciation (RP) formant values – LOT.** Shown are means and standard deviations for F1 and F2 for the five text categories of the Jamaican English (JE) data (grey), together with the phonetic realization of the corresponding phoneme /ɒ/ in Received Pronunciation (blue). The blue arrow illustrates the tendency of the Jamaican English data points to approximate the British English norm of pronunciation with increasing level of formality of the speech situation. (Data from Deterding 1997.)

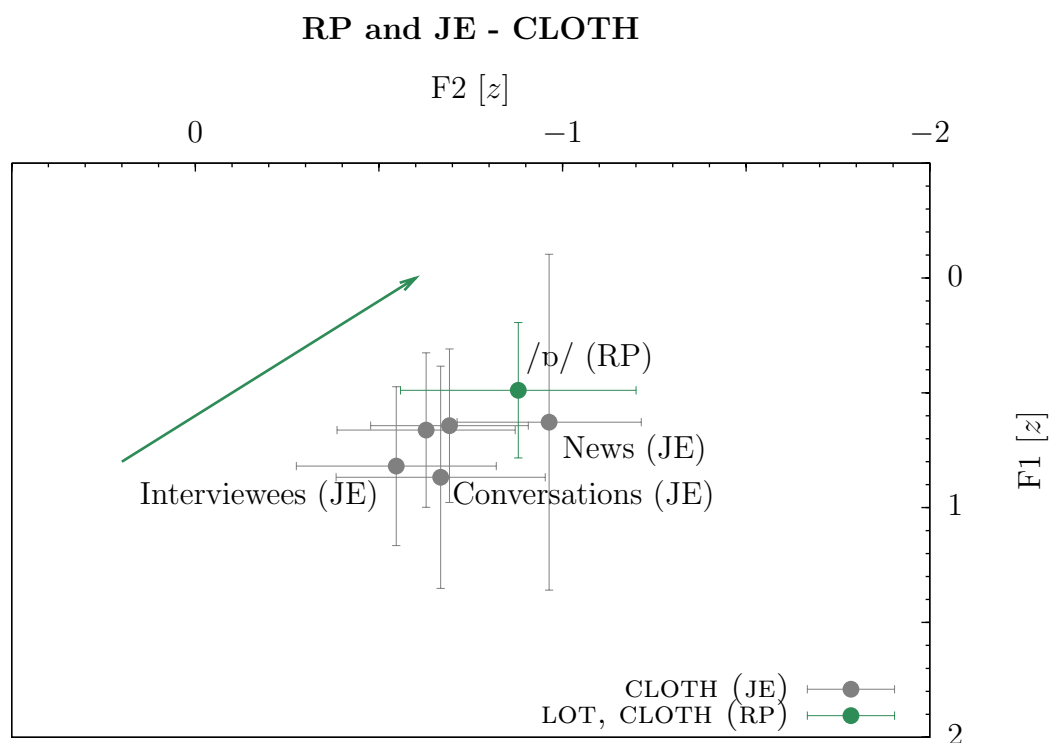


Figure 6.16: **Comparison with Received Pronunciation (RP) formant values – CLOTH.** Shown are means and standard deviations for F1 and F2 for the five text categories of the Jamaican English (JE) data (grey), together with the phonetic realization of the corresponding phoneme /ɒ/ in Received Pronunciation (dark green). The dark green arrow illustrates the tendency of the Jamaican English data points to approximate the British English norm of pronunciation with increasing level of formality of the speech situation. (Data from Deterding 1997.)

variability has been found to be present for all lexical sets investigated so far, this is clearly the one with the largest span of realizations across the vowel space. Moreover, there is a pronounced and almost perfectly linear movement of the Jamaican English realizations of THOUGHT in the direction of the location of the British English norm of pronunciation, as indicated by the arrow in Fig. 6.17. As with the LOT and CLOTH lexical sets, the Jamaican English pronunciation of THOUGHT in the text category of *news* clearly approximates the British English norm, this time, however, together with the text category of *speeches*. Thus, these two most formal speech categories form a separate cluster approximately halfway between the Received Pronunciation data point and the cluster constituted by the three more informal text categories, *conversations*, *interviewees* and *radio hosts*. Conversely, due to the diagonal movement across the formant space and the increasing centralization of THOUGHT with decreasing level of formality, it can be stated that this lexical set clearly moves towards more mesolectal Jamaican Creole pronunciations, namely in the direction of low central /a:/. This lexical set thus provides a clear and striking example of variability between two opposite poles of a continuum, these being British English on the more formal end of the continuum and Jamaican Creole on the informal end.

6.4.7 Comparison with AE formant values

Although it has become clear from the analyses in the previous sections that the two most probable influences on the phonetic realization of the Jamaican English vowels are British English Received Pronunciation (RP), on the one hand, and Jamaican Creole (JC), on the other, a comparison with American English data is nonetheless useful in order to describe the relationship between the phonetic variability in the Jamaican data and the various external norms in further detail, as well as as a last check on the plausibility of a postulated American English influence on Jamaican English patterns of pronunciation. This section therefore juxtaposes the British and Jamaican findings so far with formant data from five independent studies of varieties of American English.

A complicating factor that has to be taken into account in such a comparison,

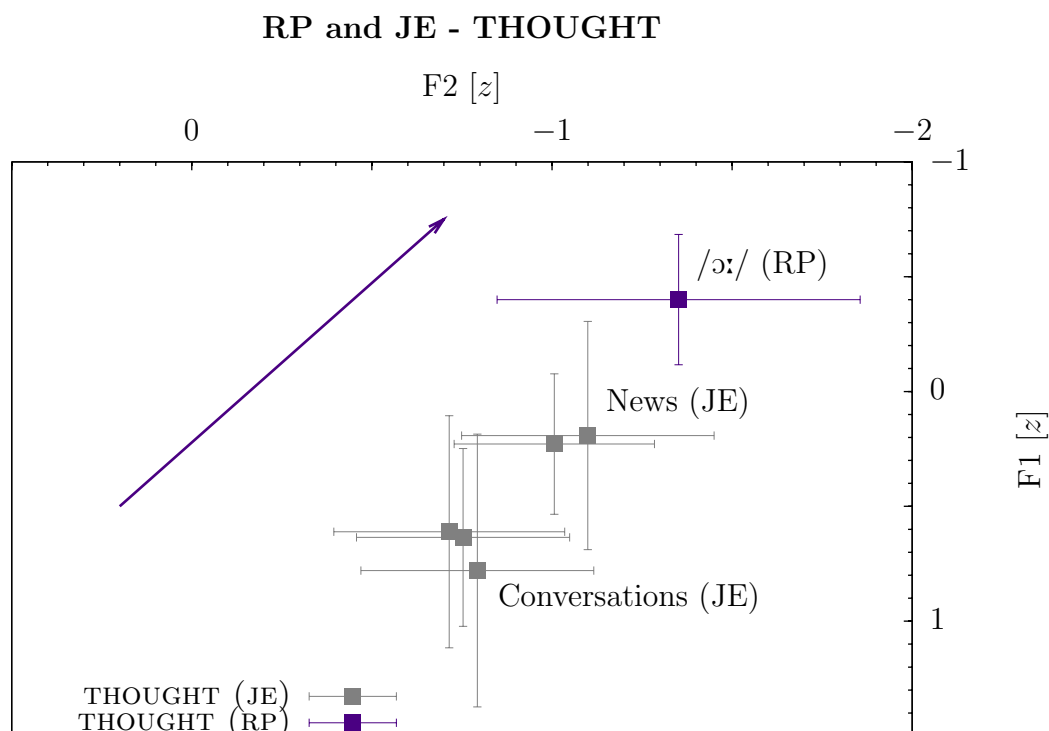


Figure 6.17: **Comparison with Received Pronunciation (RP) formant values – THOUGHT.** Shown are means and standard deviations for F1 and F2 for the five text categories of the Jamaican English (JE) data (grey), together with the phonetic realization of the corresponding phoneme /ɔ:/ in Received Pronunciation (violet). With increasing level of formality of the speech situation, there is a pronounced and almost perfectly linear movement of the Jamaican English realizations of THOUGHT in the direction of the location of the British English norm of pronunciation, as indicated by the violet arrow. (Data from Deterding 1997.)

however, is the fact that although the term *General American* for a postulated North American standard of pronunciation is still in use in European textbooks such as Wells (1982), both the term and the existence of such a homogeneous, supra-geographical standard are viewed much more sceptically by scholars from the North American continent:

The term “General American” arose as a name for a presumed most common or “default” form of American English, especially to be distinguished from marked regional speech of New England or the South. “General American” has often been considered to be the relatively unmarked speech of “the Midwest”, a vague designation for anywhere in the vast midesction of the country from Ohio west to Nebraska, and from the Canadian border as far south as Missouri or Kansas. No historical justification for this term exists, and neither do present circumstances support its use. While population mixture did make the different colonial varieties of American English more similar to each other than to any form of old-world British English, and there remain some relatively common pronunciation (and other) features that continue to justify the use of the term “American English” in opposition to other national terms for English varieties, there has never been any single best or default form of American English that might form the basis of “General American”. (Kretschmar 2004: 262)

In fact, a number of recent studies (most notably Labov, Ash & Boberg’s (2006) *Atlas of North American English*, but also e.g. Clopper, Pisoni & de Jong 2005) have demonstrated that North American English varieties are actually diverging with respect to their phonetic properties, increasing perceptual and realizational differences between the major dialect regions of the United States. In particular, those regions of the country whose accents have been traditionally considered to approximate the “General American” standard most closely now feature developments, especially in the vowel system, that lead to sharp divergences with other regional accents:

The dialect of the regions around the Great Lakes, known as the “Inland North”, was also relatively stable since that region was first settled in the middle of the nineteenth century. It is reportedly the basis for Kenyon and Knott’s *Pronouncing Dictionary of American English* (1953), which was in turn the basis for the broadcast standard adopted by radio networks in the middle of the twentieth century (Frazer 1993). [...] Inland North speech was also the basis for the vague term “General American” which continues to appear in popular accounts of American dialects. Though there remain features common to the North and the Midland [...] the sharp split between the vowel systems of the Inland North and other areas makes this dialect an unlikely candidate for a “general” or unmarked form of American English. (Labov, Ash & Boberg 2006: 190)

In view of such developments, the traditional definition of General American becomes increasingly difficult to uphold, as supra-regional features shared by speakers across the whole continent become rarer and rarer, leading in fact every variety of North American English to inevitably exhibit regional characteristics. Kretschmar, therefore, sees “Standard American English” as the result of “what is left over after speakers suppress the regional and social features that have risen to salience and become noticeable” (Kretschmar 2004: 262). This process, however, will still lead to regional variability within the “Standard American” accent thus produced, as the decision of which features are considered distinctive enough to become candidates for suppression is subjective and depends on the linguistic insight of the respective speakers:

Decisions about which features are perceived to be salient will be different in every region, even different for every speaker, depending on local speech habits and the capacity of speakers to recognize particular features out of their varied linguistic experiences. [...] The result of such decisions and perceptions is [...] a relative level of quality for [Standard American English] that varies from place to place and person to person. (Kretschmar 2004: 262/263)

This difficulty in defining a single pronunciation standard for the whole of the United States is also mirrored in the results in the following subsections, which show the phonetic realizations of the various lexical sets to differ markedly according to the region of origin of their speakers. While in some cases, as e.g. for the lexical set of TRAP, it is still possible to pinpoint a shared characteristic and thus to draw generalizations about the pronunciation of a particular lexical set as compared to the realization of the same lexical set in Jamaican English, the variability exhibited in the American English data often is as large as that found for Jamaican English in the present study.

One consequence of this variability, of course, is to render the probability of American English exerting a considerable influence on Jamaican speech even more unlikely, given the absence of a focussed norm of pronunciation for this variety. Jamaican speakers who come into contact with speakers of American English or who are exposed to American English patterns of pronunciation via the media, for example, will always be exposed to one particular variety of North American English, depending on the geographical origin of the American speaker in question. However,

the large diversity in North American English dialects makes it extremely unlikely that the combination of all of these influences will have a cumulative effect in one particular direction on the pronunciation of the Jamaican speaker.

The data material plotted in the formant graphs in the following subsections comes from the following five studies:⁶ Peterson & Barney 1952 (abbreviated *P&B* in the plot legends; geographical origin of speakers: Middle Atlantic, “General American”); Lehiste & Peterson 1961 (*L&P*; “General American”); Hillenbrand, Getty, Clark & Wheeler 1995 (*H et al.*; upper Midwest); Yang 1996 (*Y*; South/Southwest); and Hagiwara 1997 (*H*; southern California). Raw formant values reported in these studies were subjected to the same (or as close an approximation as possible) normalization procedure as for the Jamaican English data; i.e. converted to *z* scores following the modified Lobanov procedure. (For a more detailed description of the data processing, see Appendix C.4.)

STRUT

A comparison of normalized F1 and F2 formant values for British, American and Jamaican English for the lexical set of STRUT can be found in Fig. 6.18. Generally speaking, this vowel is realized at approximately the same degree of height in Jamaican and American English, with STRUT being realized somewhat fronter in the latter varietie(s). There are two exceptions to this general patterning: Firstly, the data from Hillenbrand, Getty, Clark & Wheeler (1995), for which STRUT is pronounced considerably further back than in the other North American varieties, reflecting the ongoing backing of this vowel in the Northern Cities Chain Shift (Clopper, Pisoni & de Jong 2005: 1669; Labov, Ash & Boberg 2006: 199). Secondly, Peterson & Barney’s (1952) realization of STRUT is located at the same height in the vowel space as the RP data point, i.e. it is realized considerably more open than in the other North American varieties, a fact which may be either due to historical reasons

⁶The five studies in question were chosen primarily because they report the raw formant measurements for their subject, thus allowing vowel normalization to be carried out according to the same procedure as the Jamaican data in the present study. In addition, they also cover some of the major geographical areas of the United States.

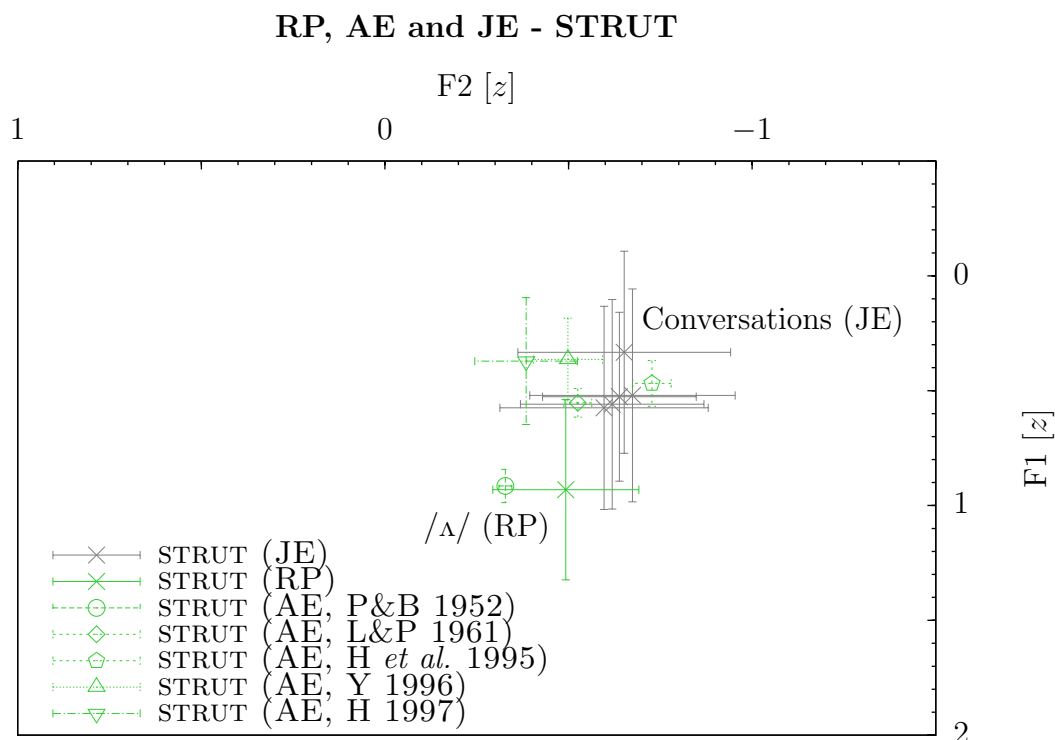


Figure 6.18: **Comparison of Jamaican English (JE), Received Pronunciation (RP) and American English (AE) formant values – STRUT.** Data material for American English comes from the following studies: Peterson & Barney 1952 (Middle Atlantic/“General American”); Lehiste & Peterson 1961 (“General American”); Hillenbrand, Getty, Clark & Wheeler 1995 (upper Midwest); Yang 1996 (South/Southwest); and Hagiwara 1997 (southern California).

(the study dating back over 50 years) or to artefacts in the sampling of speakers, only a very small number of which were investigated in this study.

All in all, however, no evidence can be discerned from the plot for a hypothesized influence of American English pronunciation patterns, as no movement of the Jamaican English data points can be detected towards the front, where most of the American English data points are located.

TRAP

The phonetic realization of the pronunciation of TRAP in the three varieties is illustrated in Fig. 6.19. Again, the North American data points are characterized by considerable scatter. However, a common characteristic, when compared to the British and Jamaican pronunciations, is that they are all realized more frontly

and/or higher than their Jamaican and British English counterparts. This is most pronounced for the data point from Hillenbrand, Getty, Clark & Wheeler (1995), reflecting the general raising of /æ/ in the Northern Cities Chain Shift (Labov, Ash & Boberg 2006: 192-195). Comparatively raised and fronted realizations are also characteristic of the data points from the other four studies, the sole exception being the data from southern California, where TRAP appears considerably raised but also somewhat backer.

While it is not impossible to view the gradual raising of Jamaican English TRAP with decreasing level of formality as evidence for the effect of a possible influence of American English pronunciation patterns, support for this hypothesis is rendered extremely shaky by the concomitant gradual backing of this vowel in Jamaican English speech. Thus, while American English influence cannot be conclusively ruled out on the basis of the present data, there is no compelling positive evidence for such an influence either.

LOT

Fig. 6.20 illustrates the pronunciation of the LOT lexical set in the five varieties of American English, together with the corresponding data points for British and Jamaican English. Once again, substantial variability can be observed in the North American data for this vowel. With the exception of the data point from Peterson & Barney's (1952) study, American English pronunciations of LOT tend to be realized much more openly than in British English, being located at approximately the same height in the vowel system as the more informal Jamaican English text categories. However, American English LOT is at the same time realized further back, making the realization of this vowel distinct from the Jamaican English pronunciation. The only exception to this is the data point from Lehiste & Peterson (1961), which lies in the same region as the more informal Jamaican English pronunciations. Another outlier is the data point from Hillenbrand, Getty, Clark & Wheeler (1995) at the very bottom of the vowel system, illustrating the lowering and fronting of LOT in the Northern Cities Chain Shift. Interestingly, similar to STRUT (and also, although to a lesser extent, to TRAP), it is again the data point from the oldest acoustic study

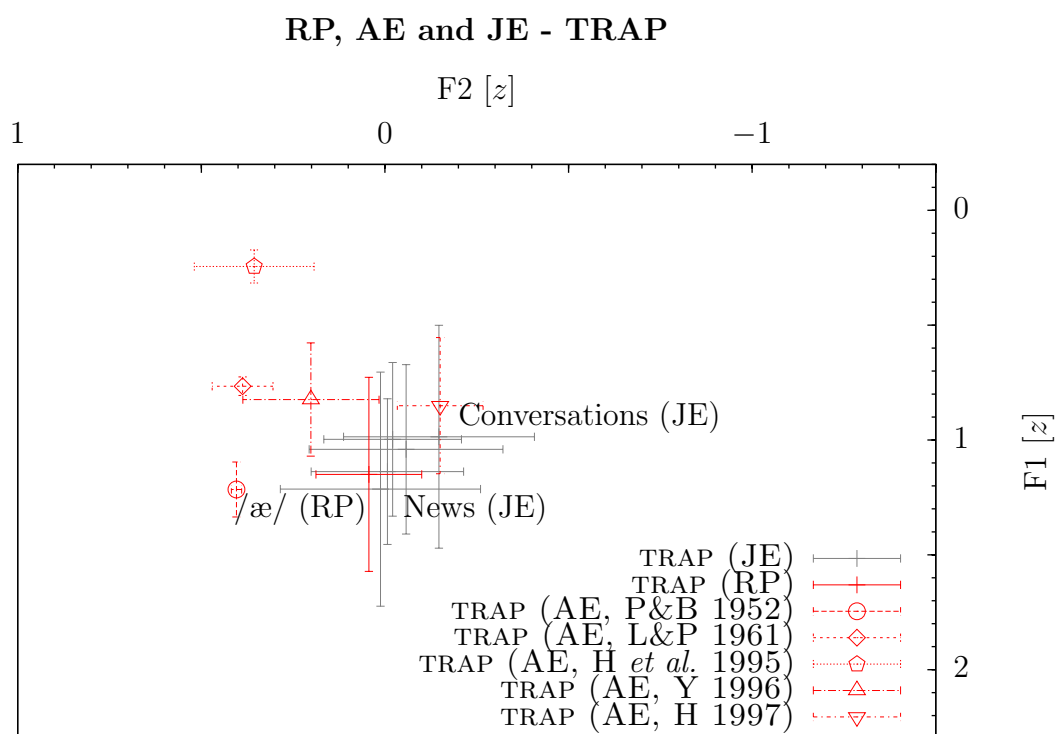


Figure 6.19: **Comparison of Jamaican English (JE), Received Pronunciation (RP) and American English (AE) formant values – TRAP.** Data material for American English comes from the following studies: Peterson & Barney 1952 (Middle Atlantic/“General American”); Lehiste & Peterson 1961 (“General American”); Hillenbrand, Clark & Wheeler 1995 (upper Midwest); Yang 1996 (South/Southwest); and Hagiwara 1997 (southern California).

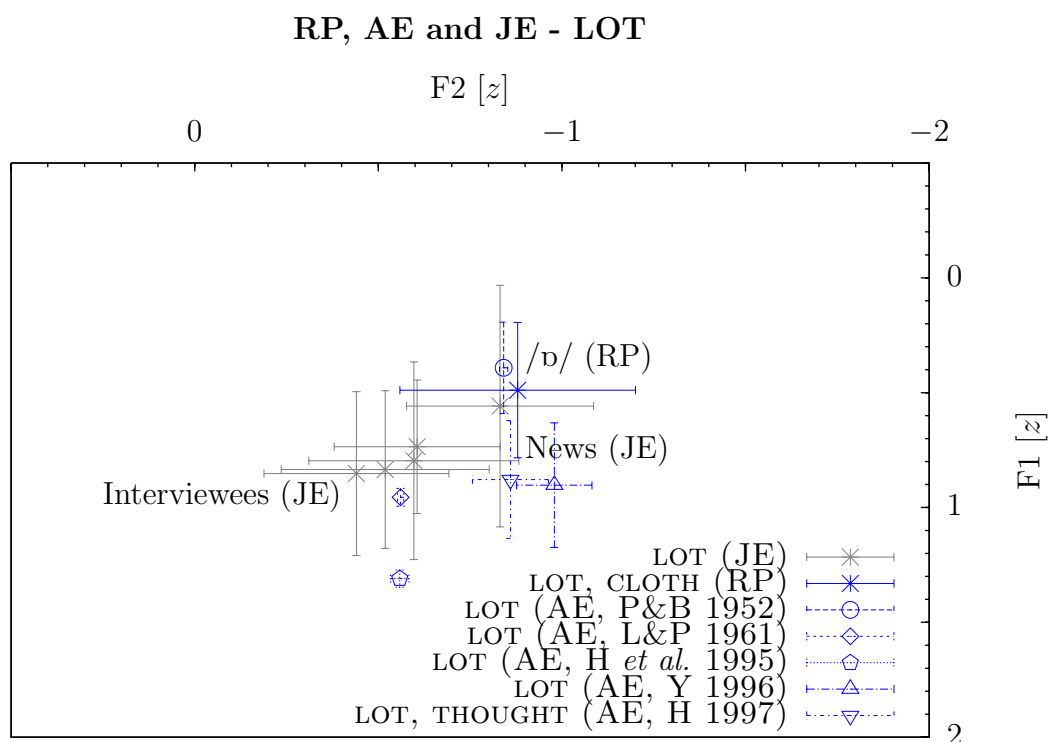


Figure 6.20: **Comparison of Jamaican English (JE), Received Pronunciation (RP) and American English (AE) formant values – LOT.** Data material for American English comes from the following studies: Peterson & Barney 1952 (Middle Atlantic/“General American”); Lehiste & Peterson 1961 (“General American”); Hillenbrand, Getty, Clark & Wheeler 1995 (upper Midwest); Yang 1996 (South/Southwest); and Hagiwara 1997 (southern California).

of North American vowels, Peterson & Barney’s (1952) study, that lies closest to the British English norm. However, no systematic variation of the Jamaican vowel realizations in the direction of their North American counterparts can be identified from Fig. 6.20. It is therefore concluded that there is no evidence for the influence of American English pronunciation patterns in the phonetic realization of LOT.

THOUGHT

The phonetic realization of the THOUGHT lexical set in British, American and Jamaican English is illustrated in Fig. 6.21. It can be seen at a first glance that the pronunciation of this lexical set differs vastly between British and American English, with THOUGHT being realized more openly in American English. Moreover, with the exception of the data point from Peterson & Barney’s (1952) study, all American

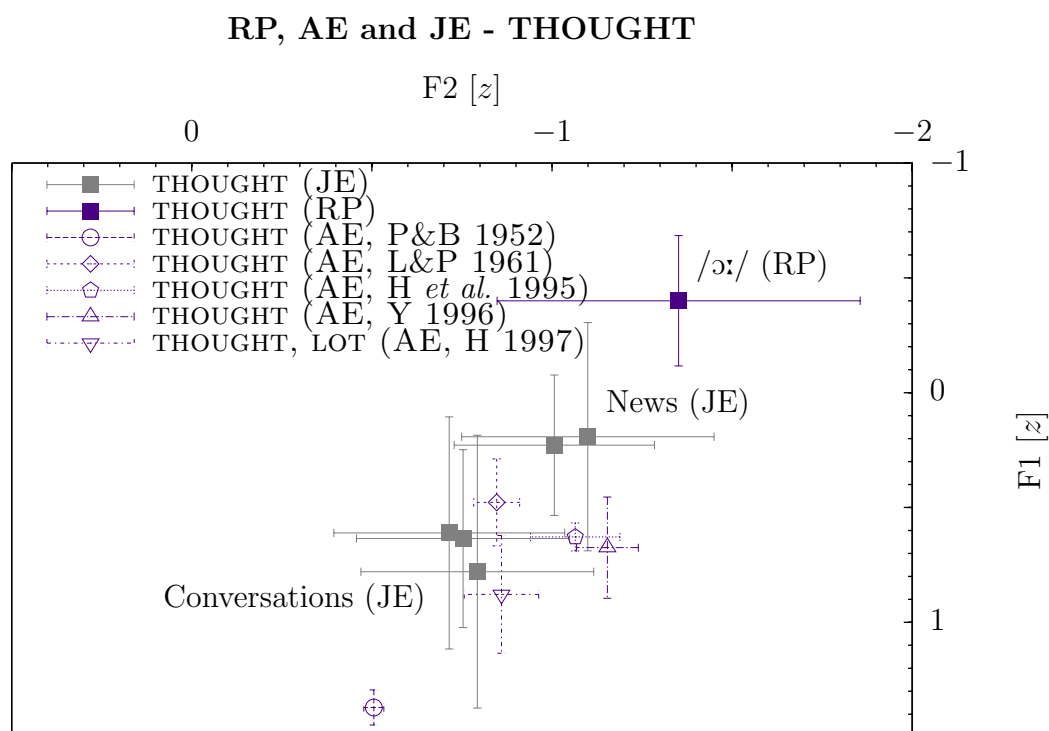


Figure 6.21: **Comparison of Jamaican English (JE), Received Pronunciation (RP) and American English (AE) formant values – THOUGHT.** Data material for American English comes from the following studies: Peterson & Barney 1952 (Middle Atlantic/“General American”); Lehiste & Peterson 1961 (“General American”); Hillenbrand, Getty, Clark & Wheeler 1995 (upper Midwest); Yang 1996 (South/Southwest); and Hagiwara 1997 (southern California).

English varieties are located at approximately the same height as the more informal Jamaican English text categories. While this might be taken to indicate a possible American English influence, it should also be noted that most of the American English data points lie somewhat more to the back than their Jamaican English counterparts. Similarly to LOT, Jamaican English THOUGHT exhibits a gradual “diagonal” cline across the vowel space, moving towards more open, but also more central realizations of the vowel with decreasing level of formality. This increasing centralization is in better accordance with a movement towards more mesolectal Jamaican Creole pronunciations. Thus, no conclusive evidence can be found for American English influence with regard to this lexical set either.

6.5 Chapter summary

The present chapter has demonstrated that, with the exception of STRUT, considerable variability exists in the non-high vowels of educated Jamaican English, i.e. among the upper end of the Jamaican creole continuum.

The phonetic realization of the STRUT lexical set exhibits a stable pattern: no variation was found across different text categories for this vowel, nor with respect to speaker characteristics such as speaker sex and age. The lack of stylistic variation in this variable strongly suggests that the phonetic realization of this vowel is neutral in its social connotations, i.e. there are neither stigmatized nor especially prestigious forms of this vowel in educated Jamaican English. Further comparison with British and American English formant data has also shown that this vowel is realized considerably backer in Jamaican English, and that, furthermore, there is a marked difference in vowel height between the Jamaican realization and the British English standard. All of these factors show that STRUT is a stable feature of Jamaican speech, and thus support the existence of a distinct Jamaican standard with respect to this vowel.

For the other lexical sets investigated – SCHWA; TRAP and BATH; LOT, CLOTH and THOUGHT –, variable patterns were observed that point to influence from Jamaican Creole and British English norms of pronunciation. In the case of SCHWA, there is a horizontal movement of this vowel across the F1/F2 space, with SCHWA becoming increasingly open with decreasing level of formality. Moreover, female Jamaican speakers tend to use more closed (i.e., British English-like variants) of this vowel than their male counterparts. Variable patterning was also observed for the lexical sets of TRAP and BATH; although this patterning appears to be systematic for the TRAP lexical set only. Finally, pronounced variation in both vowel height and degree of centralization were detected for the three lexical sets LOT, CLOTH and THOUGHT. The direction of their movements across the phonetic space is systematic and linear, in the direction of the British English norm of pronunciation for increasing levels of formality, and in the direction of more meso- or basilectal Jamaican Creole realizations for decreasing formality.

In conclusion, it can be stated that the influence of British norms of pronunciation decreases with decreasing level of formality, and that Jamaican Creole is the most important determining factor in this divergence from the British norm.

Chapter 7

Discussion

7.1 Rhoticity

Chapter 4 has shown rhoticity to be highly variable in educated Jamaican English. Individual speakers differ significantly with respect to their overall degree of rhoticity, which ranges from 0-70% overall, with the majority of speakers falling somewhere between 5-35% of postvocalic /r/ realization. All in all, educated Jamaican English as sampled in the present subset of speakers exhibits an overall rate of approximately 22% of postvocalic /r/ realization, a finding which clearly calls into question the traditional characterization of Jamaican English as predominantly rhotic.

Accents of English are usually classified into two broad groups, “rhotic” and “non-rhotic” accents respectively. In the characterization of English accents, rhoticity is generally one of the key features distinguishing between individual varieties. This importance of rhoticity in classifying varieties of English has been demonstrated empirically by McMahon (2008), who compared the segmental phonetic realizations of a list of 110 cognates in 91 varieties of present-day English by computing similarity scores and drawing network diagrams (phenograms) representing the degree of phonetic similarity between individual varieties (see McMahon *et al.* 2007 for further details). Her findings show rhoticity to be the single most salient feature distinguishing varieties of English. In the phenograms representing relative phonetic distance between the varieties investigated, rhotic and non-rhotic varieties of En-

English emerged as clearly separated by a broad split. (Incidentally, in this analysis, “Jamaica - Standard” emerged on the rhotic side of the split in the diagram.)

With respect to rhoticity, the variety of English spoken in Jamaica appears to be a somewhat unique case when compared to other varieties of English around the world. Usually, rhoticity is characterized and analyzed as a categorical phenomenon (especially in more theoretically oriented phonological accounts of this feature), varieties of English being usually classified as either “rhotic” or “non-rhotic”. By contrast, variation in rhoticity is either ignored or briefly acknowledged and downplayed, the emphasis being put on the regularity of the distinction instead.

What is more, the terms *rhotic* and *non-rhotic* turn out to be somewhat problematic in their usage on closer inspection, in that their precise meaning appears to be not universally agreed upon. While all authors agree that /r/ is usually not realized in postvocalic position in non-rhotic accents, the precise meaning of the term *rhotic* is interpreted differently by different authors. This also entails differences in the treatment of actual variability in rhoticity.

On the one hand, rhotic varieties are regarded as categorically (or near-categorically) /r/-pronouncing. An example of this kind of view can be found in Wells (1982: 220), who defines the term *rhoticity* as follows: “Accents which have undergone the change [of historical loss of /r/, which he calls **R Dropping**] are termed **non-rhotic**; accents which have not undergone [it], but have retained /r/ in all environments where it occurred historically, are termed **rhotic**.” Although he later acknowledges variability in postvocalic /r/ realization, conceding that “[i]ntermediate varieties also exist” (Wells 1982: 221), this variability is again described as being governed by regularly operating rules: “It is not uncommon for R Dropping to have applied preconsonantly but not finally [...] In Jamaica, /r/ is much more consistently present in *far* and *near* than in *start*, *beard*, and *letter*. Accents of this kind, if historical /r/ is retained consistently in some non-prevocalic environments but lost consistently in others, may be referred to as **semi-rhotic**” (Wells 1982: 221). Thus, the emphasis again is on consistency and regularity, and the use of the term *semi-rhotic*, according to Wells, is restricted to describing the regular patterning

of variation and therefore not applicable to the kind of variability exhibited in the present Jamaican data.

Trudgill & Gordon (2004), on the other hand, appear to subsume not only categorical or near-categorical realization of postvocalic /r/ under the label *rhotic*, but also accents or speakers that display variable degrees of postvocalic /r/ realization, arguing that the fundamental difference between these two types of accents lies in the underlying phonotactics, i.e. in the permissibility of /r/ occurring postvocally, and not in its actual regular realization in these contexts:

While there is an absolute prohibition in non-rhotic accents on the occurrence of /r/ pre-consonantly and pre-pausally, it is not necessarily the case that historical non-prevocalic /r/ will actually occur 100% of the time in rhotic accents, as there are many such accents where rhoticity is variable. [...] A speaker who has only 1% rhoticity is nevertheless most definitely rhotic. [One of their speakers analyzed] has a phonotactic system which **does** permit the occurrence of /r/ in non-prevocalic position in a way that would not be possible, for example, in the speech of either of the two authors of this paper (one from New Zealand, one from England) - “variably rhotic” is still “rhotic”. (Trudgill & Gordon 2006: 236/240)

By this definition, then, it would be perfectly possible to characterize educated Jamaican English as “rhotic” after all. However, in light of the fact that the varieties prototypically associated with the label *rhotic*, such as e.g. North American English, display much higher, if not near-categorical usages of post-vocalic /r/, this type of classification appears to be too misleading. Given the findings that postvocalic /r/ is realized in approximately only one out of five instances in Jamaican English, a label indicating this high degree of variability in educated Jamaican English, such as “variably rhotic”, seems much more descriptively appropriate.

Variability in rhoticity in educated Jamaican English appears to be unique in another way, in that it appears to be a case of diachronically stable variation. This is not only supported by the findings from Chapter 4, where age proved to be non-significant in determining postvocalic /r/ realization in present-day Jamaican English, but also by the fact that rhoticity in Jamaican English was already explicitly described as variable by Wells as early as 1982, i.e. more than a quarter of a century ago. Similarly, Akers’ (1981) descriptions of rhoticity at the acrolectal end of the Jamaican speech continuum are interspersed with qualifications such as “in

at least monitored styles” (Akers 1981: 75), or more explicitly by the statement that “variable deletion of final nonsyllabic r may occur even in stage 6 speakers [i.e. speakers at the acrolectal end of the continuum]” (Akers 1981: 77), thereby implying that variability in postvocalic /r/ production was present in acrolectal Jamaican speech at that time as well. By contrast, other varieties for which variable rhoticity has been reported usually are subject to a sound change in progress, either from a previously non-rhotic norm to a rhotic one, as in Scotland (Romaine 1978, Stuart-Smith 2004), Eastern New England (Nagy & Roberts 2004), Boston (Irwin & Nagy 2007; Bernard, Andrus & Anttila 2007), New York City (Labov 1966; Gordon 2004) or the Southern U.S. (Feagin 1990; Thomas 2004), or vice versa, as in Southeastern England (Altendorf & Watt 2004), the Channel Islands (Ramisch 2004), or the Southland-Otago region of New Zealand (Gordon & MacLagan 2004).

While the different social contexts of these other varieties of English with variable rhoticity obviously render them not comparable to the Jamaican situation with respect to the language-external sociolinguistic factors, it is nevertheless possible to compare findings from empirical studies of these varieties with the Jamaican data in order to assess which similarities and differences in language-internal factors may reflect universal phonetic principles, and which may be situation- or context-dependent. In the present analyses, the latter clearly applies to the factor of *text category*, or relative formality of the speech situation, since the variant selected in more formal speech situations is clearly dependent on the social values ascribed to it, i.e. its (overt or covert) prestige, which, in turn, will clearly be different in different social settings.

The situation, however, is somewhat different with respect to the second factor found to be a significant predictor for the occurrence of postvocalic /r/ in the present Jamaican data, namely, *preceding vowel*. Here, the low incidence of postvocalic /r/ following unstressed [ə] (as in the text categories of LETTER and SCHWA in the present analyses) appears to follow a universal tendency, being mirrored in other studies of variable rhoticity in a number of varieties of English in North America and the Caribbean. Feagin (1990), investigating the ongoing sound change in Southern U.S. English from an older, non-rhotic prestige norm to rhotic pronunciations

in Anniston, AL, found “Environment IV”, “[u]nstressed vocalic *r*” (Feagin 1990: 133) – corresponding to the text categories of LETTER and SCHWA in the present analyses – to emerge as the last context in which rhoticity was likely to occur in her implicational hierarchy: “individuals who have *r* in Environment IV, *mother*, are likely to have it also in *far*, *fur*, and *first*, Environments III, II, and I.” (Feagin 1990: 137). Other descriptions of English in the American South agree well with this analysis, showing preceding unstressed [ə] as the context disfavoring realization of postvocalic /r/ both synchronically as well as diachronically: “Unstressed syllables are the most likely contexts for non-rhoticity, and some varieties that show consistent rhoticity in other contexts show variable non-rhoticity in unstressed syllables” (Thomas 2004: 315). Similarly, the lexical set of LETTER has been found to be the least likely context for rhoticity in Eastern New England. In an empirical study of /r/-vocalization by white speakers in Boston, MA (Irwin & Nagy 2007, confirmed and extended to Bostonian African Americans in Nagy & Irwin 2007), unstressed [ə], or the LETTER lexical set, emerged as the category with the lowest rate of /r/ realization: 31% as opposed to a general degree of rhoticity of 38%. Another study of rhoticity in Boston, as well as in John F. Kennedy’s 1960 nomination acceptance speech (Bernard, Andrus & Anttila 2007), used an Optimality theoretical approach to arrive at a similar implicational hierarchy, with environment “(f) _C, no primary stress, after central vowel” (corresponding to LETTER in the contexts /__C and __#C in the present study) as the last environment for rhoticity to occur in, just after “(e) _C, no primary stress, after noncentral vowel” (i.e. all other unstressed lexical sets). A similar pattern also emerges for Bajan, or Barbadian Creole. Although Blake (2004: 503) characterizes this variety as “fully rhotic, with [r] rarely deleted among all levels of society”, a list of Bajan vowel realizations in the same publication features both the NURSE lexical set, as well as the LETTER and COMMA lexical sets, without /r/, [ɹ] being given as the pronunciation of NURSE and LETTER, and [ə] for the COMMA class, implying either some degree of variability or even categorical absence of postvocalic /r/ in this environment. In Newfoundland English and in Labrador, too, “a number of traditional speakers from a range of communities” are reported to “display a variable tendency to postvocalic *r*-deletion in unstressed syllable-

bles (not only in *letter* words, but also in such cases as unstressed *there's*)” (Clarke 2004: 377). Non-rhoticity is also reported as being favored in the phonological environment of unstressed syllables in African American Vernacular English, for which “[t]he deletion of vocalization [of /r/] most often takes place after non-central vowels in unstressed position; and least often after central vowels in stressed position” (Edwards 2004: 388). Finally, a study of the acquisition of a non-rhotic second dialect (British English) by children with an originally rhotic (Canadian) accent notes that “/r/ tends to be dropped in unstressed syllables, most likely morpheme-finally and when it is followed by a glide” (Berger 2007).

Thus, there appears to be overwhelming cross-varietal evidence¹ that this environment, which also emerged as the one favoring rhoticity the least in the present Jamaican data, exhibiting an overall degree of rhoticity of only 3-4%, appears to be universally disfavored for the realization of postvocalic /r/. It is, however, not quite clear from especially the last three descriptions (of Newfoundland/Labrador English, African American English and second dialect acquisition), whether the crucial determining factor involved in this mechanism is word class or stress, these two factors being highly interdependent. Unfortunately, neither of the studies mentioned above analyses stress as an independent and separate factor.

A phonetic explanation for this phenomenon might lie in the fact that due to the lack of stress, /r/ is perceptually less salient in unstressed syllables, as has been noted in connection with linking /r/ realization by Crystal (1984: 43, cited in Hay & Sudbury 2005: 802). Especially in an environment where rhoticity is variable and thus both *r*-ful and *r*-less forms are acceptable, speakers might thus be less inclined to undertake the additional articulatory effort of pronouncing /r/ (or an /r/-colored vowel), which has been shown to be quite complex in its articulatory configurations (see e.g. Lindau 1985; Alwan, Narayanan & Haker 1997). Moreover, the durational compression of unstressed syllables in English simply allows less time for /r/ production in this phonetic context.

¹Possible counterevidence to this tendency comes from Trudgill & Gordon (2006), who note that postconsonantal /r/ in the end-stages of loss of rhoticity in earlier Australian English was actually favored after the *LETTER* lexical set (Trudgill & Gordon 2006: 240), as well as from Wells, who cites a number of examples in the *Linguistic Atlas of England* (Orton, Sanderson & Widdowson 1978) where /r/ occurs in the *LETTER* set in otherwise non-rhotic dialects.

A second universal factor which, however, is not supported by the results from the present data, appears to be the high degree of postvocalic /r/ realization in words from the NURSE lexical set. This is mentioned as the most likely phonetic environment for postvocalic /r/ production in Southern U.S. speech by Feagin (1990: 132/133) and Thomas (2004: 309). Two NURSE environments (preconsonantly and word-finally) also appear as the most and fourth most likely contexts for rhoticity in white Bostonian English in Irwin & Nagy (2007), with percentages of postvocalic /r/ realization of 64% (preconsonantly) and 38% (word-finally), respectively. Taking the token counts from both NURSE environments together yields an overall degree of rhoticity in Bostonian English of 318/564 or 56.4%, making this environment the most likely overall to exhibit postvocalic /r/ realization. African American Vernacular English, too, is described as being rhotic mostly in the NURSE lexical set: “African Americans [in the U.S. South] remain largely non-rhotic except in the NURSE class” (Thomas 2004: 318, see also Edwards 2004: 388). The same holds also true for Bahamian English (Childs & Wolfram 2004: 446), and this context is also the only one where postvocalic /r/ is found in Hawai’i Creole: “the only post-vocalic R or R-coloured vowel in Hawai’i Creole is /ɜr/” (Sakoda & Siegel 2004: 743/744). Moreover, NURSE has been found to exhibit rhoticity in New Zealand English, otherwise characterised as non-rhotic: “A recent study of New Zealand hip-hop music by one of our students found that non-prevocalic /r/ was used systematically after the NURSE vowel (*bird*, *heard*), but nowhere else” (Bauer & Warren 2004: 16), and this tendency for postvocalic /r/ to be favored in the NURSE lexical set also appears to hold for the variable rhoticity observed in the Southland-Otago region of New Zealand, which is described as “particularly prevalent following the NURSE vowel, much rarer elsewhere” (Bauer & Warren 2004: 595, see also Gordon & MacLagan 2004: 606). The special role of this lexical set (and of LETTER) with respect to rhoticity has also been pointed out by Wells (1982: 221), who noted that “[t]he mid central vowels seem to behave idiosyncratically in respect of their influence on the retention or otherwise of a following /r/”, citing examples from North American English and British English dialects.

However, this apparently universal tendency for postvocalic /r/ realization to be

avored in words of the NURSE lexical set is not supported by the findings in the present Jamaican data. For this phonetic environment, educated Jamaican English exhibits an overall degree of rhoticity of approximately 25%. While this is slightly above the overall rate for all phonetic environments, approximately 20%, it falls nevertheless far short of the mark of percentages around 64% and 67%, such as reached in the environments of a preceding FORCE or NEAR vowel. This might possibly be connected to the fact that the NURSE vowel does not exist in basilectal Jamaican Creole, being merged with the vowel of the STRUT lexical set (Wells 1982: 576, Devonish & Harry 2002: 454).

With regard to the other lexical sets, no consistent pattern appears in the literature. Feagin (1990) and other authors (see also Thomas 2004: 317/318, Tillery & Bailey 2004: 333/334) describe rhoticity in the American South as being favored by front vowels over back vowels, as well as by high vowels over low vowels: “Within Environment III [i.e. all other lexical sets], stressed vowel followed by tautosyllabic *r* [...], the ordering of change [from non-rhotic to rhotic] seems to be front vowels first, along with low central [ɑ], back vowels last. Within the categories front and back, the higher vowels with *r* change first” (Feagin 1990: 137). Thus, in the data from the American South, NEAR and SQUARE emerge as the environment in which postvocalic /r/ is most likely to be manifested. This is in contrast to the findings of Irwin & Nagy (2007) for rhoticity in Boston, where the same lexical sets emerge in the lower part of the rhoticity hierarchy, with overall rates of rhoticity showing the following ordering (in descending order) of the lexical sets: NURSE, CURE, START, NEAR, NORTH/FORCE, SQUARE, LETTER. On the other hand, Trudgill & Gordon (2006), analyzing the end stages of loss of rhoticity in earlier Australian English, found rhoticity to be favored after the NORTH/FORCE and LETTER lexical sets (Trudgill & Gordon 2006: 240).

None of these findings seems directly applicable to the Jamaican situation, for which the ordering of the environments favoring the realization of postvocalic /r/ in terms of the preceding vowel is as follows: NEAR - FORCE - SQUARE - CURE - START - NURSE - NORTH - PRICE - MOUTH - LETTER/SCHWA.² Thus, while the

²Please recall that the lexical sets of PRICE, MOUTH and SCHWA, which are not part of Wells’

high degree of rhoticity in the NEAR lexical set (roughly 67%) - and also, albeit to a lesser extent, SQUARE (in third place with an overall degree of rhoticity of 46%) - mirrors the preference for rhoticity after front and high vowels described for the American South, this pattern is interrupted by the next most favorable environment, the lexical set of FORCE, with an overall degree of approximately 64% in the Jamaican English data, which, by contrast, is the second least favorable in the implicational hierarchy proposed for the Southern U.S. The high incidence of postvocalic /r/ in this environment, on the other hand, is in accordance with Trudgill & Gordon's (2006) description of phonetic environments favoring postvocalic /r/ realization in Australian English. However, the fourth most likely environment for incidence of postvocalic /r/ in educated Jamaican English, the lexical set of CURE, does not fit either of the patterns described. Moreover, the Jamaican data are in clear disagreement with the implicational scale described for Bostonian English by Irwin & Nagy (2007), with comparatively low values for the environments most favored in the Bostonian data, NURSE and (although to a lesser extent) CURE.

In conclusion, therefore, while rhoticity does seem to be universally influenced by the nature of the preceding vowel in some cases (such as the LETTER lexical set), there appear to be no universally valid phonetic principles at work for the rest of them, with differing and often non-systematic patterning observed in different localities.

Another factor found to be of importance in determining the realization of postvocalic /r/ in educated Jamaican English in the present study was the position of /r/ and the presence or absence of a following pause word-finally. There is surprising agreement between all studies investigating this factor and the findings for the Jamaican data in the present study. Recall that the analyses in Chapter 4 have shown postvocalic /r/ to be significantly more frequent in word-final position, as opposed to preconsonantal position, with average rates of /r/ realization of 27% and 16%, respectively. These findings agree with what has been described for other situations in which variable rhoticity is found. For example, Labov's (1966) famous

(1982) original inventory of lexical sets, were added in the present study to describe the incidence of postvocalic /r/ in words such as *fire*, *hour* and *international*, respectively.

department store study in New York City found /r/ to be favored in word-final (as opposed to word-internal, morpheme-final) position (Labov 2006: 48). Although all other empirical studies on variable rhoticity in the U.S. (Feagin 1990; Bernard, Andrus & Anttila 2007) unfortunately do not distinguish between these two environments, Irwin & Nagy (2007), in their study of rhoticity in Boston, do analyze them separately, with the result that speakers are again more likely to pronounce /r/ word-finally: 40% of the time in this environment as opposed to 36% in pre-consonantal position. This finding, however, does not seem to hold for the NURSE lexical set, for which /r/ in word-final position is actually less frequently realized than preconsonantly, with an overall rate of rhoticity of 64% in the latter position but only 38% in the former (Irwin & Nagy 2007: 141). (The same study also found no significant effect of morpheme boundaries on the realization of postvocalic /r/ (Irwin & Nagy 2007: 142), a finding which is in good agreement with the results found for the Jamaican data in the present study.) Conversely, preconsonantal position is also mentioned as a factor disfavoring rhoticity in the Southland-Otago region of New Zealand: “The /r/ in word-final position (e.g. in *car*) or as syllabic /r/ (e.g. in *letter*) is maintained to widely varying degrees. Preconsonantal /r/ (e.g. *card*, *fort*) is less likely to be maintained” (Gordon & MacLagan 2004: 606).

Thus, another possibly universal factor appears to be reflected in the data for educated Jamaican English: the fact that postvocalic /r/ pronunciation is favored in word-final position, compared to preconsonantal position.³ A possible phonetic explanation for this tendency might lie in the fact that the presence or absence of /r/ in word-final position, especially when followed by a pause,⁴ is much more perceptually salient than in contexts where this variable is followed by a consonant. At least in varieties of English where *r*-ful pronunciations carry high prestige (as is the case for New York City, New England and Jamaica), this might motivate speakers to increase their use of postvocalic /r/s in this phonetic environment. The findings

³The only possible counterevidence to this that emerged in the survey of the literature was the finding by Berger (2007), who, in her study of the acquisition of a non-rhotic second dialect (British English) by children with an originally rhotic (Canadian) accent, states that “/r/ tends to be dropped [...] most likely morpheme-finally.” However, “morpheme-final” is not necessarily identical with “word-final”, making this possible counterevidence questionable.

⁴Regrettably, this variable was not controlled for in any of the studies surveyed here.

from the present study further support this explanation, in that the presence of a following pause makes /r/ realization more than five times as likely in this context than in preconsonantal position (see section 4.4.4).⁵

The question remains of how and why rhoticity survived at all in Jamaica. With non-rhotic Received Pronunciation as the prestige norm on the one hand and a reportedly non-rhotic Creole⁶ on the other, the expected development would have been convergence on a non-rhotic norm. That this did in fact not happen historically is probably due to a number of factors. First of all, large proportions both the early settlers and later immigrants were speakers of regional and/or nonstandard British dialects, most notably the large number of (rhotic) Scots in the eighteenth century (see section 2.2). Moreover, many early settlers came from Barbados, which has been described as “the only West Indian accent that is fully rhotic at all levels of society” (Wells 1982: 584, see also Blake 2004: 503). A factor exerting counter-pressure to the formation of a non-rhotic norm was the genesis of Jamaican Creole, which, as many other creoles, is non-rhotic, probably due to either the non-existence of rhotic phonemes, or the fluctuation between /r/ and /l/, in many West African languages (Parkvall 2000: 33). Thus, rhoticity acquired social meaning, becoming a means of distancing from speakers of Jamaican Creole. Later on, the role of the educational system became increasingly important, e.g. with respect to the influence of spelling pronunciations. Moreover, as has been noted by Irvine (1994), many teachers, coming from less affluent families, are likely to be rhotic (Irvine 1994: 71/72).

A similar case in point to the Jamaican language situation is India, which shares a colonial past with Jamaica (see e.g. Hansen, Carls & Lucko 1996: 210-216), and for which striking similarities emerge with respect to rhoticity. In India, English is the “associate official” language of the country (Gargesh 2004: 992, McArthur 2002: 313), and, similarly to Jamaica, British English has been the historical norm. With

⁵This explanation does not hold for the last study mentioned, variable rhoticity in the Southland-Otago region of New Zealand (Gordon & MacLagan 2004), which is currently in the process of losing postvocalic /r/. However, it is not inconceivable that the variable holds covert prestige there, being associated with local identity similar to the diphthongs /aʊ/ and /aɪ/ in Labov’s (1963) classic study of Martha’s Vineyard.

⁶See section 4.2.1 on qualifications of this statement.

the exception of small majority of “Anglo-Indians”, English in India functions as a second language for a large number of speakers (Hansen, Carls & Lucko 1996: 216), although estimates of the actual number of speakers of English remain controversial (see e.g. McArthur 2002: 312). In contrast to Jamaica, where Jamaican Creole predominates as the variety spoken alongside English, a “rather complex socio-linguistic situation” (Sahgal & Agnihotri 1988: 51) exists in India, leading to a comparatively higher degree of variability within Indian English itself due to the diversity of first-language backgrounds found across the country (see Mehrotra 1982: 153). English in India is used in domains similar to where it is used in Jamaica: in parliament and government administration, in legislation and the courts, in the economy, the mass media and literature (Hansen, Carls & Lucko 1996: 217/218, Gargesh 2004: 992, McArthur 2002: 313). As in Jamaica, English enjoys high prestige: it is “the language of privileges and opportunitiers, of upward mobility and social advancement, of innovations and modernization” (Mehrotra 1998: 2). English also functions prominently in the Indian educational system, where transmission and contact with English takes place for the majority of the population: “[Indians] acquire the language from schools and colleges” (Das 1982: 143). Similar to Jamaica, too, a local standard has emerged in India, defined as the forms of speech used by “a significant number of administrators, teachers, scientists, journalists, businessmen etc.” (Gargesh 2004: 993, see also Das 1982: 142), i.e. a similar segment of the population to what has been described by Shields (1989) as speakers of the newly emerging educated Jamaican standard (see section 2.6). This variety of English is “considered to be the educated variety and a benchmark for English Language teaching” and transmitted to new generations via the educational system, where English is “taught to Indians by Indians” (Gargesh 2004: 993).

With regard to rhoticity in educated Indian English, conflicting accounts of this feature, which has been described as “certainly the most diagnostic feature socially” (Sahgal & Agnihotri 1988: 62), can be found in the existing literature. A detailed sociolinguistic study of the speech of 45 informants from the South Delhi area in the late 1980s (Sahgal & Agnihotri 1988), investigating both reading and conversational style, found this variable to behave like a typical sociolinguistic marker, with RP-like

postvocalic /r/ deletion constituting the prestige variant, which varied with respect to education/social status, age and speaker sex, to the extent that the authors concluded that Indian English might well be on the way towards non-rhoticity (Sahgal & Agnihotri 1988: 58).

Present-day accounts of rhoticity in Indian English, however, are contradictory with respect to their statements about rhoticity, a finding which strongly indicates that *r*-ful pronunciations still exist in educated Indian English. Similar to acrolectal Jamaican English, Indian English is described as “almost universally rhotic” by McArthur (2002: 320). Another set of authors, too, describe Indian English as mostly rhotic (“meist rhotic accent”) or, more explicitly, as characterized by the use of /r/ in all positions (Hansen, Carls & Lucko 1996: 221), noting in particular that rhoticity has in fact become part of the recommendations of *Indian Recommended Pronunciation (IRP)* (Hansen, Carls & Lucko 1996: 221/222). Trudgill & Hannah (2002), on the other hand, claim that “[t]he English of most educated Indians is non-rhotic” (Trudgill & Hannah 2002: 130). The conflict between those statements, together with the fact that all descriptions are qualified by hedges such as “most”/“meist” and “almost”, strongly suggests that what is described with respect to the Indian postvocalic /r/ situation is in fact a case of variable rhoticity, paralleling the situation in Jamaica. This conclusion is strongly supported by yet another description of present-day rhoticity in India, where variable rhoticity is implicit in the statement that “[g]enerally, [...] /r/ is highly pronounced whenever it occurs in the graphic script in all varieties of [Indian English] as a second language” (Gargesh 2004: 997). The similarities between the two varieties even extend to a similar patterning of postvocalic /r/ realization in the unstressed vowels: According to Gargesh (2004), the LETTER lexical set is “realized as [ər] although in the highly educated variety it tends to be the non-rhotic [ə]” (Gargesh 2004: 997). This parallels the Jamaican situation, where Wells (1982: 576) describes “the usual unmonitored pronunciation for all social classes in Jamaica” as “non-rhotic in respect of LETTER words”. With regard to the possible factors influencing rhoticity in Indian English, the same contributing factors, namely “American influence” (Sahgal & Agnihotri 1988: 51), as well as spelling pronunciations (Hansen, Carls & Lucko 1996:

221; Gargesh 2004: 998/999, Sahgal & Agnihotri 1988: 51), are often mentioned. Thus, the two varieties appear to share not only a similar colonial background, but also similar phonological properties, despite the fact that the two countries differ significantly with respect to many other aspects of their history and current sociolinguistic situations. What the two have in common, however, is the strong association of English with the education system, as well as the existence of a local elite whose speech patterns, in turn, are accepted as the local standard of pronunciation.

The above-mentioned similarities in rhoticity between India and Jamaica also strongly suggest that the higher degrees of rhoticity found in some of the text categories analyzed in the present study should not be taken as indicative of American influence. Recall that highest levels of postvocalic /r/ realization in the present Jamaican data were found in the most informal text category, *conversations*, which is also the text category with the largest number of speakers from the youngest age group. While the hypothesized influence of rhotic American English is not incompatible with these findings, this American influence being most likely transmitted via the mass media and popular culture and thus being most likely to appear in the speech of exactly this sub-group of speakers, the evidence for this is far from conclusive. Given the parallel developments in a country like India, whose geographic distance from the U.S. is significantly greater, influence of the educational system and local standards appears a much more likely explanation. Recall that almost all speakers in the most informal text category, *conversations*, besides being members of the youngest age group, are university students (or, in exceptional cases, lecturers). The high levels of postvocalic /r/ realization found in this text category thus are probably due to this background, as these speakers are still in close contact with the norms perpetuated by the educational system. In addition, these speakers, being in the process of acquiring tertiary education, represent an upwardly socially mobile segment of the Jamaican population, which might be more inclined to use rhotic pronunciations as a means of distancing themselves from stigmatized Creole patterns of pronunciation (see also Irvine 1994: 67, 71/72). It is not clear, however, whether this high degree of rhoticity will be retained later on in life, once speakers have achieved a more prestigious and socially secure position in society. Moreover, it

should also be taken into account that age, when investigated explicitly in Chapter 4, did not emerge as significant in influencing postvocalic /r/ realization in the text category of *conversations*.

Thus, in conclusion, while rhoticity does indeed diverge sharply from British English patterns of pronunciation and can thus be considered part of the emergent local Jamaican standard, conclusive evidence can be found neither for a postulated influence of American English, nor for an ongoing sound change in progress.

7.2 Linking /r/

The second variable investigated in connection with rhoticity in the present study, linking /r/, was found to be highly variable in educated Jamaican English as well. Overall, less than half (43.2%) of all potential linking /r/s were realized in the present data. Linking /r/ varies with text category and speaker sex; however, no unilinear relationship to level of formality of the speech situation could be discerned in the present analyses. Moreover, linking /r/ was found to be used less often by female than by male speakers. These findings in combination suggest that realization of linking /r/ does not form part of the educated Jamaican English standard, or, conversely, that variable realization of /r/ in tokens in potential linking /r/ contexts is the norm in Jamaica. Glottalization of word-initial vowels in potential linking /r/ contexts also occurred at an average rate of 38.6%, being markedly prevalent (60–70% for r='O' tokens) in the two most formal text categories but much less so in the other three, and being used by females more than by males. Contrary to expectations that glottalization would be used as a substitute vowel hiatus breaker in cases with non-realized linking /r/, a substantial proportion of tokens was realized with neither linking /r/ nor glottalization. Glottalization also occurred in approximately one third of the cases where linking /r/ was actually present.

The results of the present study can be compared with recent findings by Hannisdal (2006), who investigated /r/ sandhi in the speech of 20 speakers of Received Pronunciation in television newscasts. Her results show remarkable similarities to the findings from the Jamaican data in the present study. Linking /r/ was found

to be highly variable, only 59.8% of all linking /r/s being realized on average (out of 6045 tokens) (Hannisdal 2006: 159). This rate, somewhat higher than the Jamaican average of 43.2%, indicates a degree of variability of this feature in Received Pronunciation usually not described in accounts of linking /r/ in British English speech. A prevalence of glottal stops in tokens with \emptyset realization was also noted. Unfortunately, no precise numbers are given with respect to this feature, but it is stated that “[t]he most common realisation of \emptyset is by far the glottal stop” (Hannisdal 2006: 158). In accordance with the present results for educated Jamaican English, women were found to use linking /r/ less than men; in 56.3% of all cases for female speakers, but in 62.2% of all cases for male speakers. This difference between the two sexes, however, was not statistically significant (Hannisdal 2006: 163). With respect to stylistic variation, there was a tendency for speakers to favor /r/ sandhi in interviews (as opposed to reading style), with an overall rate of occurrence of /r/ sandhi of 70.3% in the former text type but only 55.9% in the latter. (Both variables, linking and intrusive /r/, were analyzed together in this context. However, it is stated that “stylistic correlation is the same for linking and intrusive /r/” (Hannisdal 2006: 179).) This is only partially in accordance with the present findings for educated Jamaican English. Although lower percentages of linking /r/ realization occur in the present study in the text category of *news* than in the two most informal text categories, *conversations* and *interviewees*, the opposite pattern is observed when comparing these latter two text categories to the second most formal text category, *speeches*, which exhibits a much higher level of linking /r/ realization. Thus, as noted above, a unilinear pattern between levels of linking /r/ realization and level of formality of the speech situation does not seem to hold for the present Jamaican data.

Given the fact that the results of Hannisdal’s study run counter to most descriptions of British English pronunciation, where realization of linking /r/ is usually taken as the default case (in Upton’s (2004: 228) words, “a normal feature of Received Pronunciation”), two possible conclusions can be reached with regard to its relation to the Jamaican English results obtained in the present study. If linking /r/ realization in Received Pronunciation really is as variable as observed in Hannisdal’s

study, the two varieties in question – educated Jamaican English and British English Received Pronunciation – actually exhibit a highly similar patterning with respect to this variable, not only in terms of the overall degree of linking /r/ realization, but also in terms of the factors conditioning this variation – style and speaker sex –, and the direction of their influence. The low incidence of linking /r/ in educated Jamaican English is not surprising in this scenario, as linking /r/ in British English speech would then represent a highly inconsistent norm, which in all likelihood could not be expected to be taken over by Jamaican speakers due to the sporadic nature of its occurrence. On the other hand, it is not completely impossible that the low degree of linking /r/ incidence in Hannisdal’s study might be an artefact of the type of data analyzed, which was restricted to the highly specialized text type of broadcast news. In this case, if linking /r/ is regarded as near-categorical, as in many descriptions, the Jamaican and British English patterns are markedly different, supporting the hypothesis that direct contact with the British English prestige norm ceased long ago in Jamaica, and highlighting the existence of a distinct educated Jamaican English standard. In any case, the high degree of lack of linking /r/ realization in educated Jamaican English provides further evidence against a postulated recent American English influence on educated Jamaican English patterns of speech: American English, being for the most part a rhotic variety with /r/ in word-final position in all contexts, would be expected to further reinforce the occurrence of /r/ in linking /r/ contexts in educated Jamaican English. This, however, is manifestly not the case.

A much more plausible explanation of the low levels of linking /r/ observed in the present educated Jamaican English data lies the fact that these may be the reflection of universal contact-induced mechanisms, as proposed by Britain & Fox (2009). This hypothesis is further supported by the fact that other related hiatus resolution phenomena such as the alternation in the forms of the definite and indefinite article, [ðə] vs. [ði] and *a* vs. *an*, are also highly variable in educated Jamaican English, often lacking the “appropriate” linking form in contexts where it is usually used in British English. H-dropping, together with concomitant hypercorrect insertion of /h/, also occurs as a salient feature of Jamaican English speech, resulting in

instances of vowel hiatus which parallel the effects of missing linking /r/. A detailed empirical investigation of these phenomena has not been feasible within the scope of the present study. However, impressionistic surveys of the data suggest that results similar to those for linking /r/ would very likely be obtained in such a study.

Lack of linking /r/ has also been observed in other colonial varieties of English, supporting the hypothesis of the contact origins of this feature. Within the Caribbean, this feature is described as variable, though not to the same extent as rhoticity, in Bahamian English by Childs & Wolfram (2004), who state that “[v]ocalization [of /r/] occurs in word-final position when followed by a consonant [...] or a vowel (e.g. *four apples*), with a following consonant favoring postvocalic *r* loss over a following vowel” (Childs & Wolfram 2004: 446). Linking /r/ is likewise characterized as variable in New Zealand English: “The interesting thing is that both [linking and intrusive /r/] appear to be variable, although really thorough studies of these phenomena are just beginning” (Bauer & Warren 2004: 595/596). Low levels of linking /r/, as well as variability in other variables indicative of hiatus resolution such as article alternation and linking glides, were also found by Labov (1972: 13, 39, 71; cited in Britain & Fox 2009 and Mufwene 2001: 296) in African American Vernacular English in New York City. Additionally, absence or variability of linking /r/ is a salient feature of African varieties of English. Thus, both Ghanaian and Cameroon English are characterized by a “conspicuous absence of linking /r/” (Simo Bobda 2004: 894, for Cameroon English; see Huber 2004: 860 for English in Ghana). South African varieties of English have also been described as lacking linking /r/; this appears to be variably the case for White South African English (“WSAfE is non-rhotic, losing postvocalic /r/, except (in some speakers) as a liaison between two words”; Bowerman 2004: 940) but more systematically so for Indian South African English, where /r/ sandhi phenomena are described as “uncommon”, being usually replaced by a glottal stop (Mesthrie 2004: 961). Finally, Tay (1982: 138, cited in Britain & Fox 2009; see also Trudgill & Hannah 2002) states that “linking *r* is hardly ever found” in non-rhotic Singapore English.

The status of linking /r/ with respect to the proposed “emergent standard” (Shields 1989: 46) for educated Jamaican English remains somewhat ambiguous.

Compared with traditional descriptions of linking /r/ in Received Pronunciation, where this phenomenon is typically regarded as predominantly present, educated Jamaican English as sampled in the present study appears to differ fundamentally in this respect, lack of this feature occurring more often than not in the present data. On the other hand, given the recent findings by Hannisdal (2006) outlined above, it is not clear whether Jamaican English really differs as substantially from the British English standard as would be concluded from the traditional literature, as the two studies in question are in good agreement with respect to the patterning of linking /r/ in the two varieties.

It can be argued, however, that variable linking /r/ should nevertheless be regarded as part of the emergent Jamaican standard proposed by Shields (1989). Support for this view comes from the fact that, according to Shields, speakers of this emergent standard are characterized as those for whom English is “typically adoptive” (Shields 1989: 46). This ties in well with Wells’ (1982: 284) observation that native speakers of Received Pronunciation tend to show a greater incidence of /r/ sandhi than speakers of adoptive RP, due to the greater speech consciousness of the latter. This mechanism is paralleled, albeit at a different level, in the comparison of the results of the two studies, Hannisdal (2006) and the present study: With an overall degree of linking /r/ realization of approximately 60%, Hannisdal’s speakers, for whom English is their native language, exhibit greater levels of incidence of linking /r/ than the Jamaican speakers analyzed in the present study (approximately 40%), for whom English, following Shield’s hypothesis, would be typically adoptive.⁷ In any case, the lack of any kind of hiatus resolution mechanism in a substantial number of tokens (144 out of a total of 474, or slightly more than 30% of all tokens) makes the Jamaican language situation fundamentally different from British English varieties, where the use of a glottal stop as a substitute hiatus breaker is the rule. Thus, the highly variable patterns of linking /r/ and concomitant glottalization observed in the present data strongly support the view that these features should be regarded as part of the emerging local Jamaican standard.

⁷Note that these results are really only parallels to the situation for British English, and not completely the same mechanism, which operates at the level of accent acquisition in the British case, but at the level of (second) language acquisition in the Jamaican situation.

The results of the present analyses, both with respect to rhoticity and linking /r/, also have implications for linguistic (more specifically, phonological) theory. As outlined in Chapters 4 and 5, as well as above, a strong tendency emerges in the literature to characterize these phenomena as categorical or near-categorical. Actual variation is often ignored or only cursorily acknowledged in theoretical models and other descriptions of these phenomena, whether due to a universal tendency of the human mind to think in categorical terms, or more specifically to linguists' desire for regular and consistent linguistic systems. Models of this kind, however, are clearly called into question by the present findings. It is clear that linguistic theory must be able to cope with the empirical results that have emerged in the present and other studies (Hannisdal 2006, Foulkes 1997). The amount of variability found for rhoticity and linking /r/ in the present data must be accounted for in theoretical models in order to reach descriptive adequacy for these phenomena.

7.3 Vowel variation

With respect to the vowel system of educated Jamaican English, the analyses in Chapter 6 have shown considerable variability to be present at the acrolectal end of the Jamaican creole continuum. With the exception of STRUT, all lexical sets exhibit stylistic variation in their phonetic realization across the different text categories analyzed in the present study. This variability, first of all, demonstrates a long-lasting influence of British English norms of pronunciation, with most of the lexical sets investigated clearly being realized closer to the British English standard with increasing level of formality of the speech situation.

A striking example of this is the variation in the SCHWA lexical set, which varies mostly with respect to its phonetic height, moving between the more closed realization found in metropolitan standard Englishes on the one hand and more open Jamaican Creole patterns of pronunciation on the other. The remaining other lexical sets, BATH, TRAP, LOT, CLOTH and THOUGHT, appear to vary in their phonetic realization on a continuum between the British English norm of pronunciation, RP, and more creole-like variants as well. This is most pronounced in the cases of THOUGHT,

CLOTH and LOT, but to a lesser extent also holds true for TRAP. Moreover, and more significantly, in all six lexical sets displaying variation (i.e. excluding STRUT) the Jamaican English data point for the text category of *news*, the most formal text category, is closest in its phonetic realization to the Received Pronunciation data point. Conversely, for the lexical set of STRUT, the data point that is furthest away from Received Pronunciation is that of the most informal text category, *conversations*. These findings taken together clearly demonstrate that Received Pronunciation still exerts considerable influence on Jamaican English patterns of speech, at least in the domain of the lower half of the vowel system.

On the other hand, the present Jamaican data also provide evidence for the phonetic distinctiveness of educated Jamaican English. A first example of this can be found in the case of the STRUT lexical set, which, unlike the other lexical sets analyzed in the present study, does not exhibit stylistic variation, remaining categorically distinct in its phonetic realization both from British English, and, although to somewhat lesser extent, from its American English counterpart. The stable back realization of STRUT can thus be considered part of the educated Jamaican Standard.

A possible explanation for this distinct phonetic value might lie in the fact that this pronunciation reflects the historical pronunciation of STRUT in British English Received Pronunciation. In its present-day position, STRUT is described as slightly less than fully open and central for Received Pronunciation (Roach 2004), with a number of phonetic variants of this phoneme along the front-back dimension additionally mentioned by Cruttenden (2001: 113). However, no consensus emerges among phoneticians as to the historical development of this phoneme in the past century, so this hypothesis must needs remain tentative. On the one hand, there are a number of authors, most notably Wells (1990: 6), who claim that STRUT has become fronter over the last hundred years. Fabricius (2007), in a survey of the existing literature on recent changes of STRUT, mentions STRUT to be listed among the back vowels in Jones (1918, cited in Fabricius 2007: 296) but among the central vowels later, supporting the hypothesis of STRUT fronting. Gimson (1970: 107, cited in Fabricius 2007), too, mentions a more retracted variant of this vowel as used in

conservative RP, and Wells (1982: 281) describes STRUT as back rather than central in U-RP. On the other hand, Harrington, Palethorpe & Watson (2000) found STRUT to have backed and lowered in the Queen's christmas broadcasts between the 1950s and the 1980s. No clear evidence with respect to the direction of movement of STRUT was found in a recent study by Hawkins & Midgley (2005), nor by Bauer (1985). Finally, no evidence emerged for the fronting of STRUT in Fabricius (2007), but rather for raising and concomitant backing of this vowel.⁸ However, while the data from the present study are in good agreement with the hypothesis of a historically backer pronunciation of STRUT, it should be noticed that the main difference between the phonetic realization of Received Pronunciation and educated Jamaican English in the present study is not one of relative backness or frontness, but much more markedly so of height. Thus, there is no conclusive evidence that the Jamaican English pronunciation of this vowel reflects earlier British English norms of pronunciation. Synchronically, however, the two varieties are clearly distinct with respect to this variable.

Further evidence for the phonetic distinctiveness of educated Jamaican English comes from the phonetic realization of the BATH lexical set, which is realized manifestly fronter in the Jamaican data than its British English counterpart. A similar argument can be advanced for THOUGHT, for which a substantial separation exists between the most formal Jamaican English realization (in the text category of *news*) and the data point from Received Pronunciation, in terms of both height and frontness/backness. While the same does not hold true for TRAP, LOT and CLOTH, at least for the text category of *news*, a similar pattern does emerge if the most formal text category *news* is excluded from consideration for the latter two lexical sets. With the exception of *news*, a clear and manifest separation of the other four text categories from the British English data point can be discerned for the LOT lexical set, with respect to both height and frontness/backness. The same holds true, although to a lesser extent, for CLOTH.

As has been demonstrated in Chapter 6, the results from the present study do

⁸However, the methodology employed in this study is somewhat questionable, measuring the position of STRUT relative to that of the TRAP lexical set, which itself has been reported to be undergoing change in its position.

not yield any conclusive evidence for influence from American English, at least in the domain of the vowel system. This postulated American English influence is unlikely, firstly, due to the divergent nature of American English dialects, resulting in a high degree of variability in the American English speech to which Jamaicans are exposed. A second argument against influence from American English patterns of pronunciation on educated Jamaican English speech lies in the passive nature of exposure to this variety, which, in Jamaica, purportedly takes place mostly via the mass media: “The electronic media and the cinema have been the main sources of exposure to spoken English in recent times. In many cases, this exposure has been to US English rather than to British English, the traditional ideal” (Christie 2003: 14). However, this type of influence results in a one-way communication, with passive listening of the Jamaican speakers in question, as opposed to the active interaction and accommodation to the speech patterns of the interlocuter found in face-to-face interactions. It is therefore much more likely that American English influence confines itself to other domains of language, most notably vocabulary. Lexical items are in fact listed as the first features to be borrowed in contact situations in Thomason & Kaufmann’s borrowing scale (Thomason & Kaufmann 1988: 74-76), being readily taken over from one language to another even in “casual contact” situations with “a minimum of cultural pressure”. By contrast, the adoption of phonological features does not appear until in later stages of this scale, where the contact between two languages is much more intense (Thomason & Kaufmann 1988: 74-76). Indeed, many descriptions of American English influence on the speech patterns of Jamaican English explicitly refer to specific lexical borrowing rather. Christie (2003: 20), for example notes that “the strongest influence [of American English] has been on vocabulary. This of course, is the the area of any language that is most susceptible to change.” Similarly, Sand (1999: 175) concludes her investigation of Jamaican broadcasts stating that “American influence is generally restricted to the lexicon.”

In contrast to American English, massive influence from Jamaican Creole patterns of pronunciation can be discerned in the present Jamaican data: Of the seven lexical sets investigated, four (SCHWA, LOT, CLOTH, THOUGHT) show unambiguous linear variation between the data point indicating the British English phonetic re-

alization on the one hand, and a movement in the direction of the corresponding Jamaican Creole pronunciation on the other. A special case is constituted by the lexical sets of TRAP and BATH. While TRAP does indeed show a linear movement towards the Received Pronunciation data point, this movement occurs only across a rather limited range of the vowel space. On the one hand, the movement of this lexical set with respect to the front-back dimension corresponds to a postulated British English-Jamaican Creole interplay, British English exhibiting a more fronted realization of TRAP, while this lexical set corresponds to a low central vowel in Jamaican Creole. On the other hand, the concomitant lowering of this lexical set with increasing level of formality of the speech situation in the Jamaican data is rather puzzling, and contrary to the expected direction of movement. However, it should again be noted that the entire range of variation of TRAP is rather small compared to that of other lexical sets. BATH, on the other hand, does not exhibit any clear linear pattern at all. Taken together, these findings strongly support Mair's (2002a: 36) assertion that "Patois [Jamaican Creole] is clearly the dominant shaping influence on spoken English in Jamaica".

Chapter 8

Conclusion and outlook

8.1 Summary of main findings

The present study has investigated the speech of educated speakers of Jamaican English with a threefold aim: firstly, to fill the gap in the existing literature on acrolectal Jamaican English by providing a detailed examination of the phonetic and phonological patterns of this variety with respect to a selected number of variables; secondly, to examine these features as to their evidence for a currently emerging local standard, and thirdly, to assess the relative influence of British English, American English and Jamaican Creole in the shaping of this variety. Three variables were investigated in connection with these aims: rhoticity, linking /r/, and the non-high Jamaican vowels.

The findings of the present analyses reveal rhoticity to be highly variable in educated Jamaican English, with an overall degree of postvocalic /r/ realization of slightly more than 20%. The traditional characterization of this variety as predominantly rhotic is therefore clearly not warranted. While rhoticity is also subject to stylistic variation in the form of text categories with differing levels of formality, it is primarily influenced by phonetic and phonological factors. Most important among these are the nature of the preceding vowel, as well as that of the following consonant, word-final as opposed to preconsonantal position of /r/, the presence or absence of a following pause, as well as the text frequency of the lexical token in question. Moreover, the non-significance of morpheme and syllable boundaries strongly suggests that the relevant phonological domain for rhoticity in educated

Jamaican English is not syllables or morphemes, but the word. No significant difference was found between the degree of postvocalic /r/ realization by male and female speakers, nor with respect to speaker age.

A second factor related to rhoticity, linking /r/, proved to be highly variable as well, being realized in less than half of all tokens in potential linking /r/ contexts. These findings are doubly surprising; first of all, due to the purported rhotic nature of Jamaican English, and secondly, due to the fact that lack of linking /r/ is the exception rather than the norm in varieties of English around the world. Linking /r/ in educated Jamaican English is also subject to stylistic variation, varying in its degree of realization between individual text categories. However, no unilinear relationship between degree of linking /r/ realization and level of formality of the speech situation could be discerned in the present data. Linking /r/ is used more frequently by men than by women, a finding which, together with the high overall degree of variability observed, strongly suggests that realization of linking /r/ does not seem to be part of the local Jamaican standard. Glottalization of word-initial vowels in linking /r/ contexts, initially hypothesized to be used by speakers as a substitute for linking /r/, was found to occur in approximately 40% of all tokens. However, a substantial proportion of tokens was realized with neither linking /r/ nor glottalization, and glottalization also appears in addition to a phonetically realized linking /r/ in a substantial number of cases.

With respect to the Jamaican vowels investigated, two distinctive patterns emerged in the data. One of these is the stable realization of the STRUT lexical set, whose lack of stylistic variation strongly suggests that this phonetic realization is a firmly established feature of the local Jamaican standard of pronunciation. By contrast, all other variables exhibit a high degree of stylistic variation in their phonetic realization. For four of the lexical sets investigated in the present study – LETTER, LOT, CLOTH and THOUGHT –, this stylistic variation is systematic and linear, moving in the direction of the British English norm of pronunciation for text categories with higher levels of formality, and in the direction of more meso- or basilectal Jamaican Creole realizations for decreasing formality of the speech situation.

The question of American English influence remains somewhat ambiguous. It

is clearly not present in the domain of the vowel system, where British English Received Pronunciation and Jamaican Creole patterns of pronunciation emerged as the relevant competing forces. With respect to rhoticity, American influence is possible, but the evidence in the present data remains inconclusive, a much more likely explanation being to regard rhoticity as an intra-Jamaican development (which may possibly be reinforced by American English influence). Moreover, the passive nature of the contact with American English, which has been reported to take place mostly via the mass media, makes the active adoption of phonological features unlikely. Finally, a decrease of the prestige ascribed to this variety has been noted by Christie (2003: 23), who states that “the attraction of “sounding American” is far less than it was even a few decades ago.” British influence, on the other hand, is still strong, most markedly in the domain of the vowel system.

A final question remains to be answered, that of the evidence for a distinct Jamaican standard. This question must be clearly answered in the affirmative for the first variable investigated, rhoticity, the highly variable patterning of rhoticity in educated Jamaican English being observed nowhere else. The role of linking /r/, however, is difficult to determine due to the lack of established empirical facts on the actual usage of this variable in British English. The high degree of variability and concomitant glottalization observed in educated Jamaican English thus may or may not distinguish this variety from its historical norm. However, the impressionistically observed variability in other hiatus resolution phenomena in the present data, as well as the existence of similar patterning in other colonial varieties of English, make a contact-induced origin of this variable (see Britain & Fox 2009) rather likely. Finally, evidence for the existence of a distinct Jamaican standard comes from the domain of the vowel system, where the lexical sets investigated in the present study approach the British English norm of pronunciation in the most formal text category without, however, completely reaching it.

8.2 Further perspectives for research

Due to limitations of space and time, the present study has confined itself in its investigations to the three variables summarized above: rhoticity, linking /r/, and the Jamaican non-high vowels. However, systematic and empirical studies of the phonetics and phonology of the Jamaican acrolect remain sparse, leaving many gaps in the literature on this variety of English to be filled by future studies.

Further avenues for fruitful research lie in the investigation of a number of other segmental phonological variables, such as the diphthongization or monophthongization of the mid vowels ([*ie*, *uo*] vs [*e*, *o*] vs. [*e*, *ou*/*əu*]), H-dropping, TH-stopping, or the palatalization of velars, all of which have been shown to be highly variable by Irvine (2004), and could therefore be confirmed (or possibly also contradicted) in their phonetic patterning by an independent check on the basis of a different corpus of data. As an extension of the present research on linking /r/, other vowel hiatus resolution phenomena, such as the alternation in forms of the definite and indefinite article might be investigated, as well as the above-mentioned H-dropping. With respect to the question of rhoticity, what is needed for a systematic comparison of the patterning of educated Jamaican English in relation to the three sources of influence mentioned above – British English, American English and Jamaican Creole – is a systematic investigation of this variable in Jamaican Creole. As outlined in Chapter 4, while an overall agreement is reached among different scholars on the basically non-rhotic nature of this variety, many exceptions and variable occurrences of /r/ noted besides this “baseline” reveal the need for more exact data in order to enable a more precise assessment of its influence on the acrolectal end of the continuum. It is in fact quite possible that the two varieties at the ends of the creole continuum, Jamaican English and Jamaican Creole, do not differ quite as much as has been previously described – or even at all, given that the degree of postvocalic /r/ realization found in the present study of only slightly more than 20% is extremely low. Thus, more detailed empirical data is urgently needed.

Another interesting question for further research is the relation of English in Jamaica to, and the possible influence of, African American Vernacular English,

with which extensive contact probably exists in Jamaican exile speech communities such as New York. Similar to Jamaican Creole, a creole origin has been postulated for African American Vernacular English (see e.g. Green 2002: 9; Mufwene 2001: 314), and similar patterns with respect to two of the variables investigated in the present studies, variable rhoticity and linking /r/, have been observed (Edwards 2004: 388; Labov 1972: 13, 39, cited in Britain & Fox 2009).

A further field of research in educated Jamaican English lies in the domain of suprasegmentals. Although a number of impressionistic descriptions exist of this phonetic domain in Jamaican speech, some of them are downright contradictory in their statements, and detailed studies are rare, being limited mostly to Lawton (1963) and Gooden (2003). Previous descriptions on the suprasegmental properties of Jamaican speech so far have had their focus heavily on the existence or survival of lexical tone in Jamaican Creole. No empirical studies exist at all on suprasegmental characteristics of Jamaican English. Acoustic studies of this variety appear especially feasible with respect to speech rhythm, for which new empirical measures have been developed and successfully applied to a variety of English accents in recent years (Ramus, Nespor & Mehler 1999; Low, Grabe & Nolan 2000; Jian 2004; Ferragne & Pellegrino 2004; Gut 2005; Thomas & Carter 2006). Further research is also needed in the domains of pitch range and intonation.

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Appendix A

Speaker background

A.1 Conversations

Speaker	Sex	Age	Education	Occupation	Date of recording
AnBl	m	18-25	secondary	student	2004
BaBr	m	26-45	university degree	medical doctor	1999
CaPi	f	18-25	university degree	student	2004
CaRe	m	18-25	undergrad	student	2003
CoGo	m	26-45	secondary	lab technician	1999
JeEd	f	46-65	university degree		2004
KaHi	f	18-25	B.A.	student	2004
KiMo	f	18-25	B.Sc.	student	2004
LaCl	f	18-25		(interviewer)	2004
LaDa	f	26-45	M.A.	attorney-at-law	2003
LiWh	m	26-45	M.Sc.	lecturer	2004
MeDu	f	18-25	undergrad	student	2003
MiBr	f	26-45	M.A.	administrator	2003
NaGr	f	18-25	secondary	student	2004
NiDa	m	26-45	B.A.	computer consultant	2003
OrBu	m	18-25	secondary	court aid	2004
RaSm	m	18-25	B.Sc.	computer technician	1999
SaWi	f	26-45	B.A.	student	2003
ShJo	f	18-25	university degree	student	2004
TrTu	m	46-65	university degree	medical doctor	1999

A.2 Interviewees

Speaker	Sex	Age	Occupation	Date of recording
AlGr	m	46-65	board member, investment bank	1999
BaCl	f	46-65	vice president, political party	1999
DeJo	m	46-65	president, law association	1999
DeRi	m	46-65	director and news editor, national newspaper	1999
IjKl	m	46-65	police commissioner	2001
JeMa	f	46-65	attorney-at-law	1999
JoHe	m	46-65	general manager, security company	2001
MaHe	f	46-65	senator and general secretary, political party	1999
RaFr	m	46-65	senior medical officer	2002
WiHa	m	46-65	director general, government agency	1999

A.3 Radio hosts

Speaker	Sex	Age	Occupation	Date of recording
DeHa	f	26-45	radio host	2002
EfGh	m	46-65	radio host	2001
JoCo	m	26-45	radio host	1999
PaBa	m	46-65	radio host (attorney-at-law)	1999
StVa	m	26-45	radio host (attorney-at-law, university lecturer)	1999

A.4 Speeches

Speaker	Sex	Age	Education	Occupation	Date of recording
CaHu	f	26-45	Ph.D.	university lecturer	2003
ChHe	f	26-45	secondary	publicist	2000
ChHy	f	26-45	secondary	marketing CEO	2000
DeBe	m	26-45		attorney-at-law	2002
EdSe	m	46-65	secondary	politician (party leader)	2002
MiWi	m	46-65	Ph.D.	university professor	2002
RaTy	m	26-45	secondary	pastor	2002
RuLe	m	46-65	Ph.D.	professor	1999
SaAl	f	26-45		lawyer	2002
VaSh	f	26-45	Ph.D.	university professor	2002

A.5 News

Speaker	Sex	Age	Occupation	Date of recording
CaFr	f	26-45	newscaster	2001
CoHa	m	26-45	reporter	2001
DoSa	f	26-45	announcer	1993, 2001
IrFo	m	26-45	newscaster	2001
KiAb	m	18-25	reporter	2001
MiPr	m	26-45	newscaster	1999, 2001
MiSh	m	26-45	reporter, newscaster	1992, 2001
OlWa	m	26-45	reporter	2001
RuHo	f	26-45	newscaster	1999
TaLe	f	26-45	reporter	2001

Appendix B

Rhoticity

B.1 Overall degree of rhoticity

0	r	<i>Total</i>
78.4% (N=1531)	21.6% (N=423)	(N=1954)

B.2 Individual speakers

B.2.1 Conversations

	0	r	<i>Total</i>
AnBl	83.3% (N=25)	16.7% (N=5)	(N=30)
BaBr	57.7% (N=15)	42.3% (N=11)	(N=26)
CaPi	76.9% (N=30)	23.1% (N=9)	(N=39)
CaRe	48.5% (N=16)	51.5% (N=17)	(N=33)
CoGo	65.8% (N=25)	34.2% (N=13)	(N=38)
JeEd	74.4% (N=29)	25.6% (N=10)	(N=39)
KaHi	83.7% (N=36)	16.3% (N=7)	(N=43)
KiMo	64.7% (N=22)	35.3% (N=12)	(N=34)
LaCl	78.9% (N=30)	21.1% (N=8)	(N=38)
LaDa	63.4% (N=26)	36.6% (N=15)	(N=41)
LiWh	78.6% (N=33)	21.4% (N=9)	(N=42)
MeDu	29.6% (N=8)	70.4% (N=19)	(N=27)
MiBr	84.6% (N=33)	15.4% (N=6)	(N=39)
NaGr	62.2% (N=23)	37.8% (N=14)	(N=37)
NiDa	60.0% (N=15)	40.0% (N=10)	(N=25)
OrBu	75.0% (N=27)	25.0% (N=9)	(N=36)
RaSm	65.5% (N=19)	34.5% (N=10)	(N=29)
SaWi	74.4% (N=32)	25.6% (N=11)	(N=43)
ShJo	53.8% (N=21)	46.2% (N=18)	(N=39)
TrTu	96.4% (N=27)	3.6% (N=1)	(N=28)

B.2.2 Interviewees

	0		r		<i>Total</i>
AlGr	89.7%	(N=26)	10.3%	(N=3)	(N=29)
BaCl	81.8%	(N=18)	18.2%	(N=4)	(N=22)
DeJo	79.4%	(N=27)	20.6%	(N=7)	(N=34)
DeRi	73.5%	(N=25)	26.5%	(N=9)	(N=34)
IjKl	73.0%	(N=27)	27.0%	(N=10)	(N=37)
JeMa	78.3%	(N=18)	21.7%	(N=5)	(N=23)
JoHe	68.8%	(N=22)	31.3%	(N=10)	(N=32)
MaHe	90.0%	(N=36)	10.0%	(N=4)	(N=40)
RaFr	88.0%	(N=22)	12.0%	(N=3)	(N=25)
WiHa	92.3%	(N=24)	7.7%	(N=2)	(N=26)

B.2.3 Radio hosts

	0		r		<i>Total</i>
DeHa	95.7%	(N=22)	4.3%	(N=1)	(N=23)
EfGh	91.4%	(N=32)	8.6%	(N=3)	(N=35)
JoCo	85.7%	(N=36)	14.3%	(N=6)	(N=42)
PaBa	81.0%	(N=34)	19.0%	(N=8)	(N=42)
StVa	90.6%	(N=29)	9.4%	(N=3)	(N=32)

B.2.4 Speeches

	0		r		<i>Total</i>
CaHu	88.1%	(N=37)	11.9%	(N=5)	(N=42)
ChHe	100.0%	(N=43)	0.0%	(N=0)	(N=43)
ChHy	69.0%	(N=29)	31.0%	(N=13)	(N=42)
DeBe	80.6%	(N=29)	19.4%	(N=7)	(N=36)
EdSe	86.0%	(N=37)	14.0%	(N=6)	(N=43)
MiWi	64.3%	(N=27)	35.7%	(N=15)	(N=42)
RaTy	65.8%	(N=25)	34.2%	(N=13)	(N=38)
RuLe	69.0%	(N=29)	31.0%	(N=13)	(N=42)
SaAl	95.3%	(N=41)	4.7%	(N=2)	(N=43)
VaSh	83.8%	(N=31)	16.2%	(N=6)	(N=37)

B.2.5 News

	0		r		<i>Total</i>
CaFr	97.4%	(N=37)	2.6%	(N=1)	(N=38)
CoHa	97.0%	(N=32)	3.0%	(N=1)	(N=33)
DoSa	95.5%	(N=42)	4.5%	(N=2)	(N=44)
IrFo	83.3%	(N=30)	16.7%	(N=6)	(N=36)
KiAb	59.5%	(N=22)	40.5%	(N=15)	(N=37)
MiPr	95.2%	(N=40)	4.8%	(N=2)	(N=42)
MiSh	96.9%	(N=31)	3.1%	(N=1)	(N=32)
OIWa	81.3%	(N=26)	18.8%	(N=6)	(N=32)
RuHo	61.9%	(N=26)	38.1%	(N=16)	(N=42)
TaLe	96.4%	(N=27)	3.6%	(N=1)	(N=28)

B.3 Factors influencing rhoticity

B.3.1 Text category

	0		r	
conversations	69.7%	(N=492)	30.3%	(N=214)
interviewees	81.1%	(N=245)	18.9%	(N=57)
radio hosts	87.9%	(N=153)	12.1%	(N=21)
speeches	80.4%	(N=328)	19.6%	(N=80)
news	86.0%	(N=313)	14.0%	(N=51)

B.3.2 Preceding vowel

	0		r	
NEAR	33.3%	(N=32)	66.7%	(N=64)
SQUARE	53.6%	(N=89)	46.4%	(N=77)
CURE	64.7%	(N=22)	35.3%	(N=12)
PRICE	86.7%	(N=39)	13.3%	(N=6)
MOUTH	91.7%	(N=33)	8.3%	(N=3)
START	74.1%	(N=183)	25.9%	(N=64)
NORTH	78.4%	(N=156)	21.6%	(N=43)
FORCE	36.1%	(N=57)	63.9%	(N=101)
NURSE	74.8%	(N=80)	25.2%	(N=27)
LETTER	97.1%	(N=741)	2.9%	(N=22)
SCHWA	96.1%	(N=99)	3.9%	(N=4)

B.3.3 Following consonant

	0	r
sonorant	86.8% (N=223)	13.2% (N=34)
continuant coronal	78.7% (N=262)	21.3% (N=71)
coronal	80.1% (N=343)	19.9% (N=85)
other	84.1% (N=449)	15.9% (N=85)

B.3.4 Position

	0	r
/__#	73.0% (N=717)	27.0% (N=265)
/__C	83.7% (N=814)	16.3% (N=158)

B.3.5 Following pause

	0	r
/__#P	63.1% (N=253)	36.9% (N=148)
/__#C	79.9% (N=464)	20.1% (N=117)

Appendix C

Vowel systems

The following sections display formant plots both summarily for text categories, as well as for individual speakers.

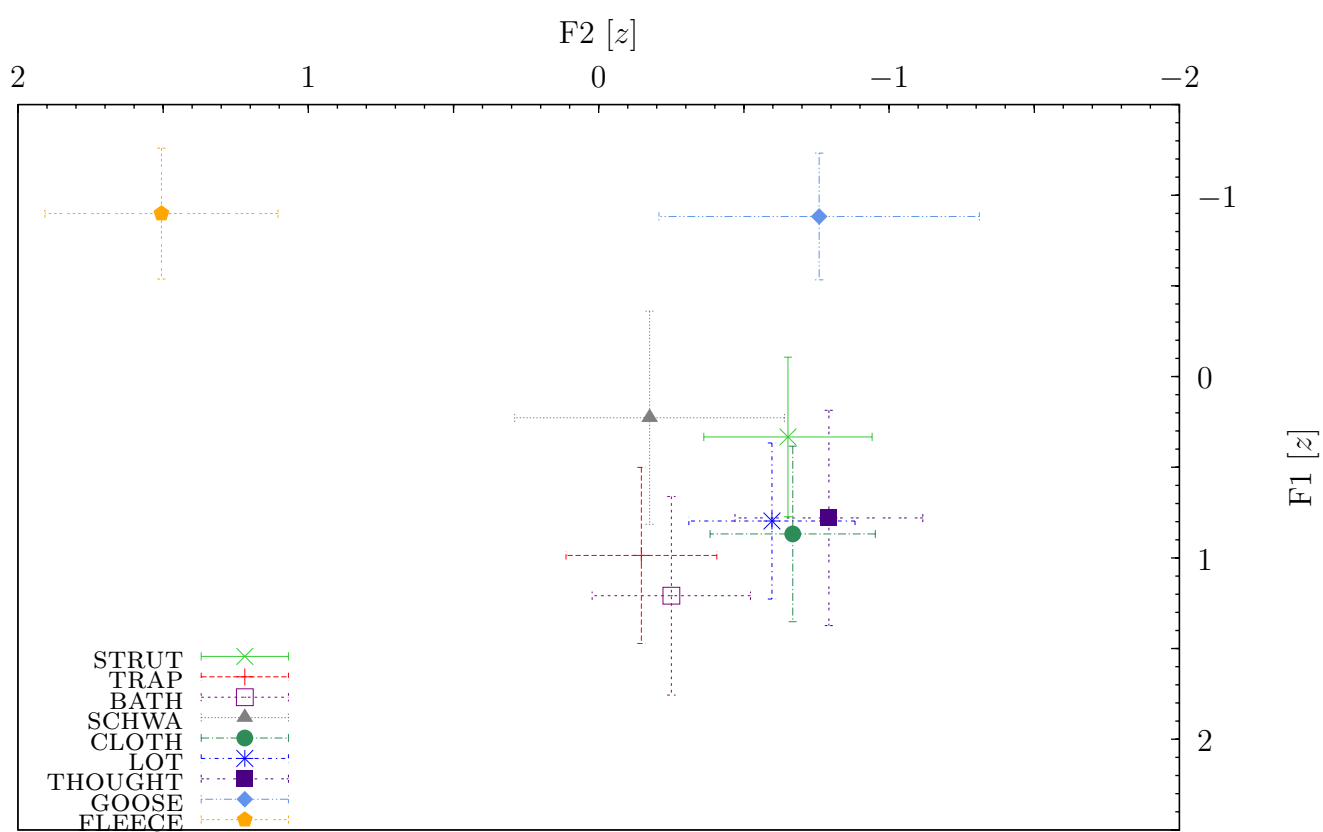
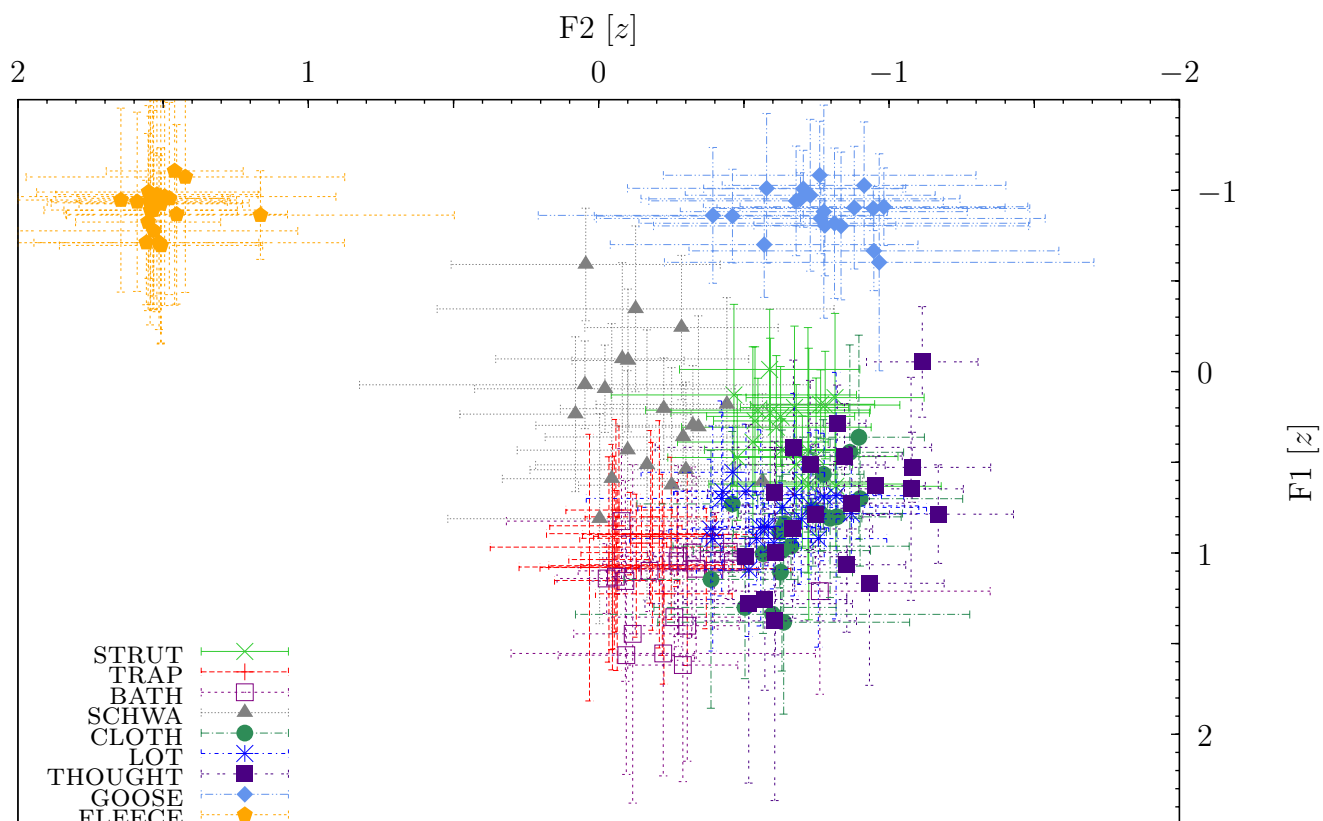
For the respective text categories, two plots are given; one showing data points for individual speakers within that category, and one displaying overall means and standard deviations across all speakers in that category. Formant data for text categories are displayed in normalized z values, and text categories are arranged in increasing order of level of formality.

Formant plots of the vowel systems of individual speakers are displayed in Hz. Speakers are arranged by category, and within categories, in alphabetical order. Again, two plots per speaker are given: one showing the individual tokens produced by that speakers, and one with overall means and standard deviations plotted for each lexical set. Normalized formant plots are not displayed here, as they only differ by a scaling factor plus a general displacement.

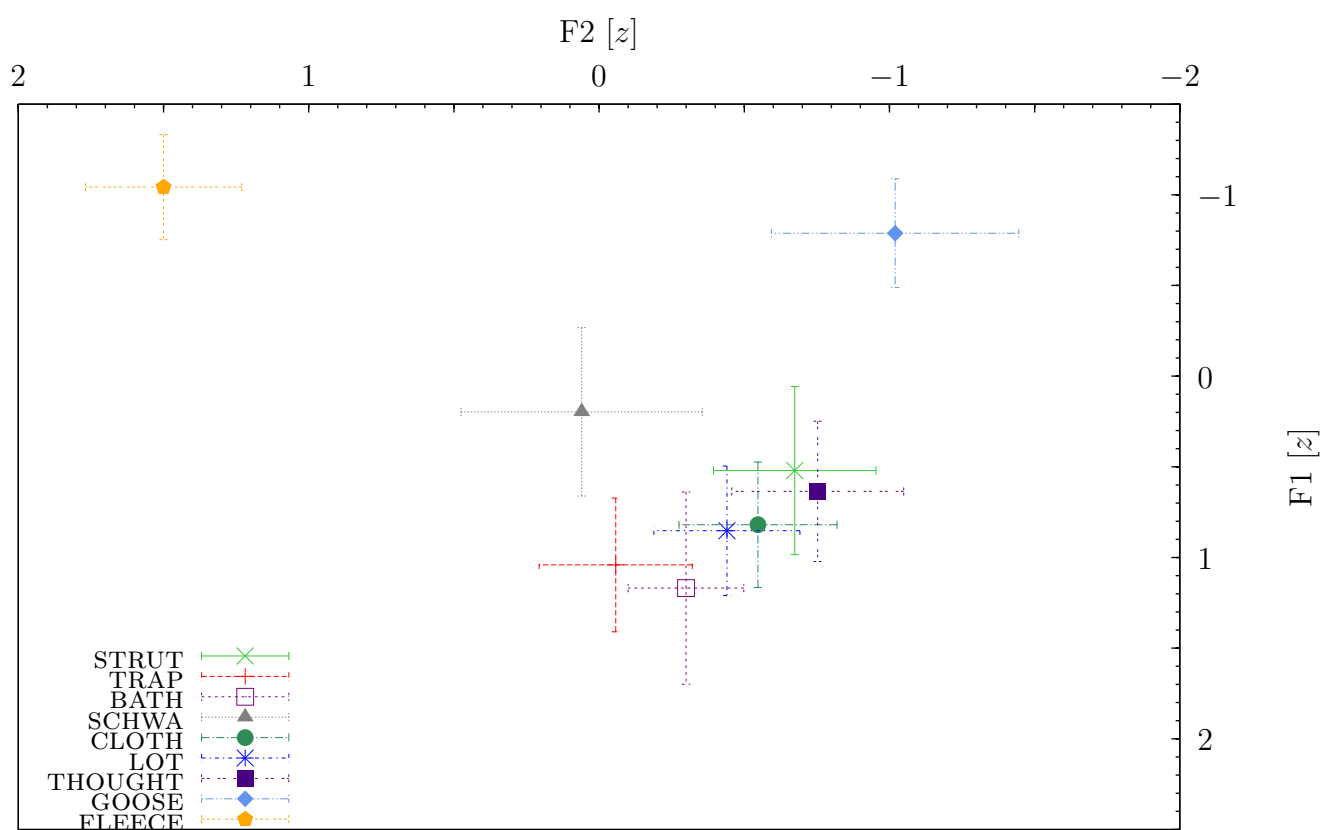
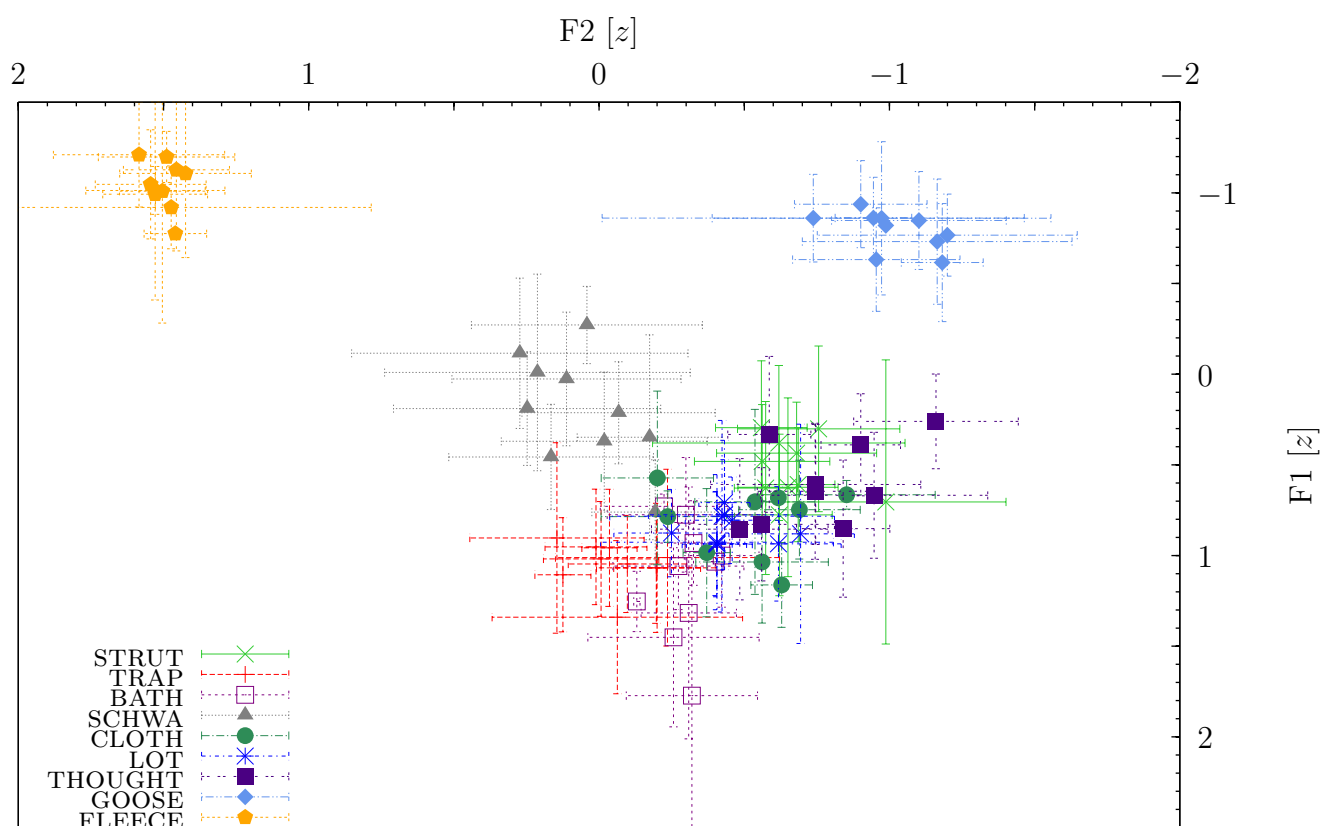
Raw formant values for individual speakers are given in section C.3.

C.1 By category

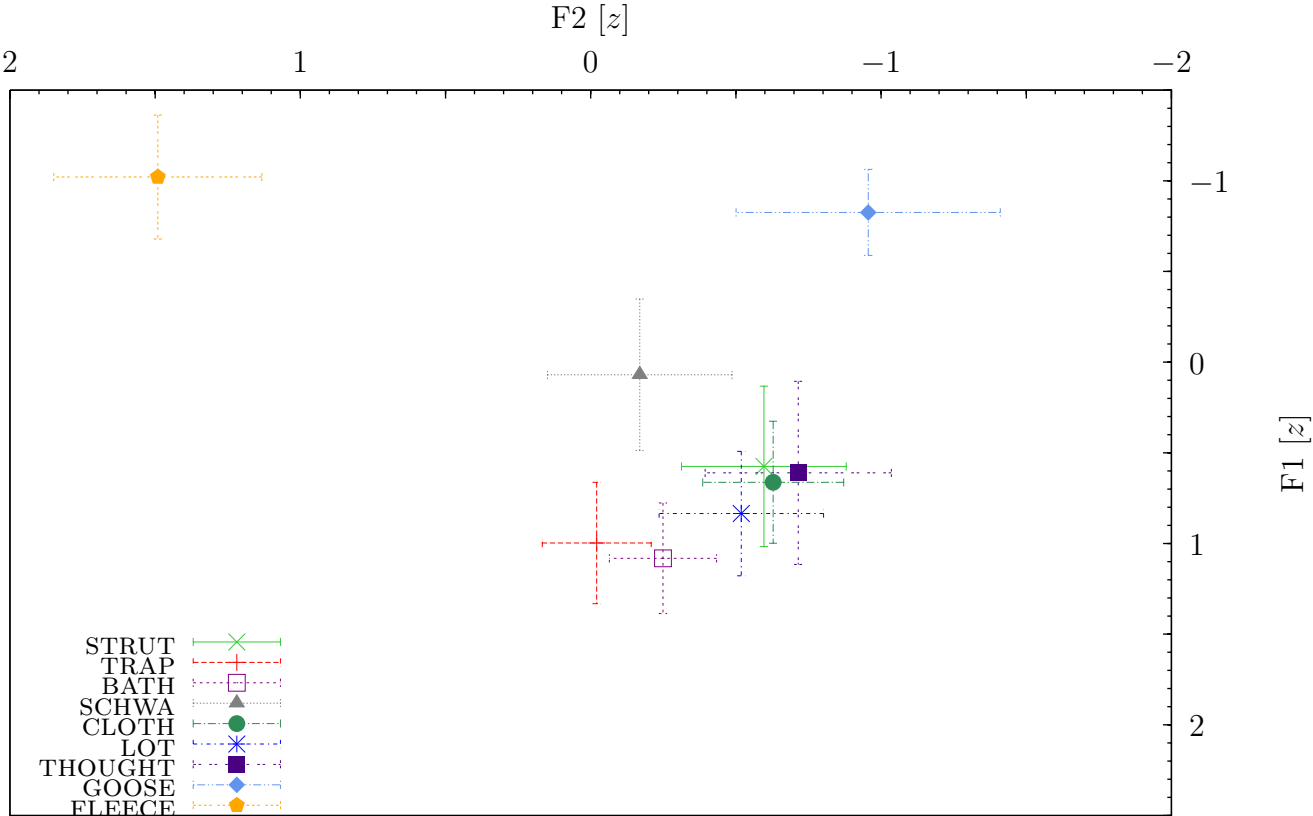
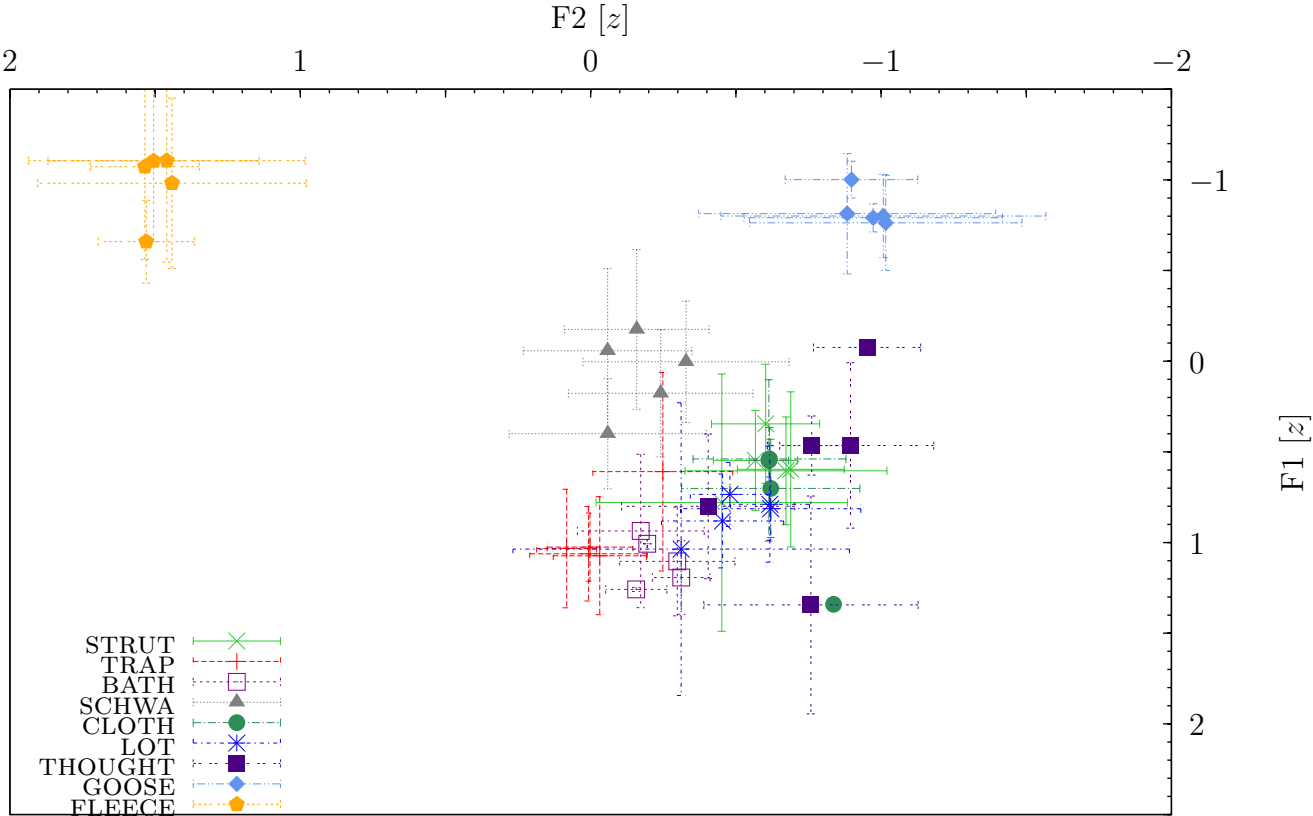
C.1.1 Conversations



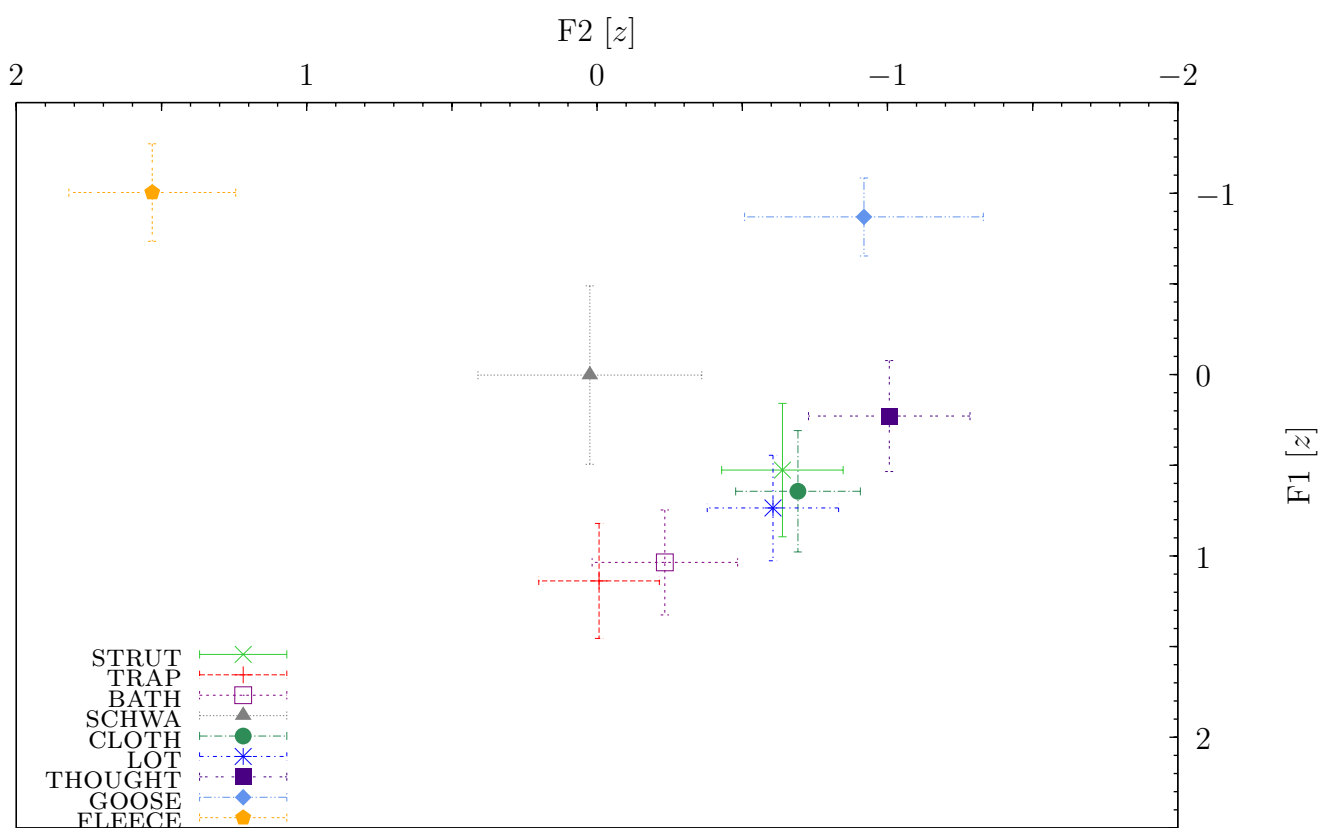
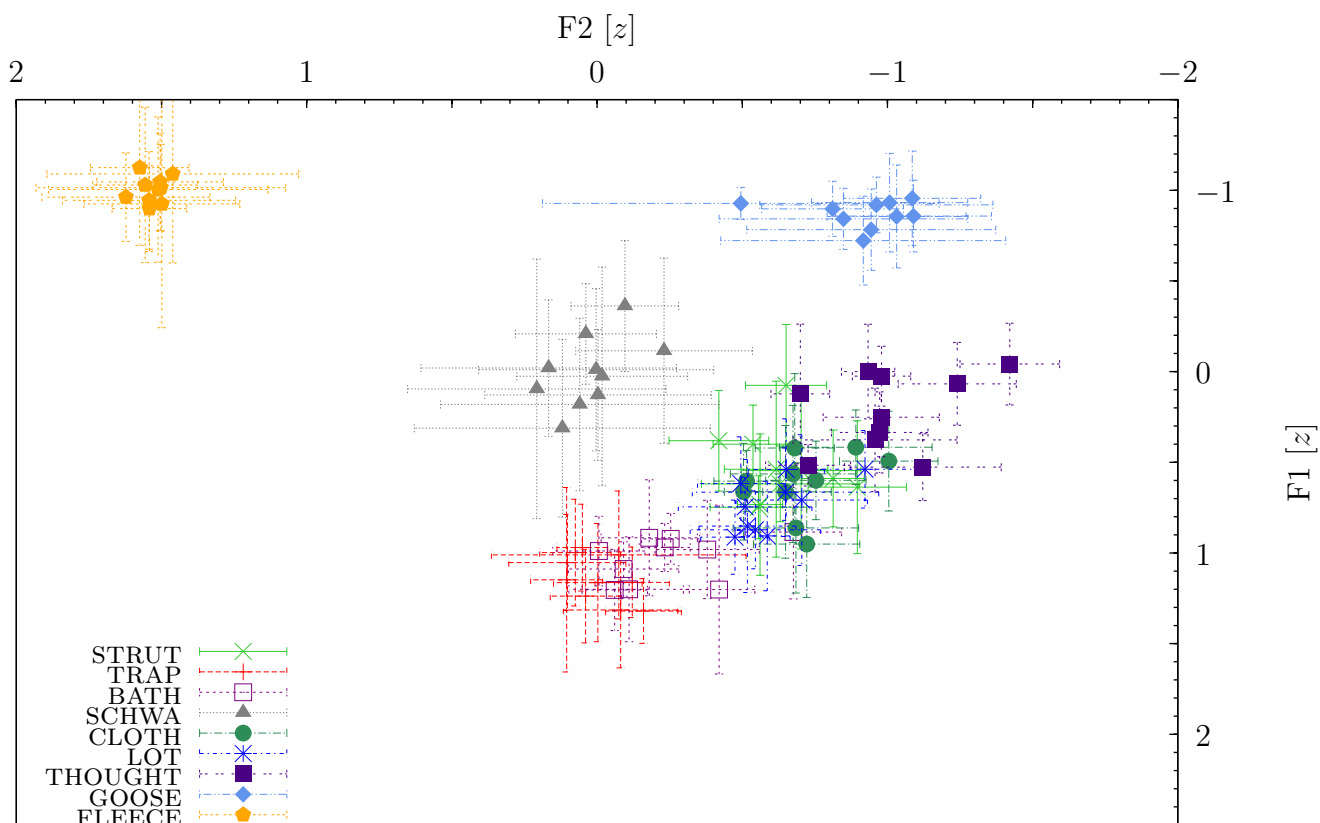
C.1.2 Interviewees



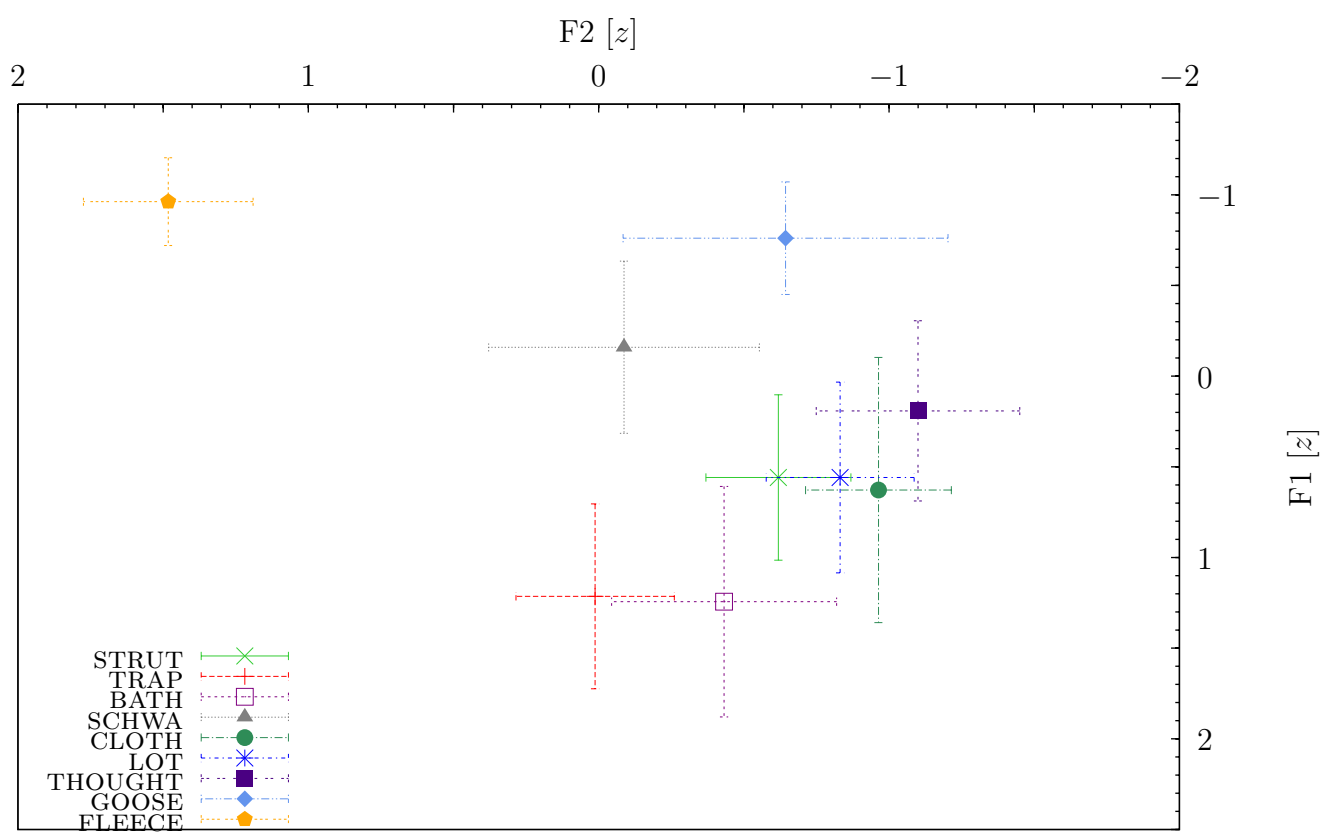
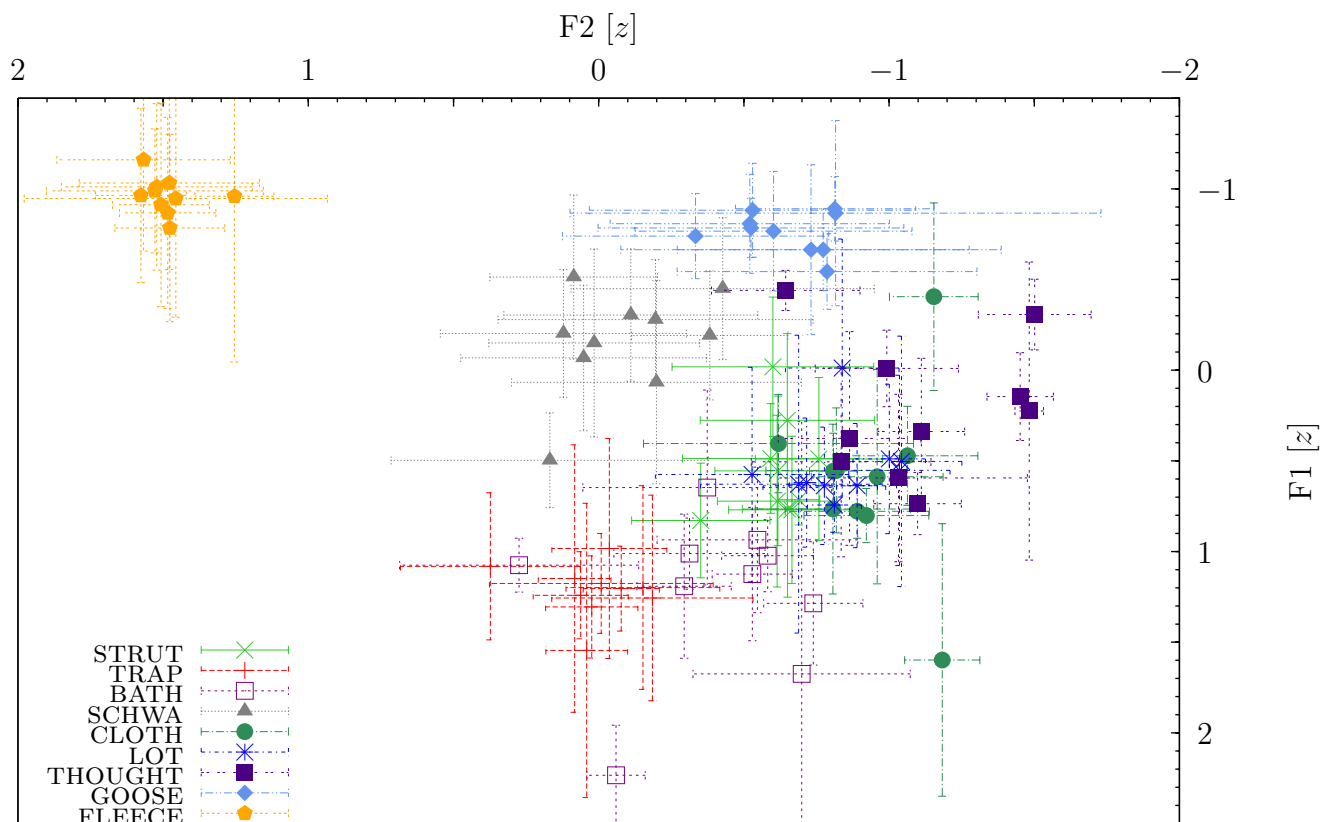
C.1.3 Radio Hosts



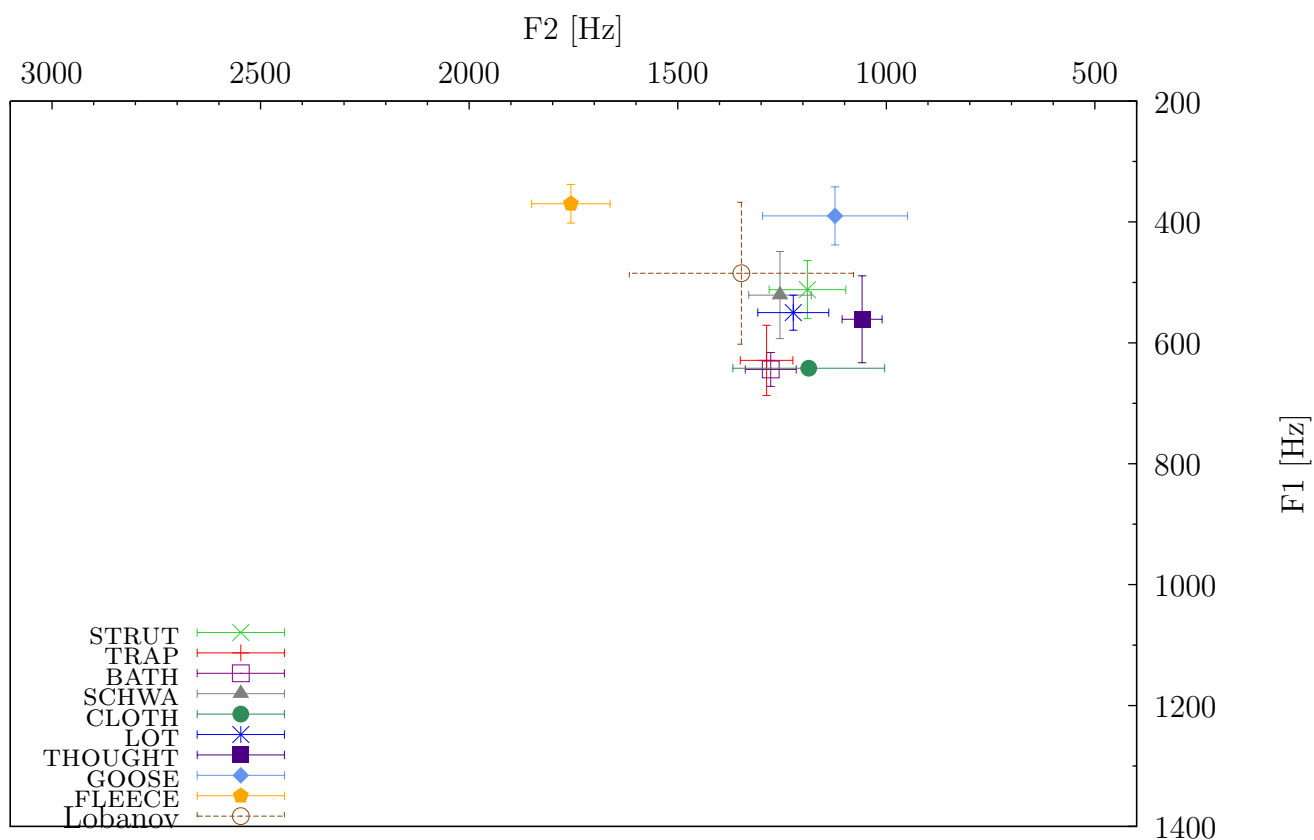
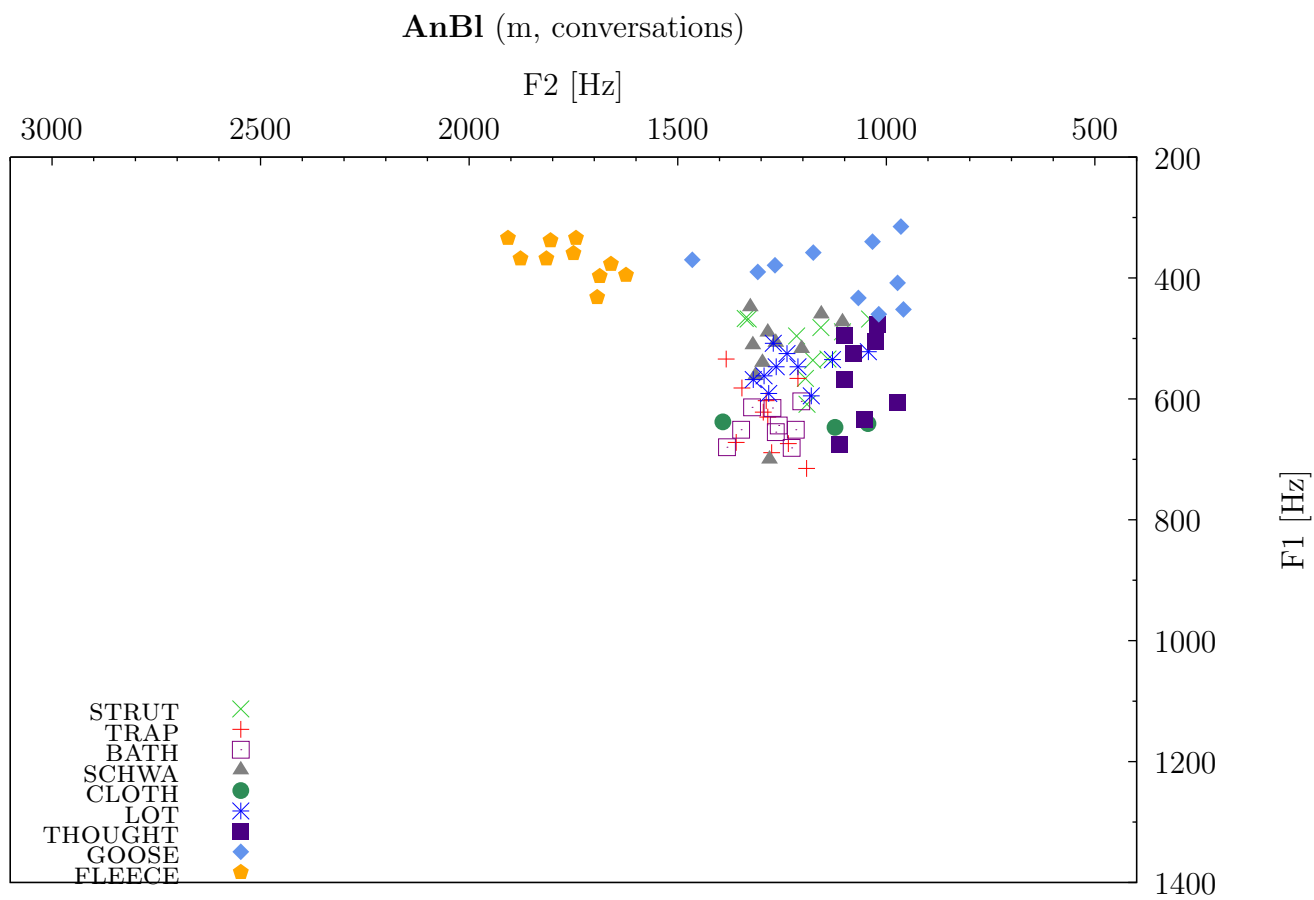
C.1.4 Speeches

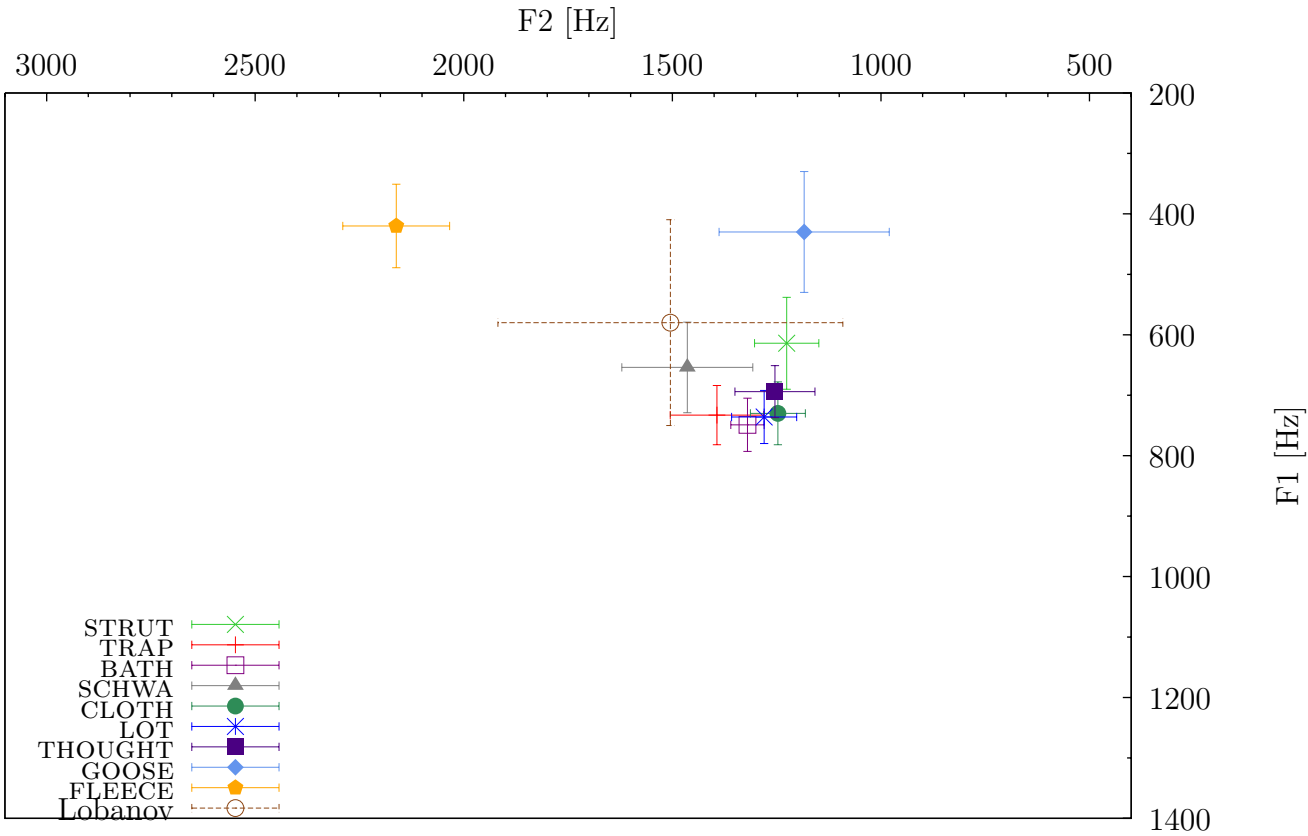
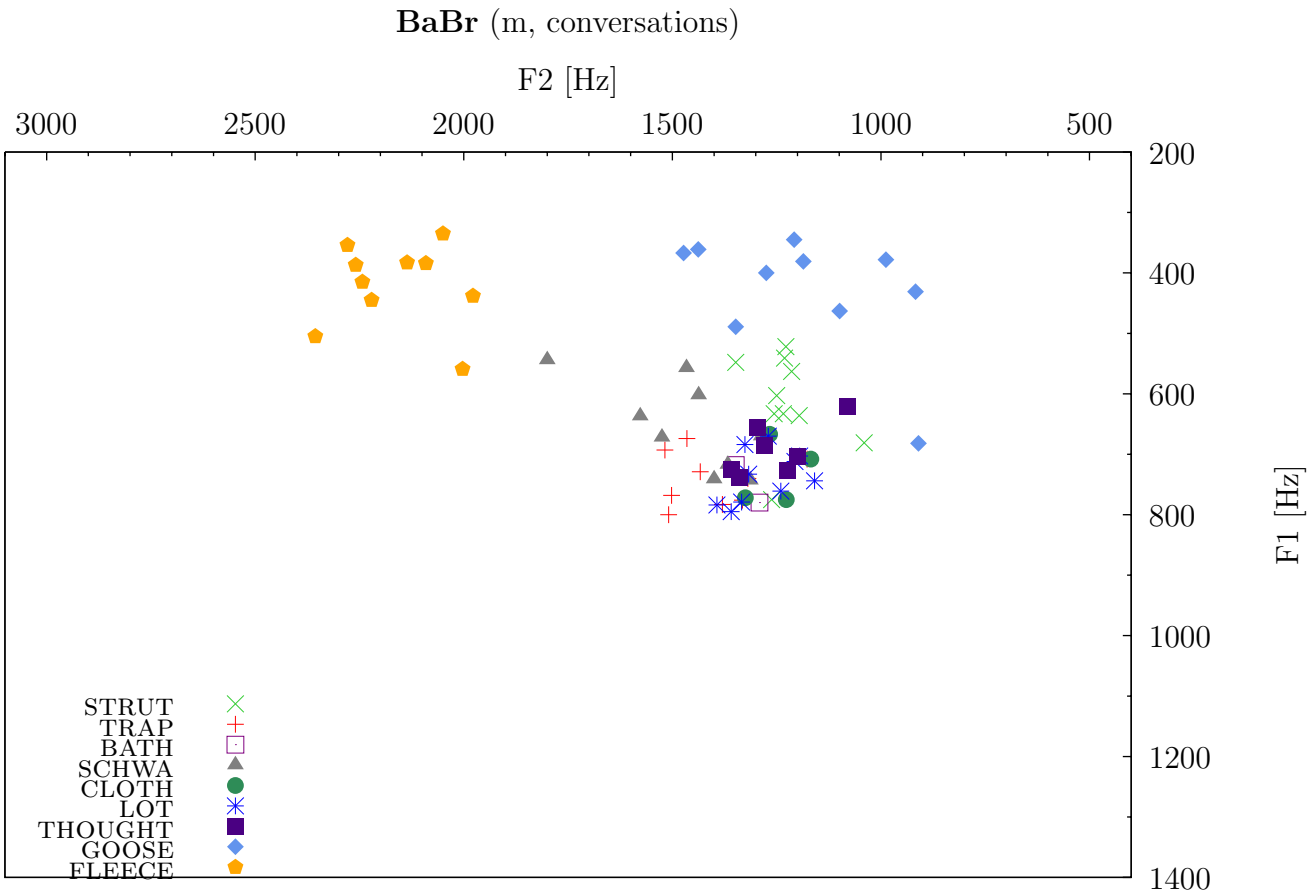


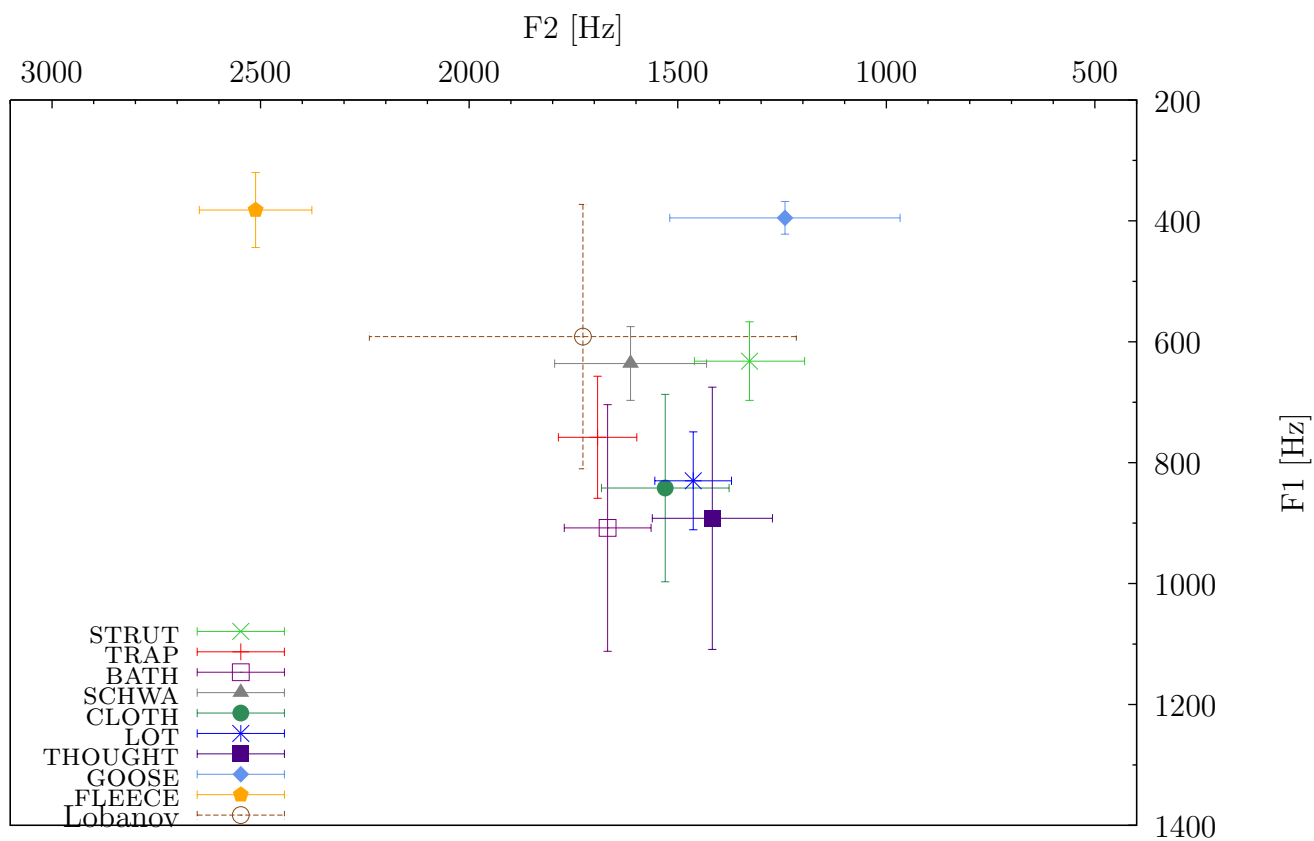
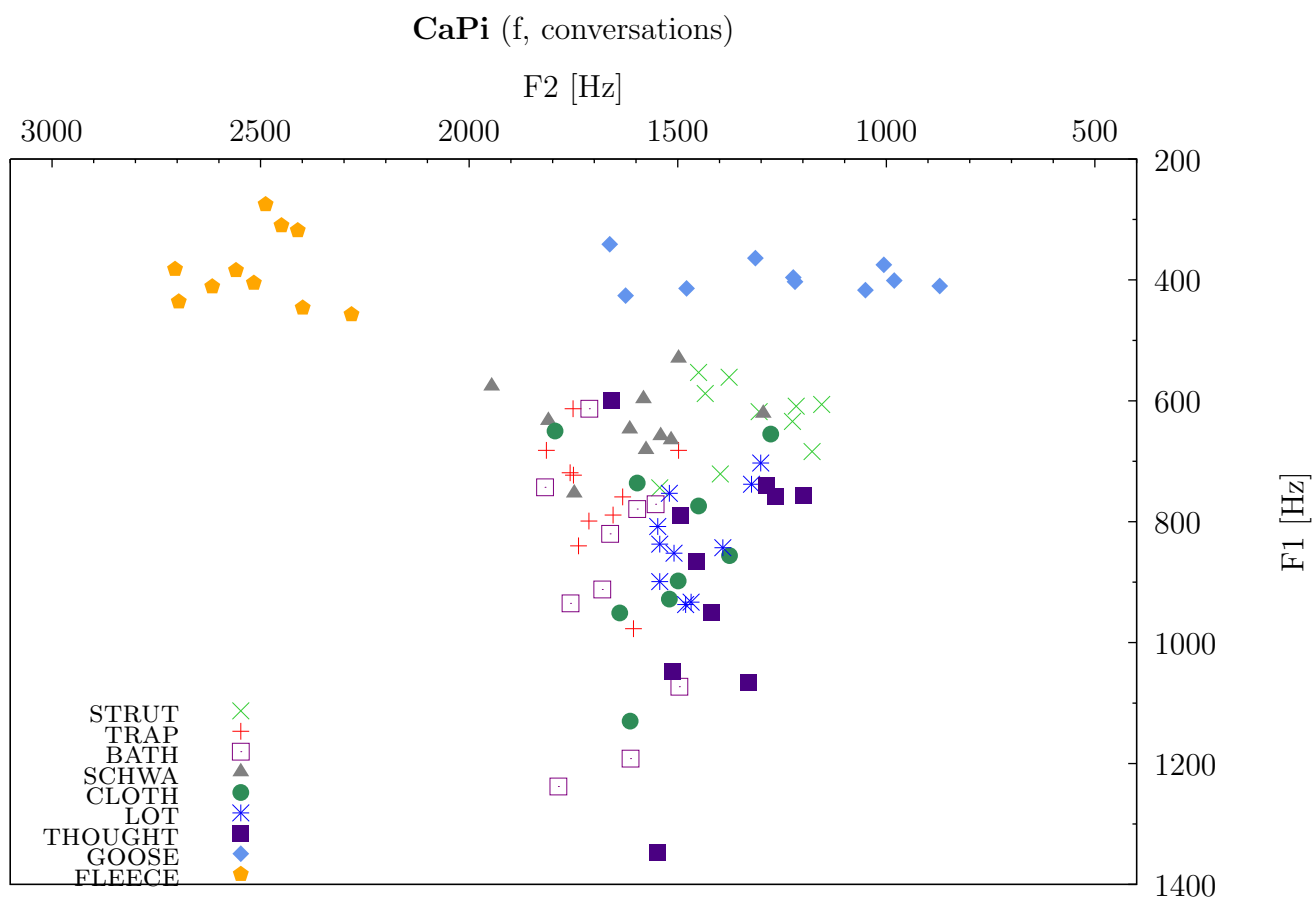
C.1.5 News

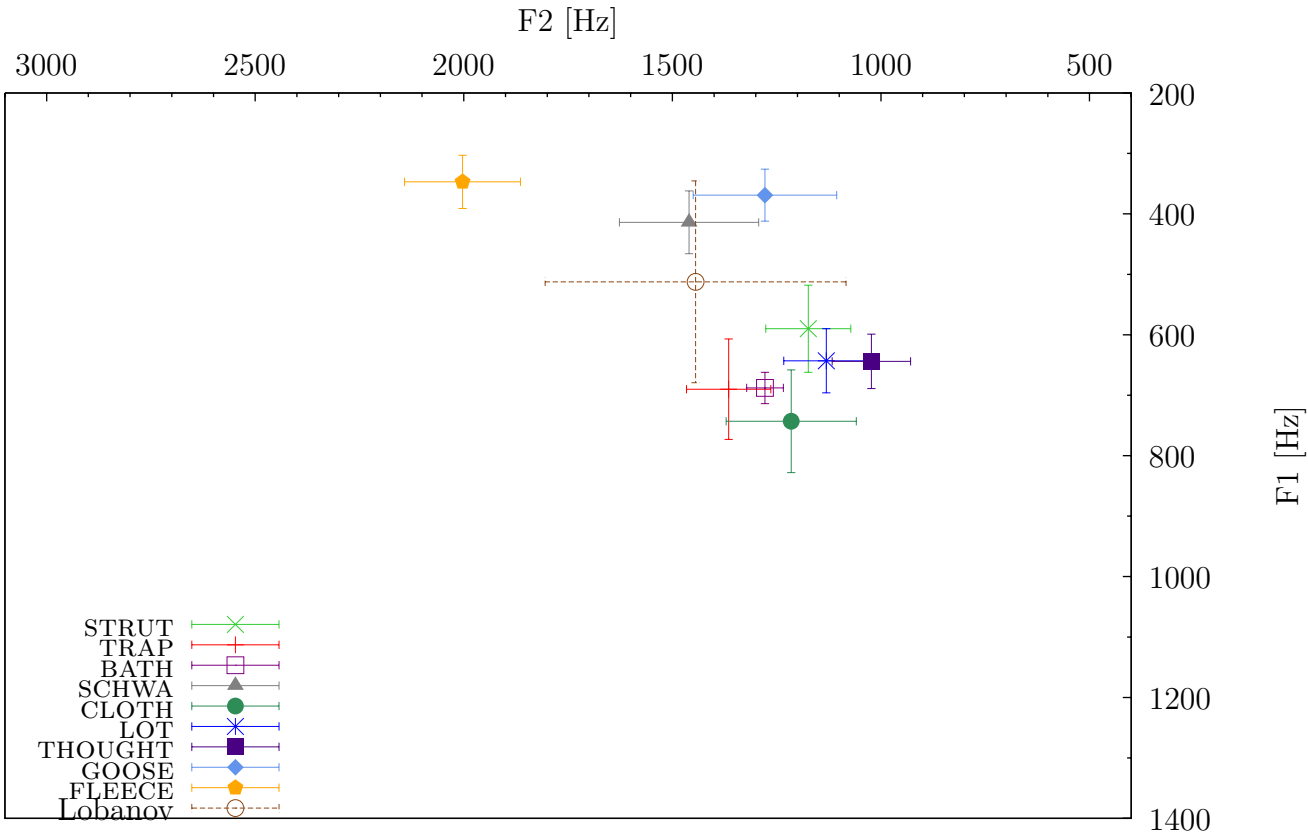
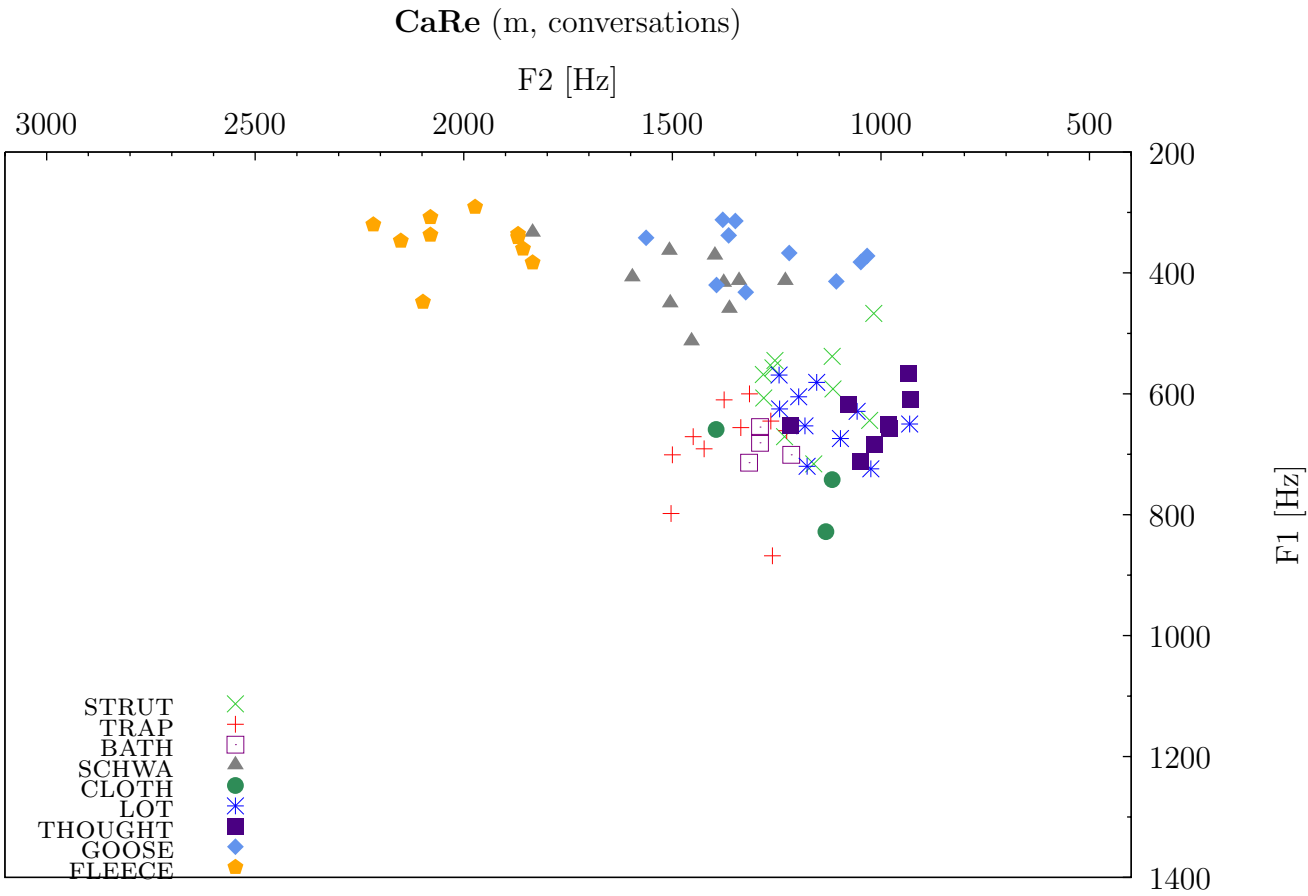


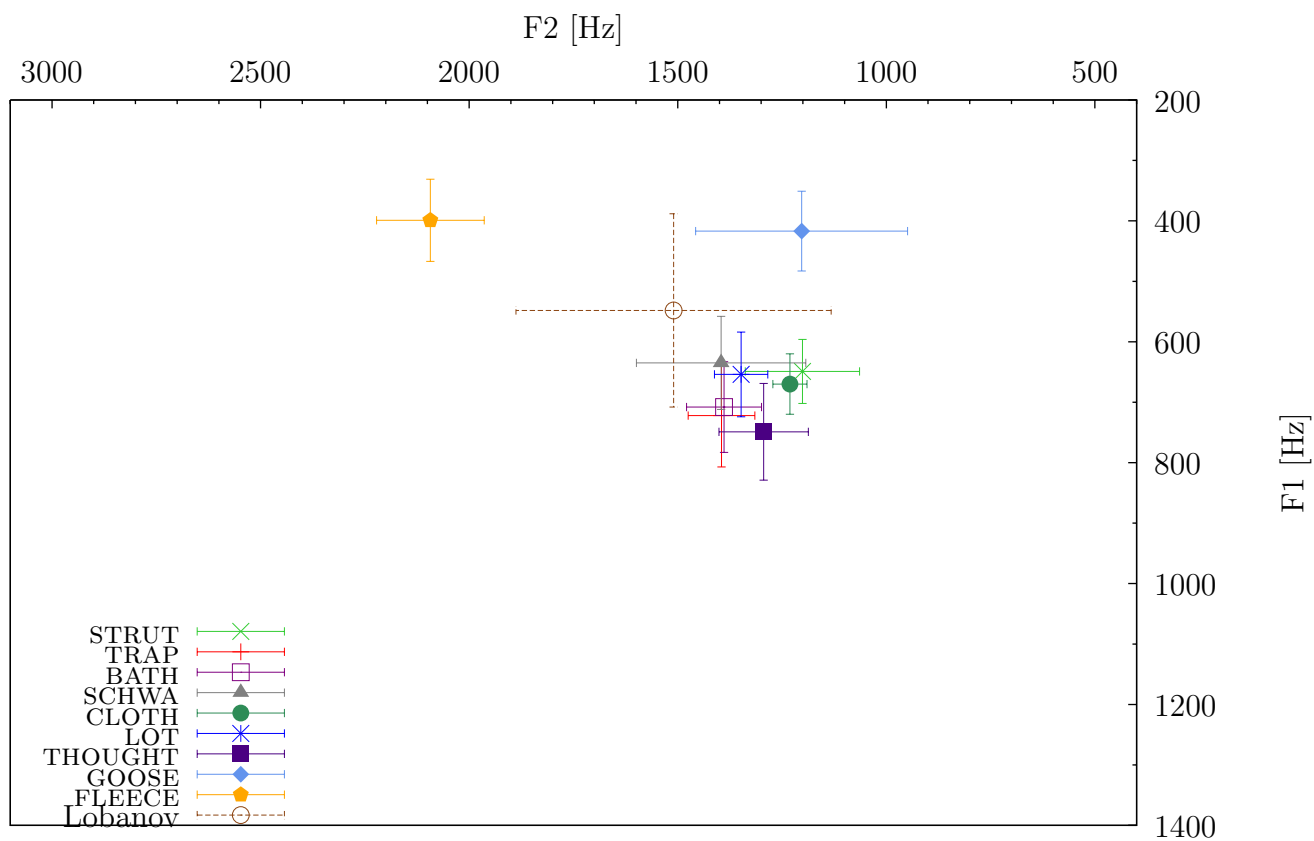
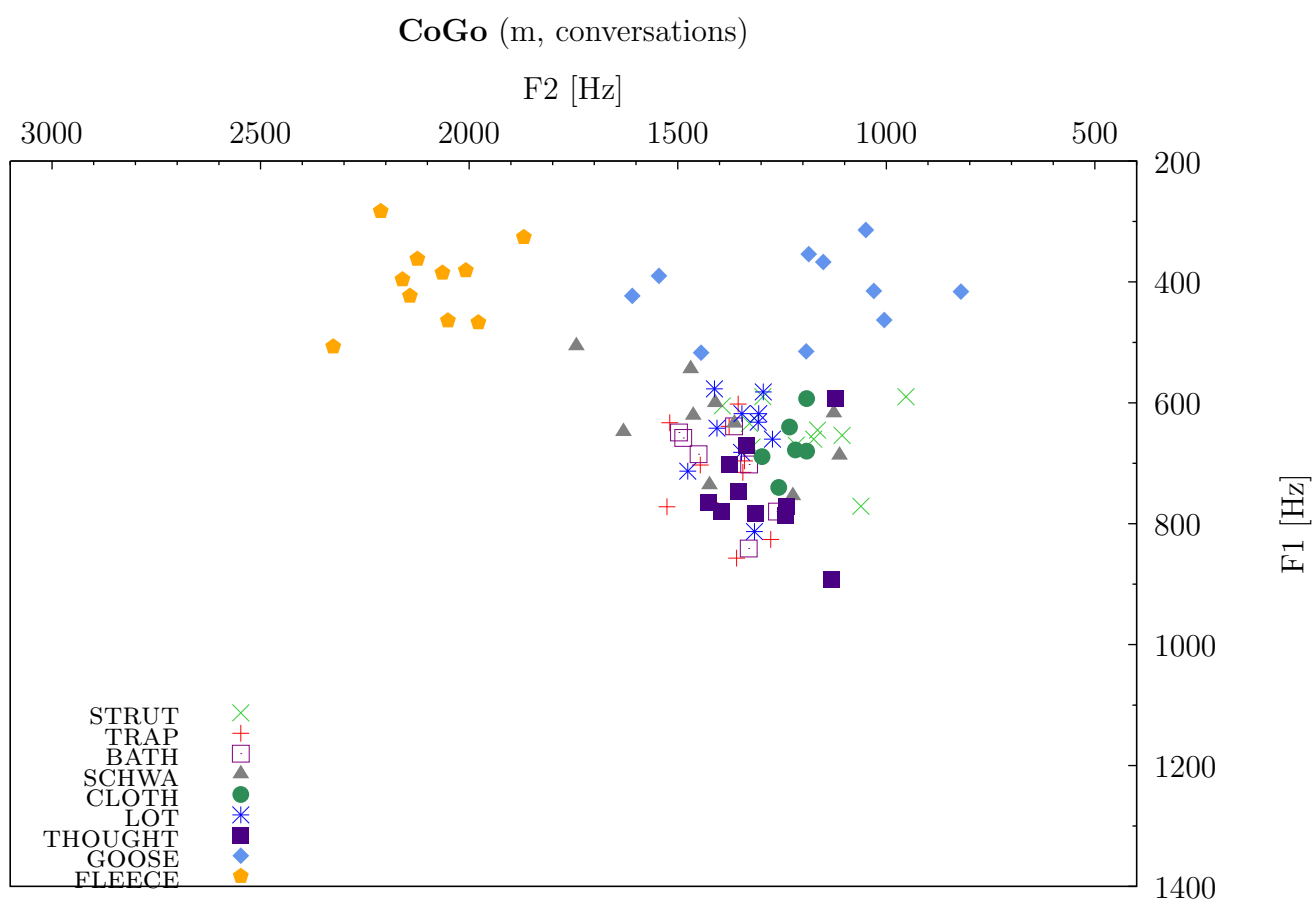
C.2 By speaker

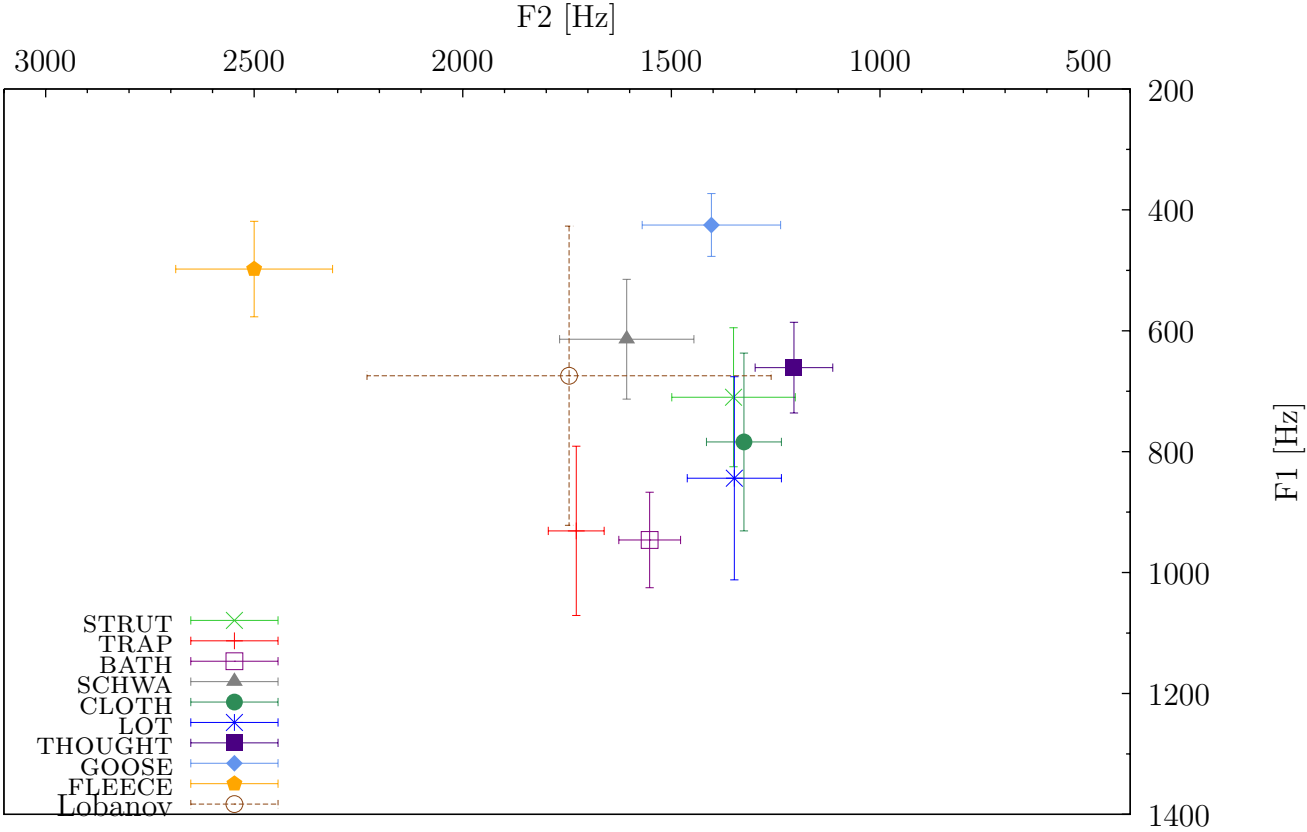
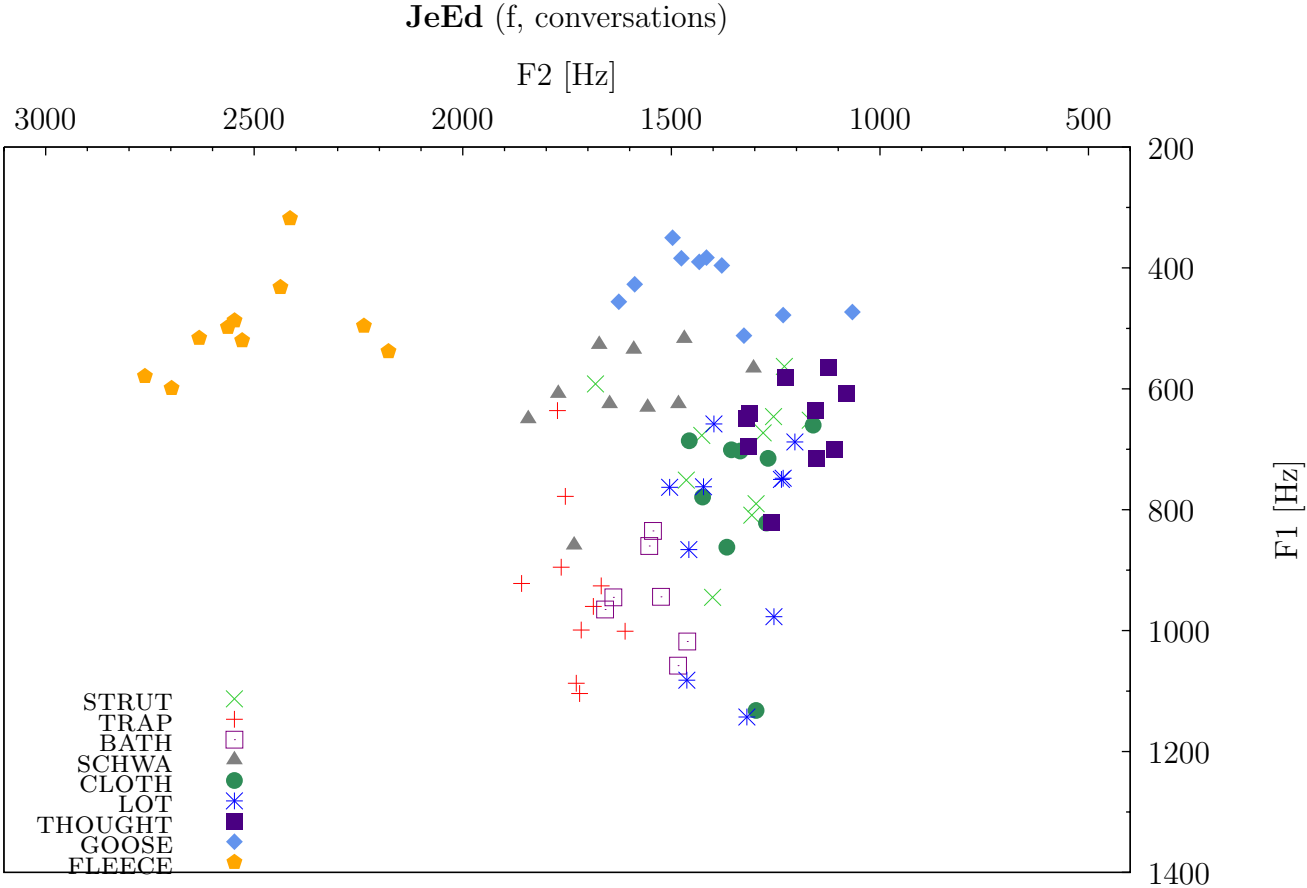


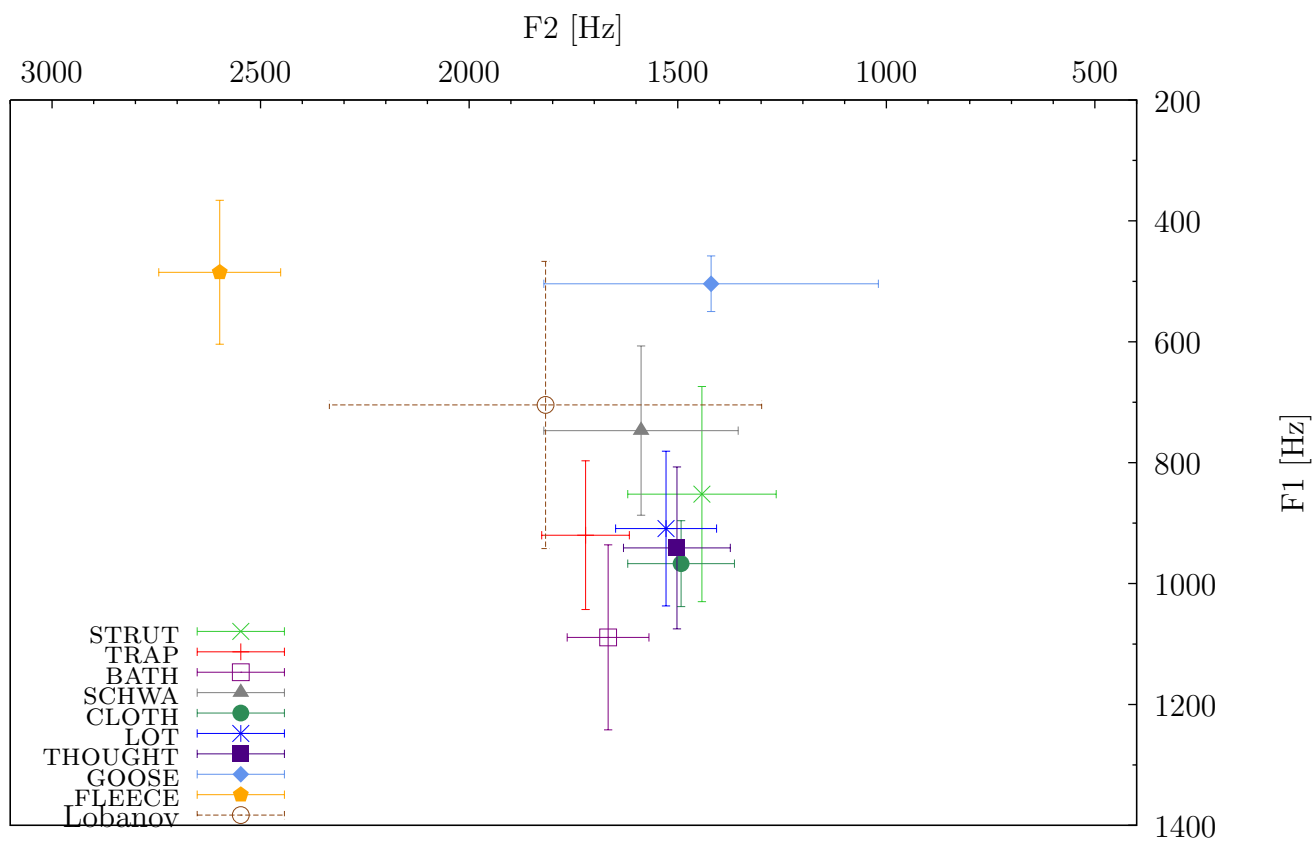
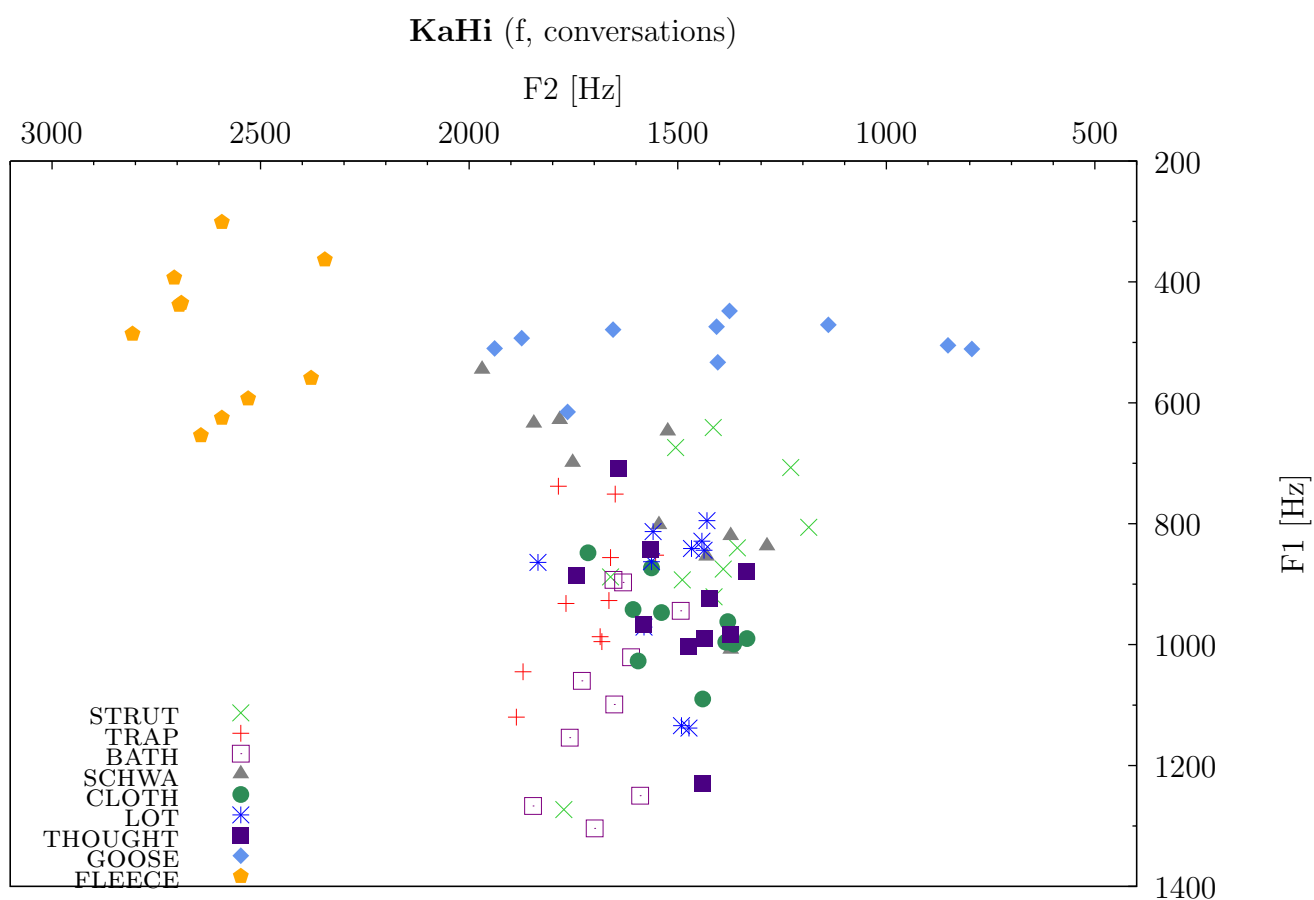


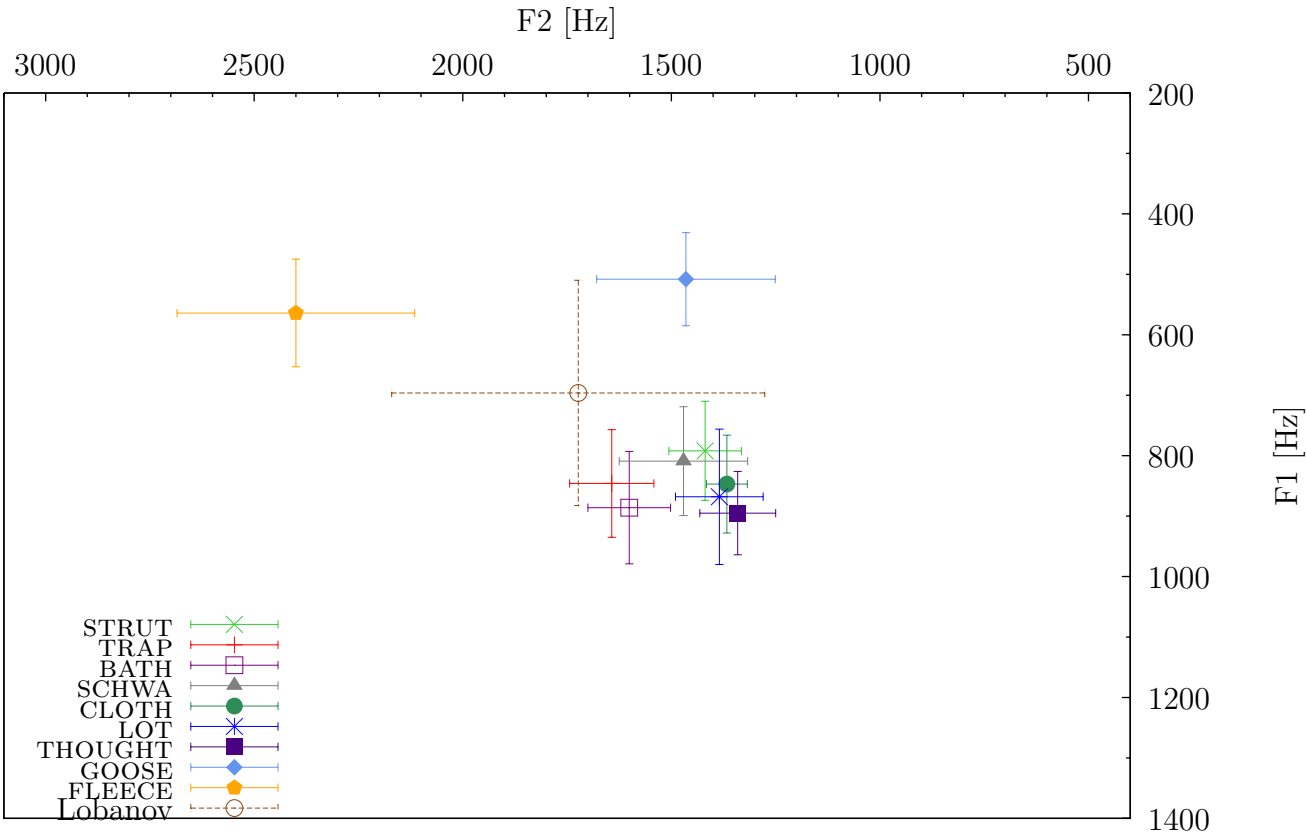
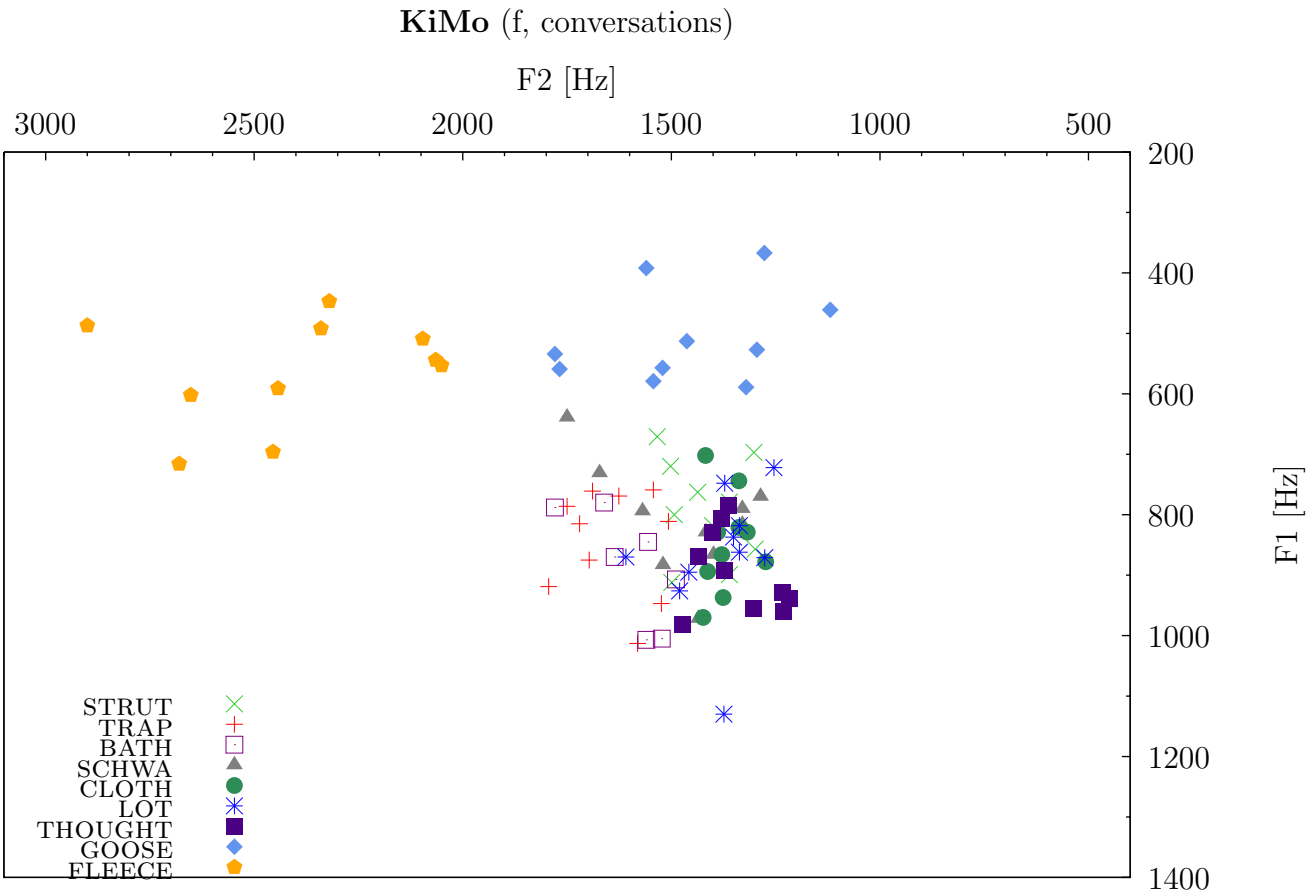




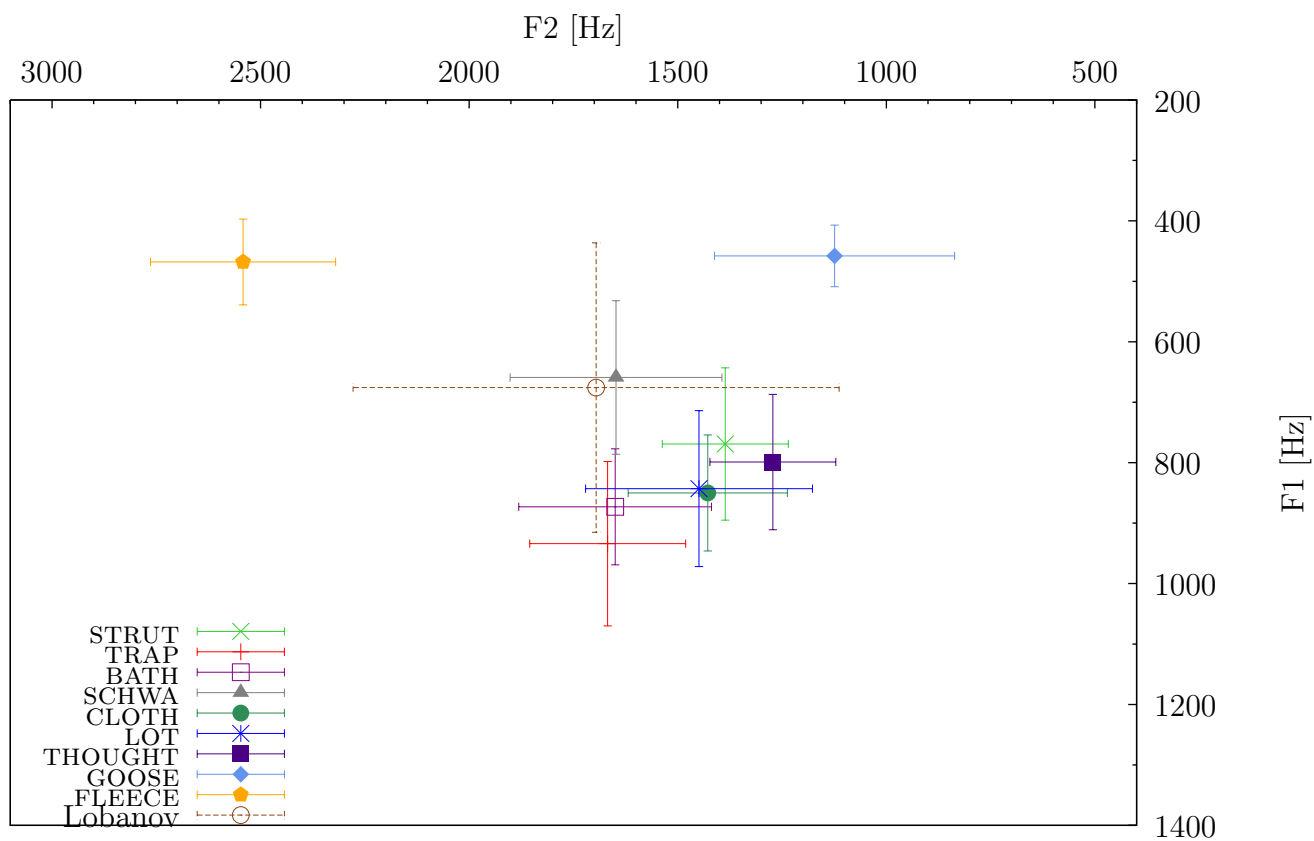
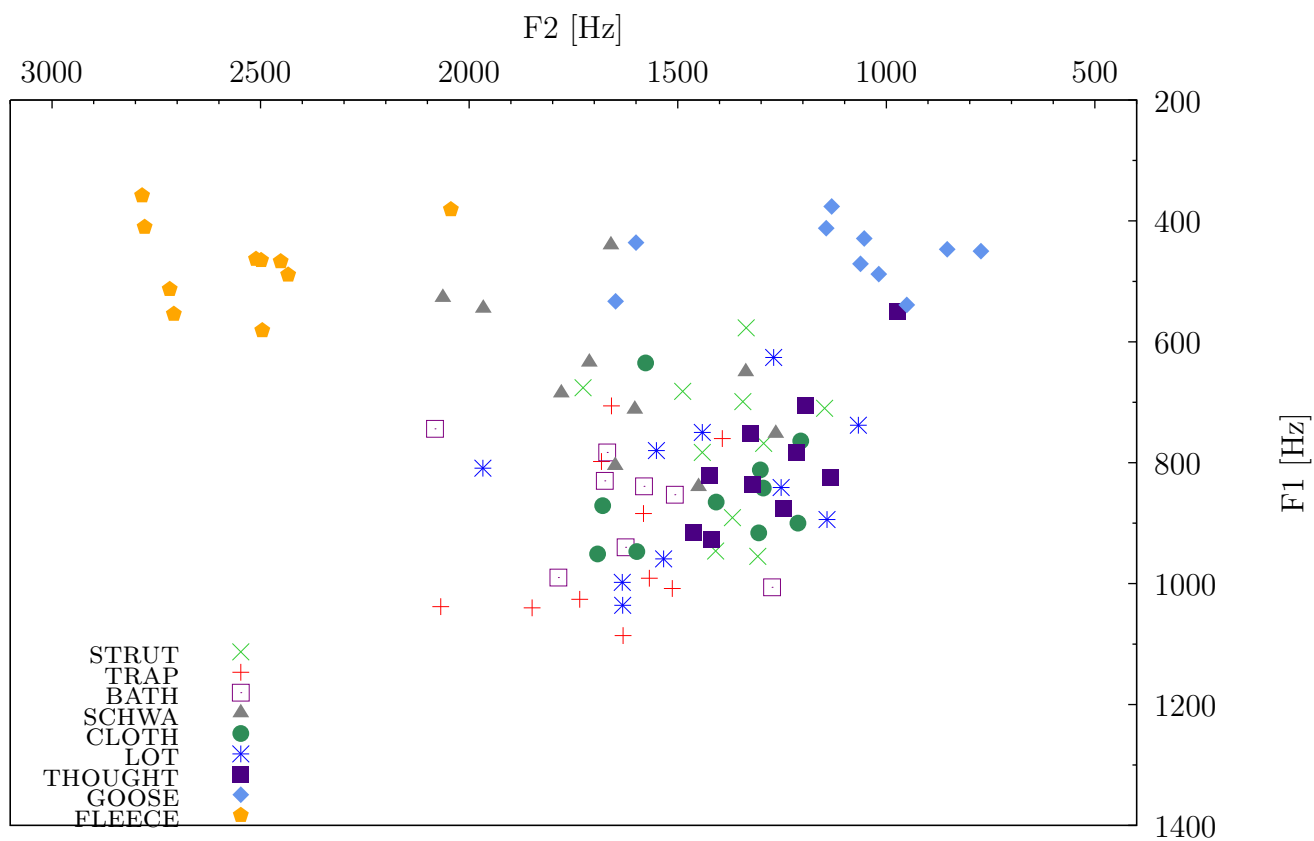


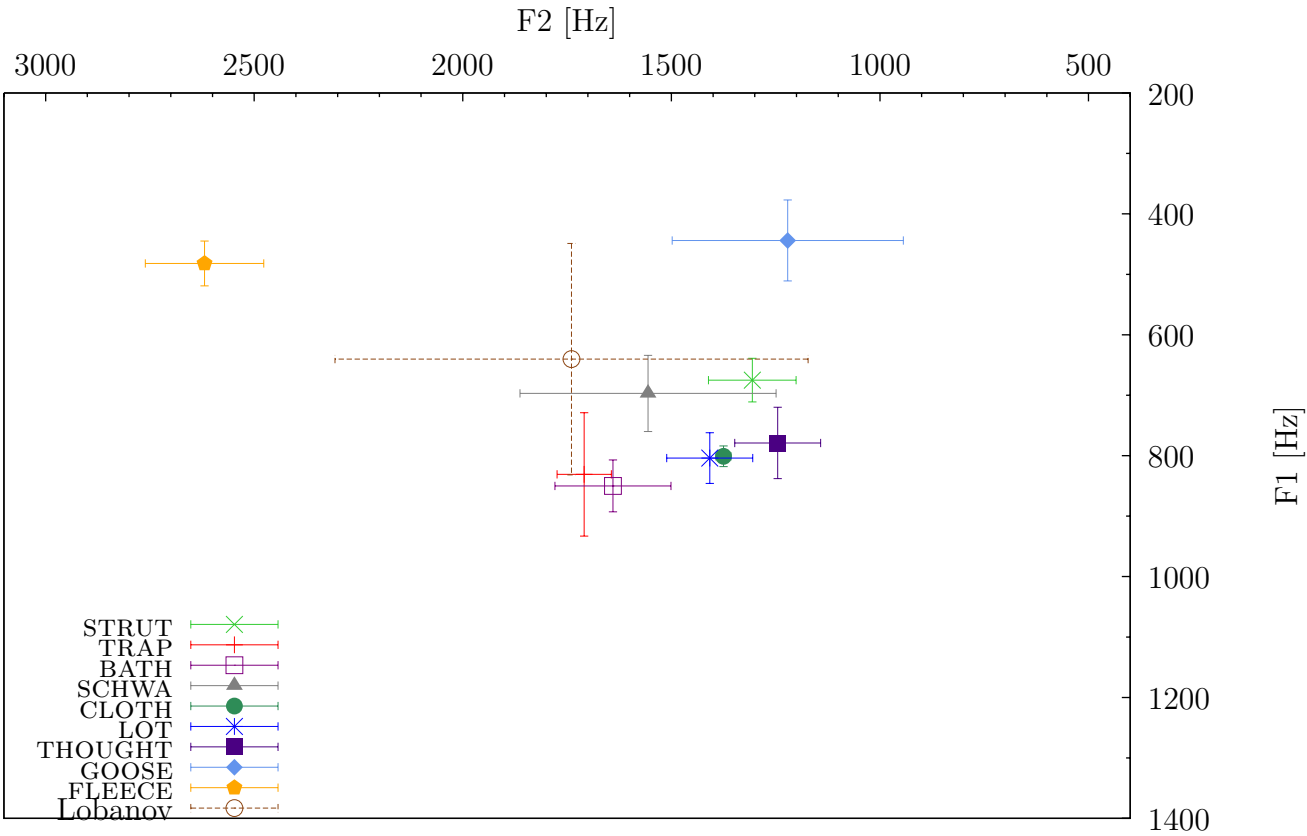
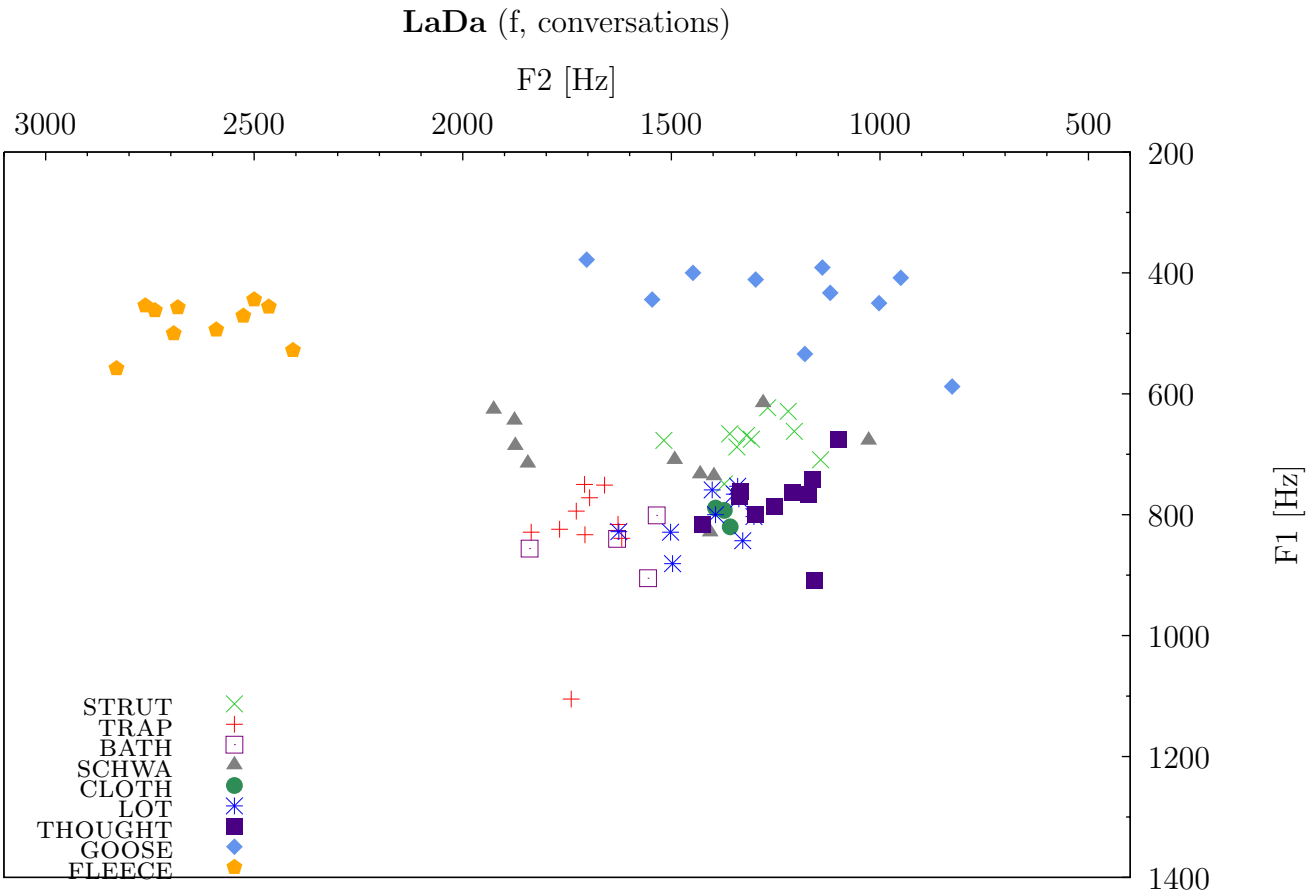


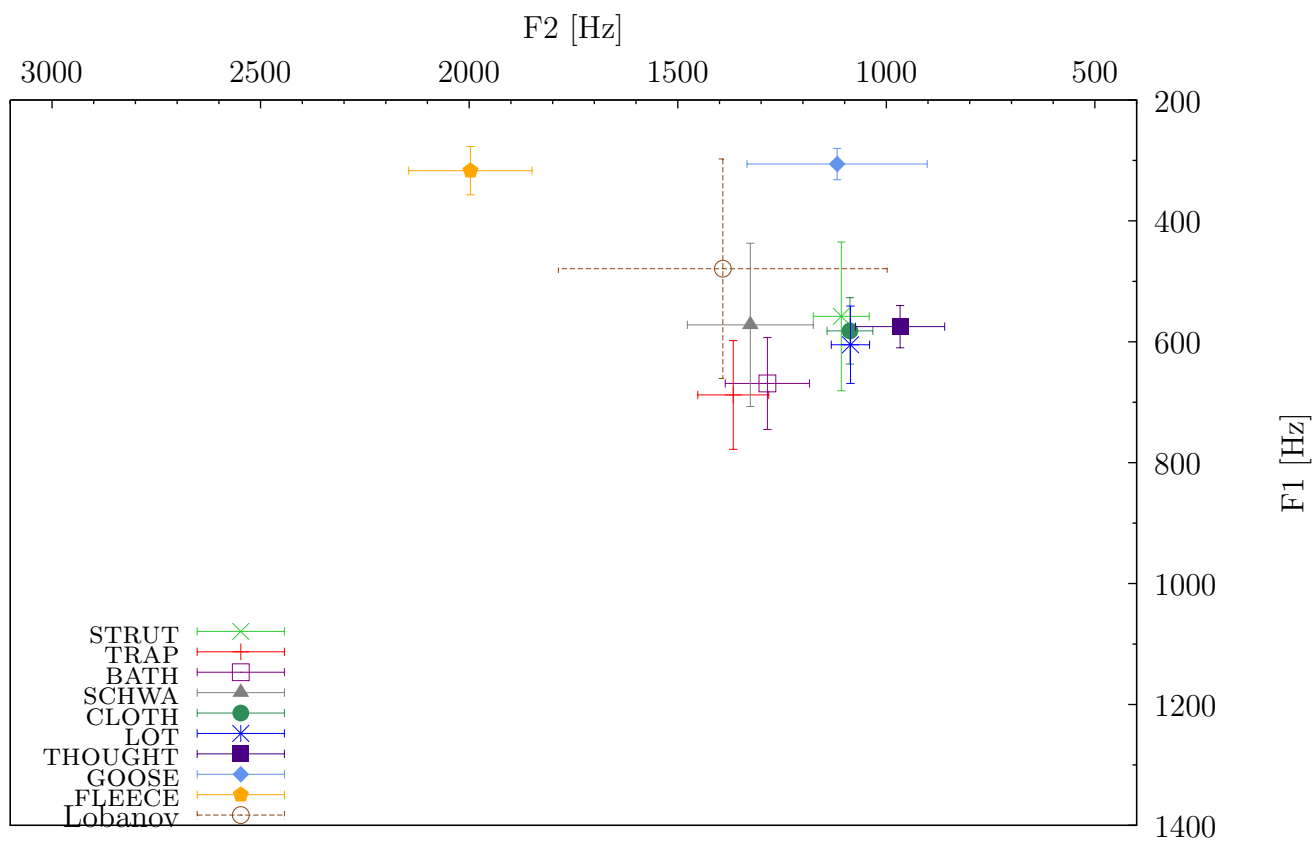
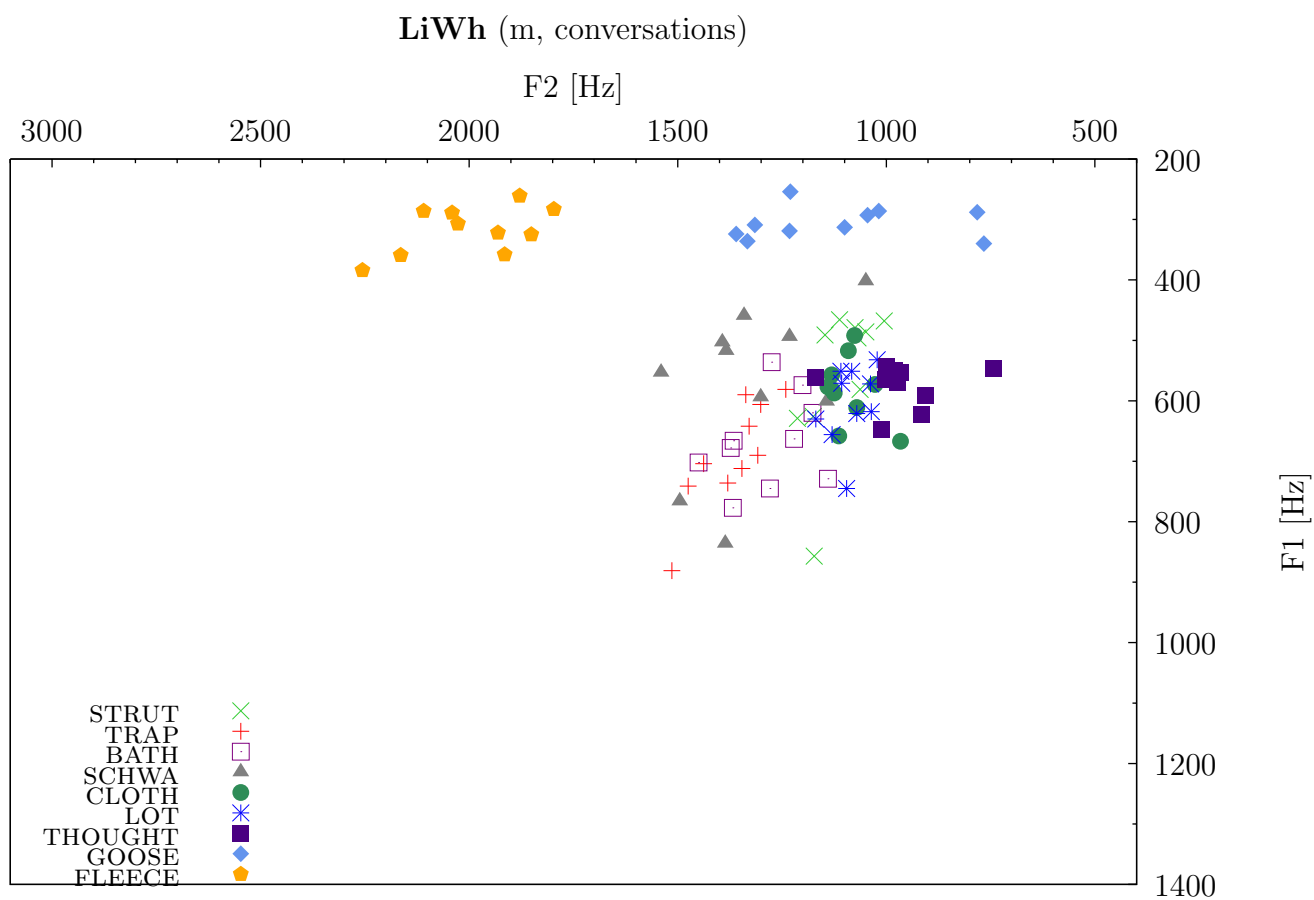


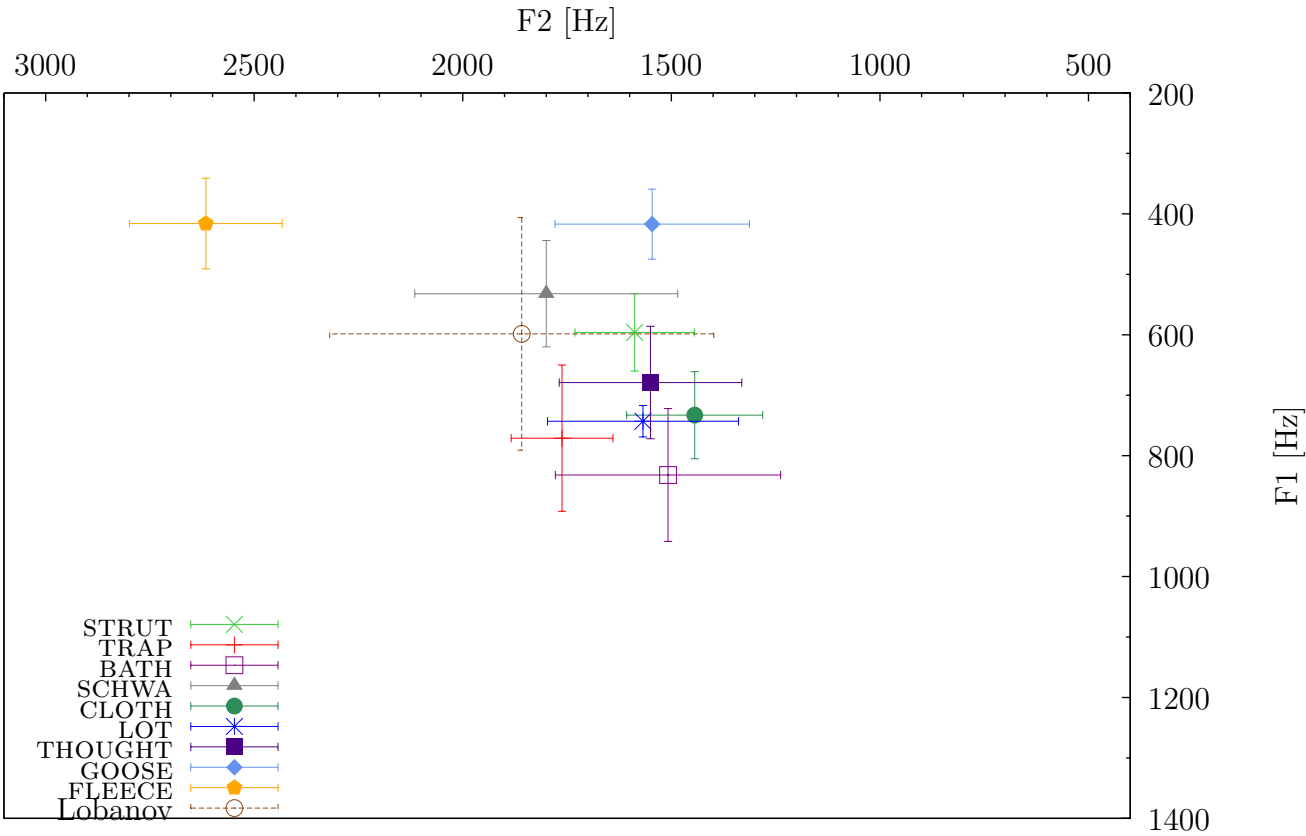
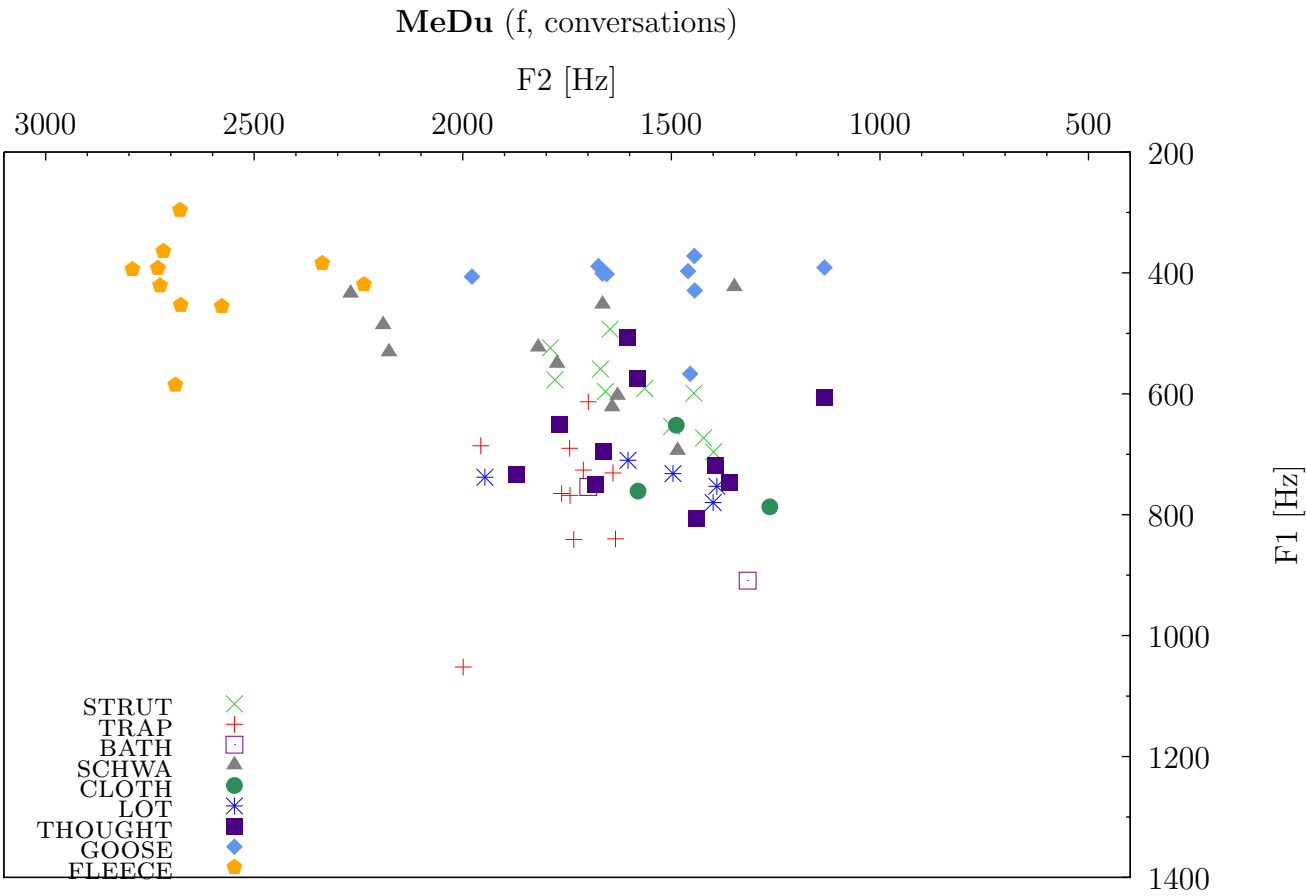


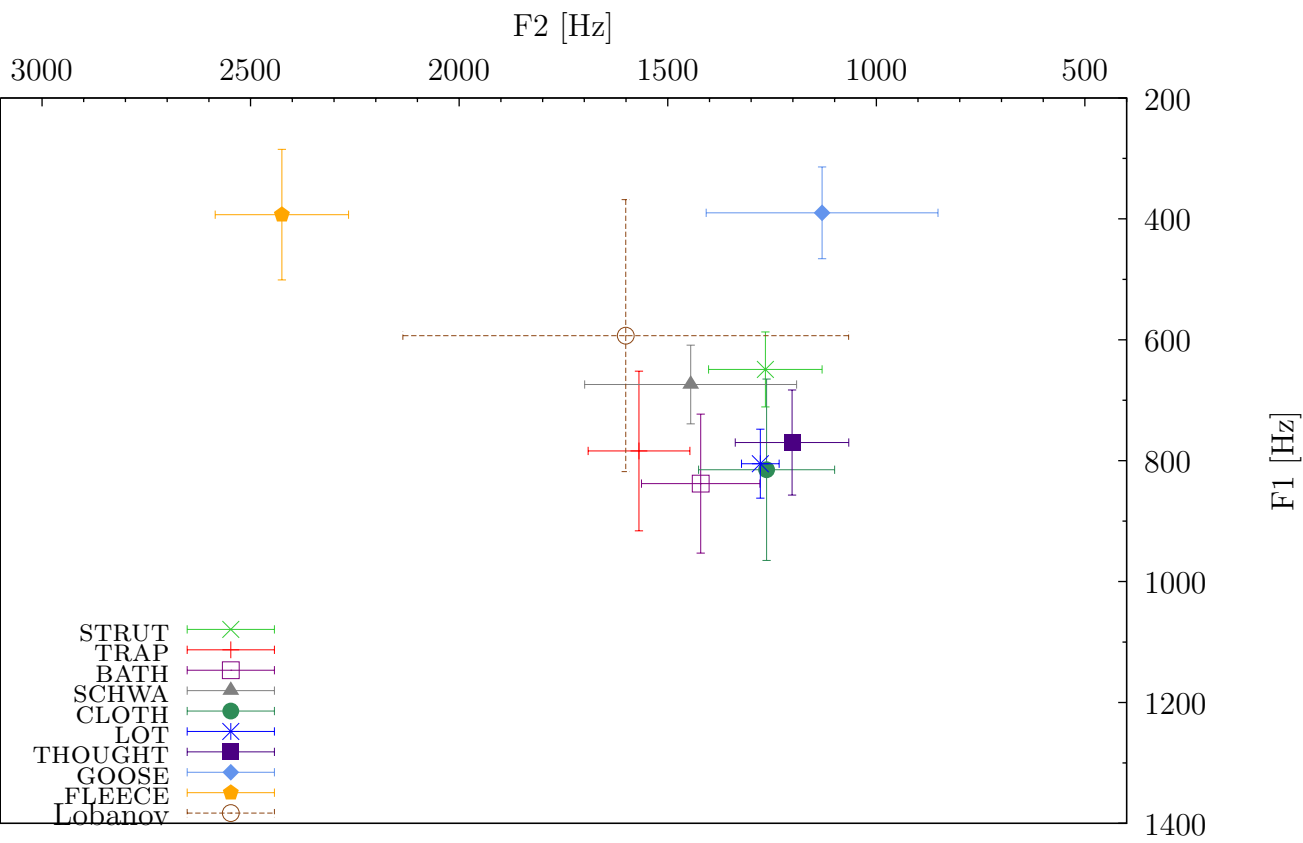
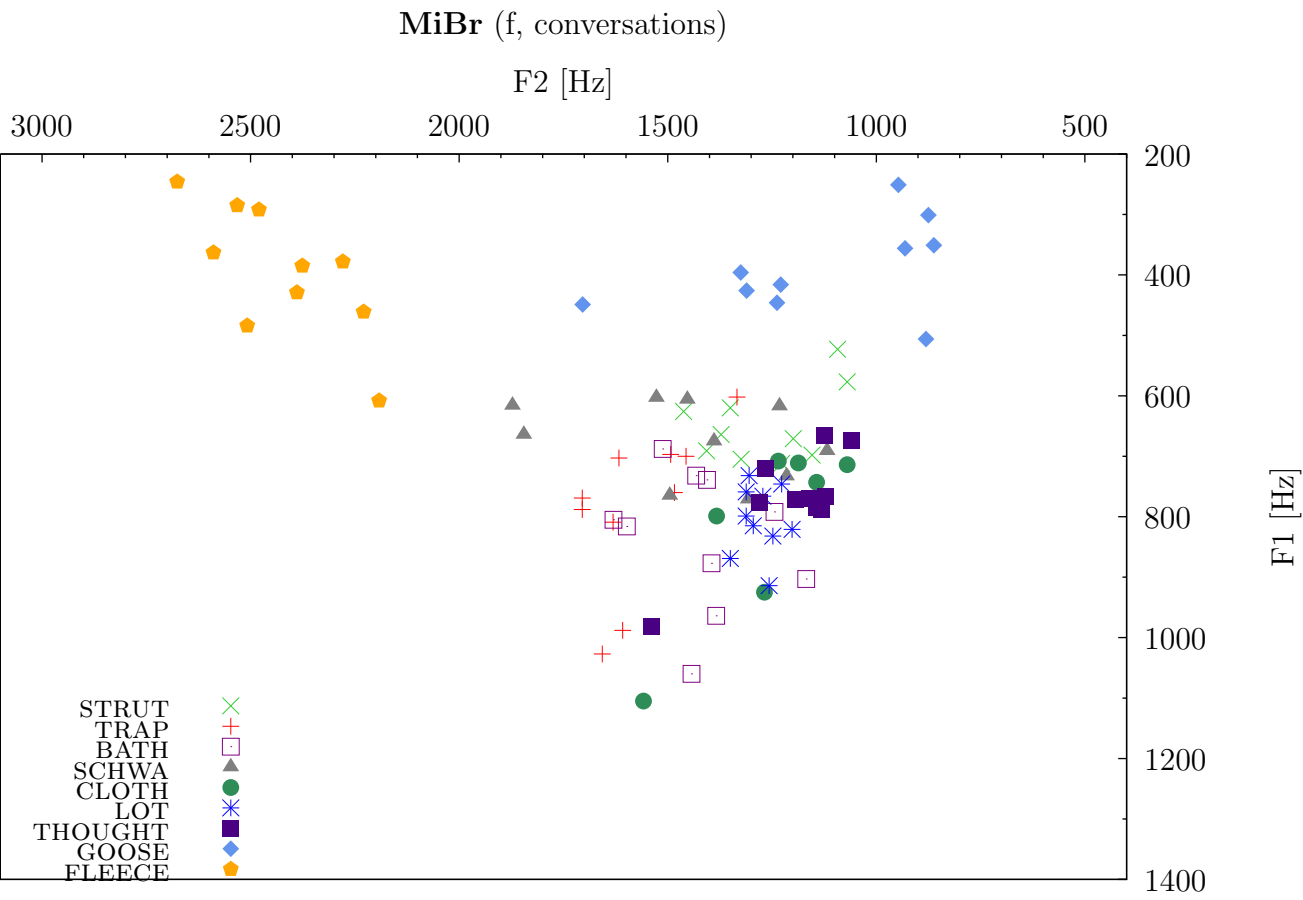
LaCl (f, conversations)

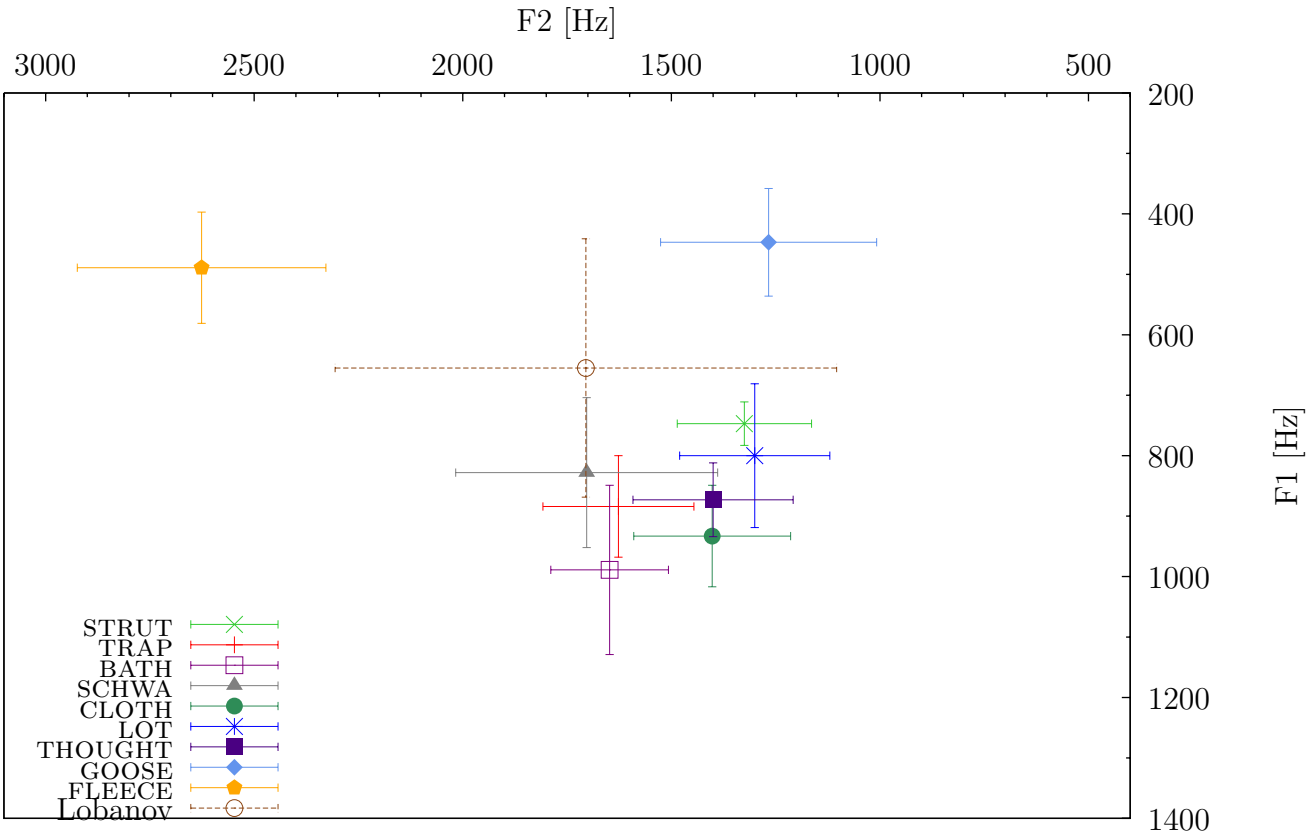
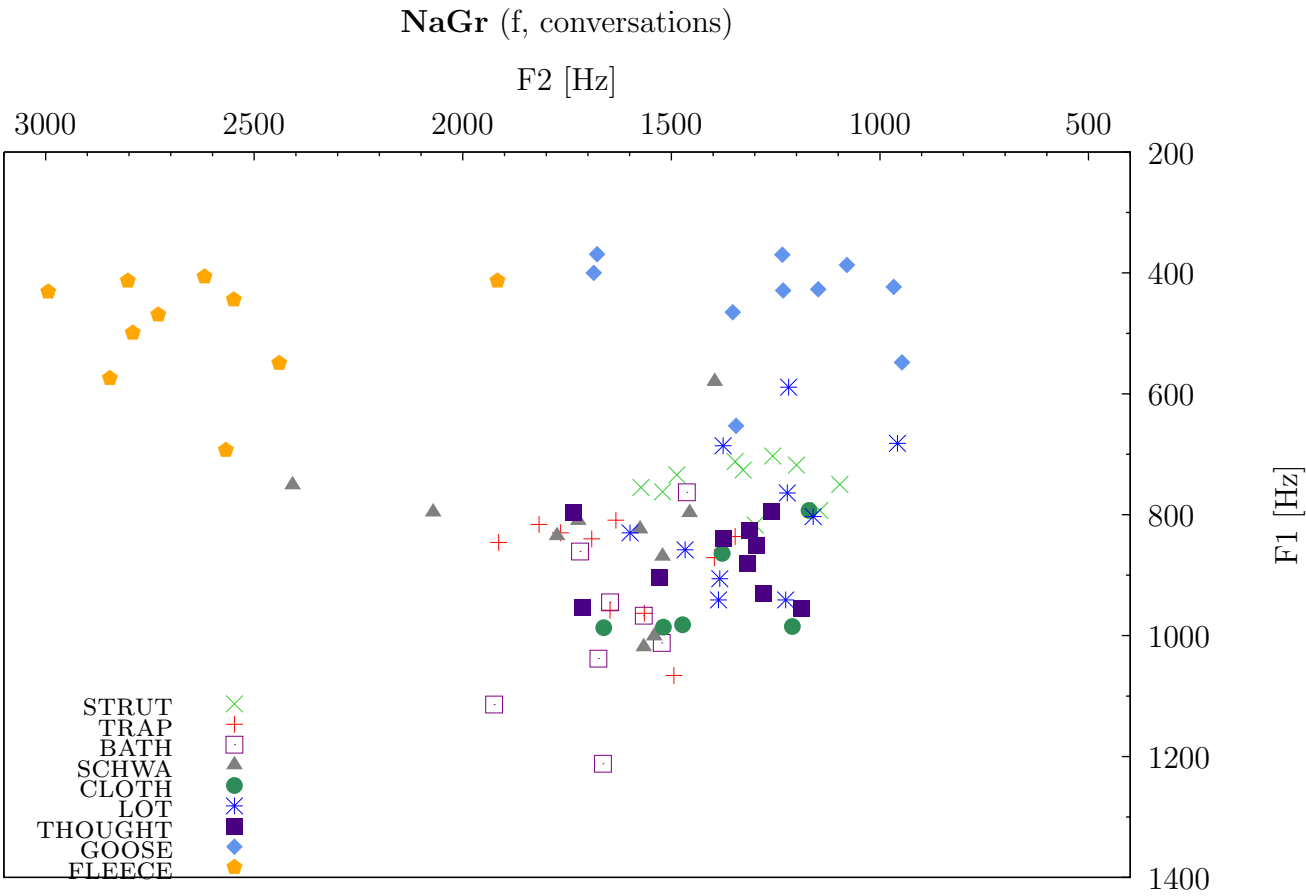


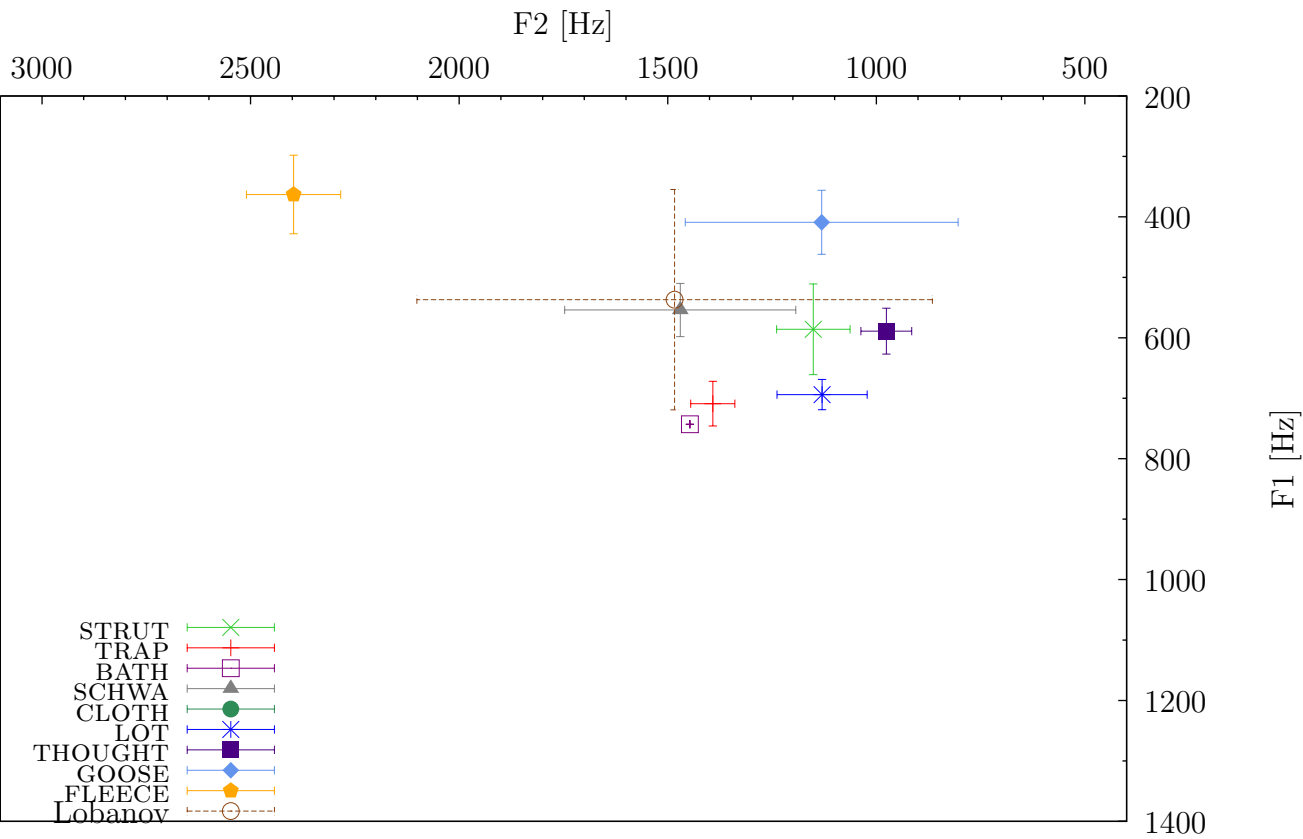
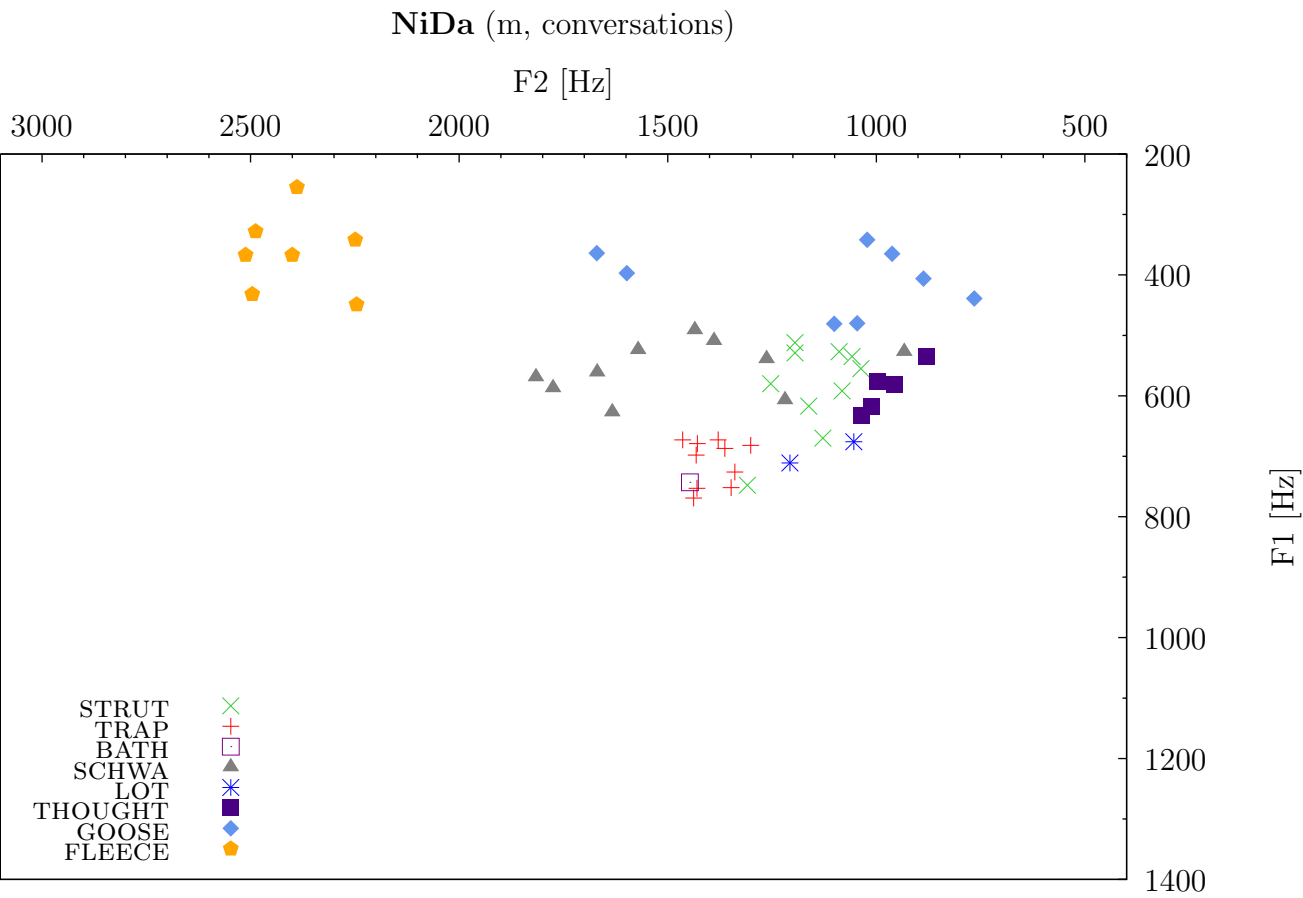


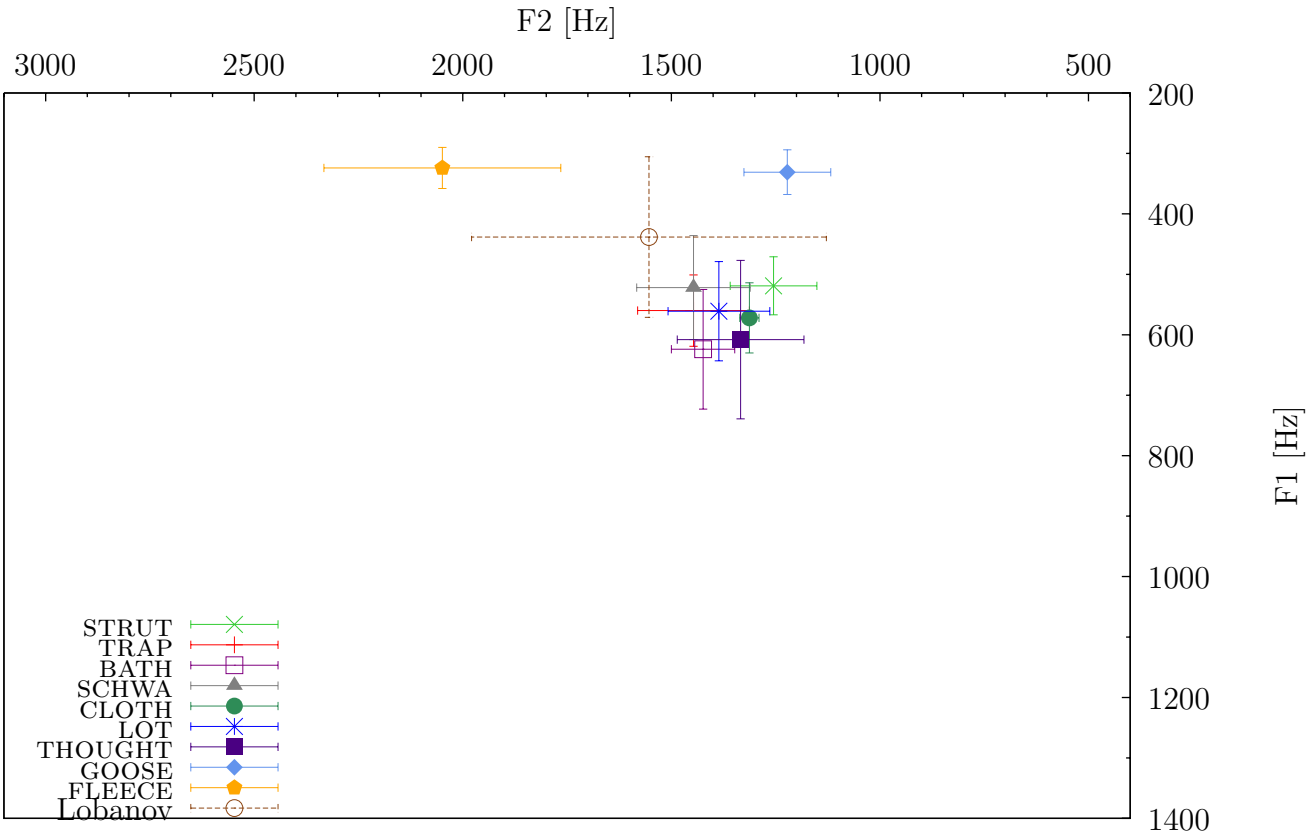
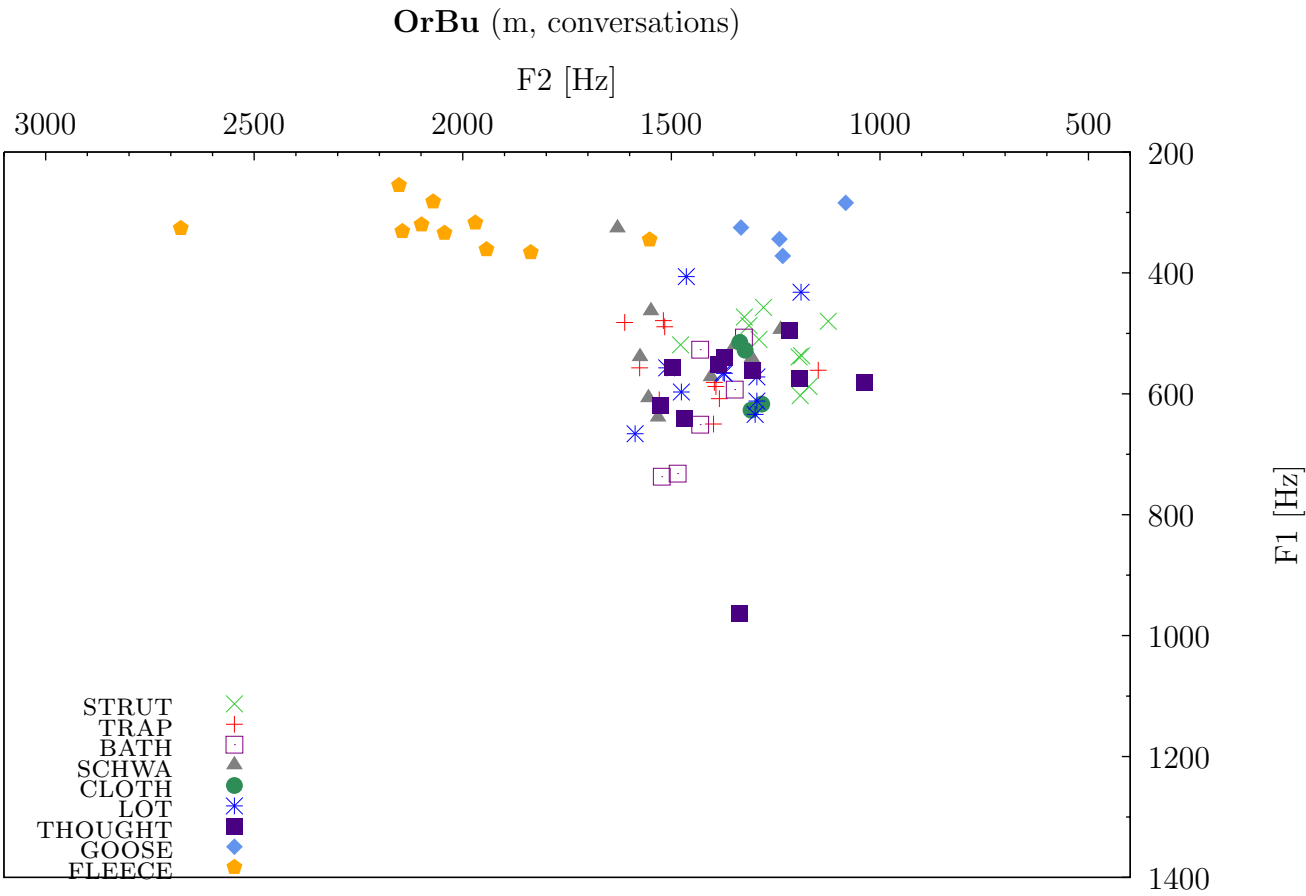


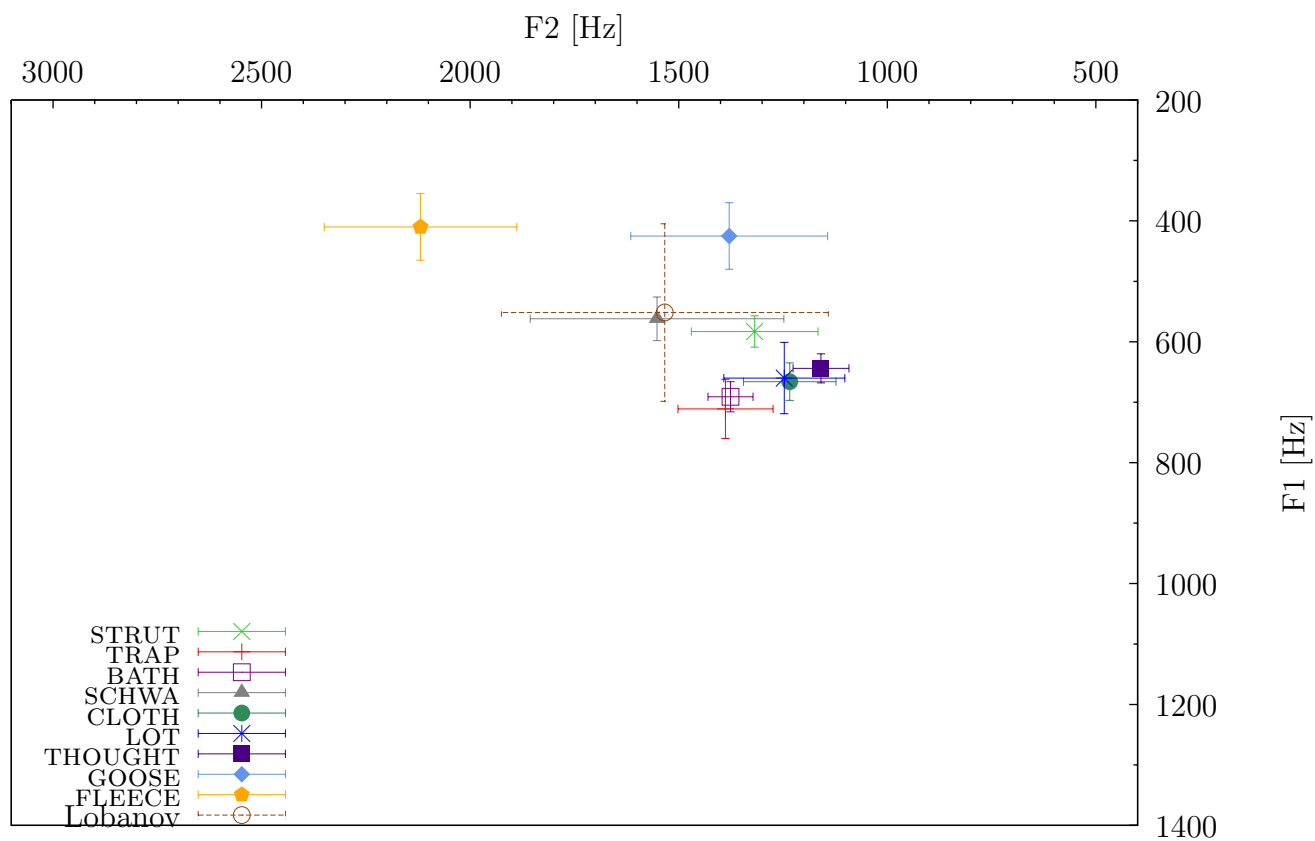
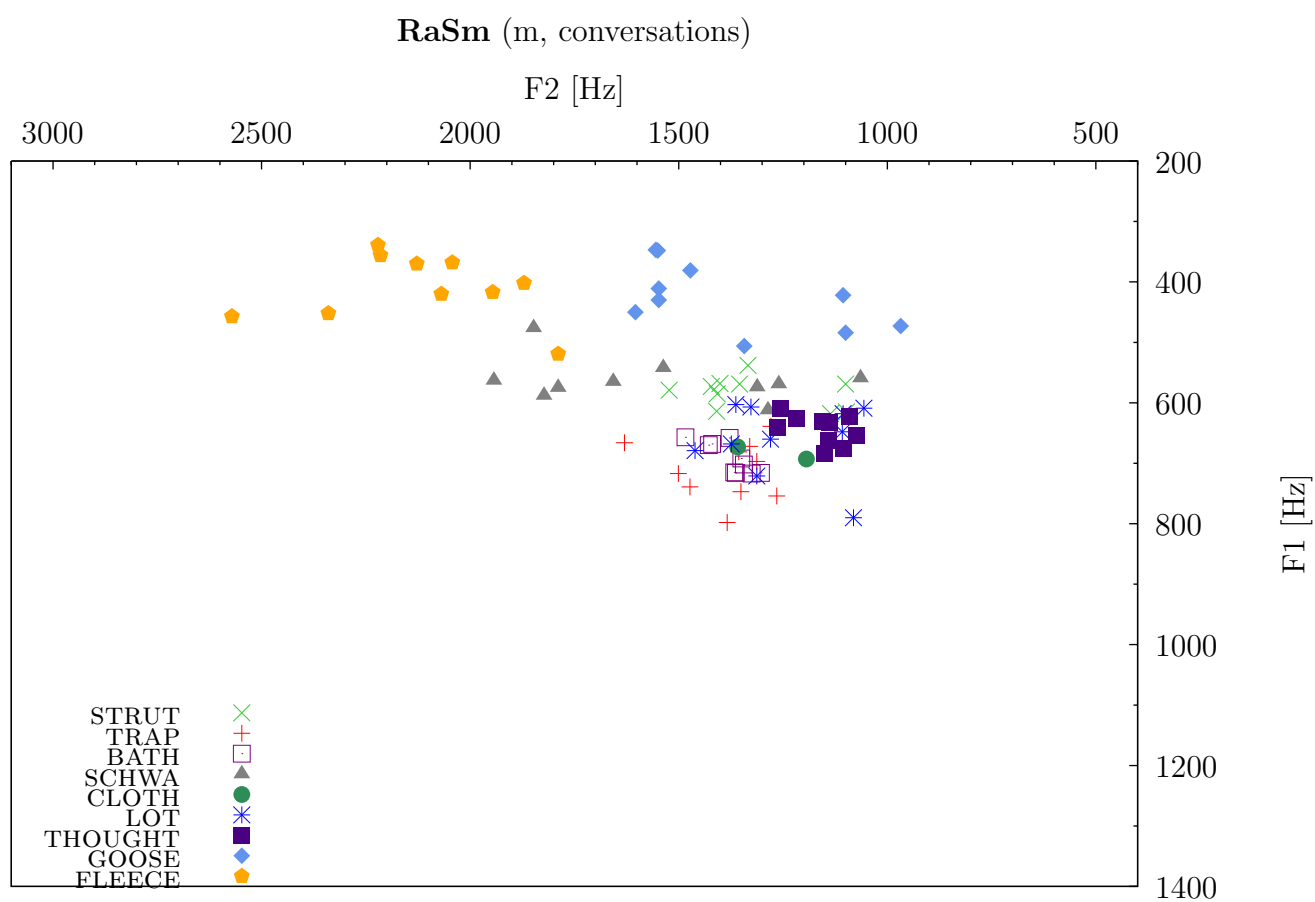


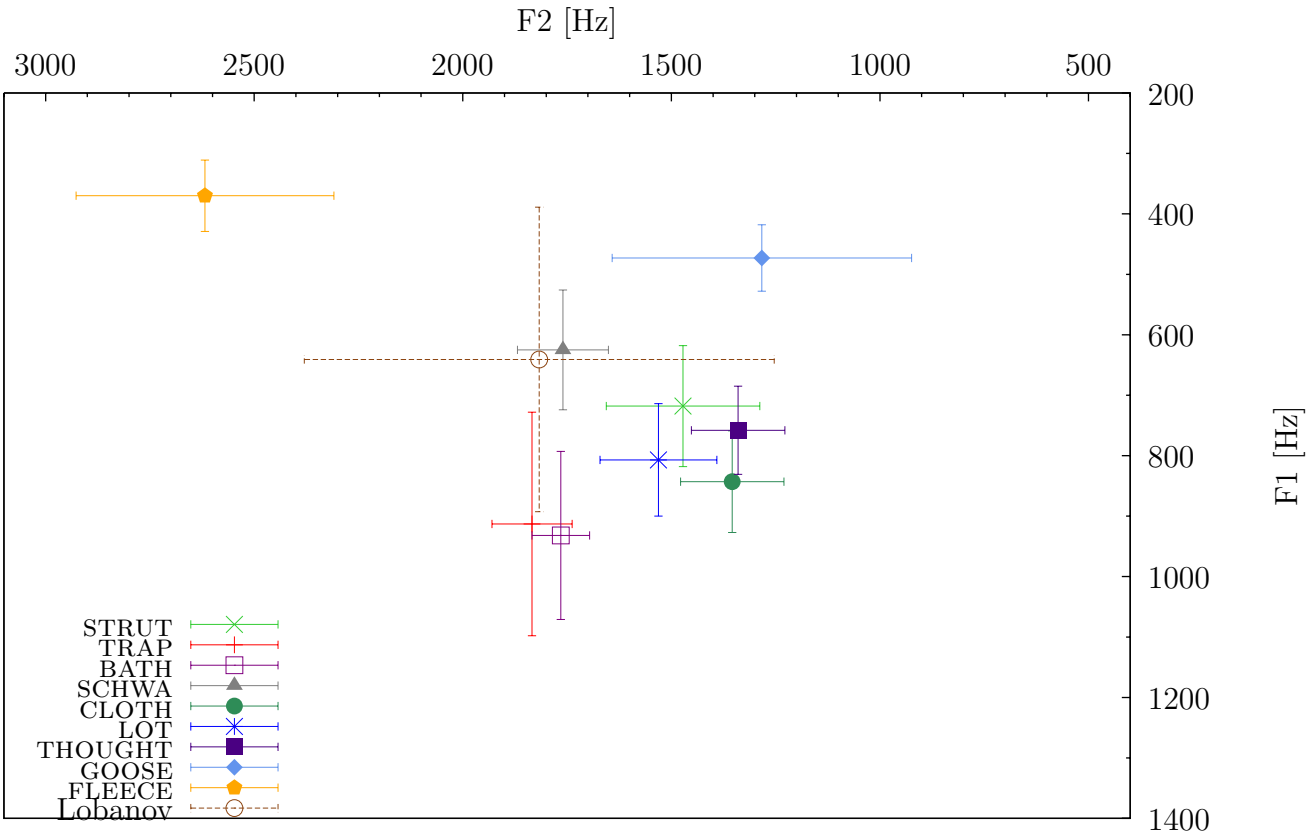
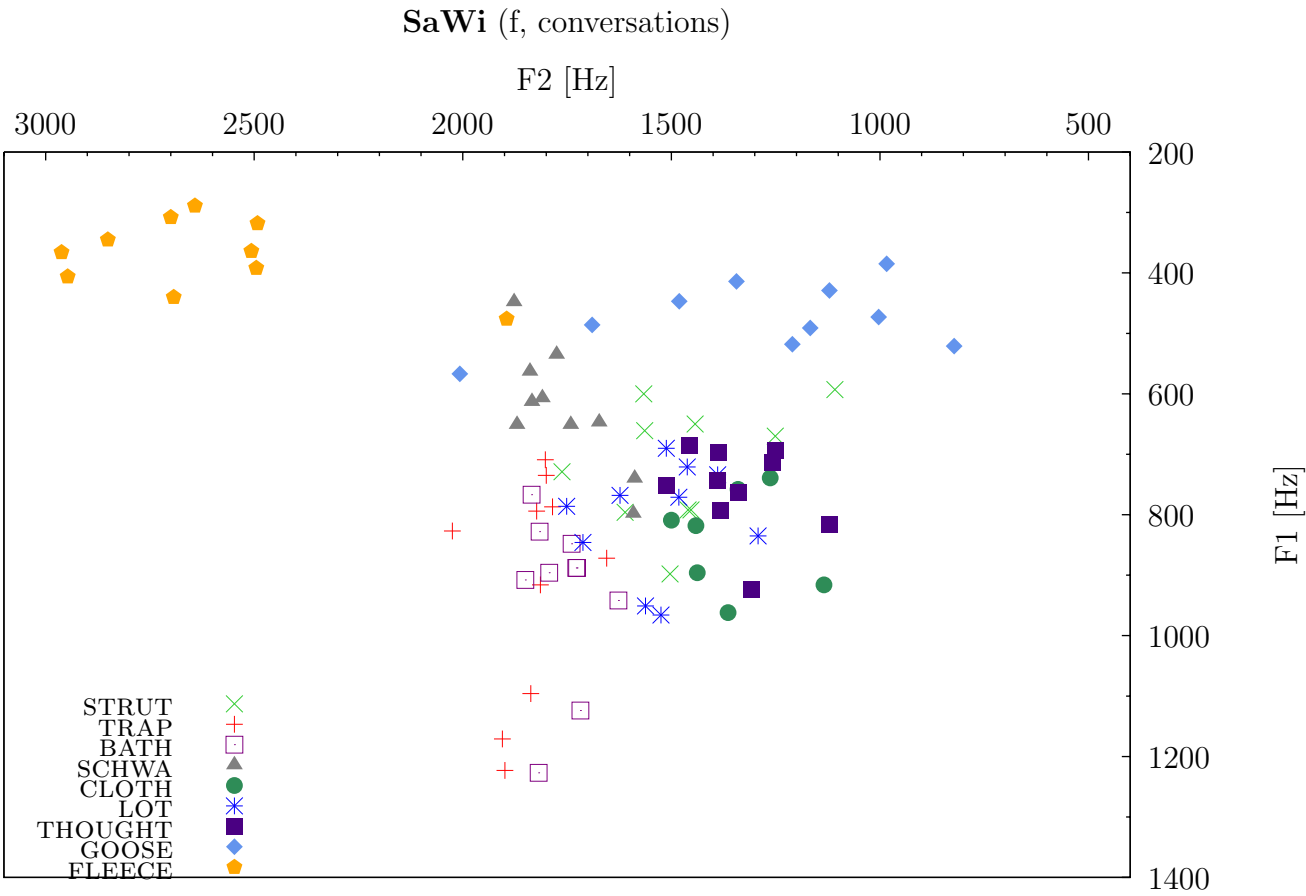


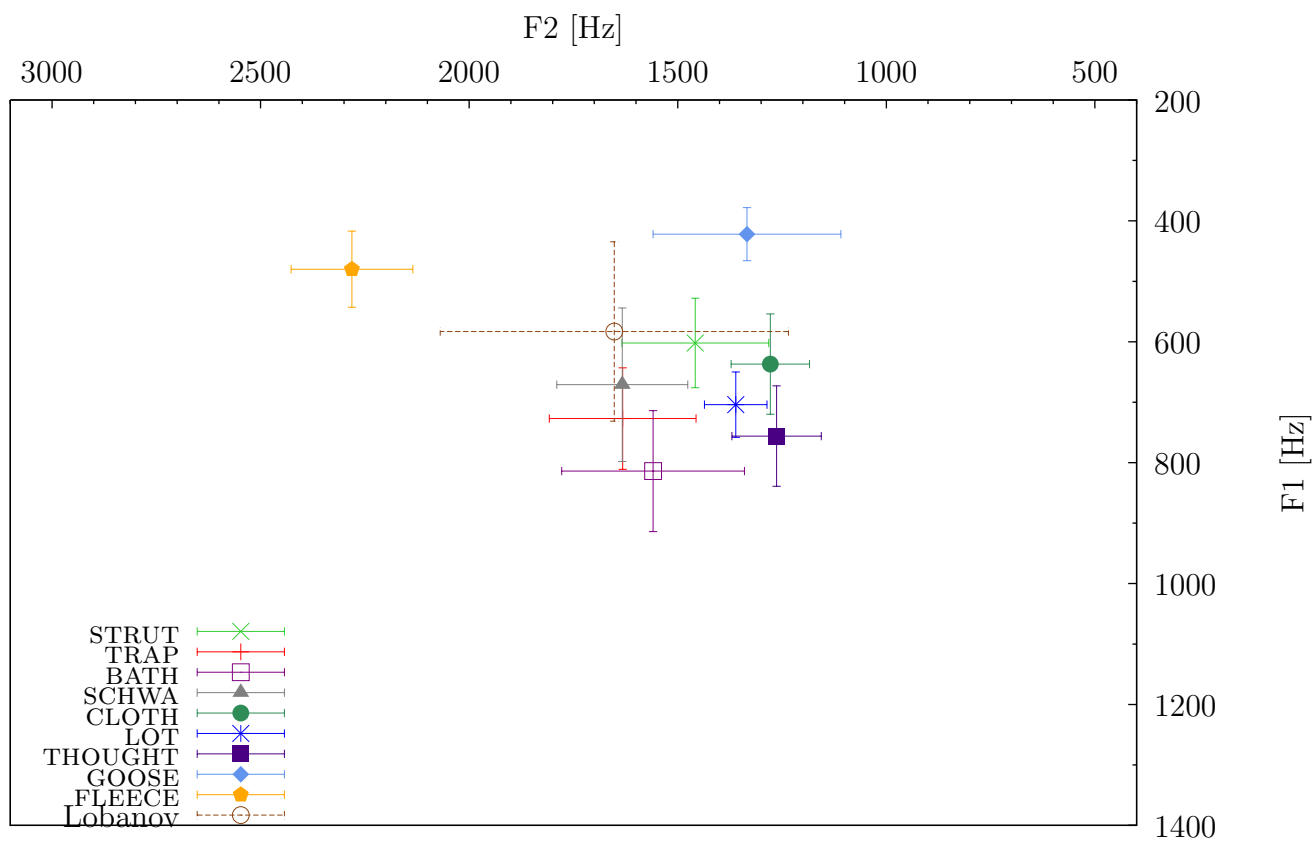
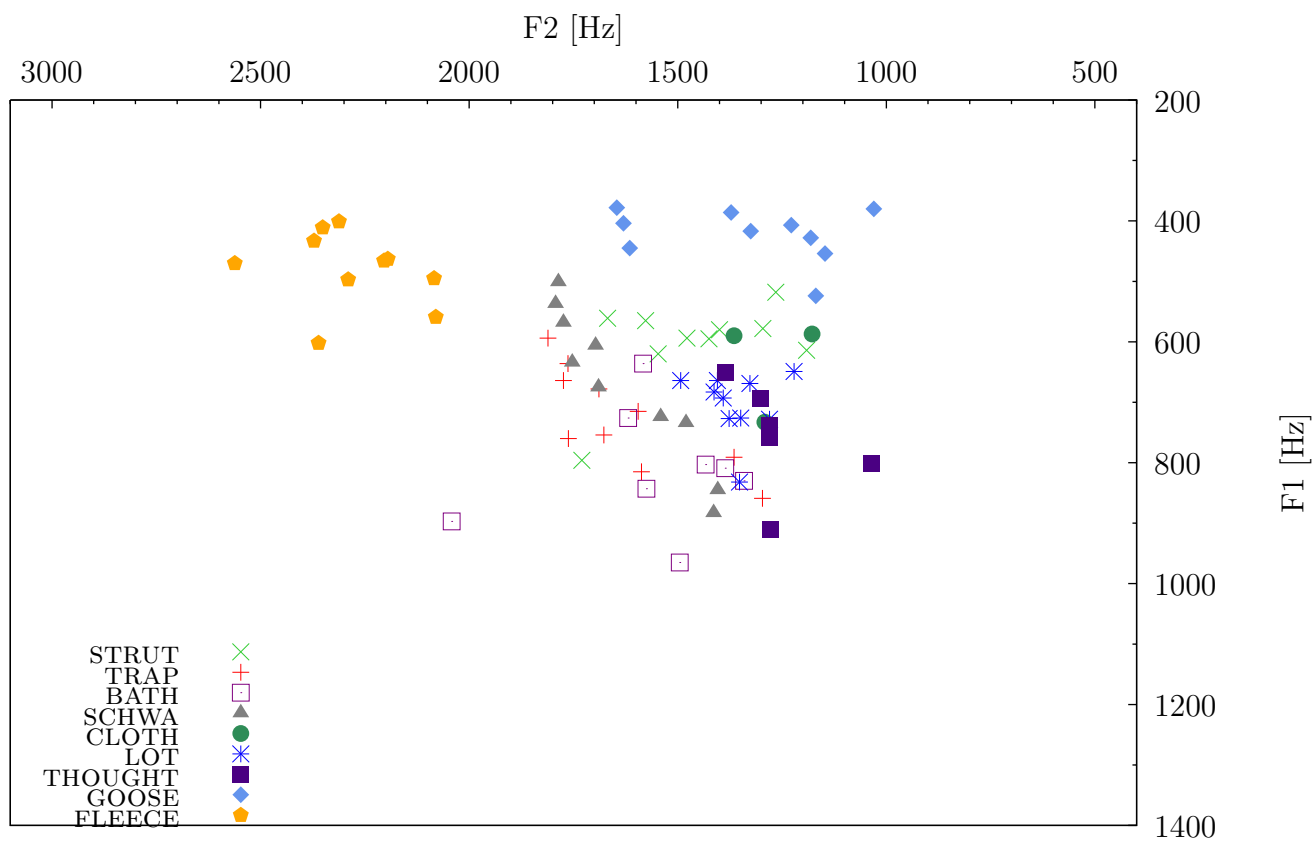


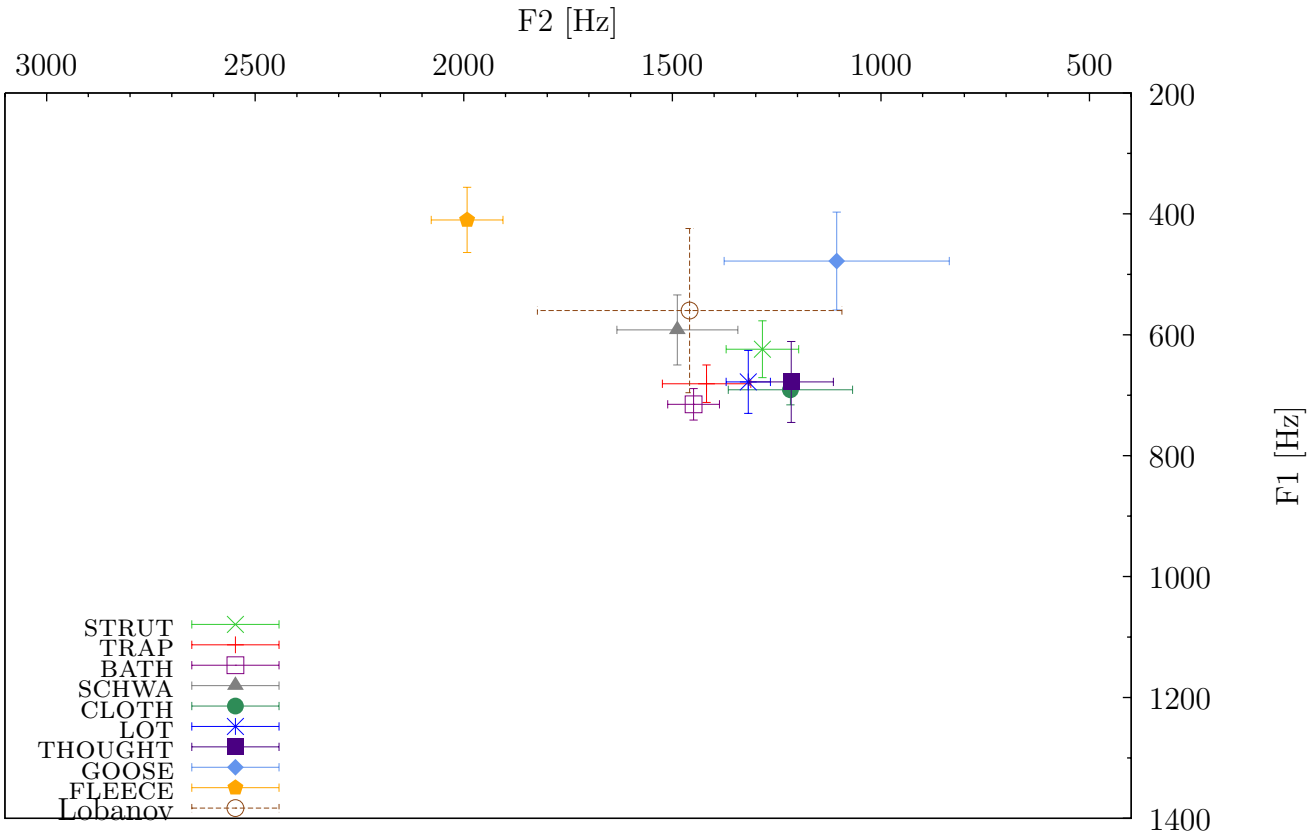
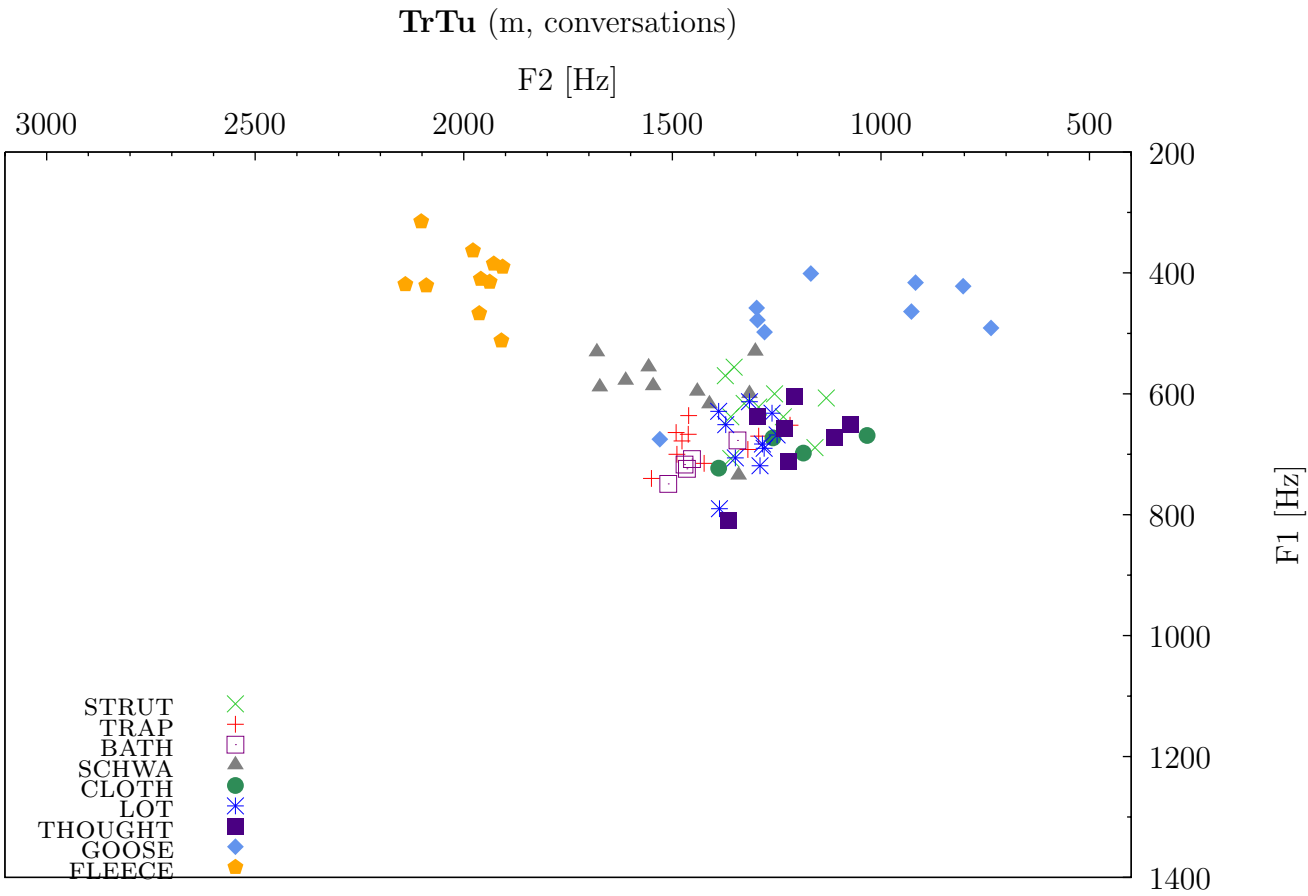


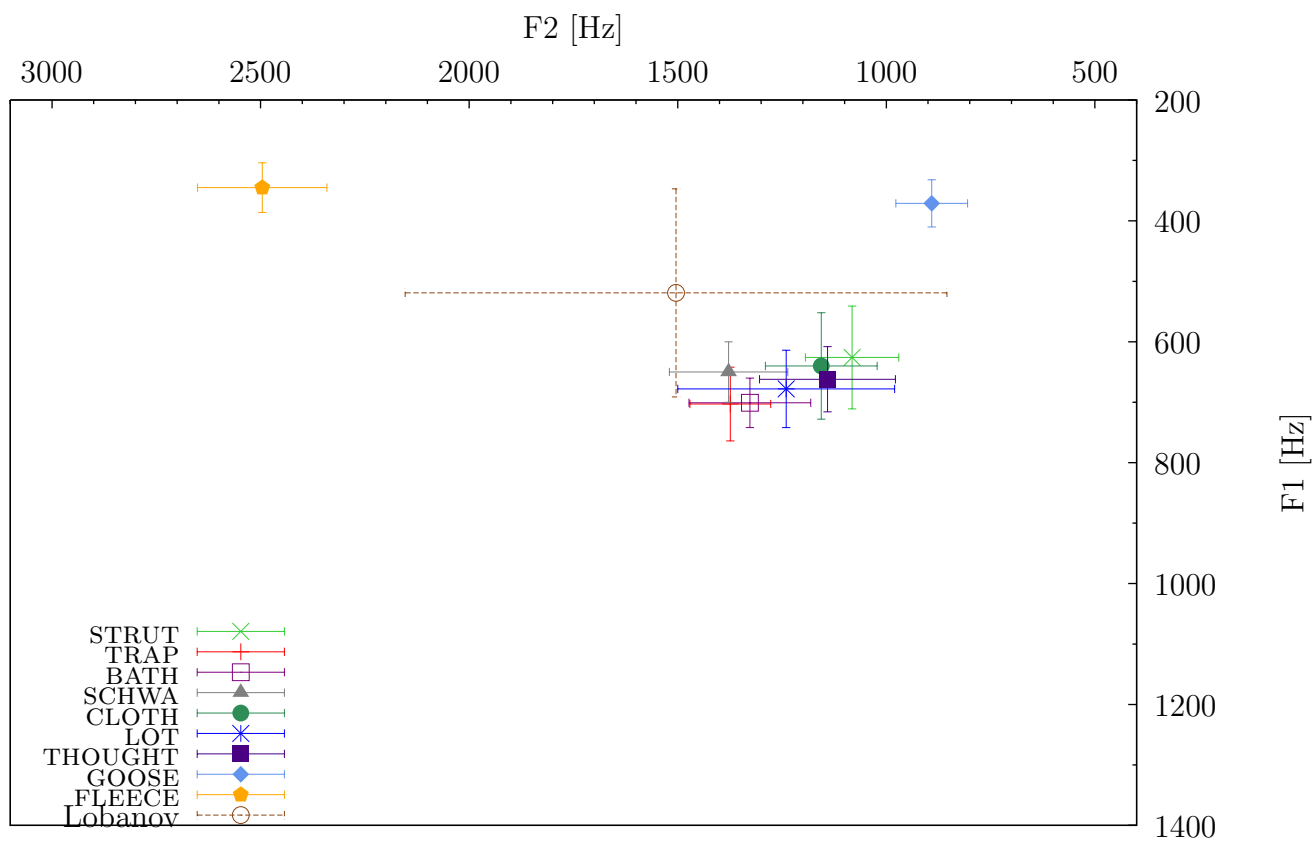
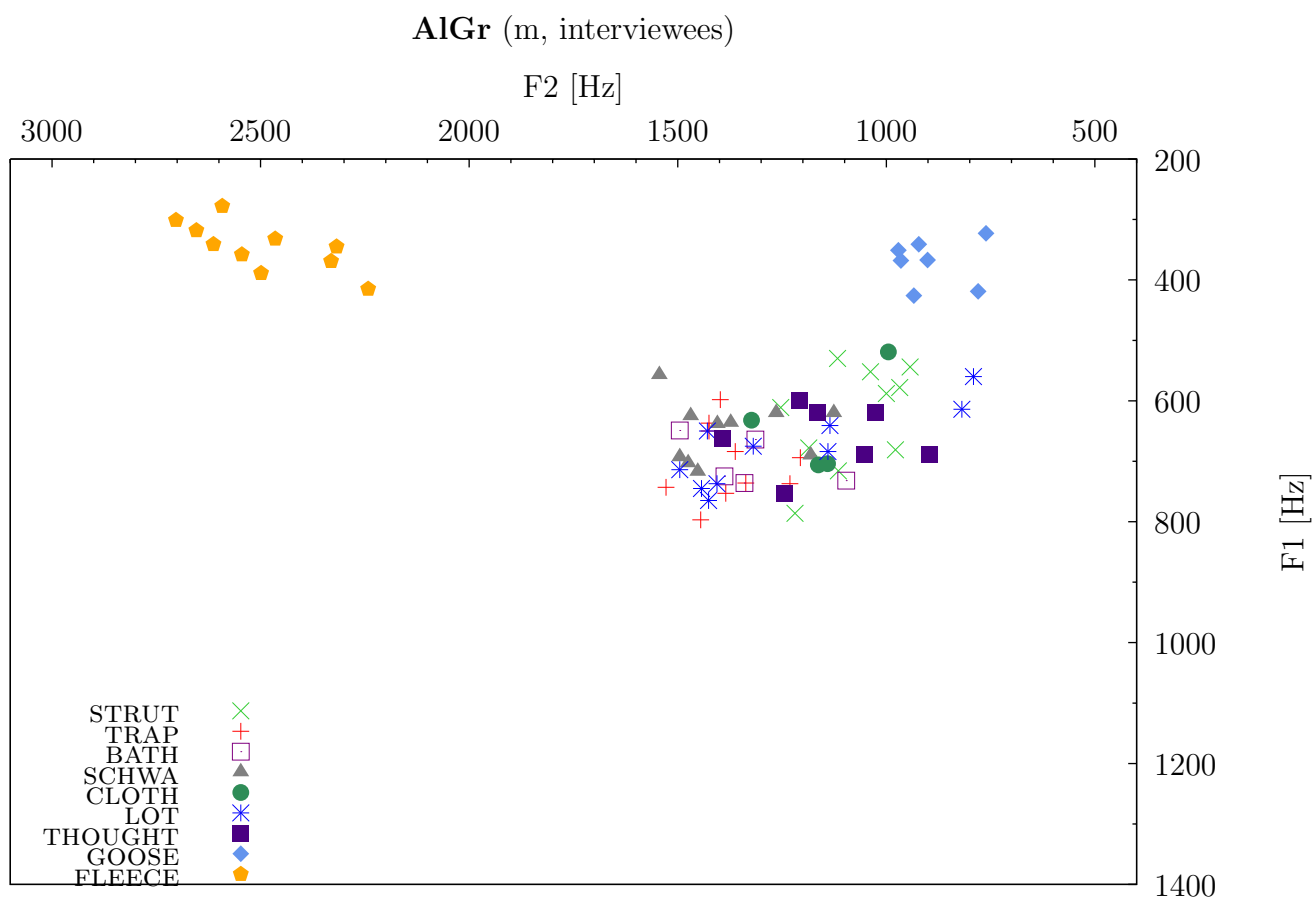


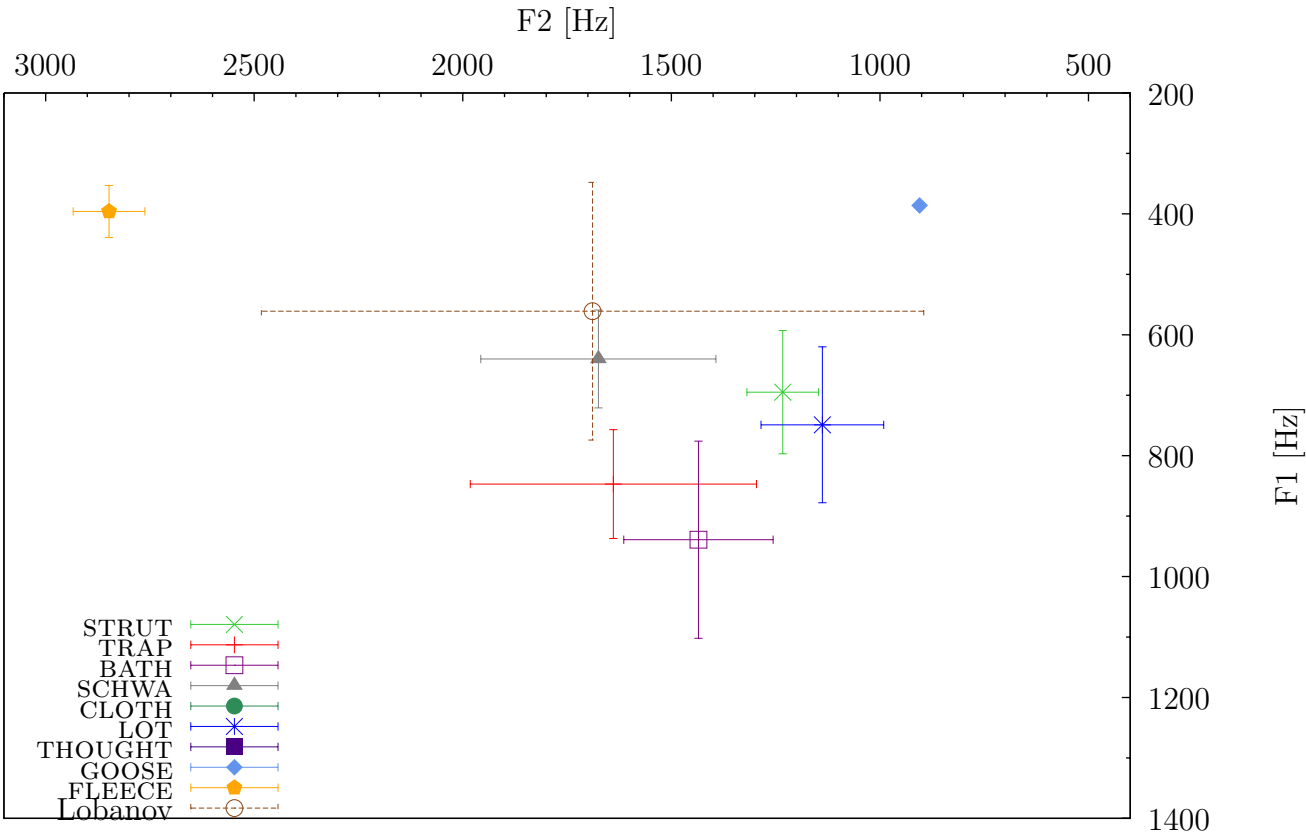
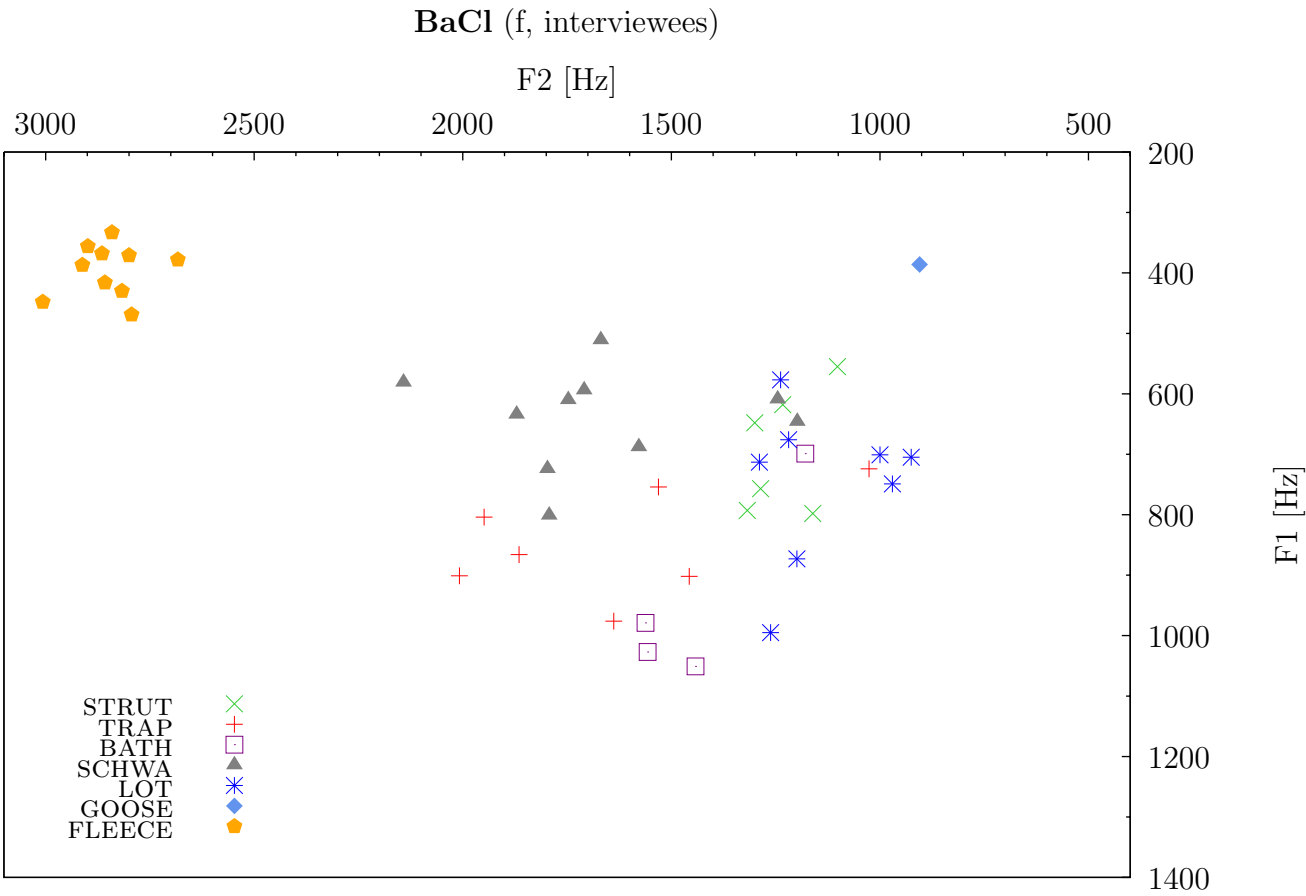


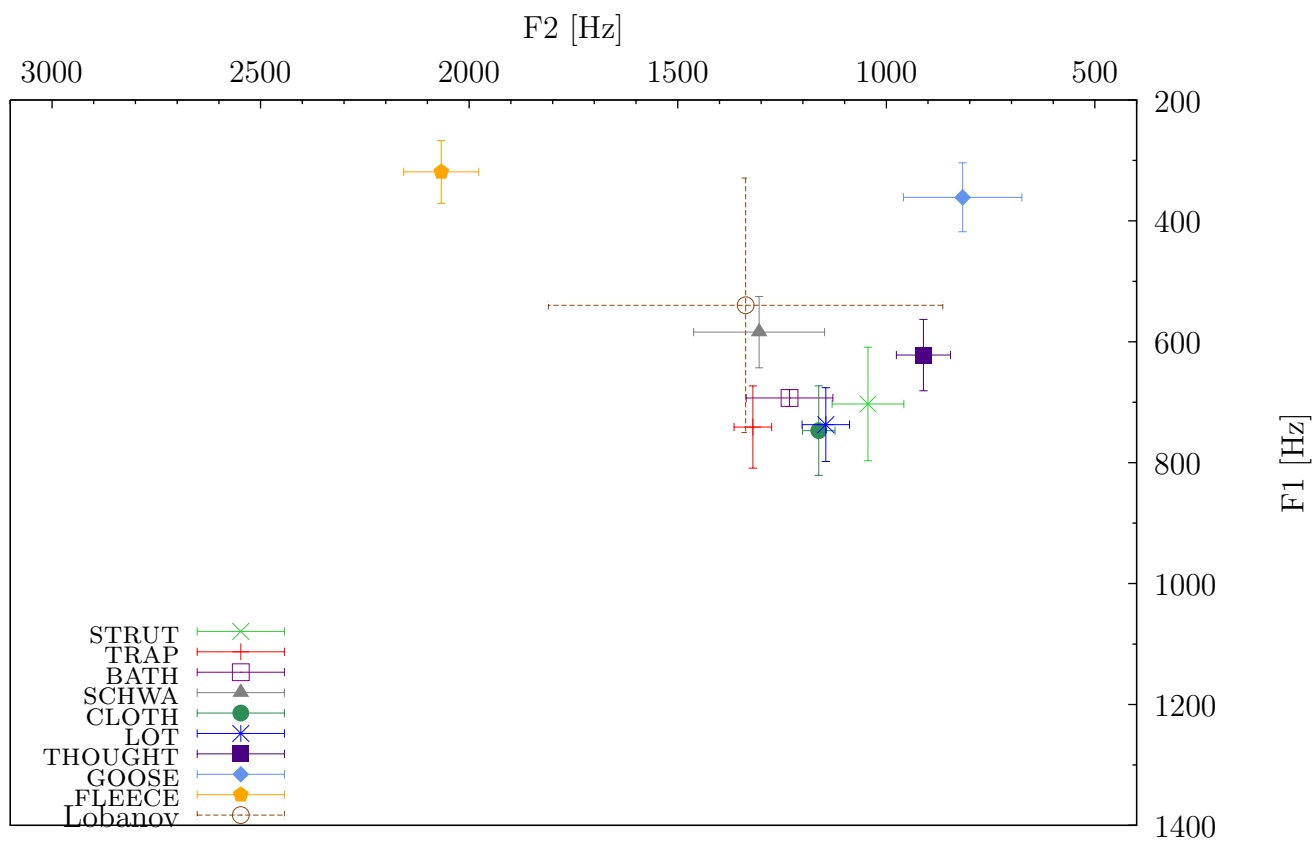
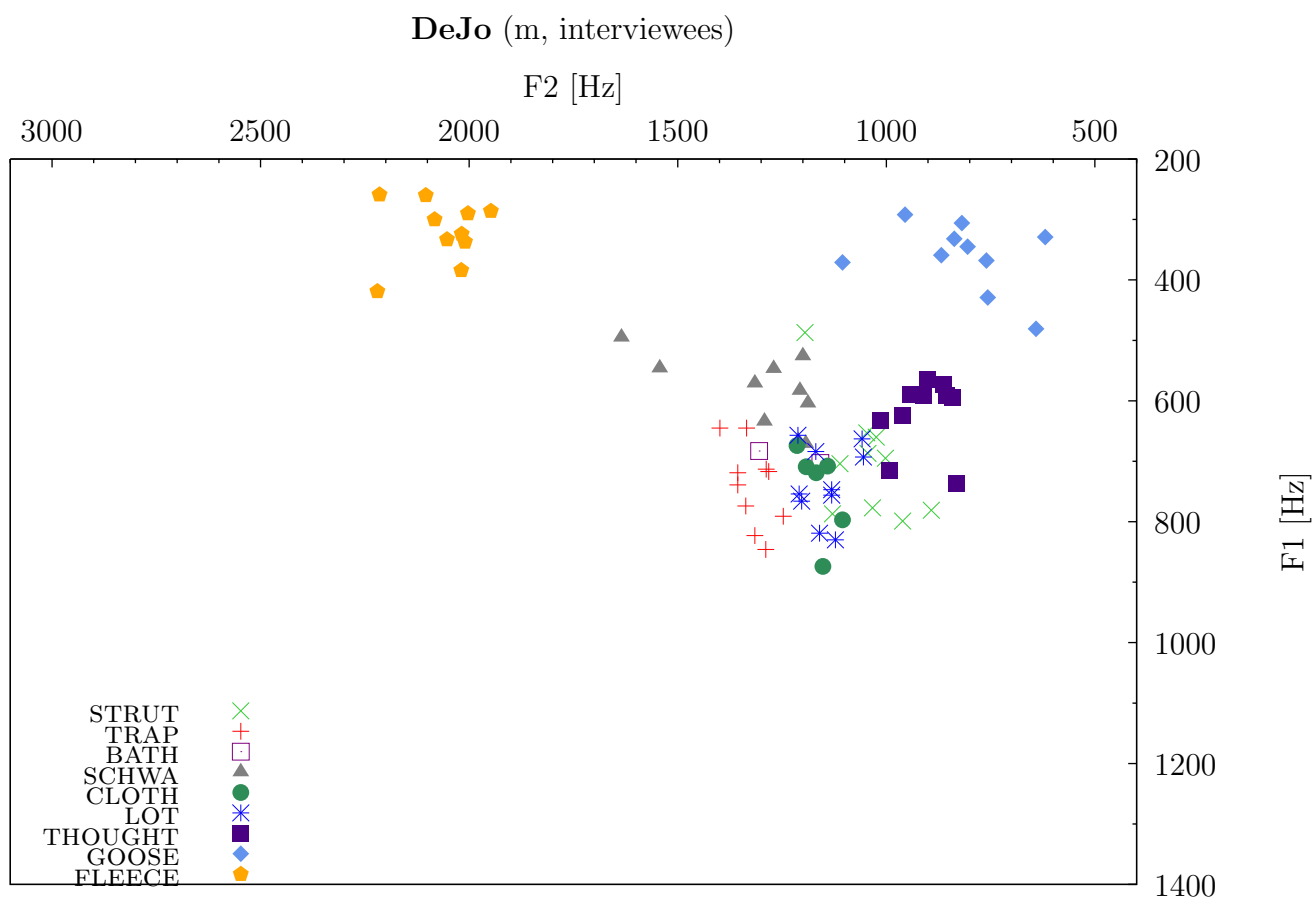


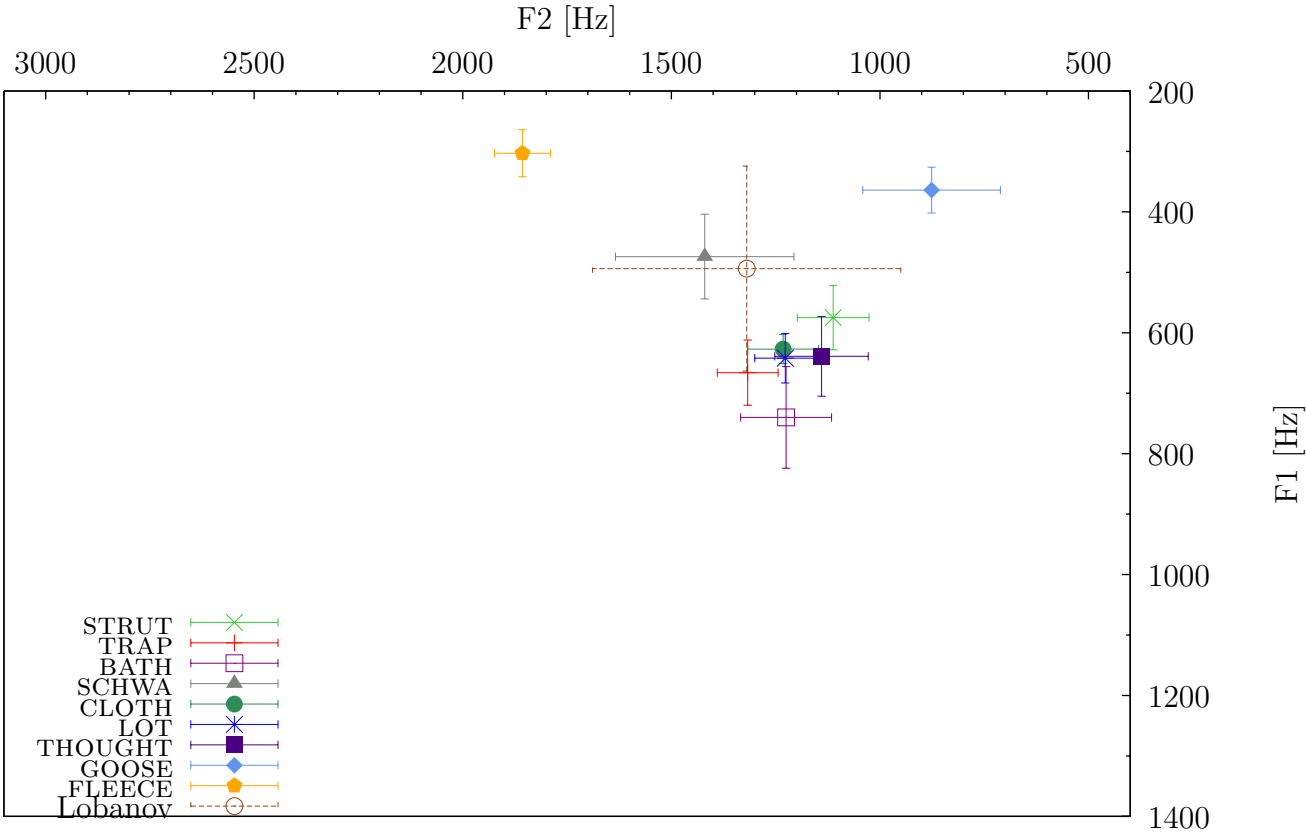
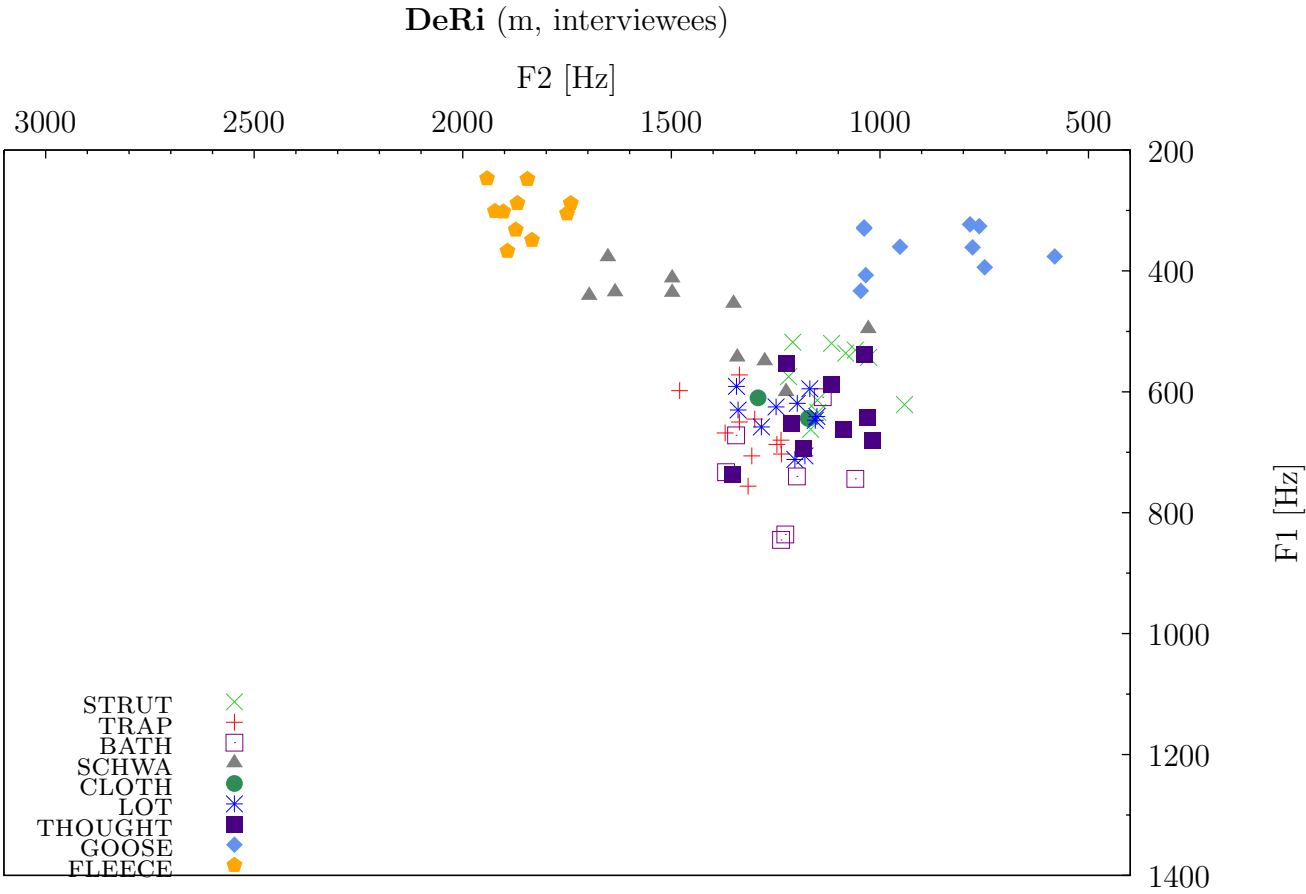
ShJo (f, conversations)

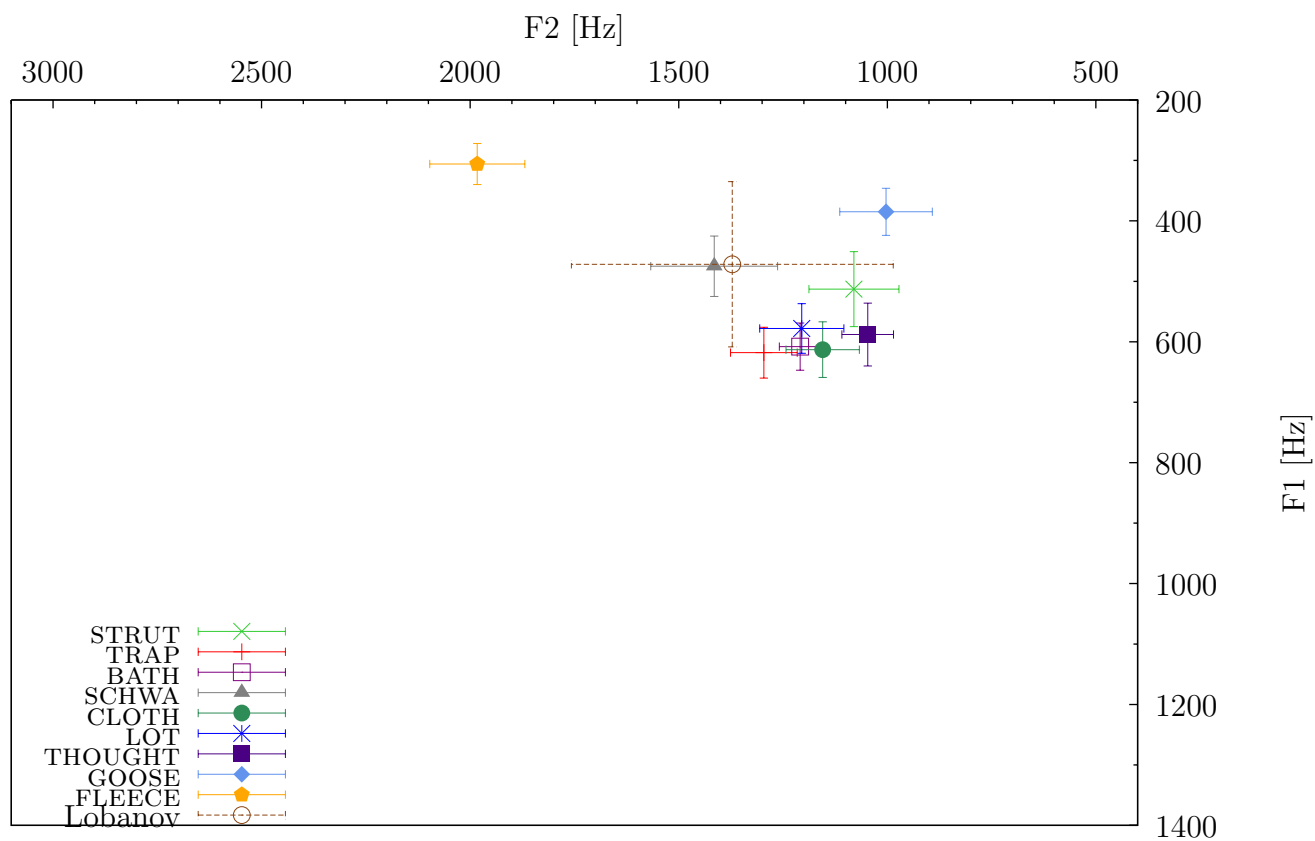
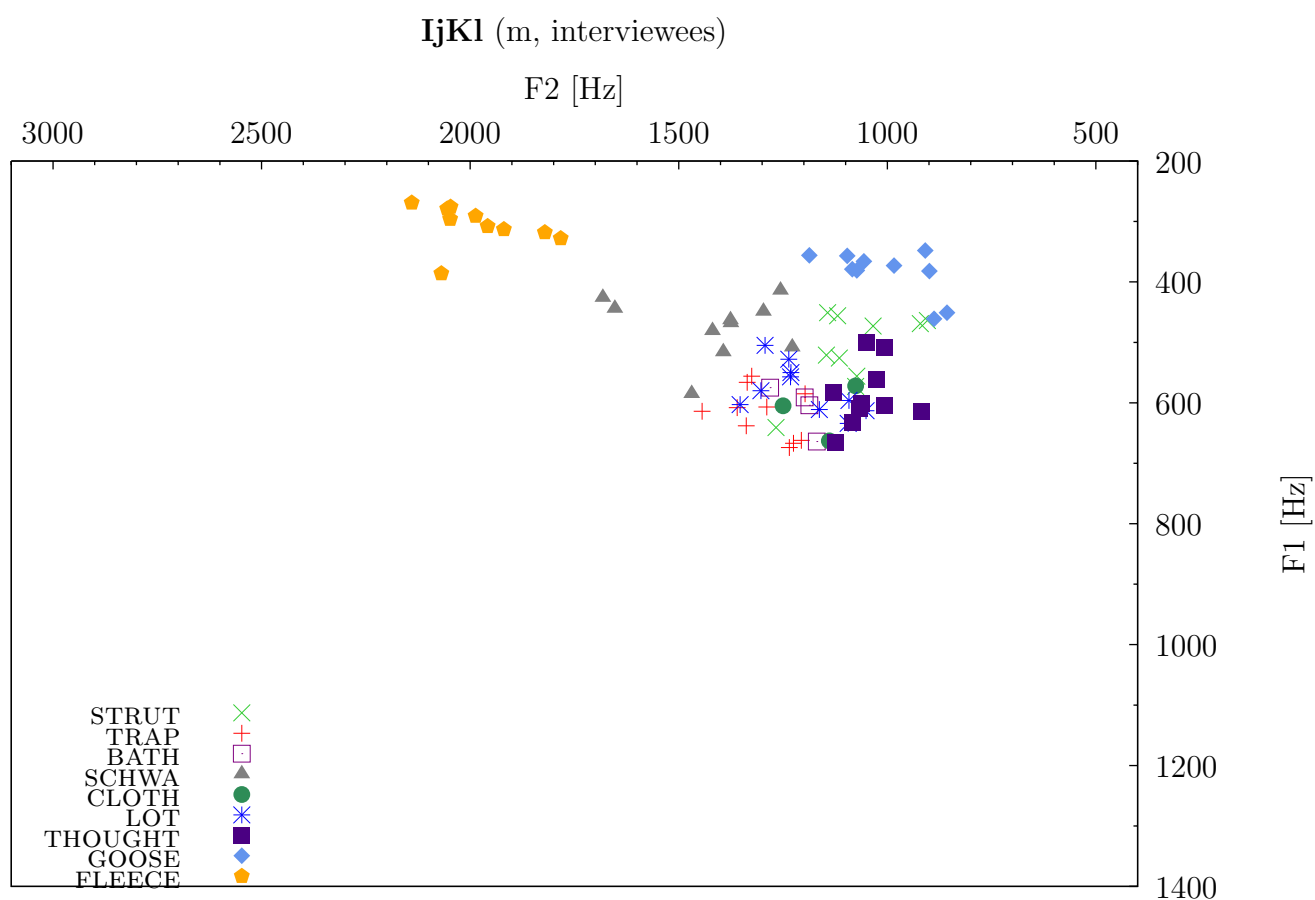


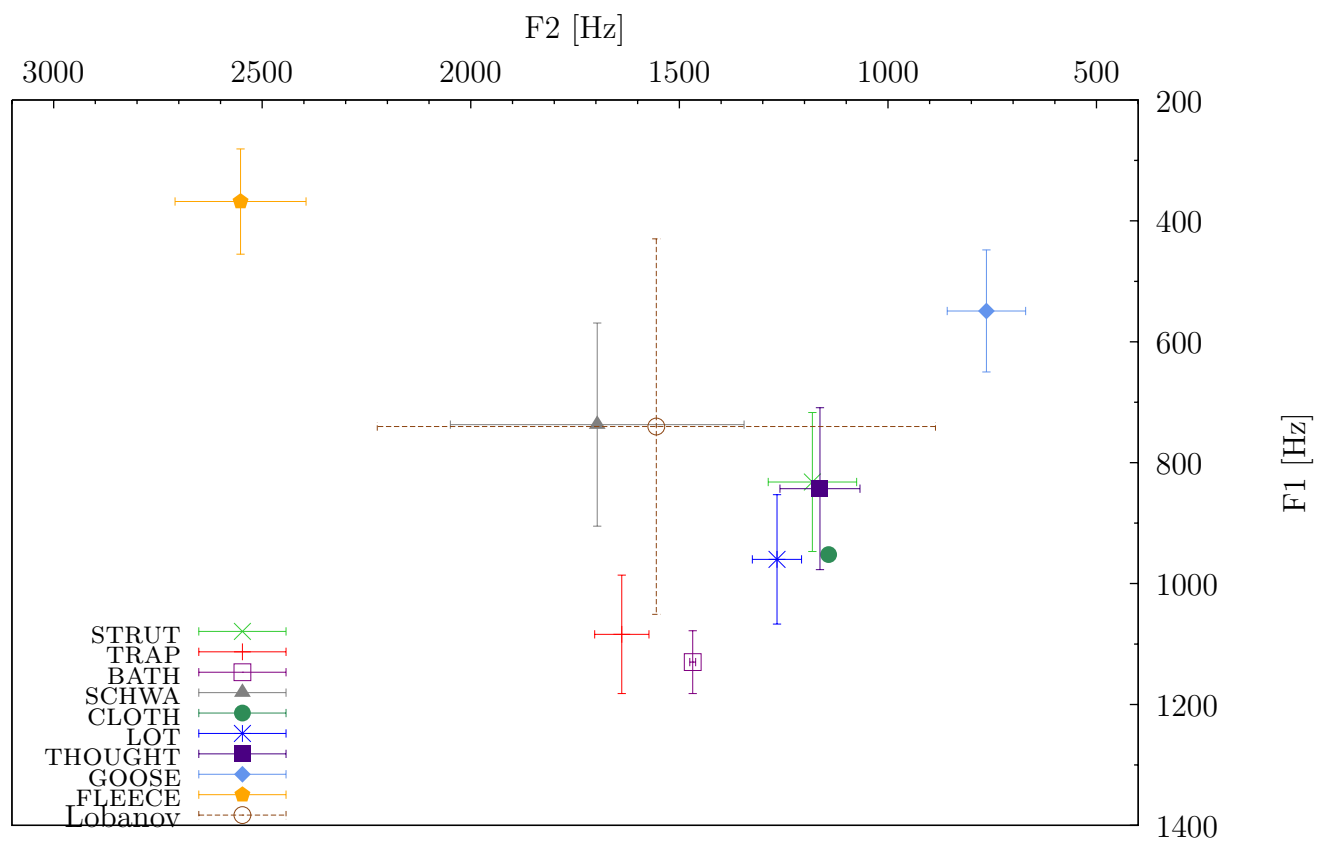
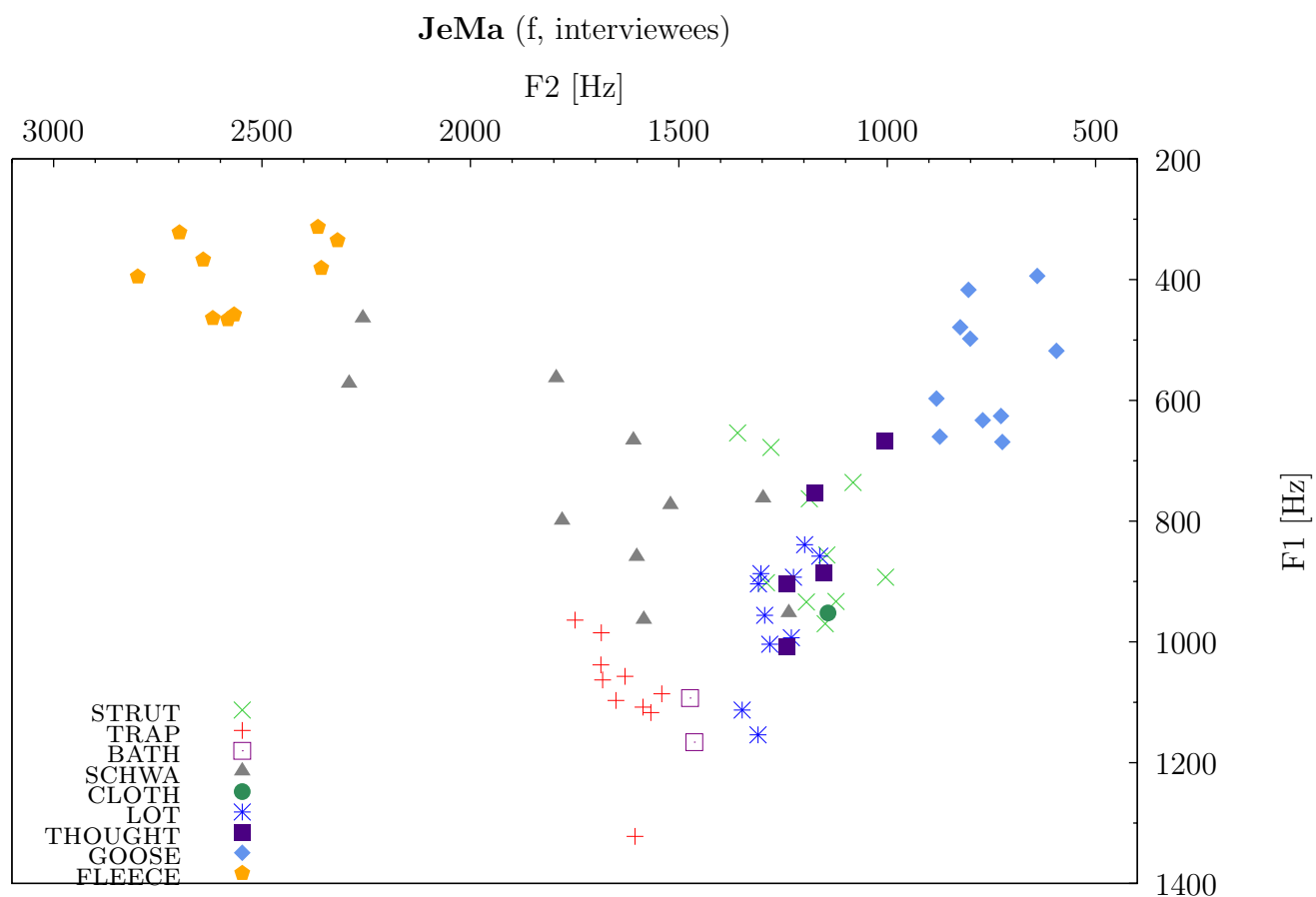


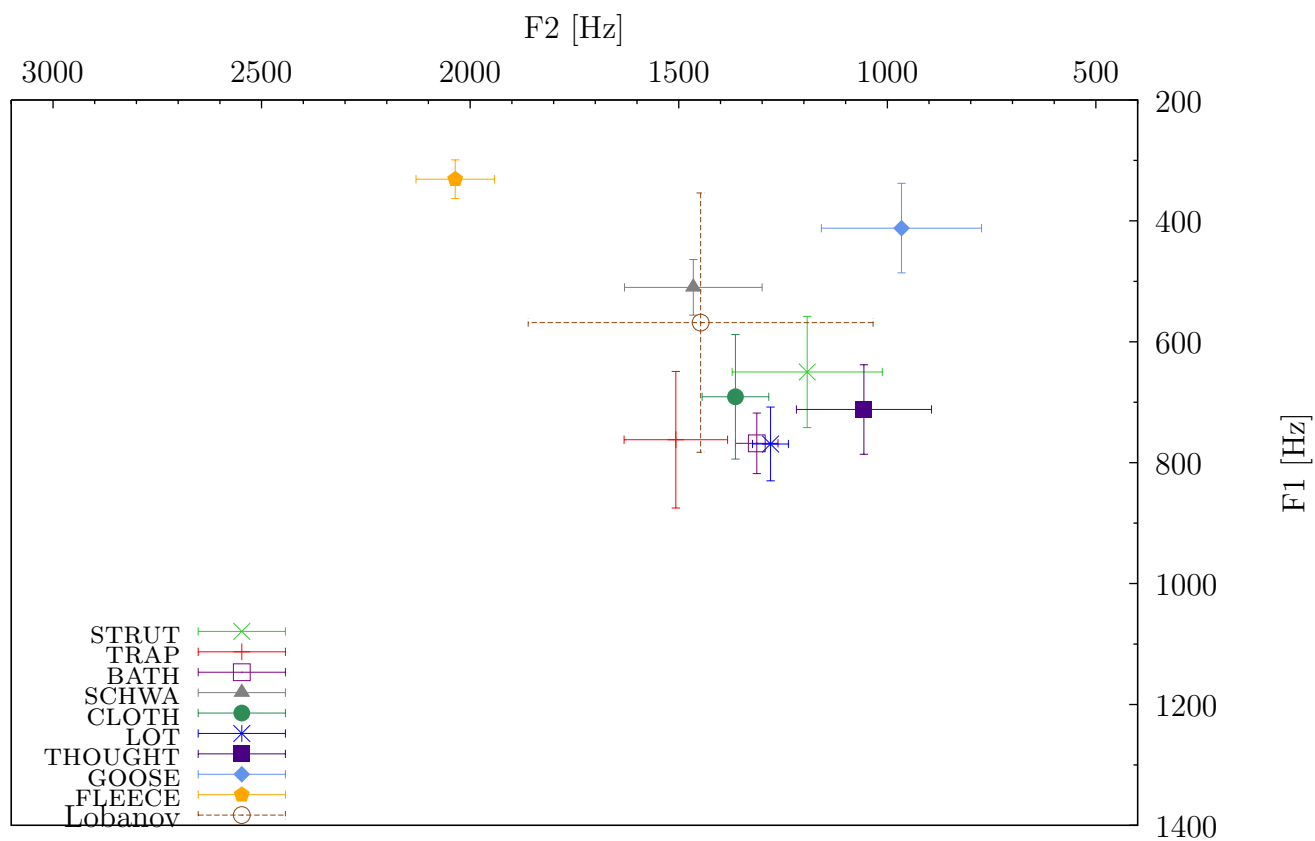
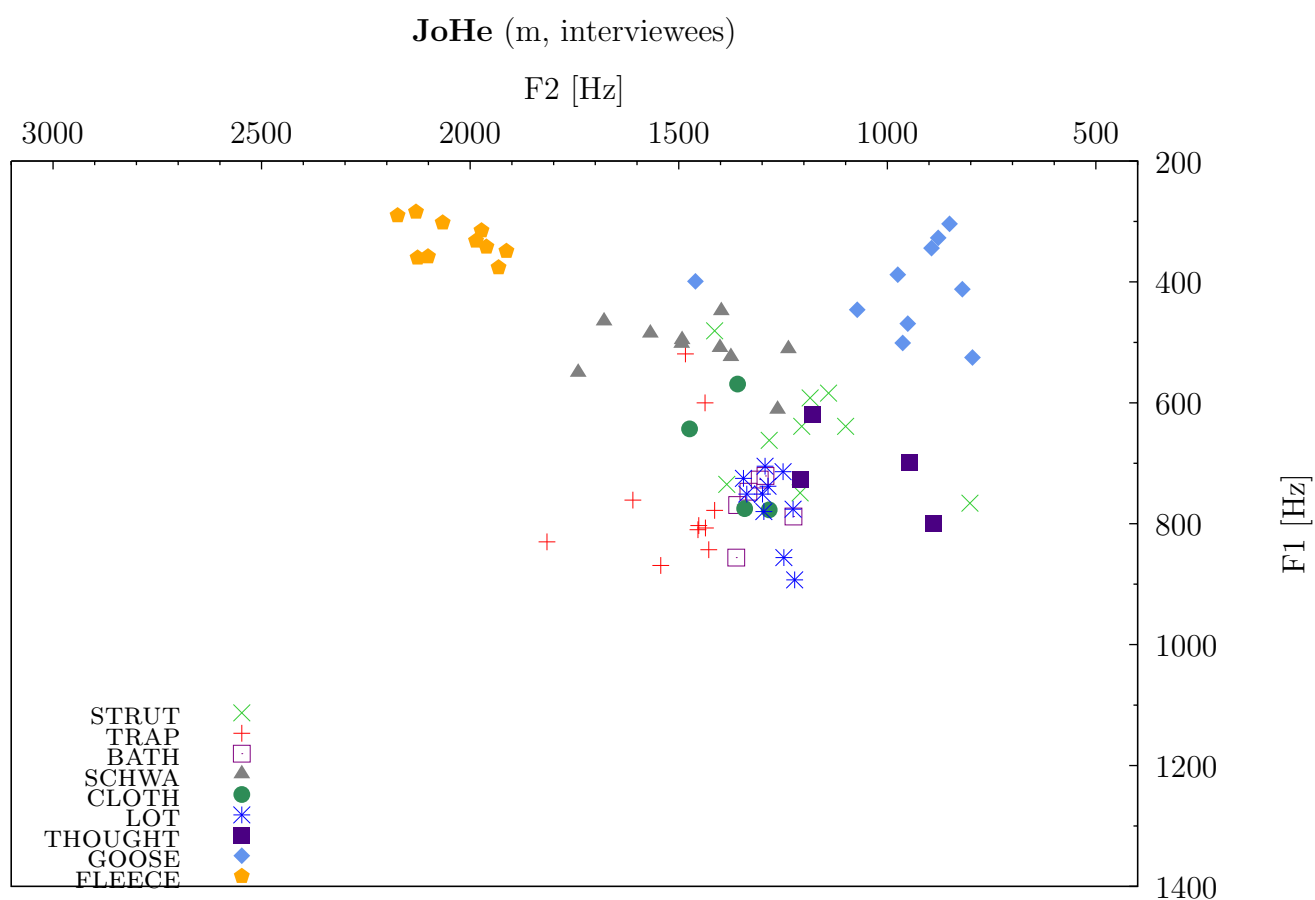


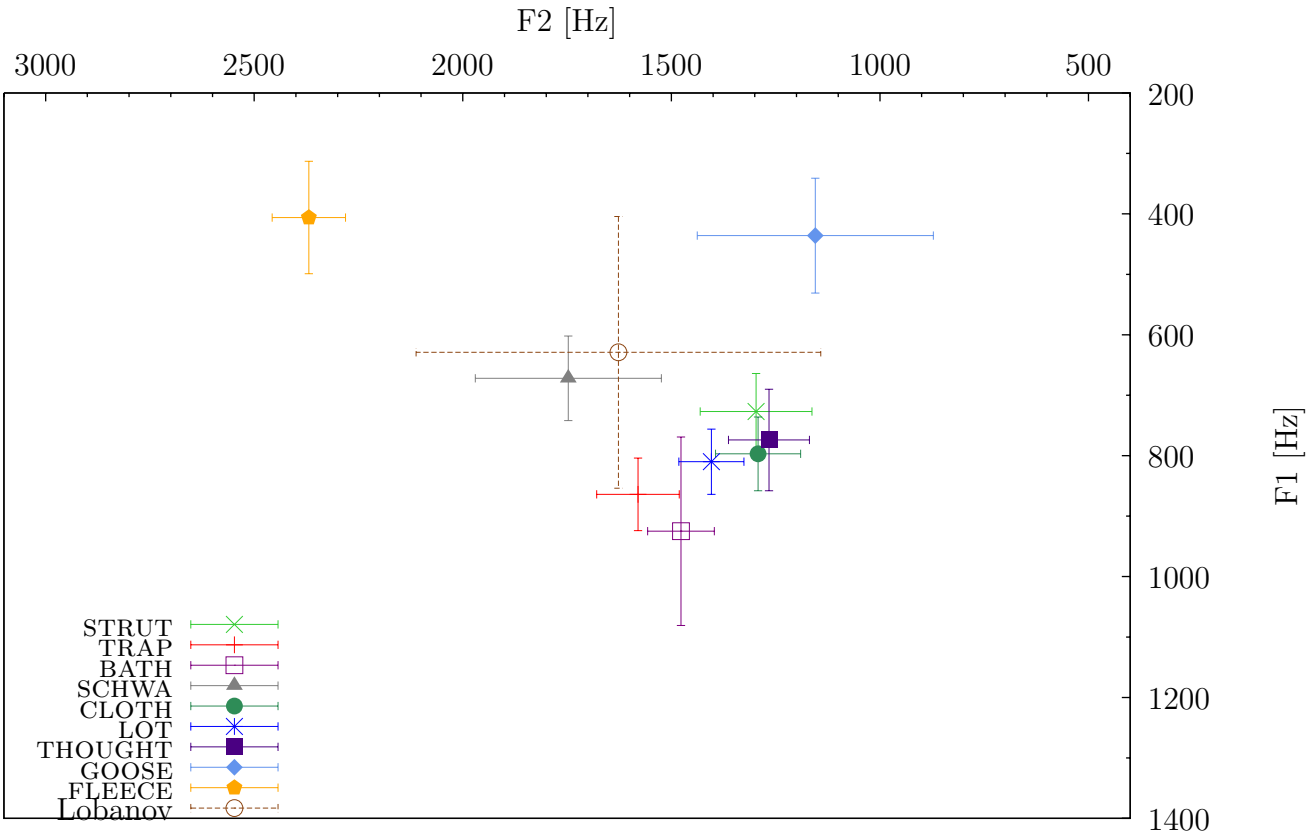
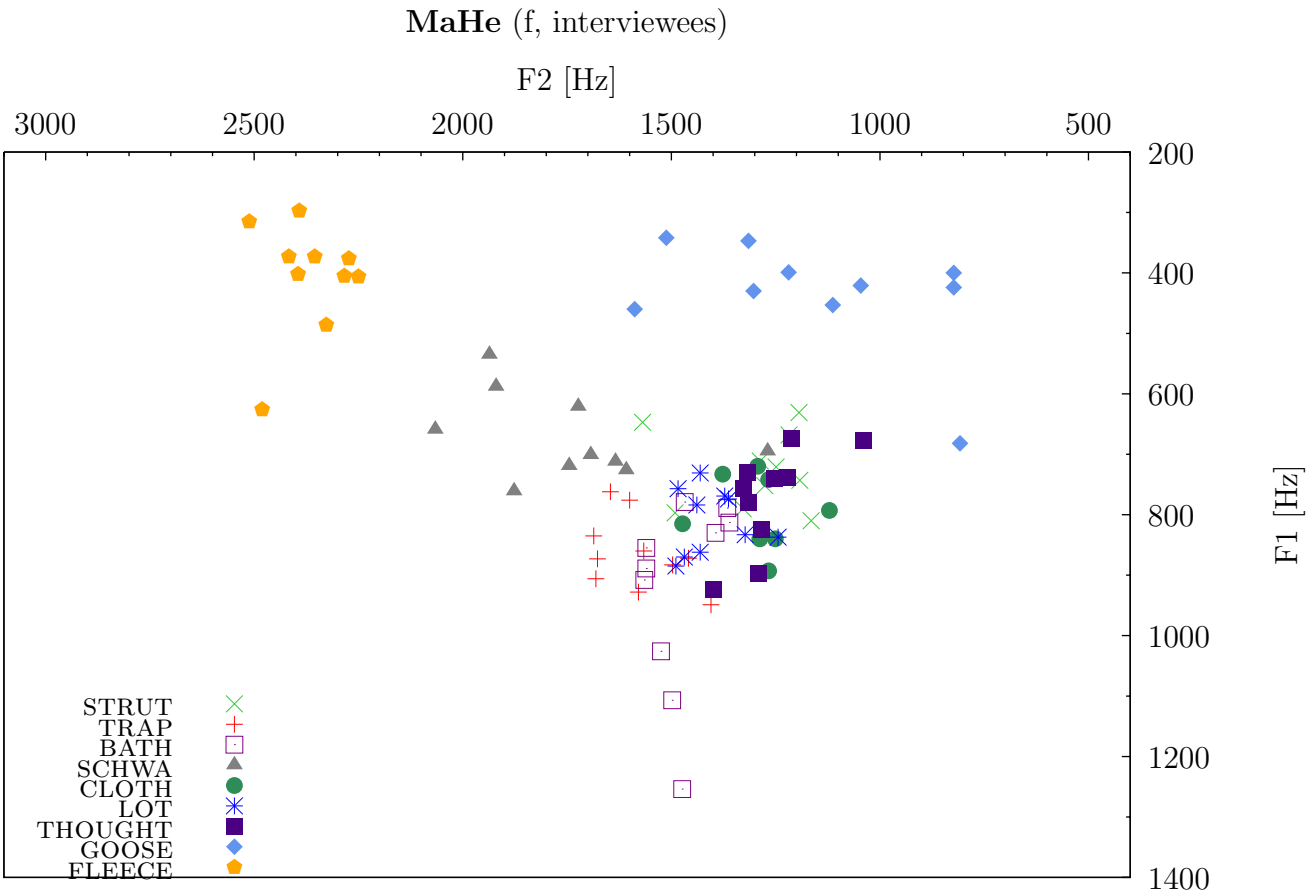


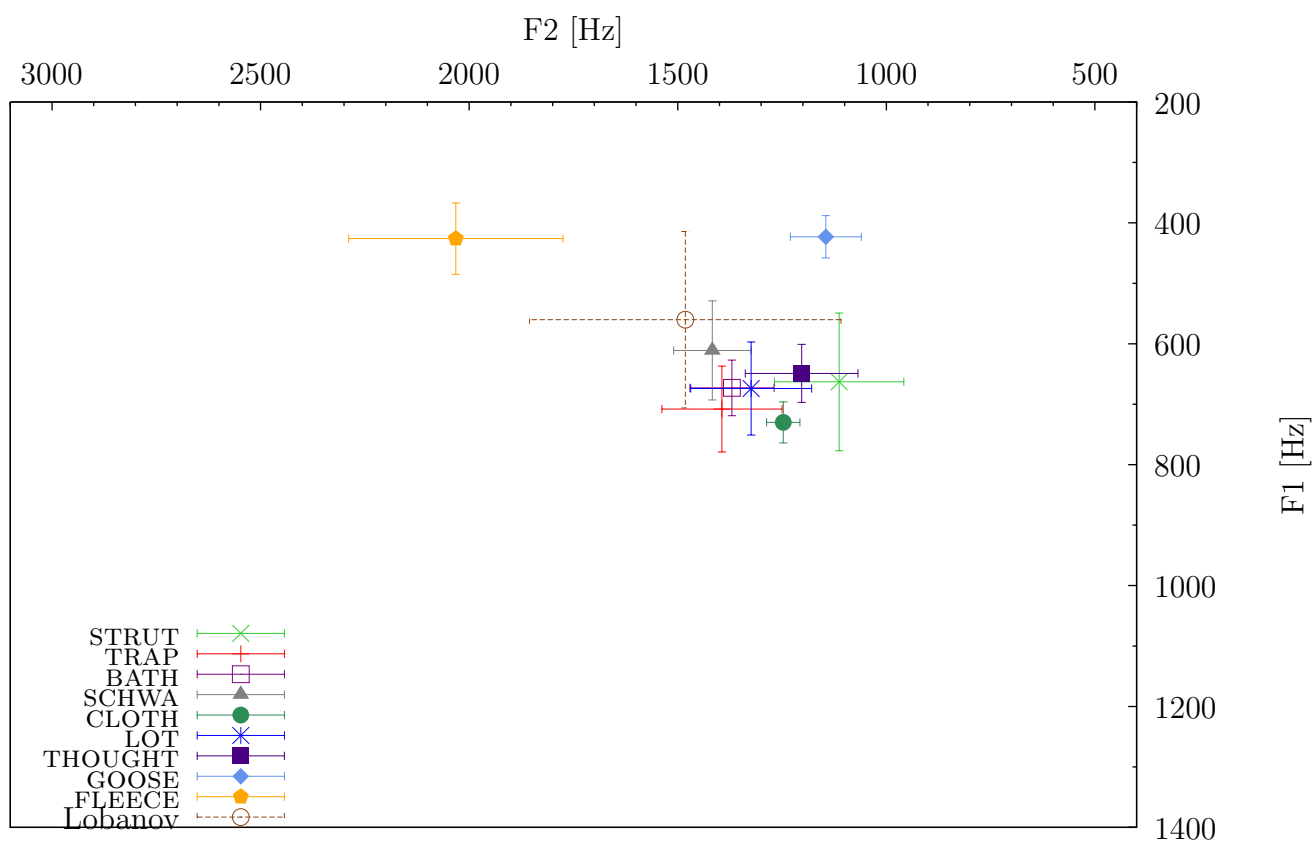
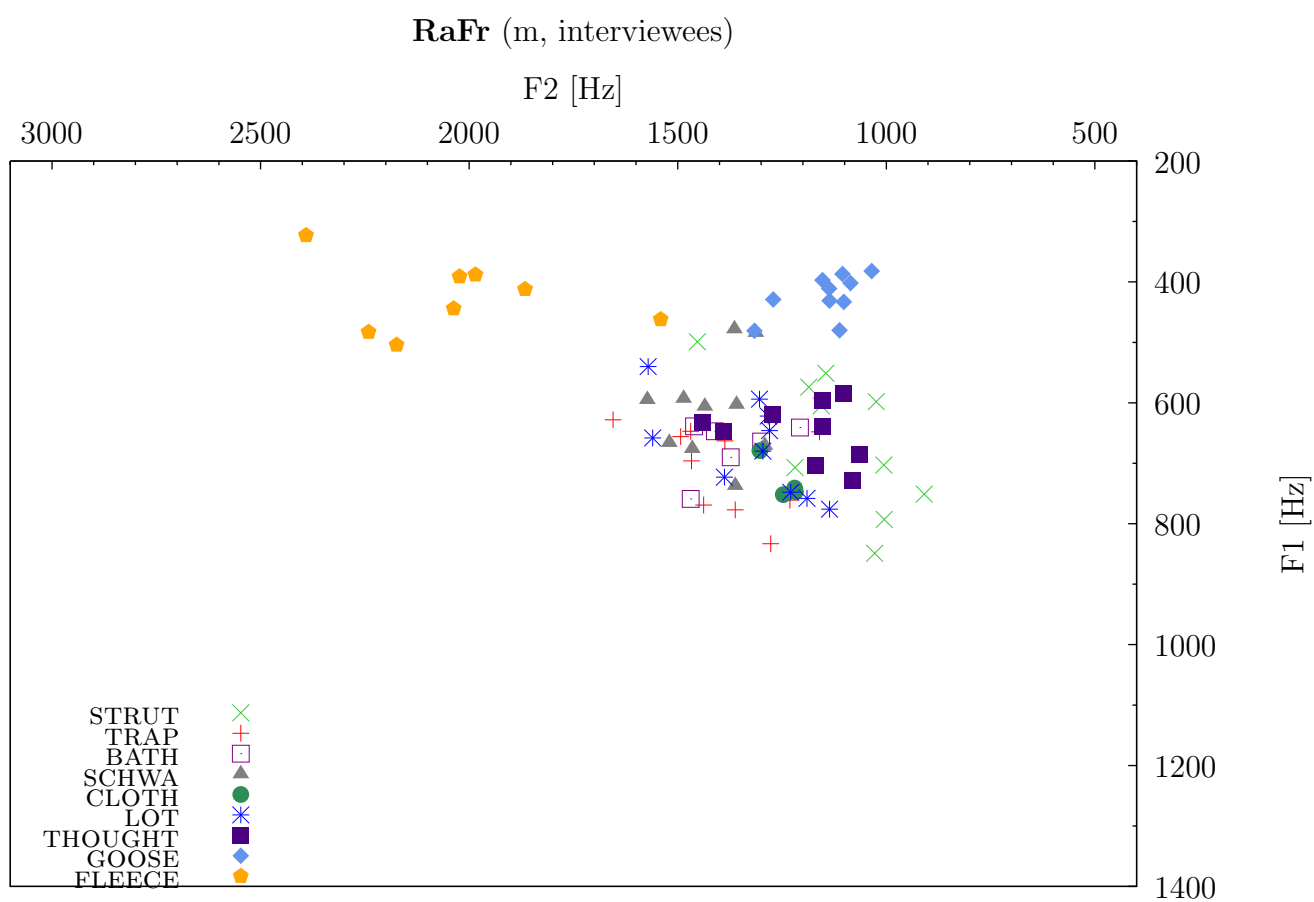


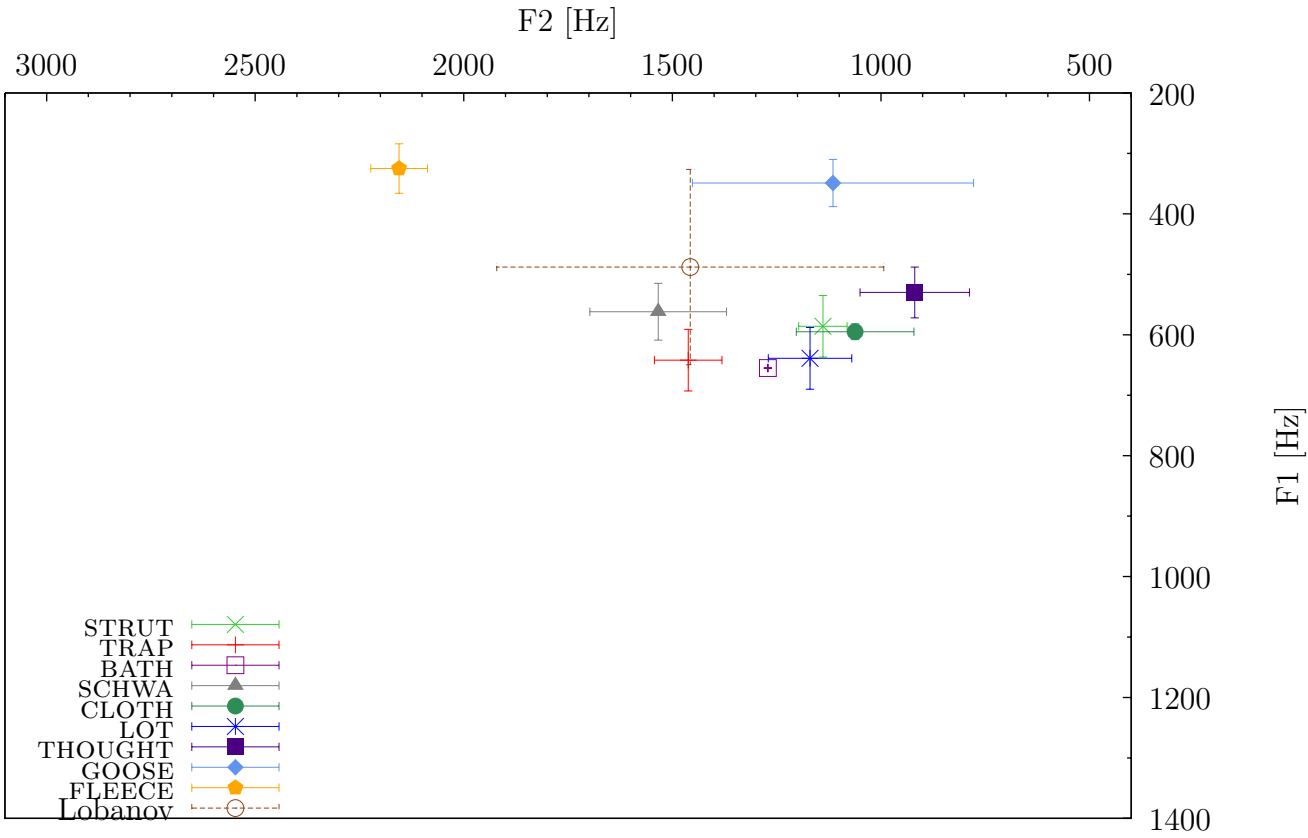
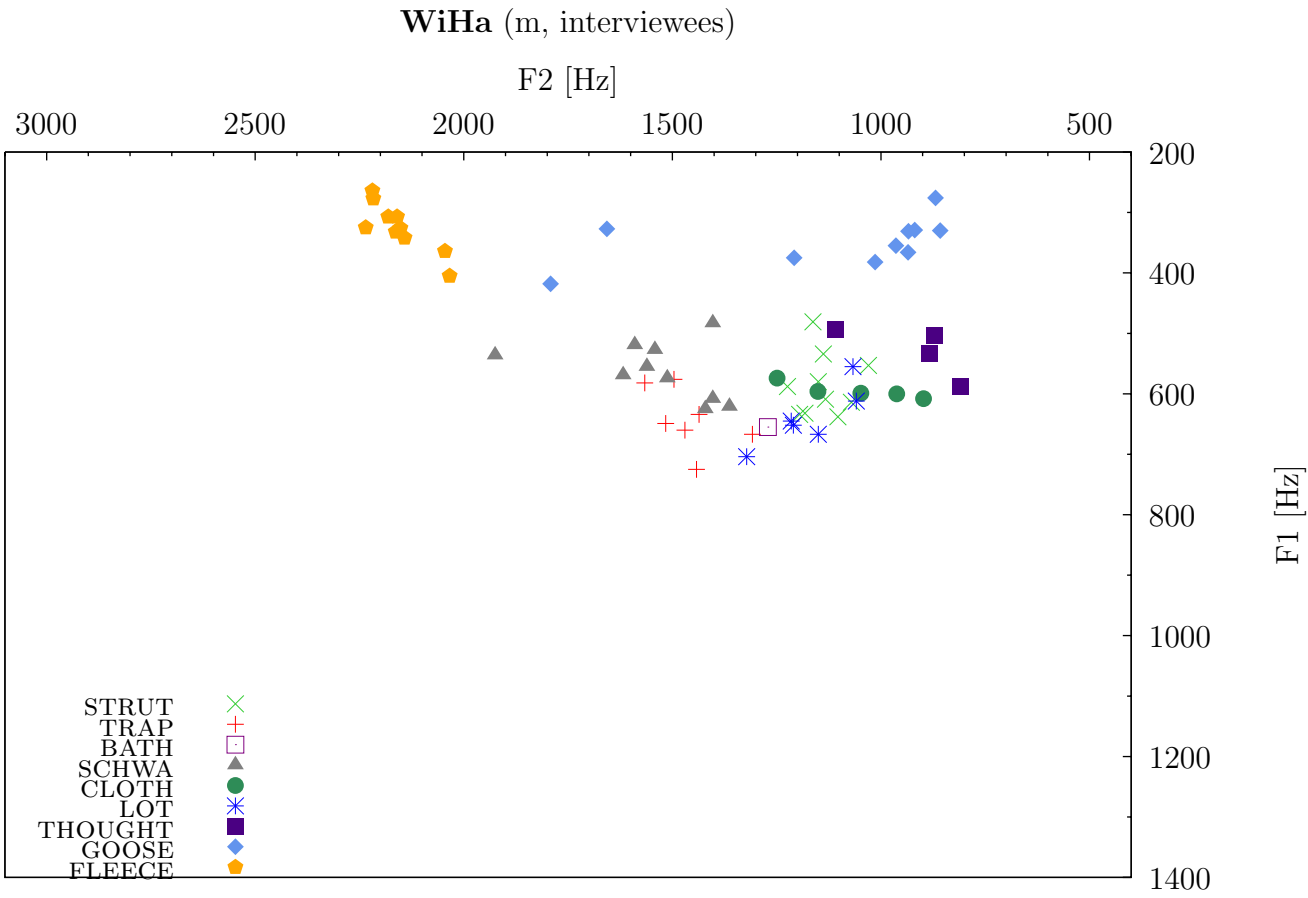


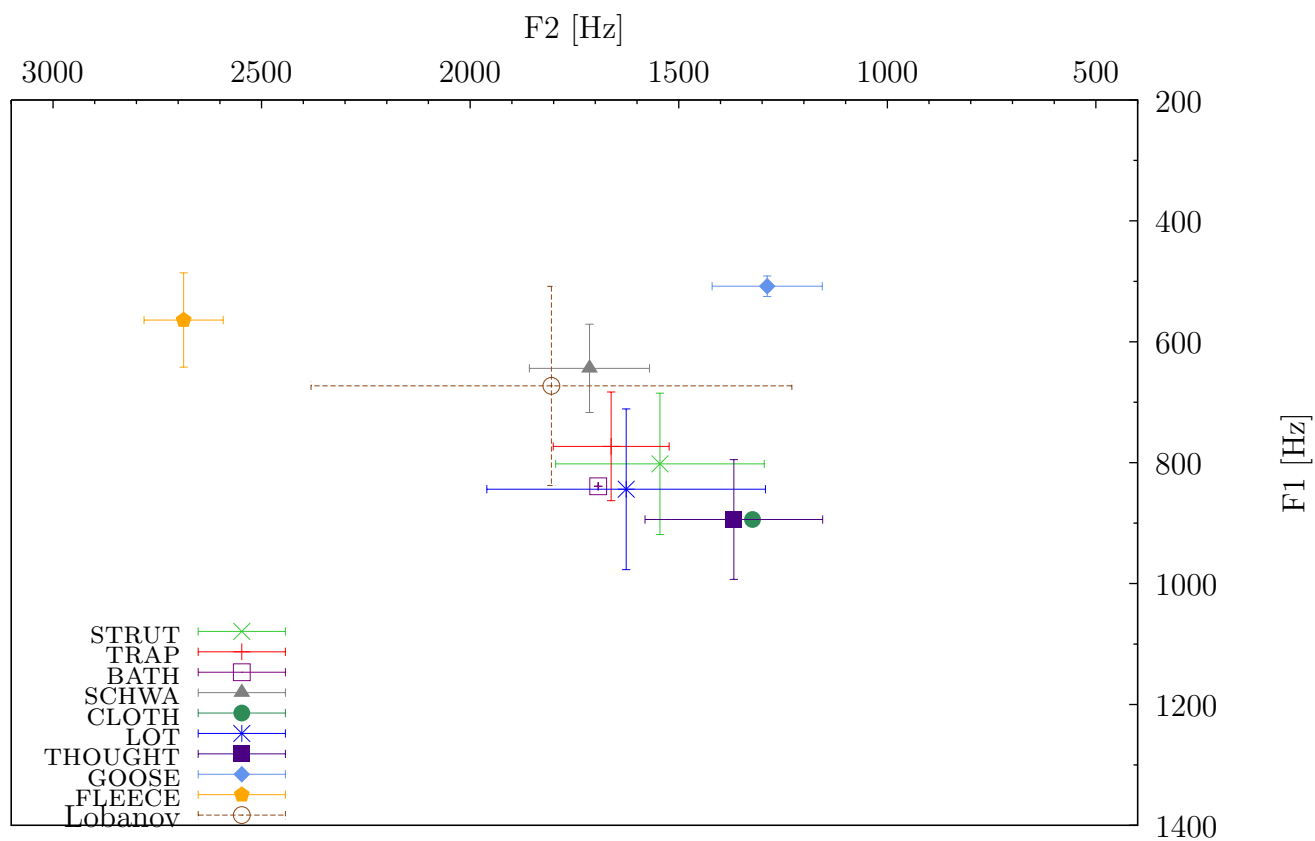
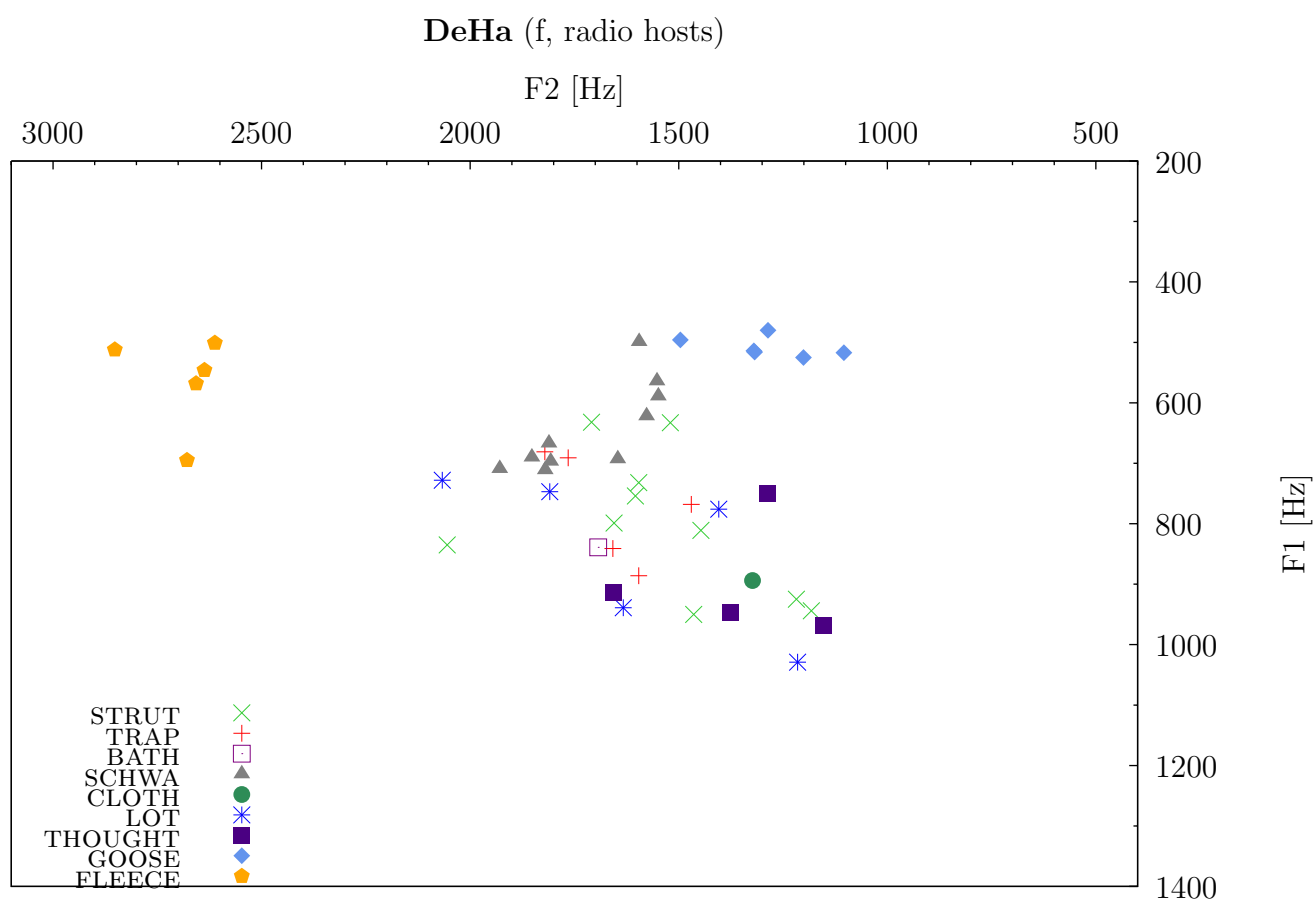


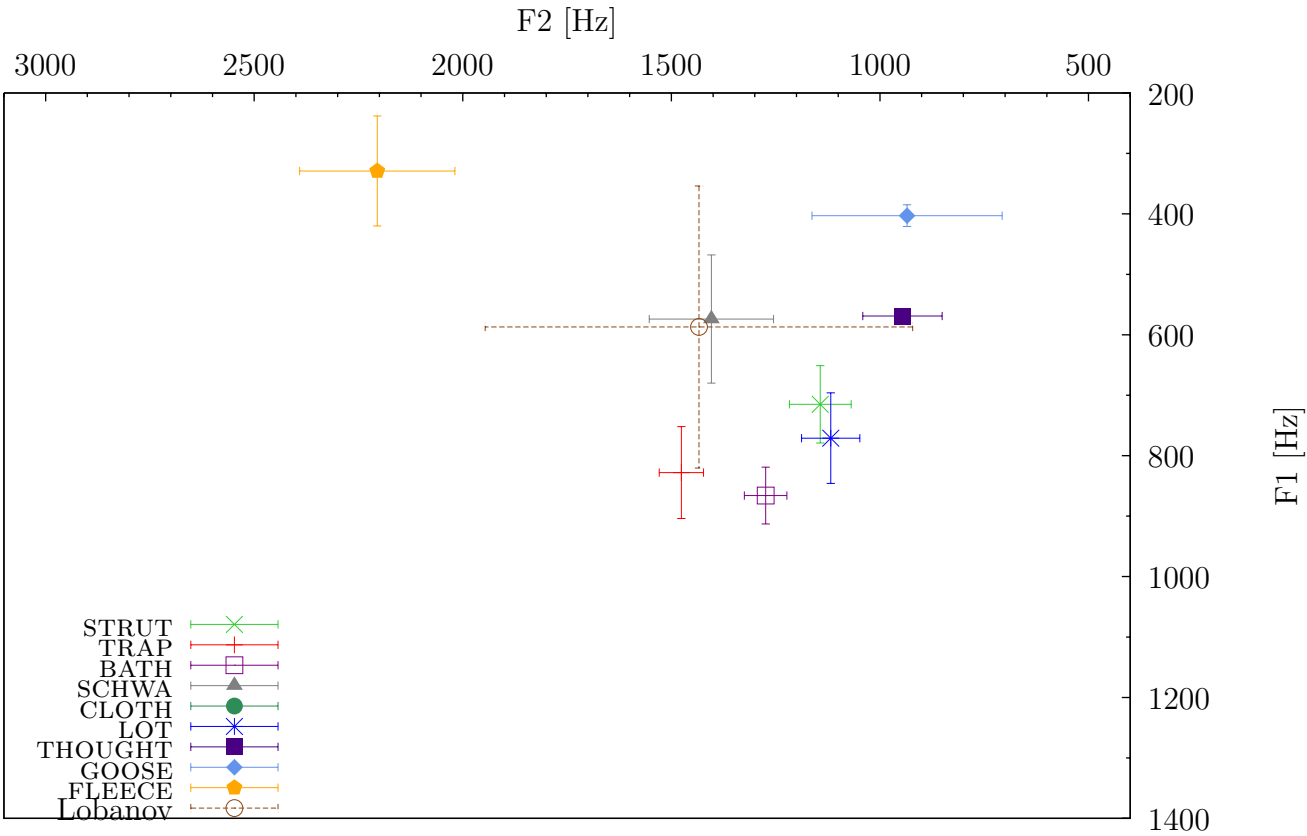
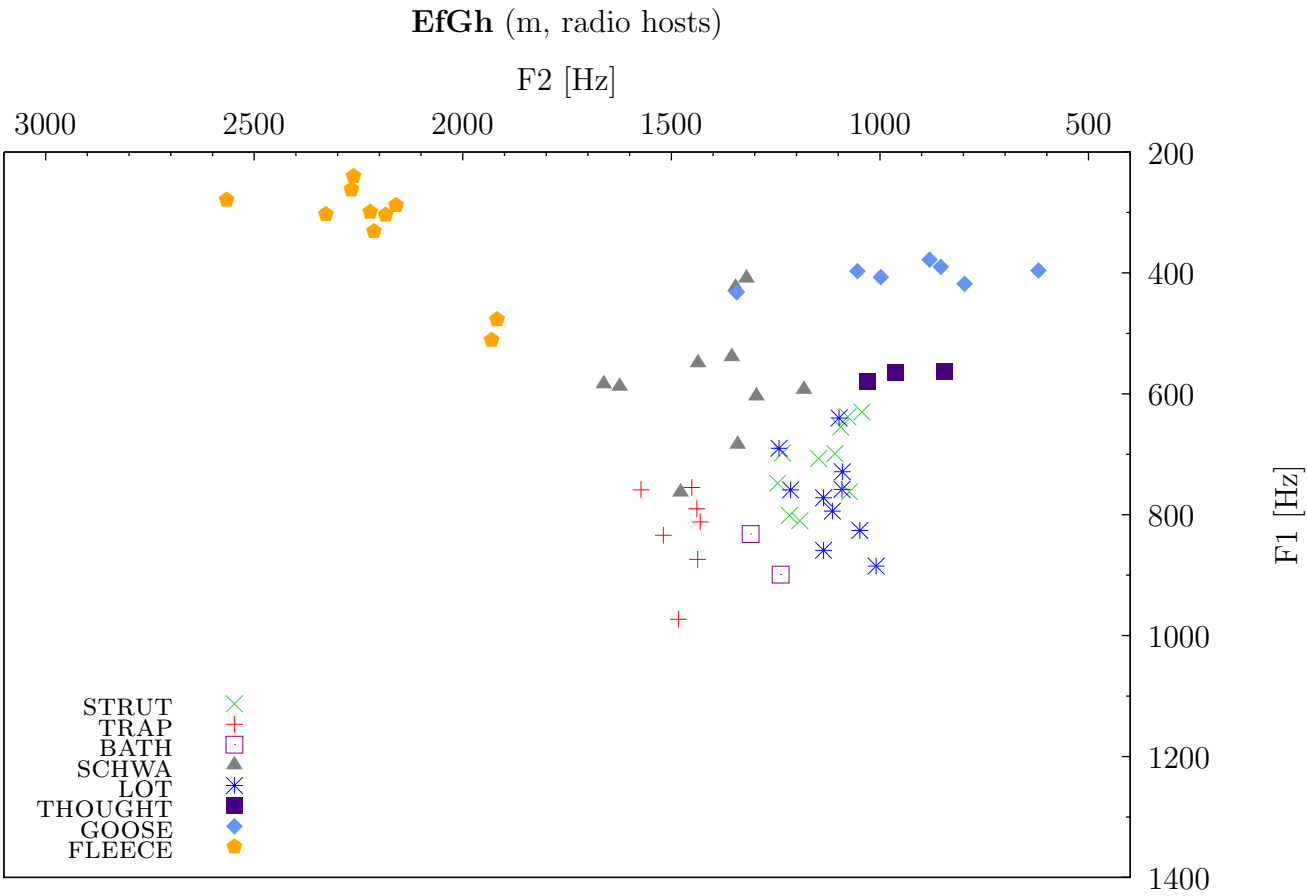


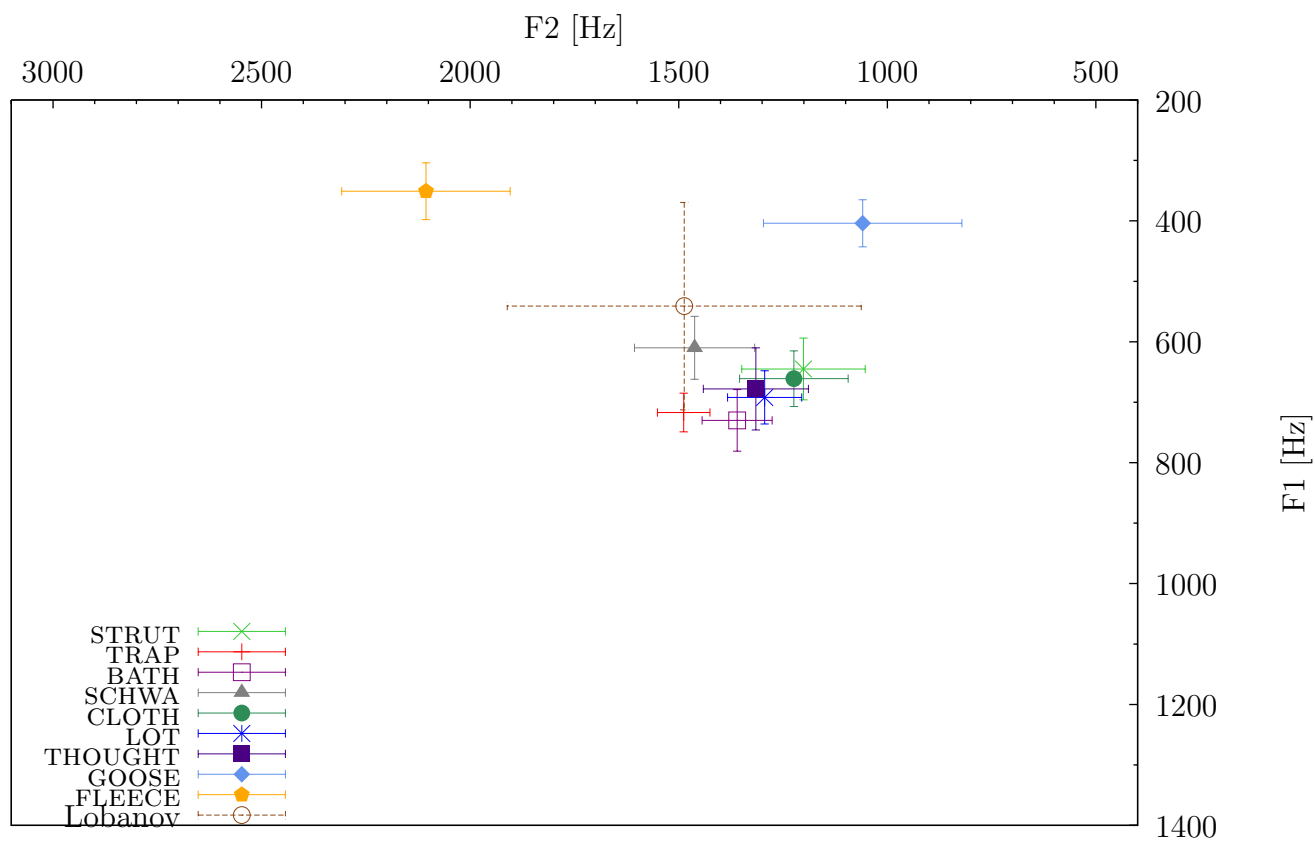
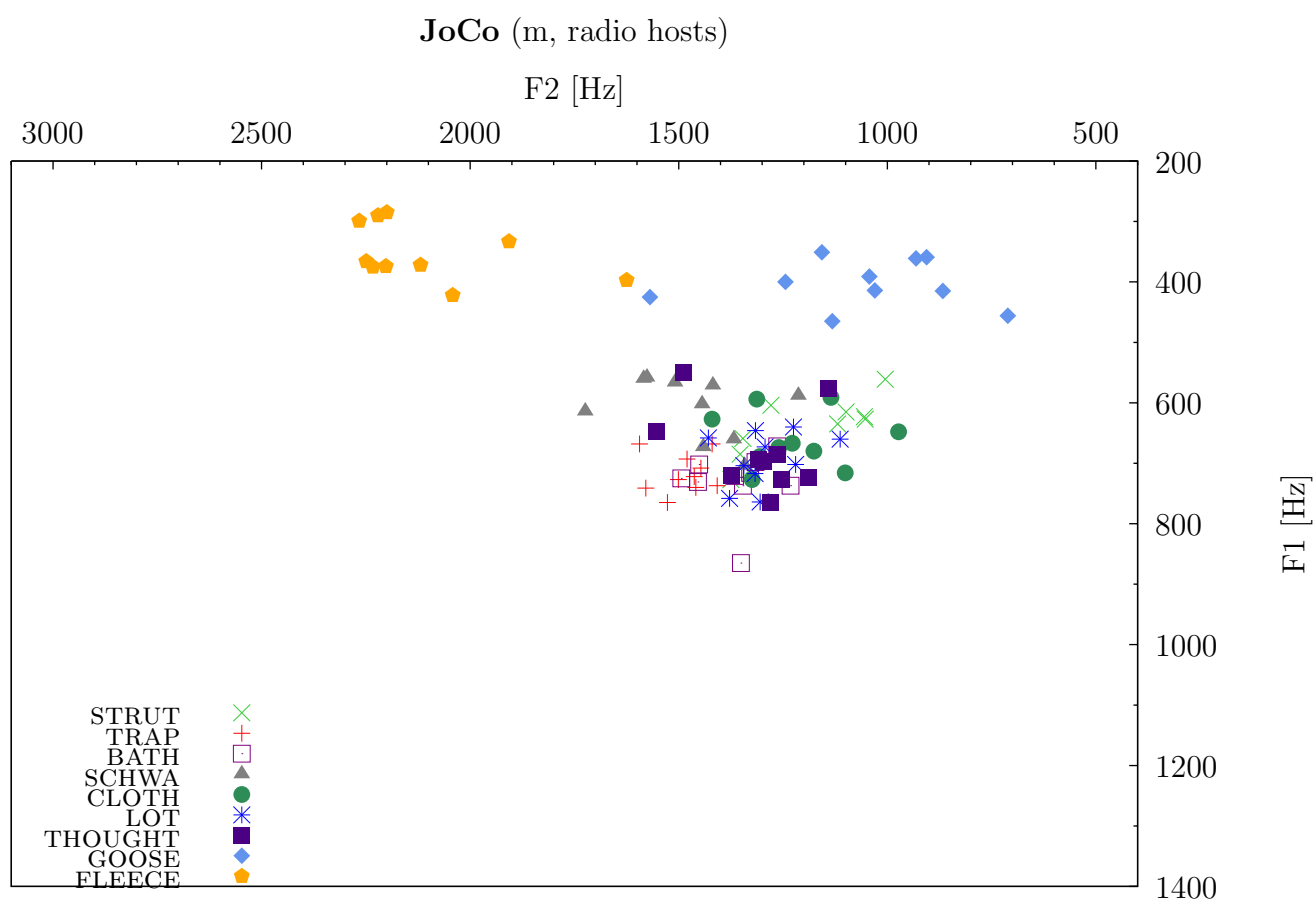


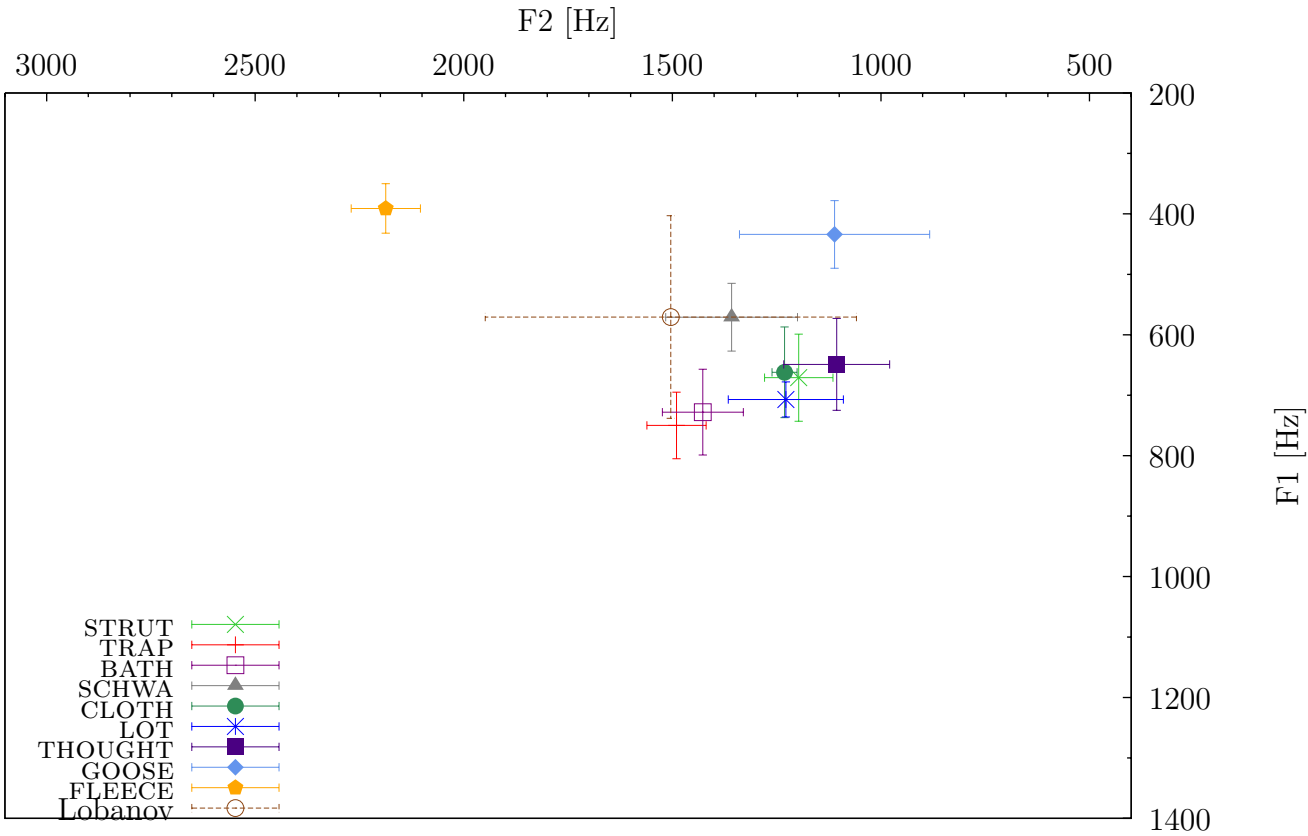
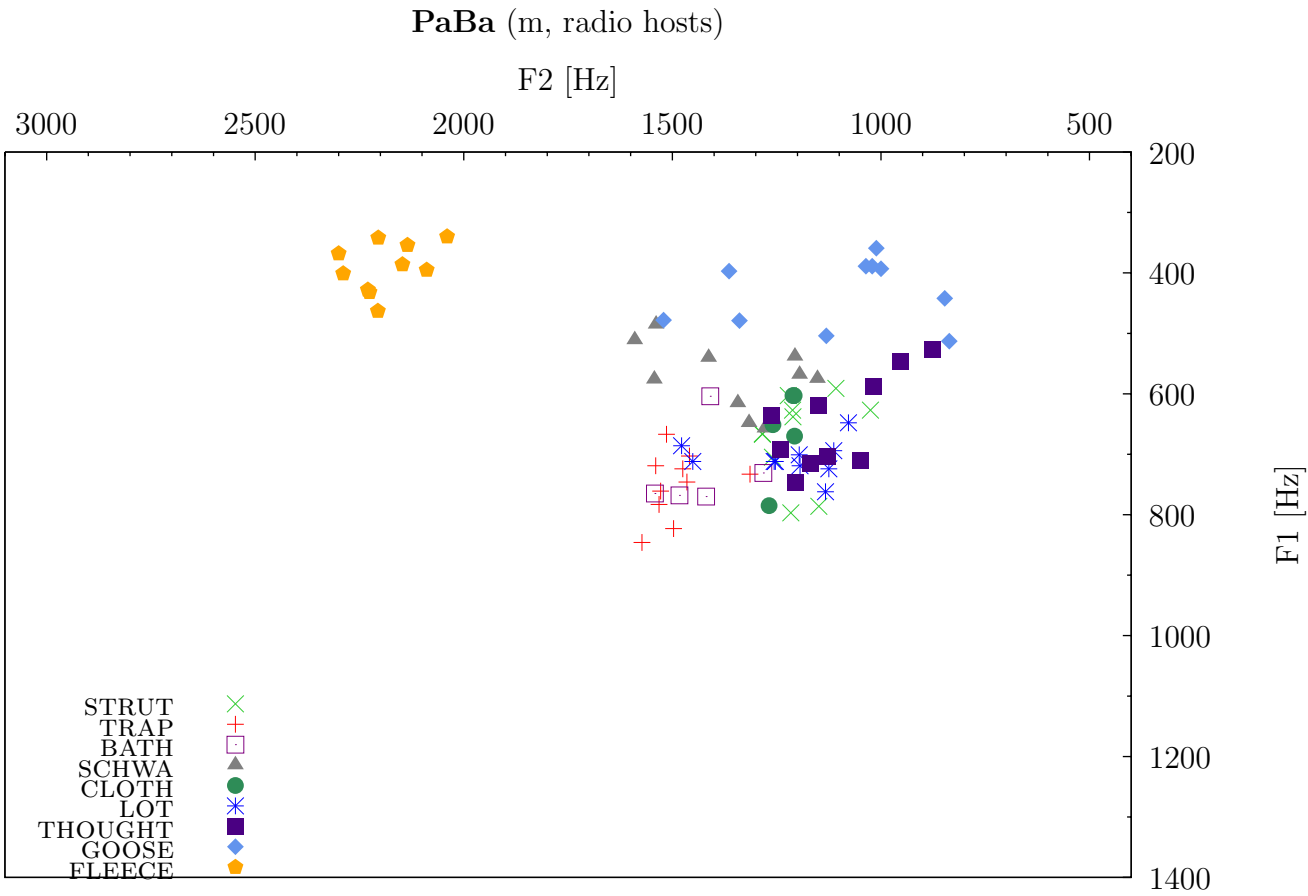


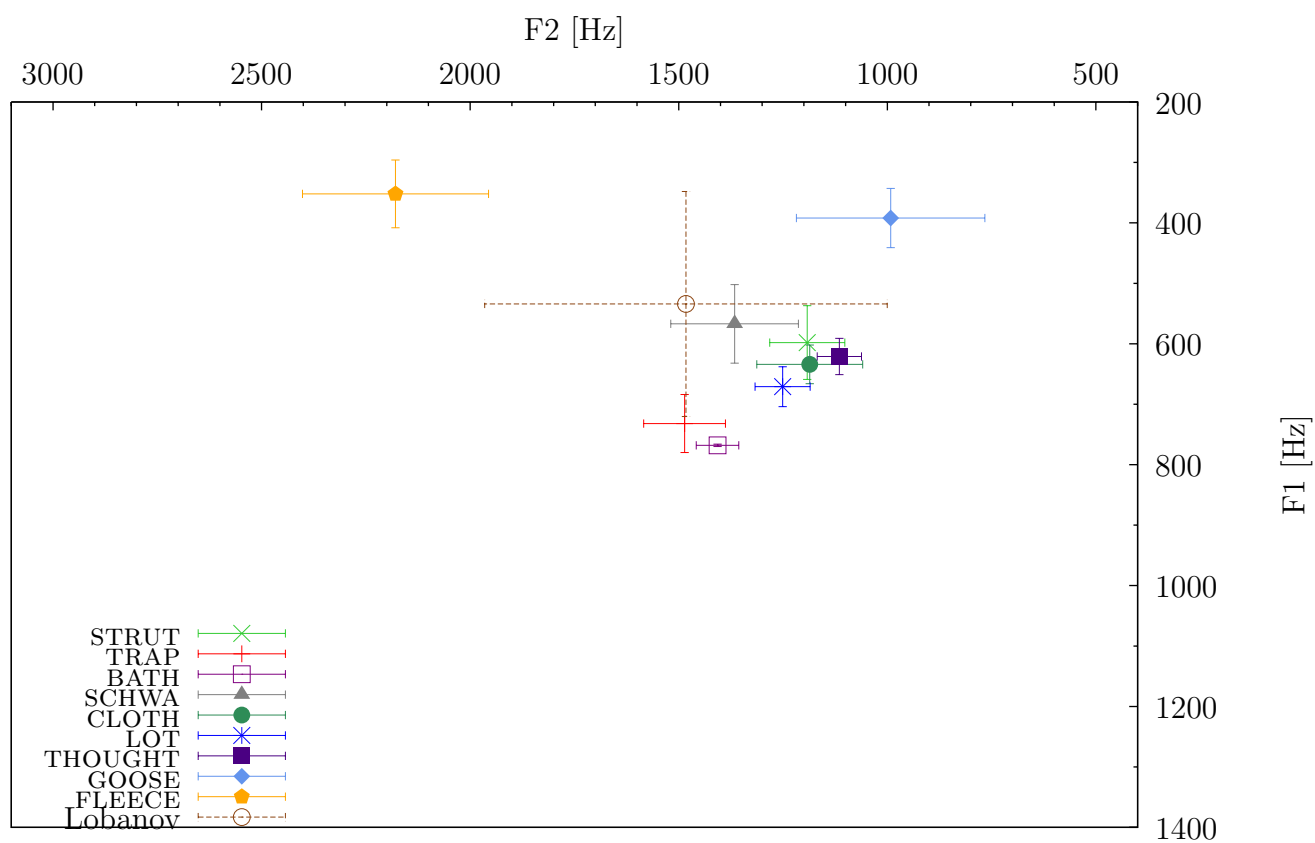
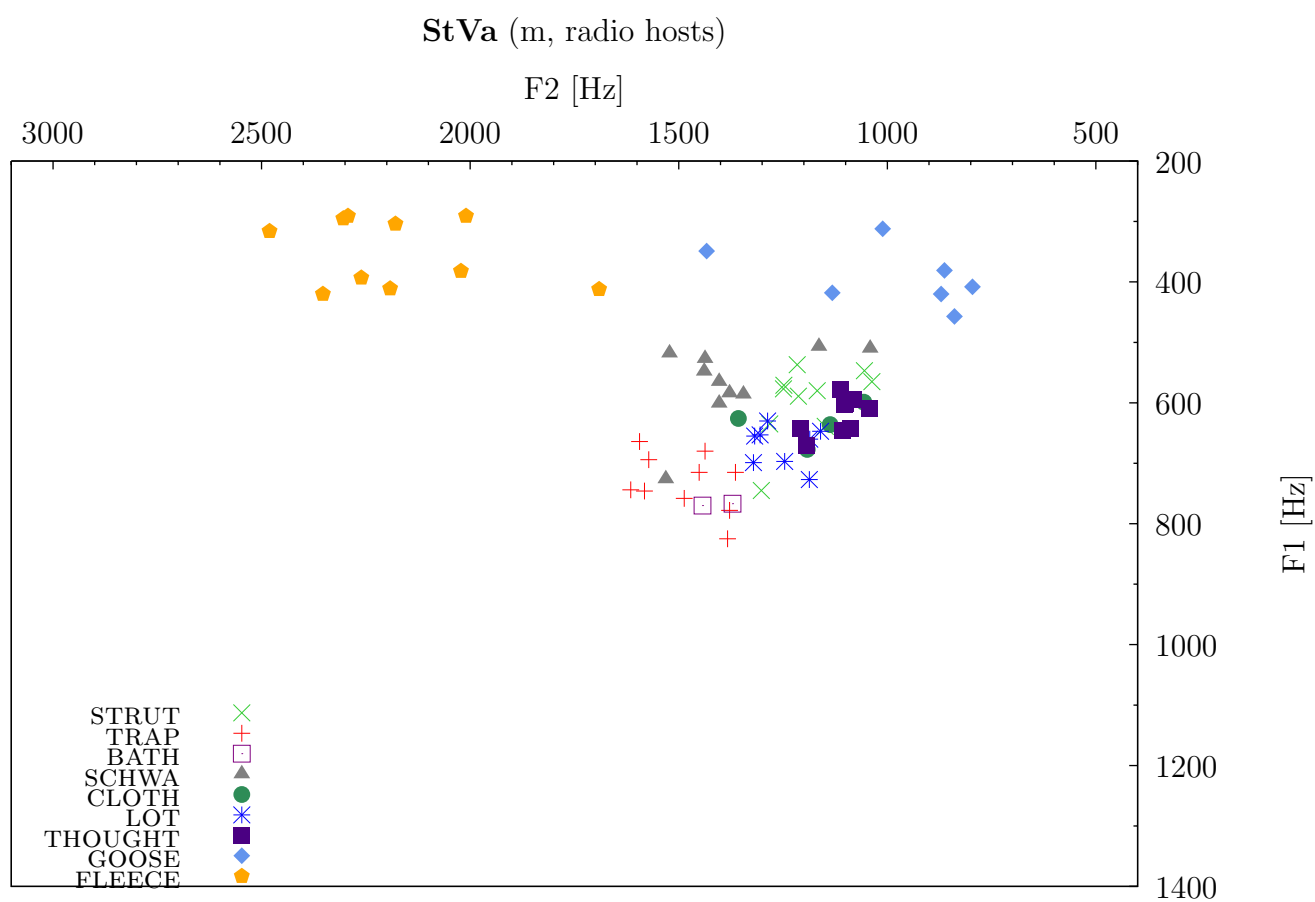


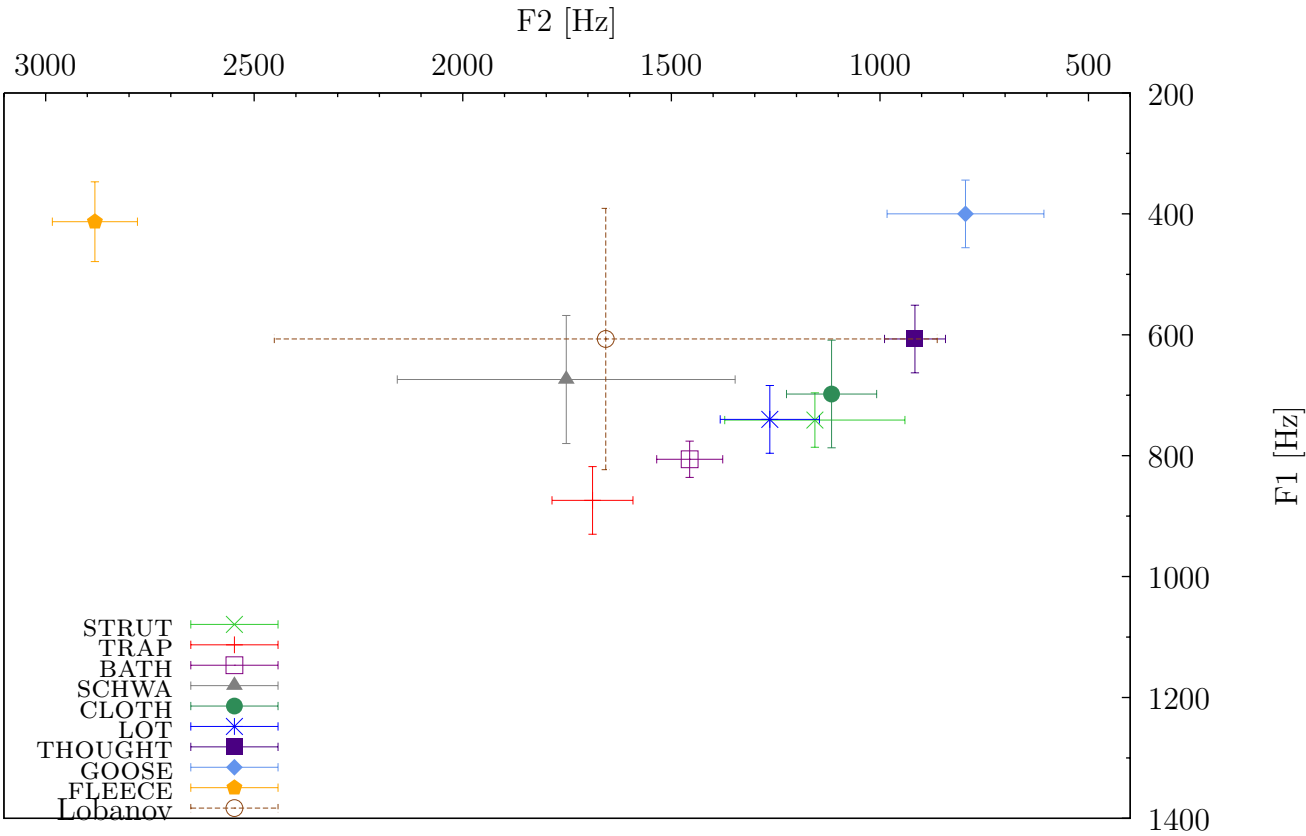
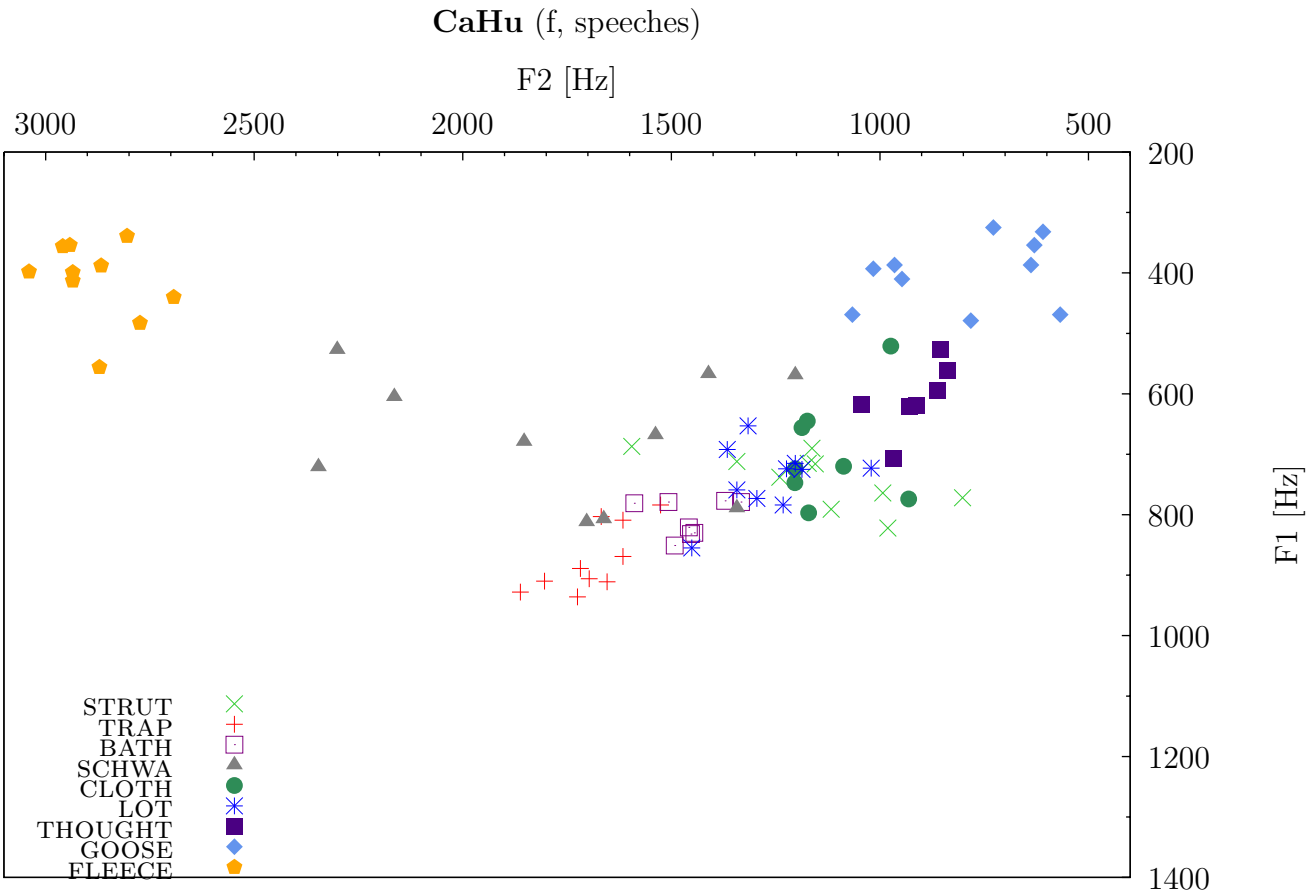


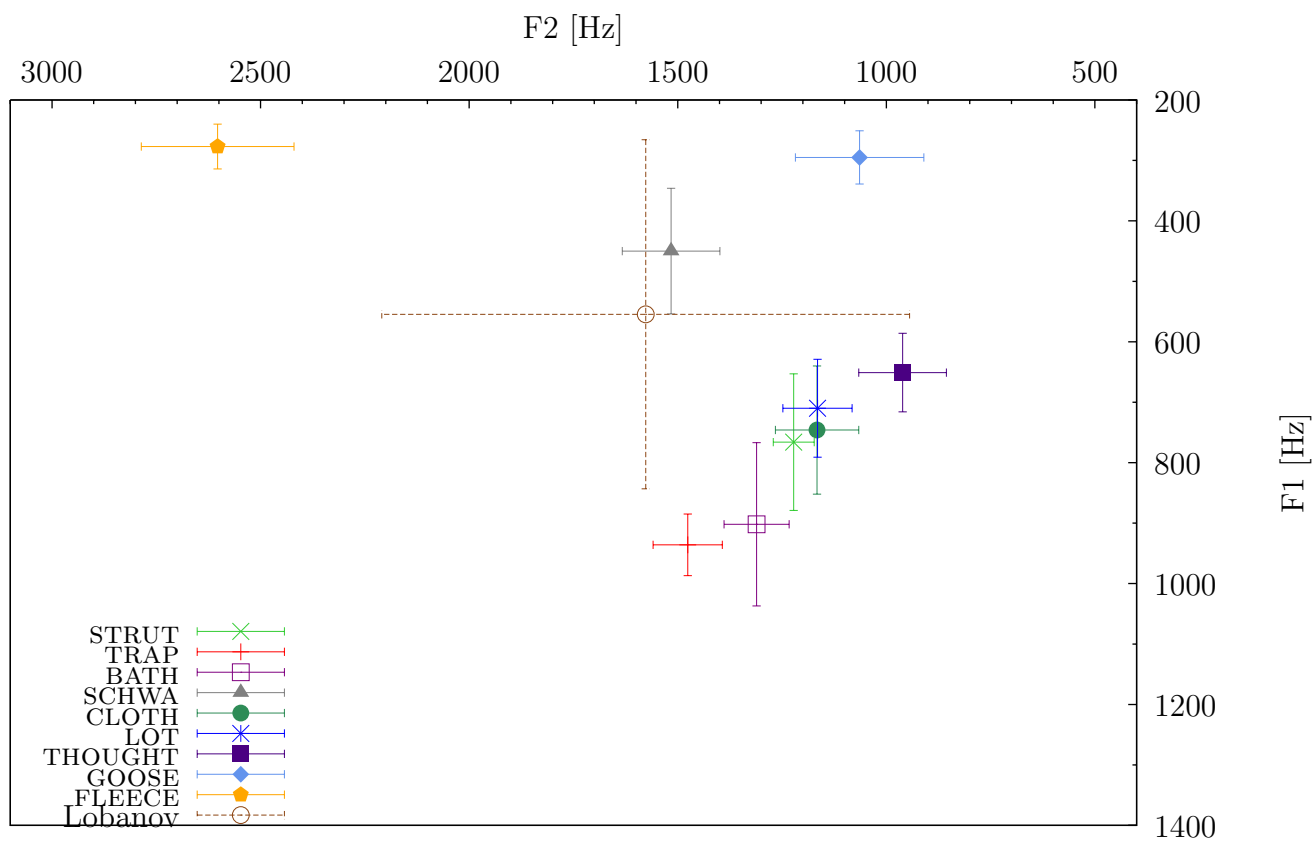
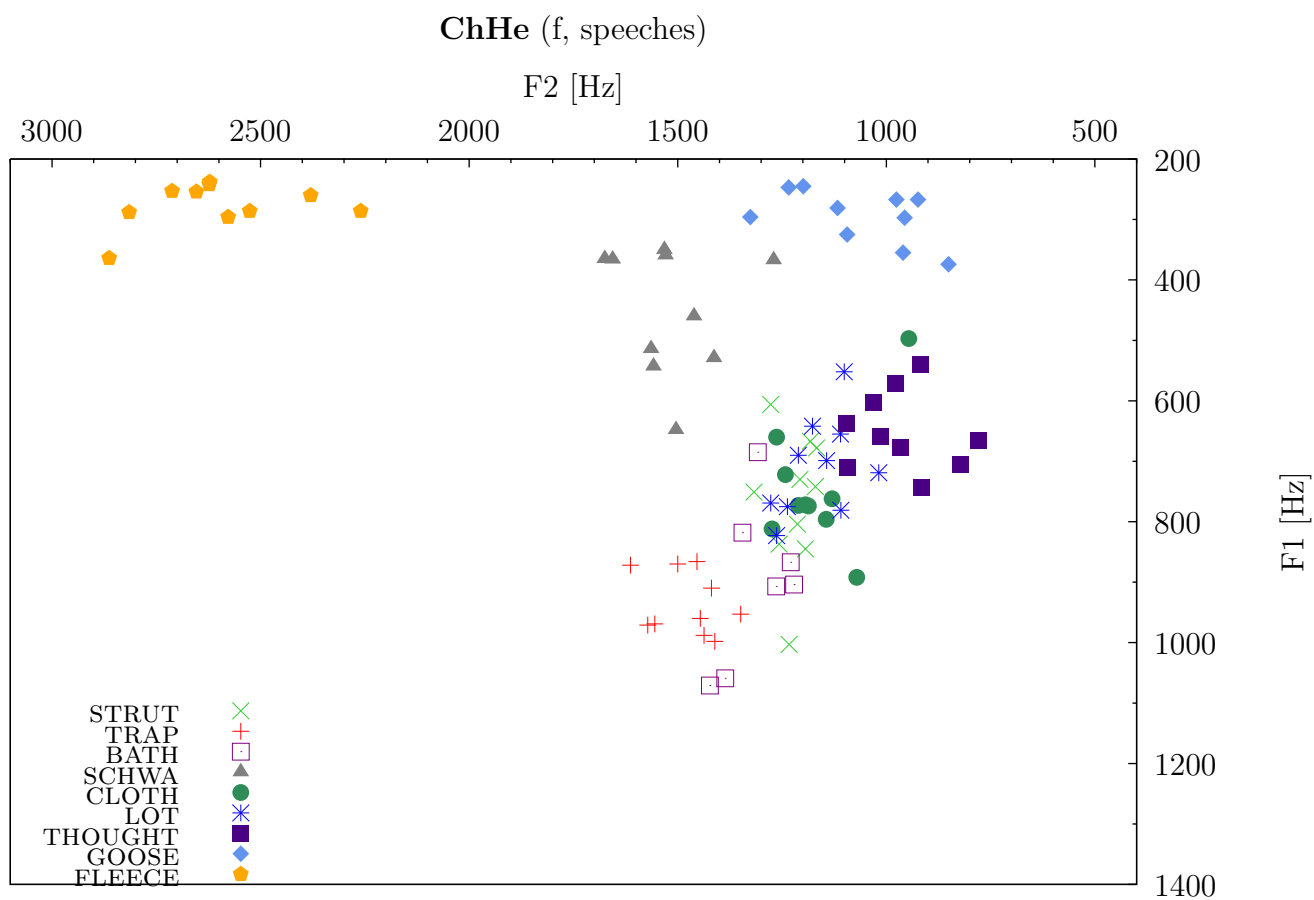


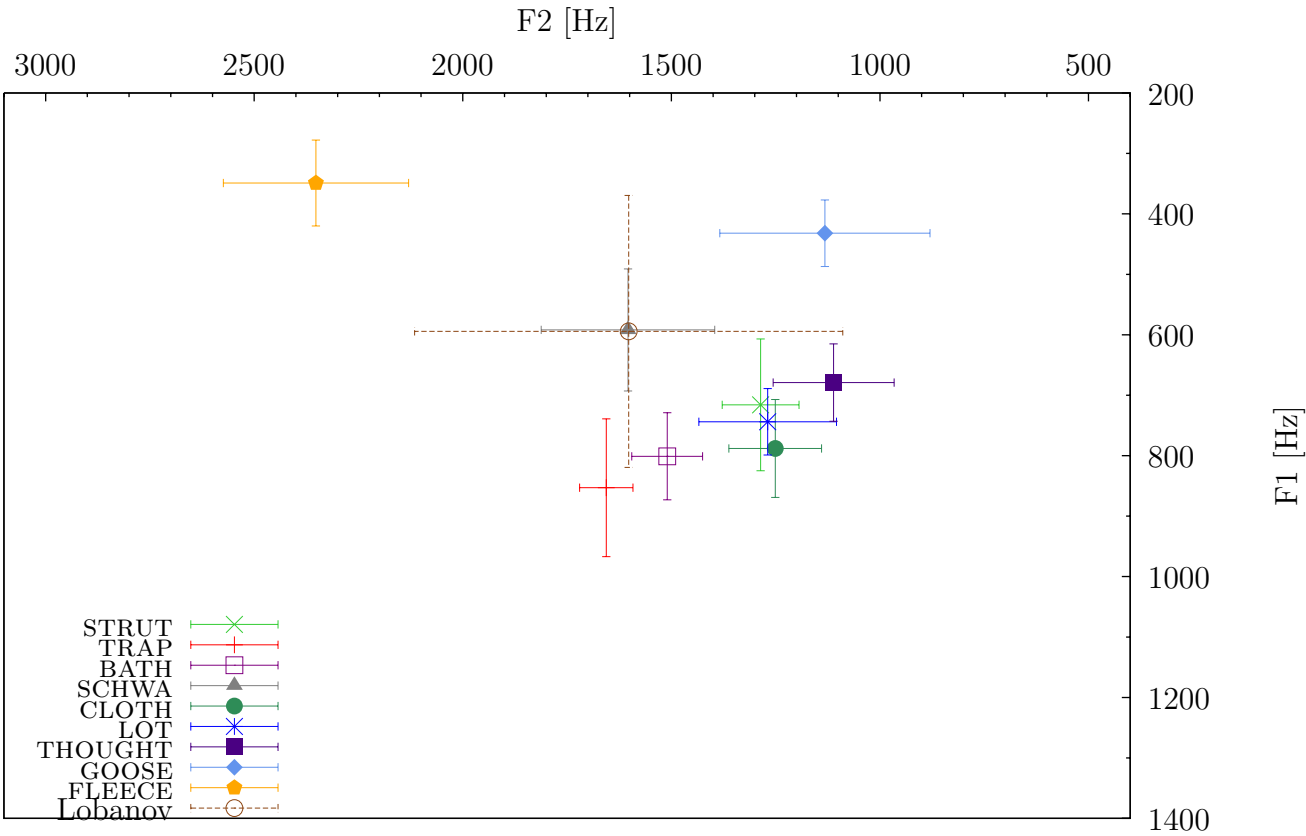
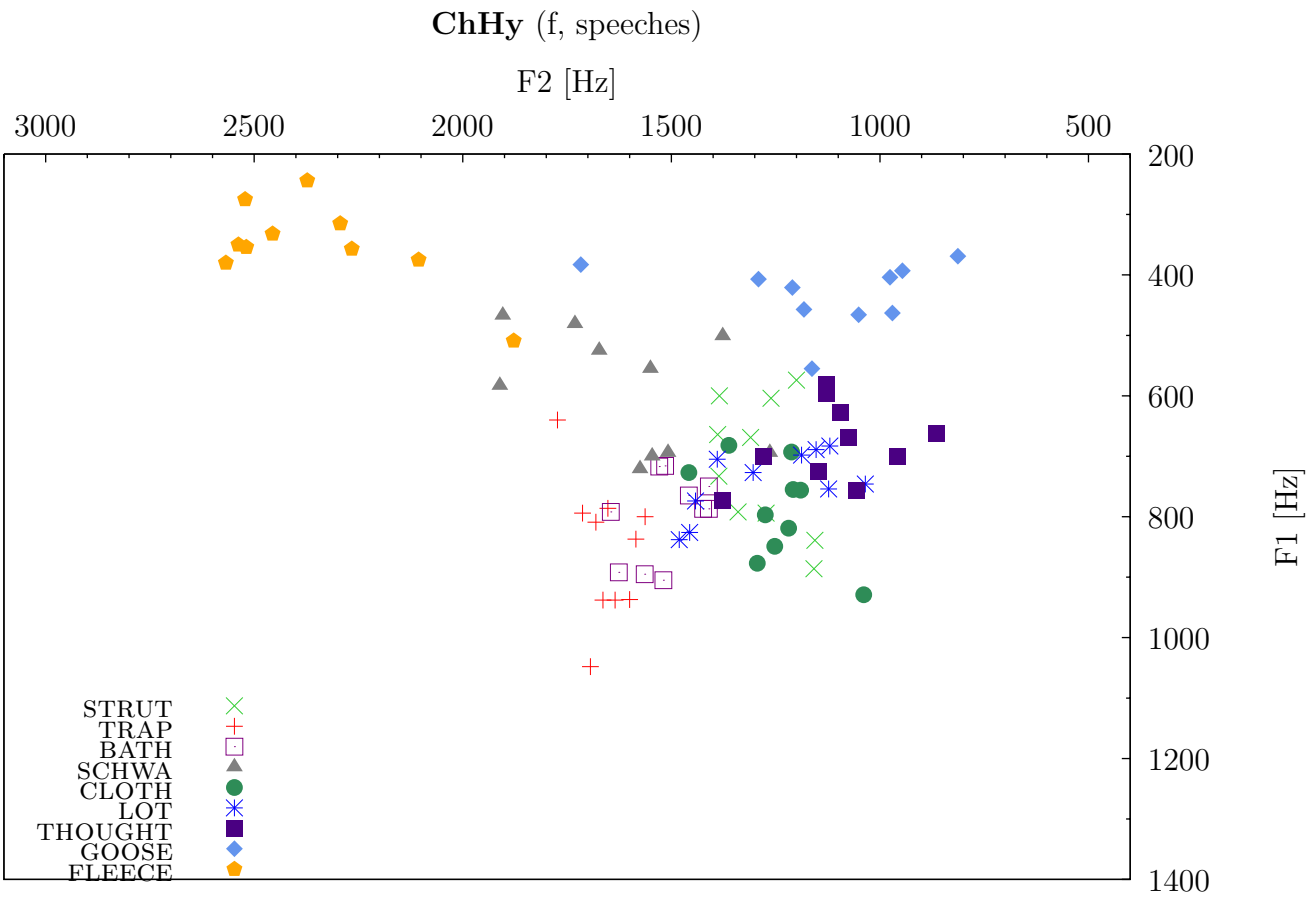


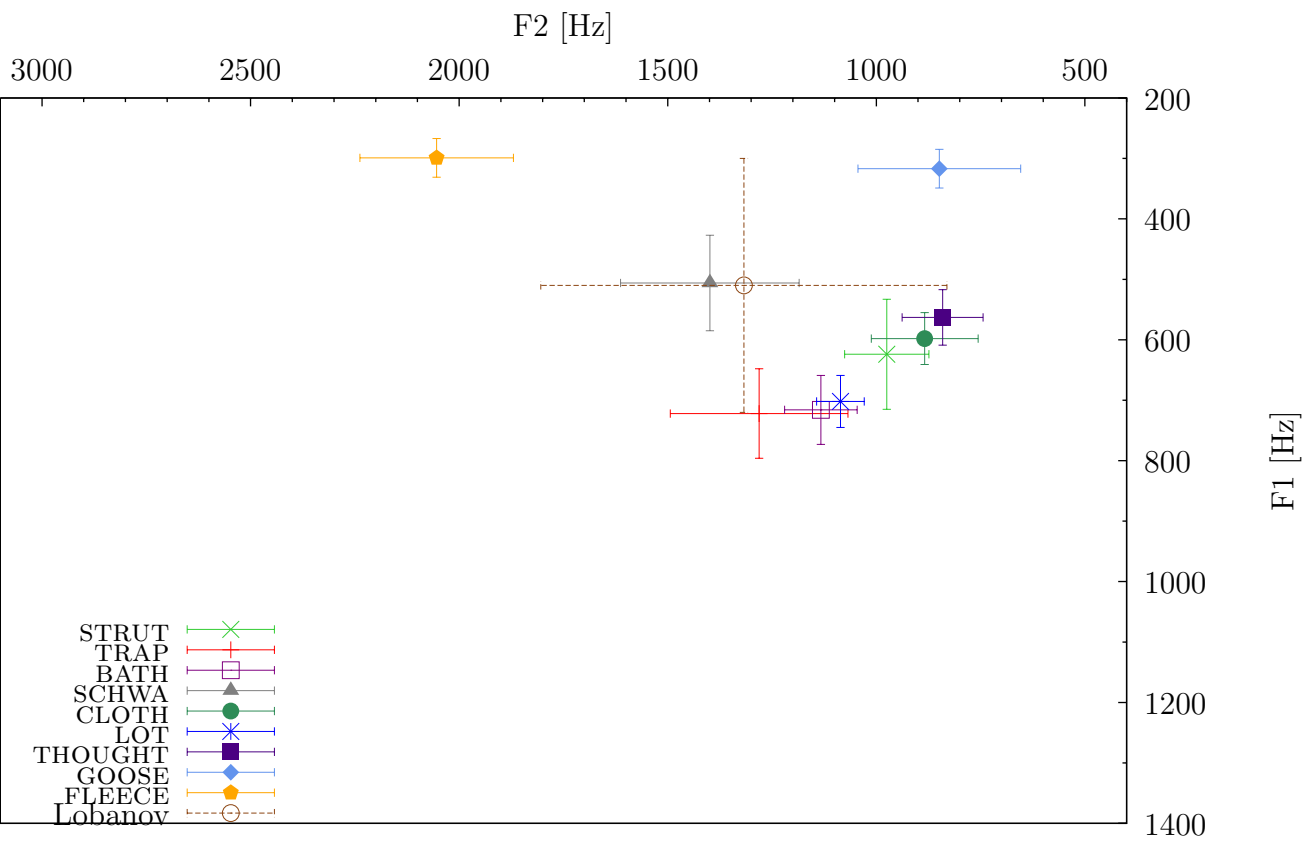
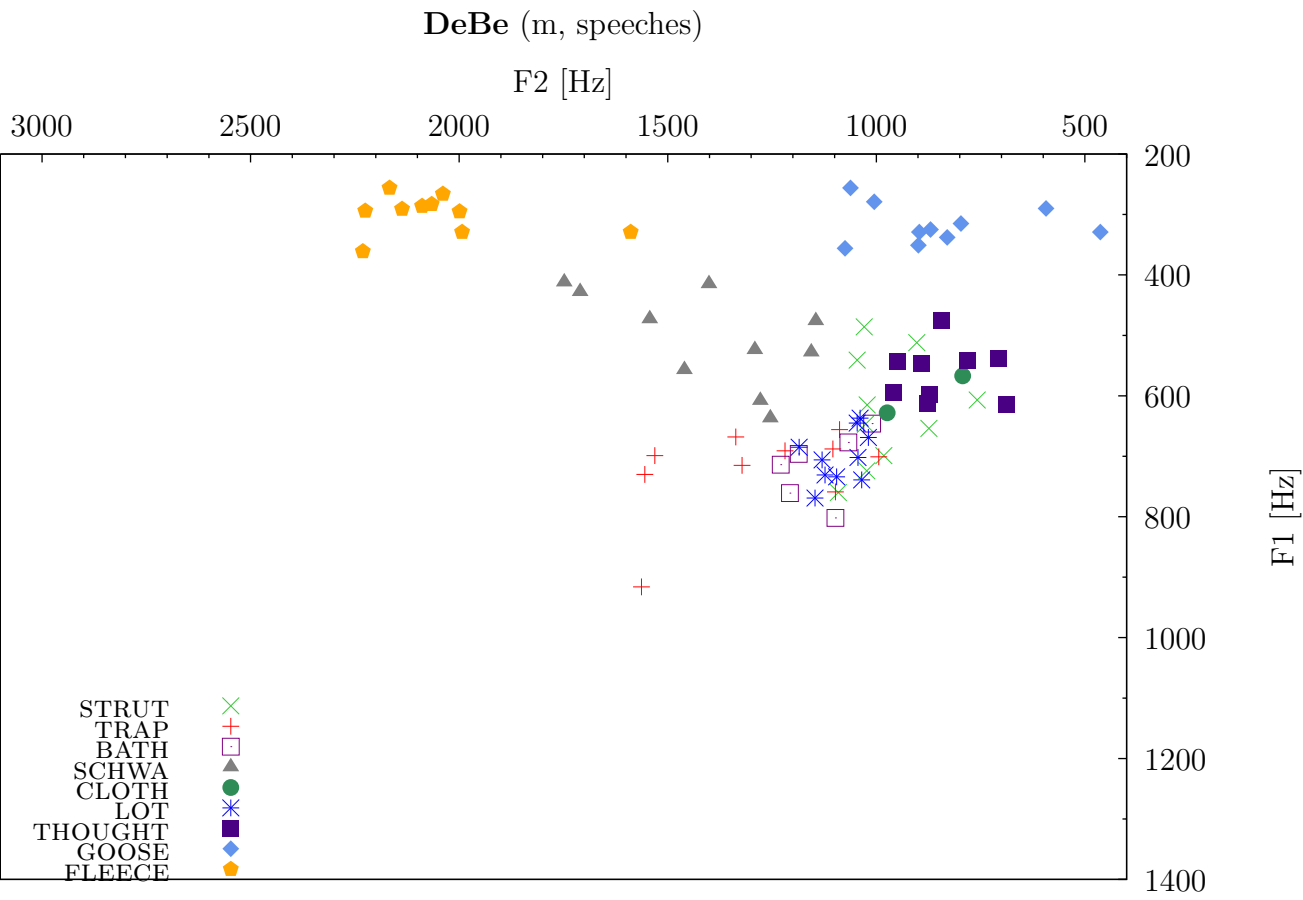


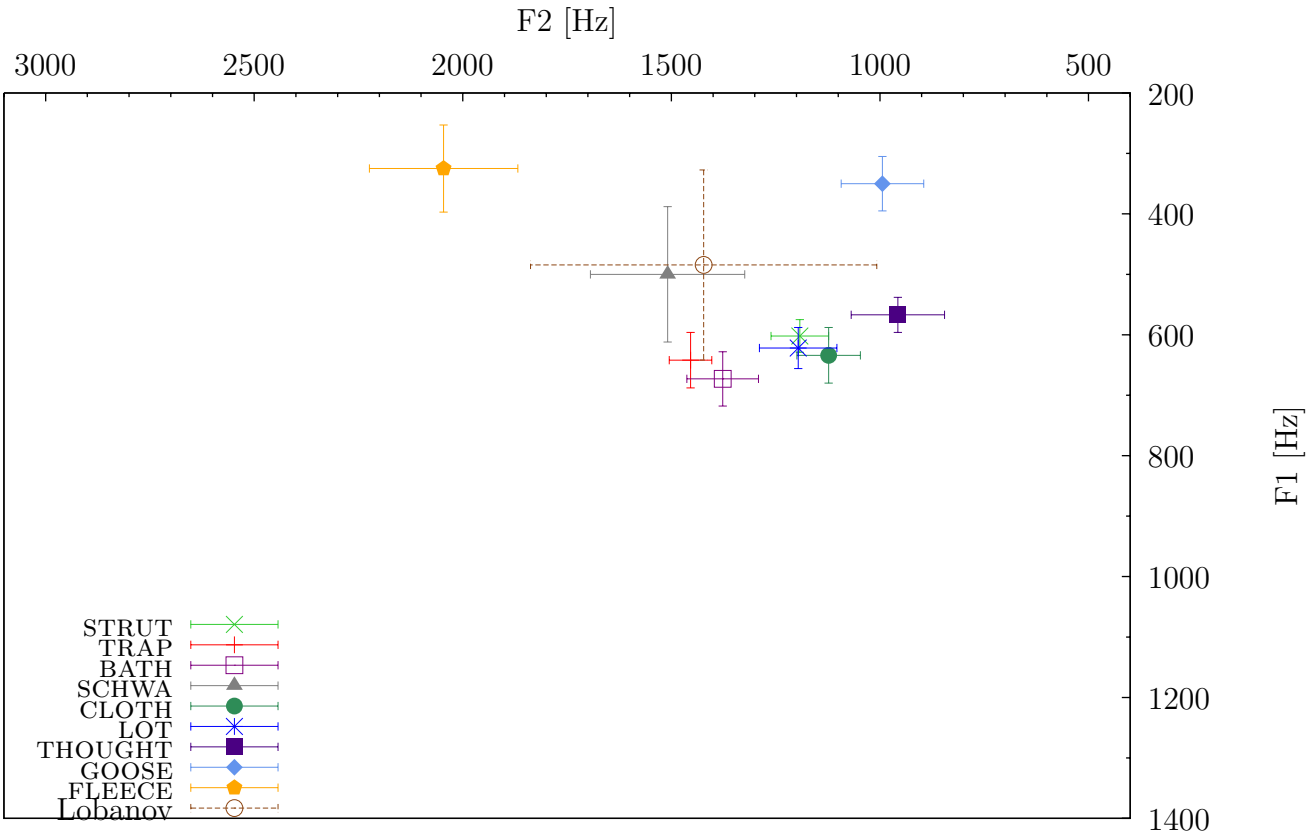
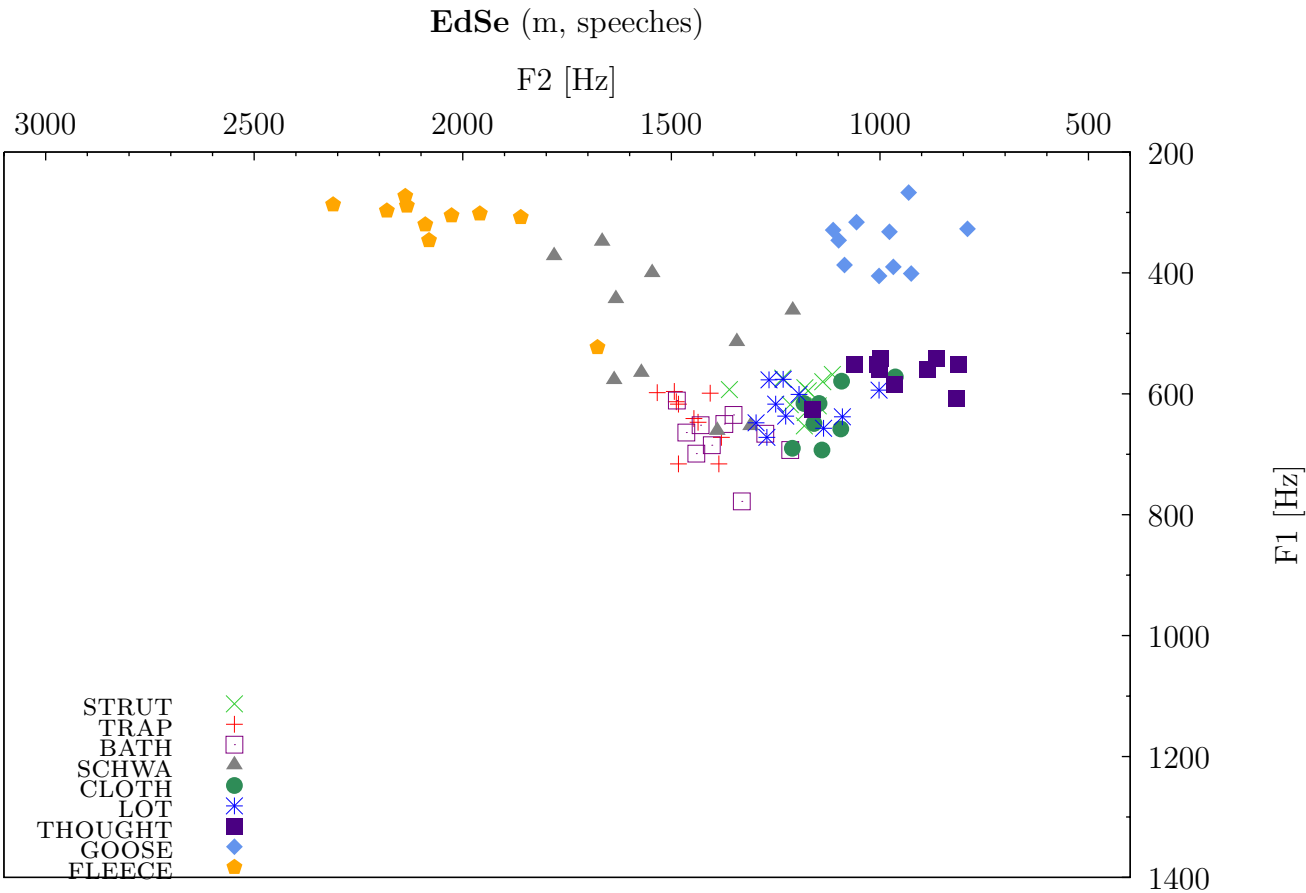


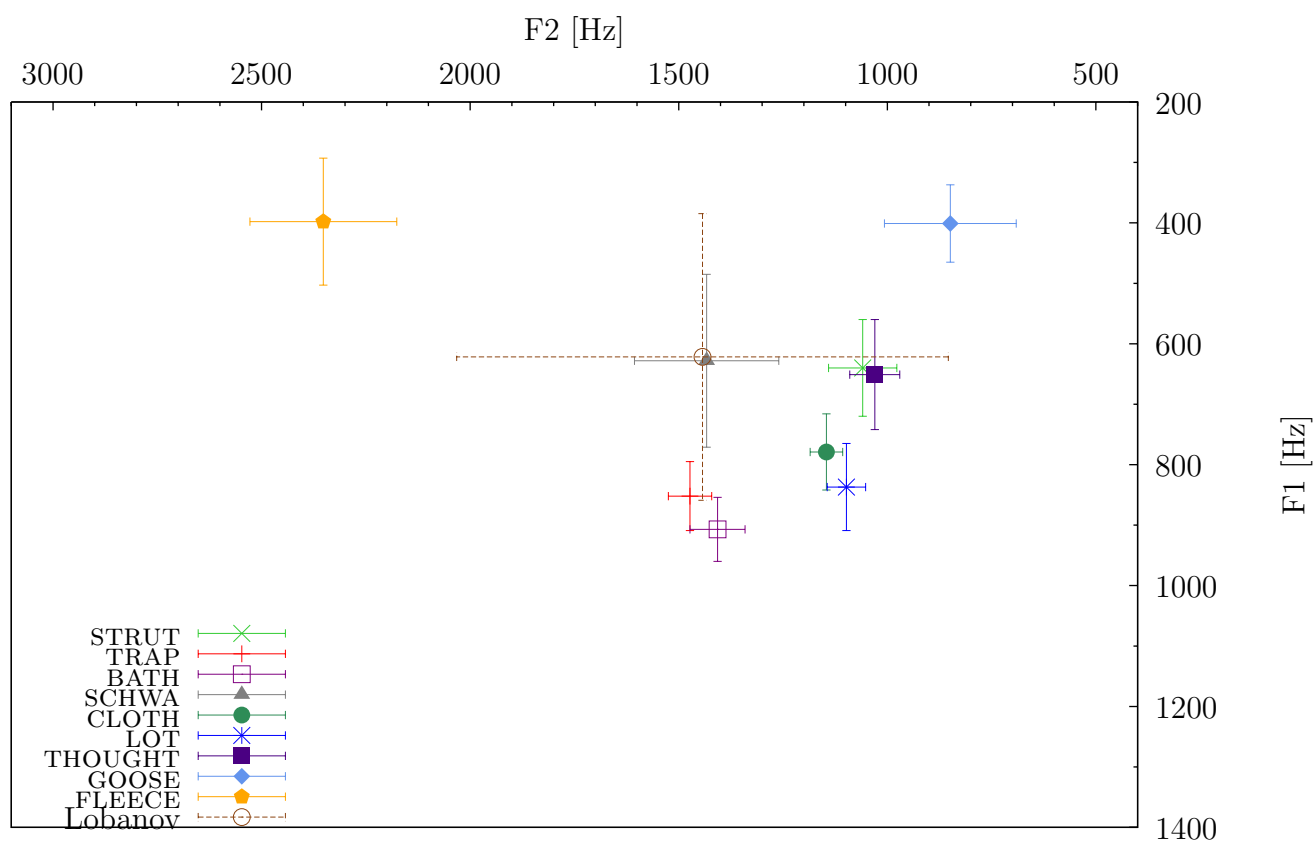
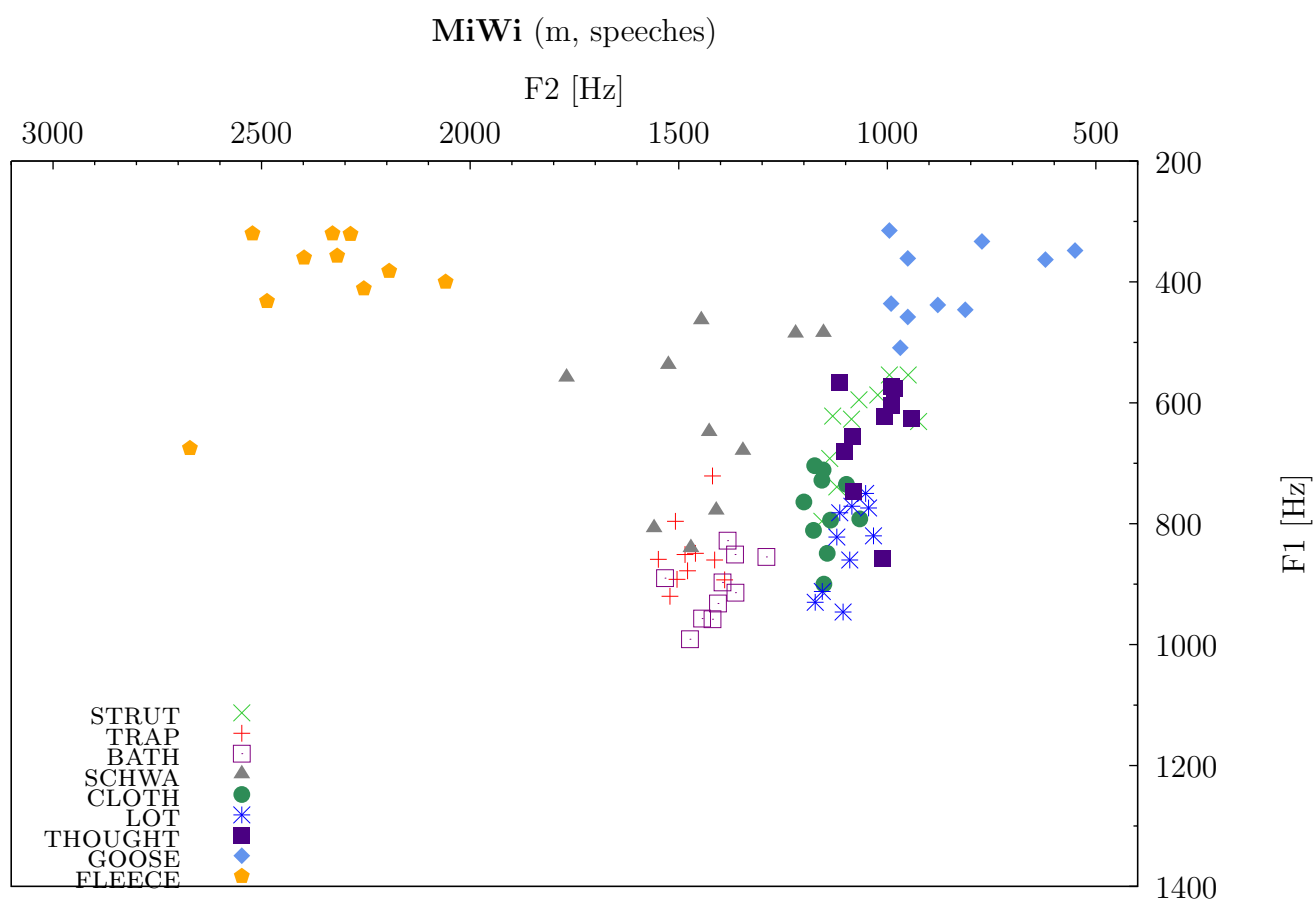


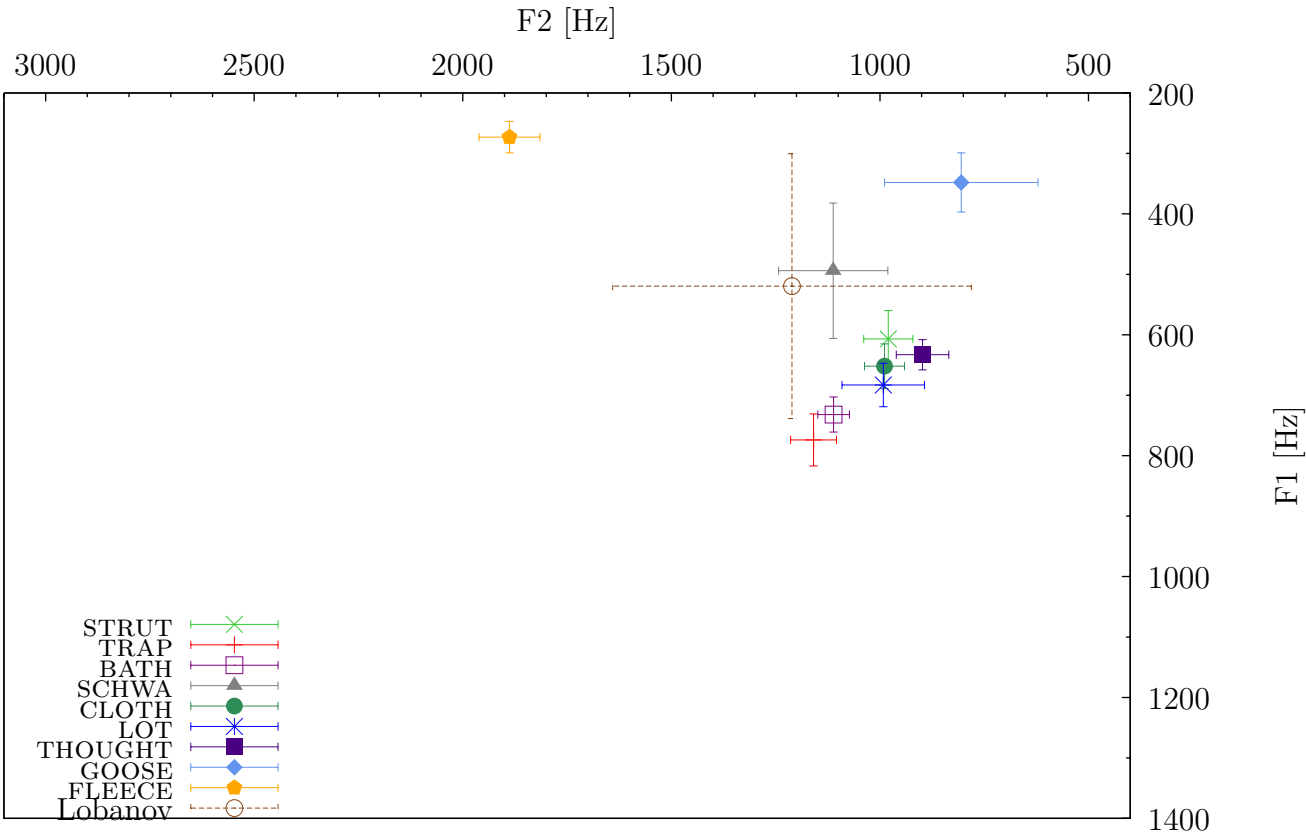
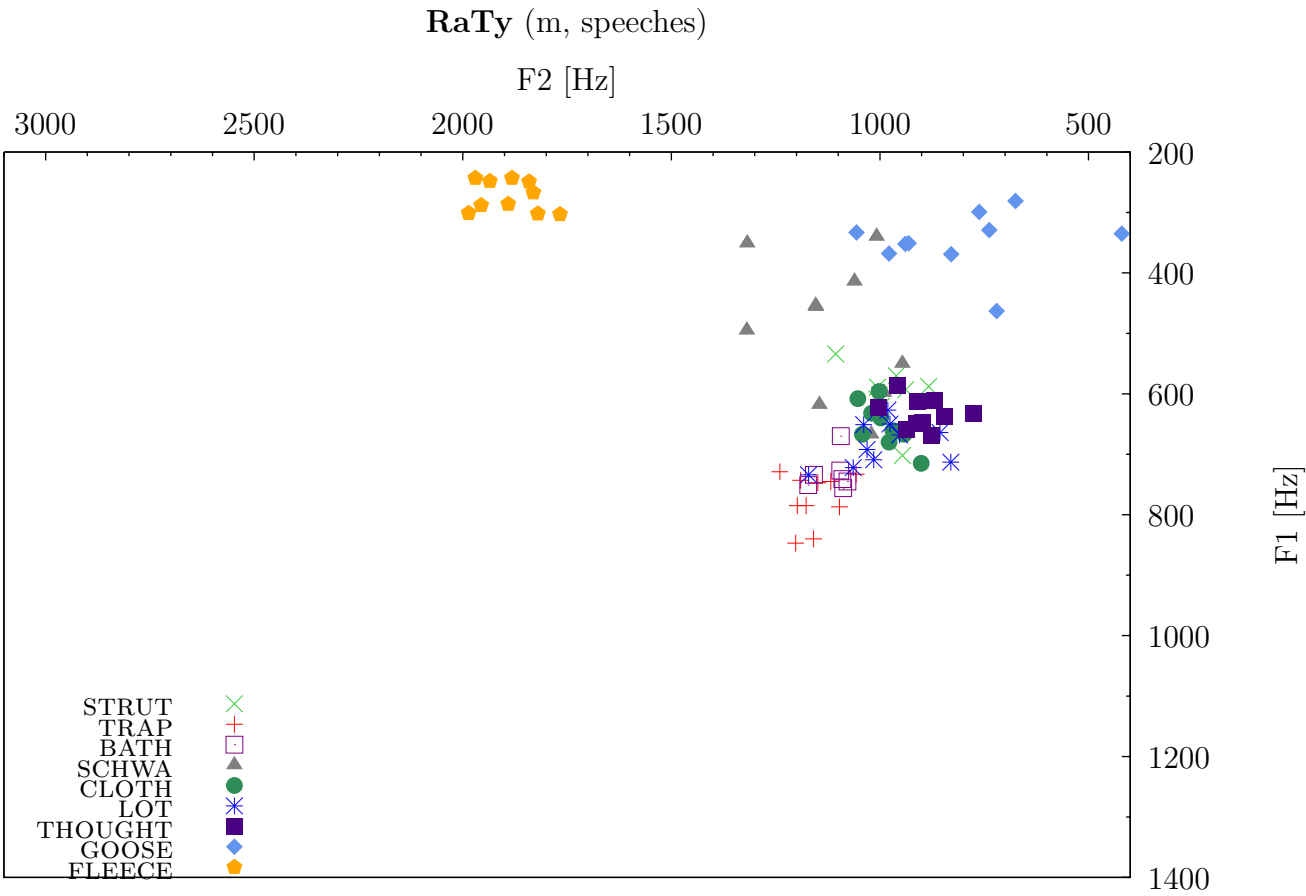


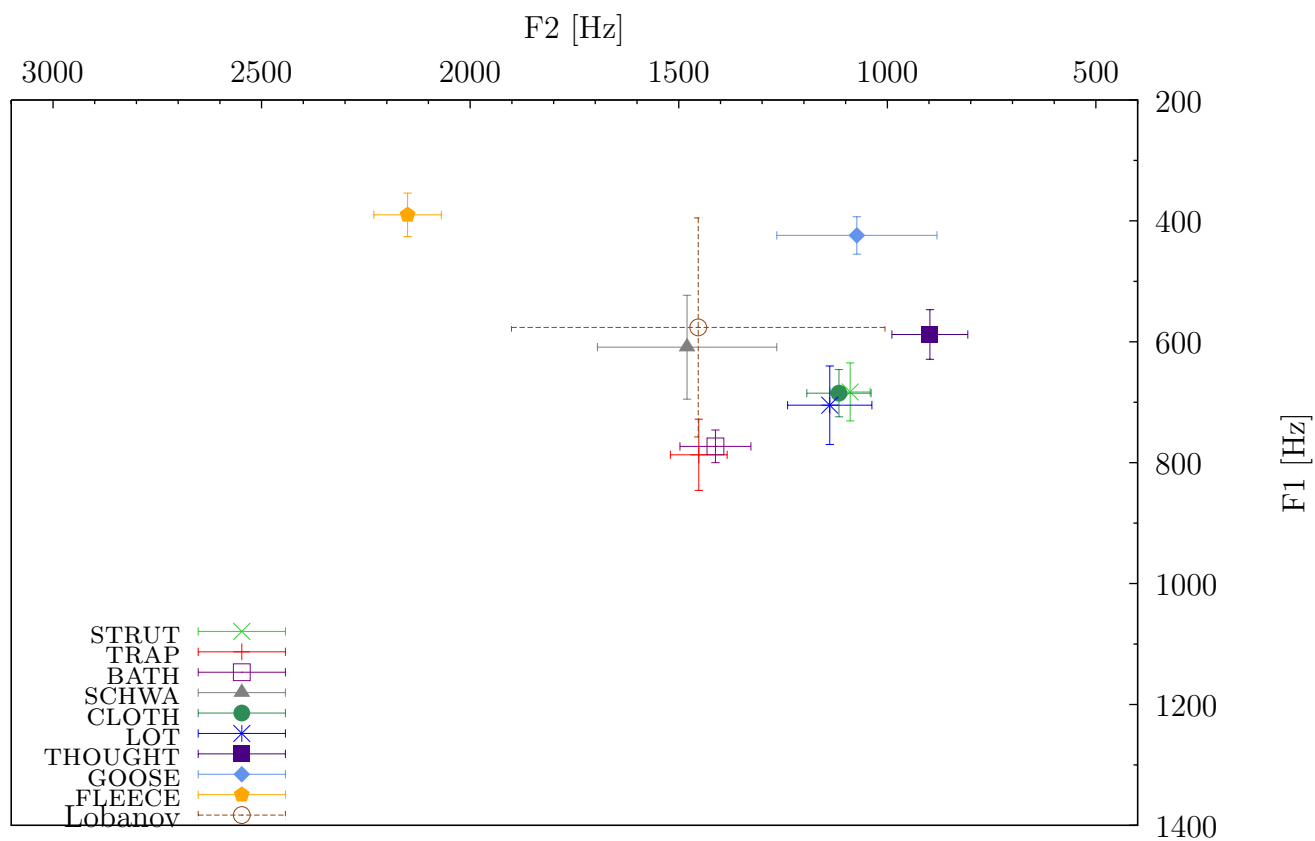
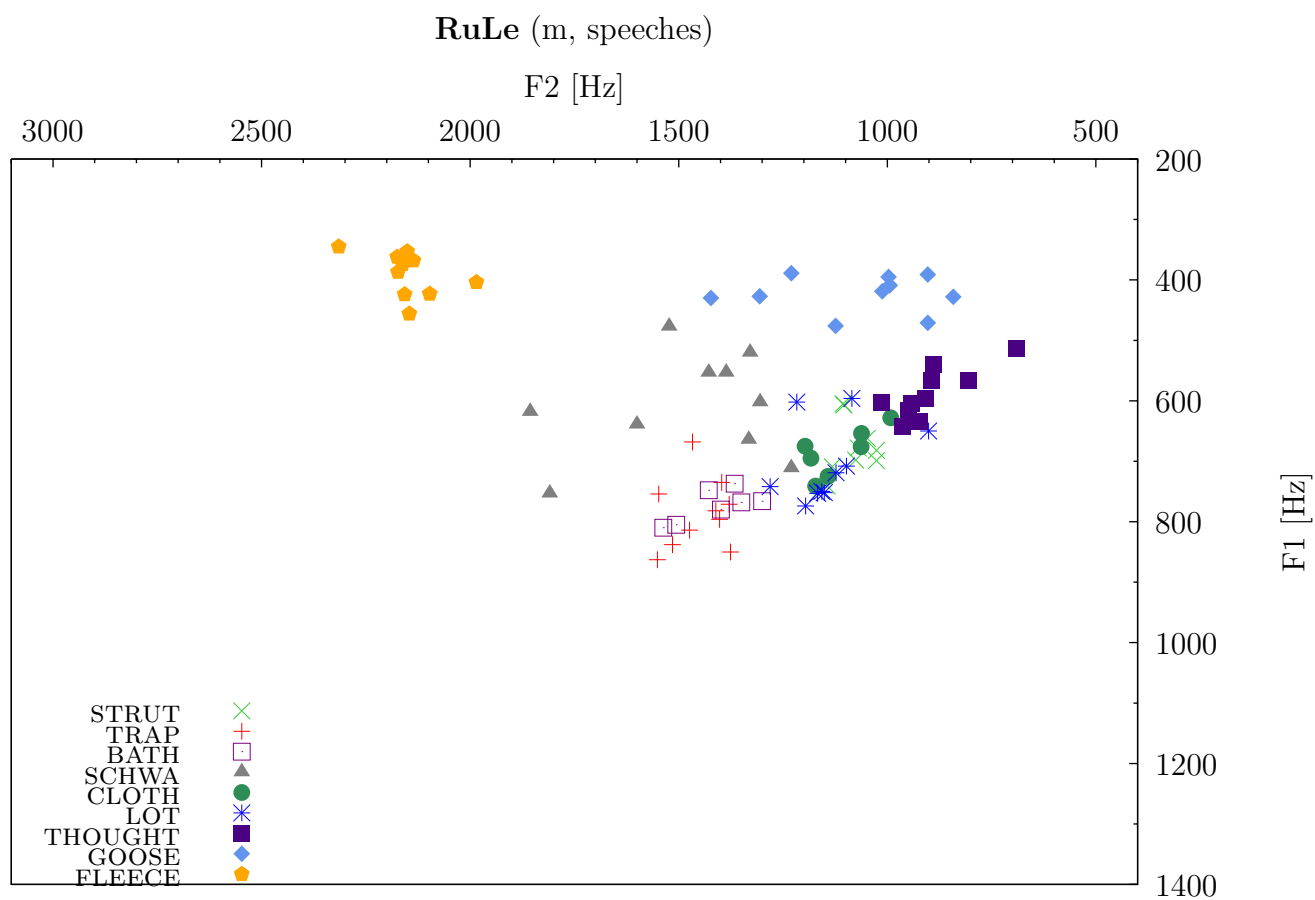


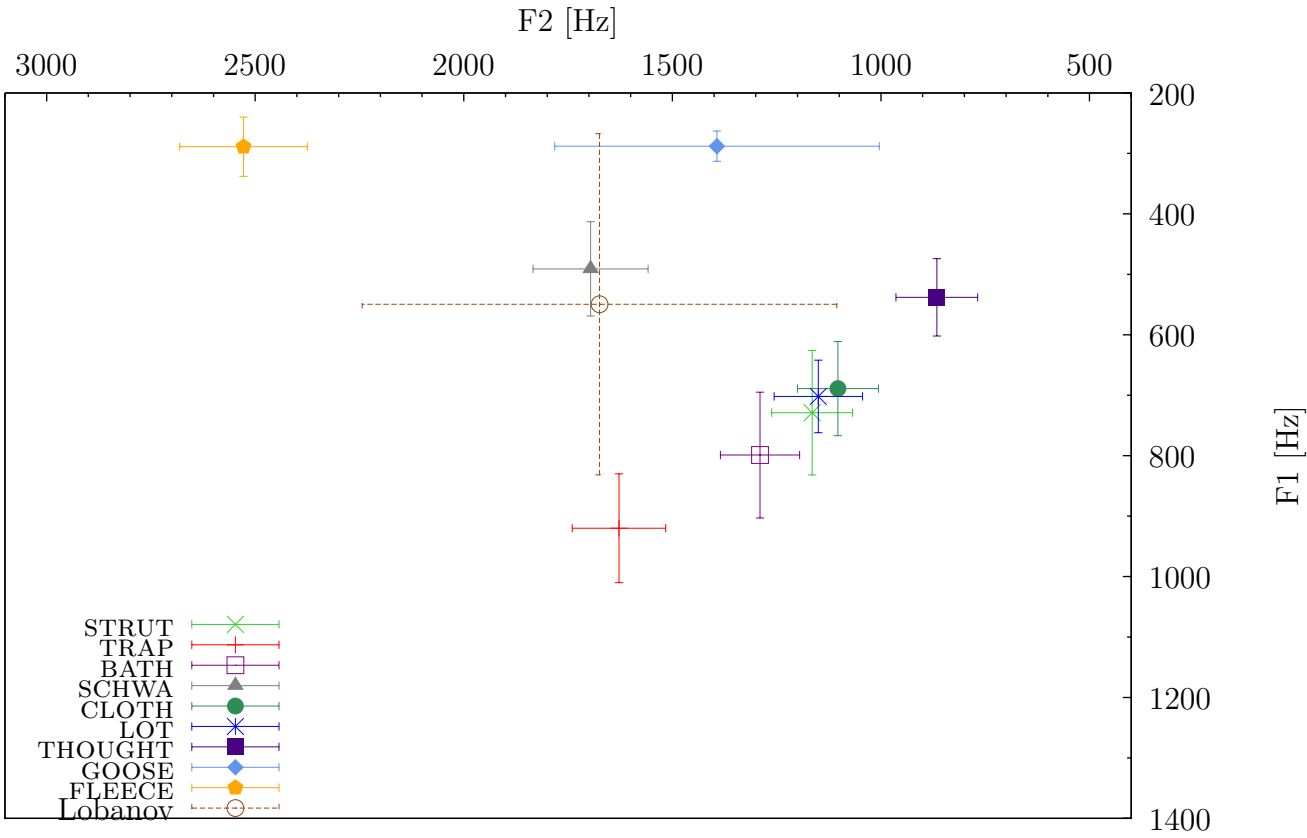
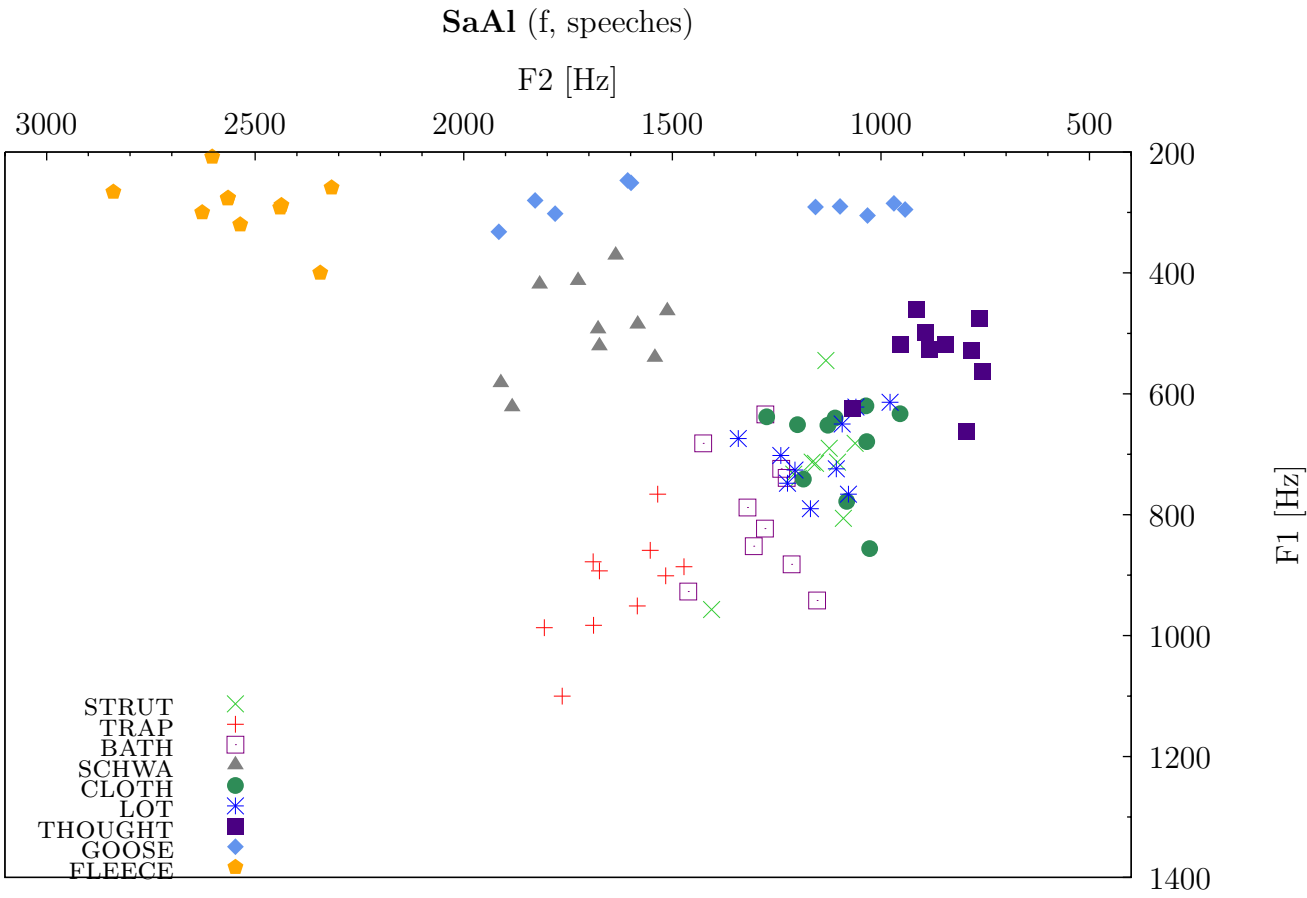


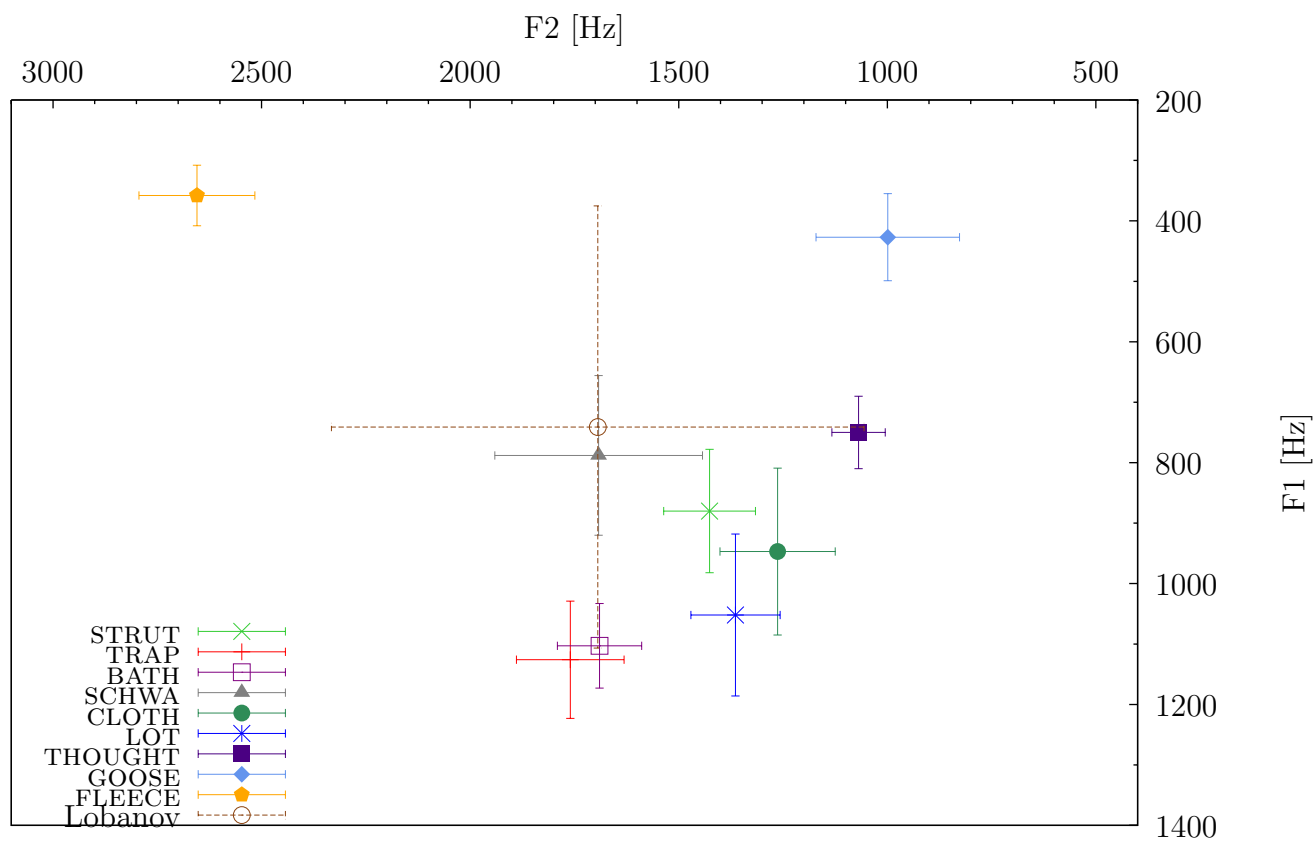
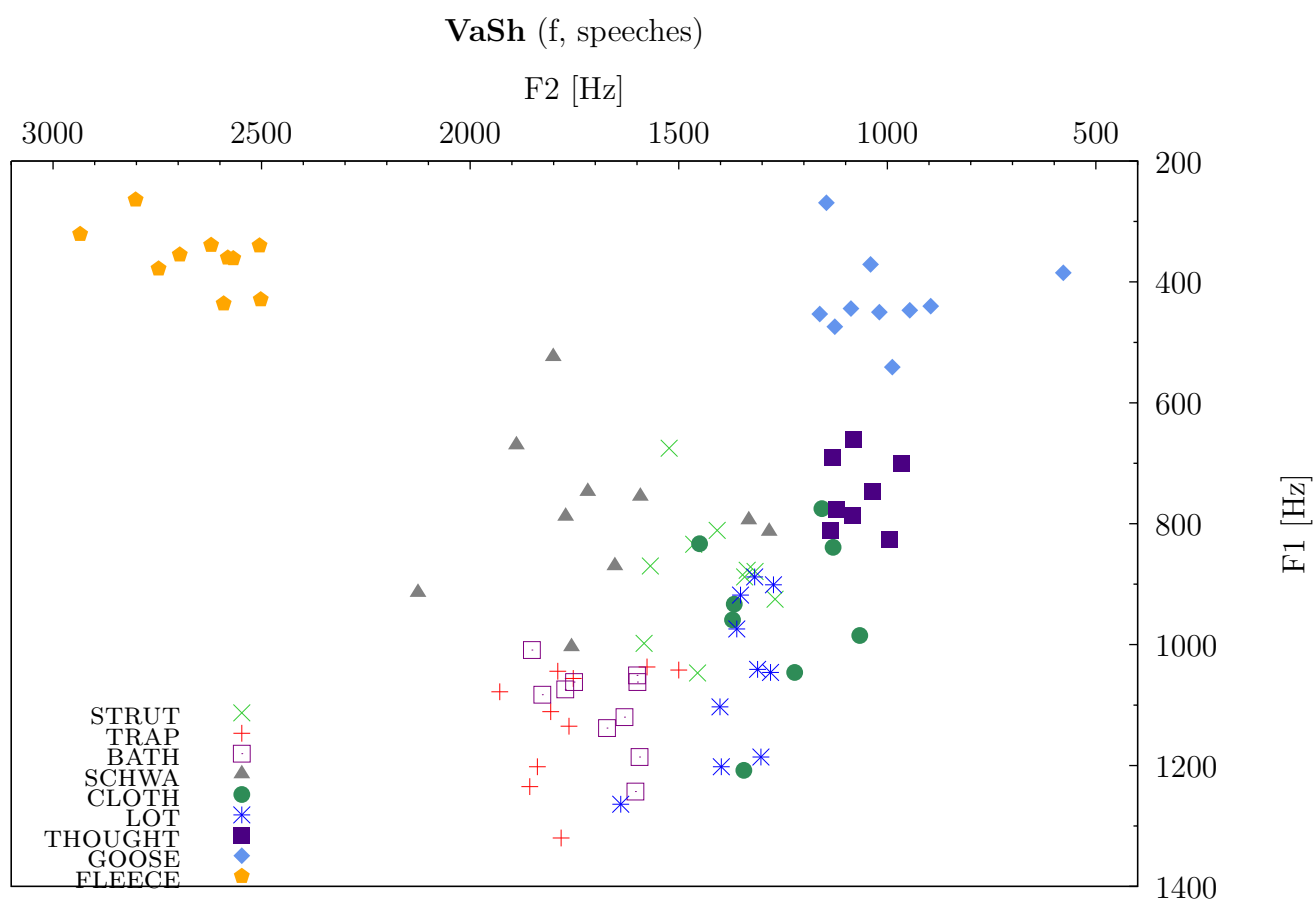


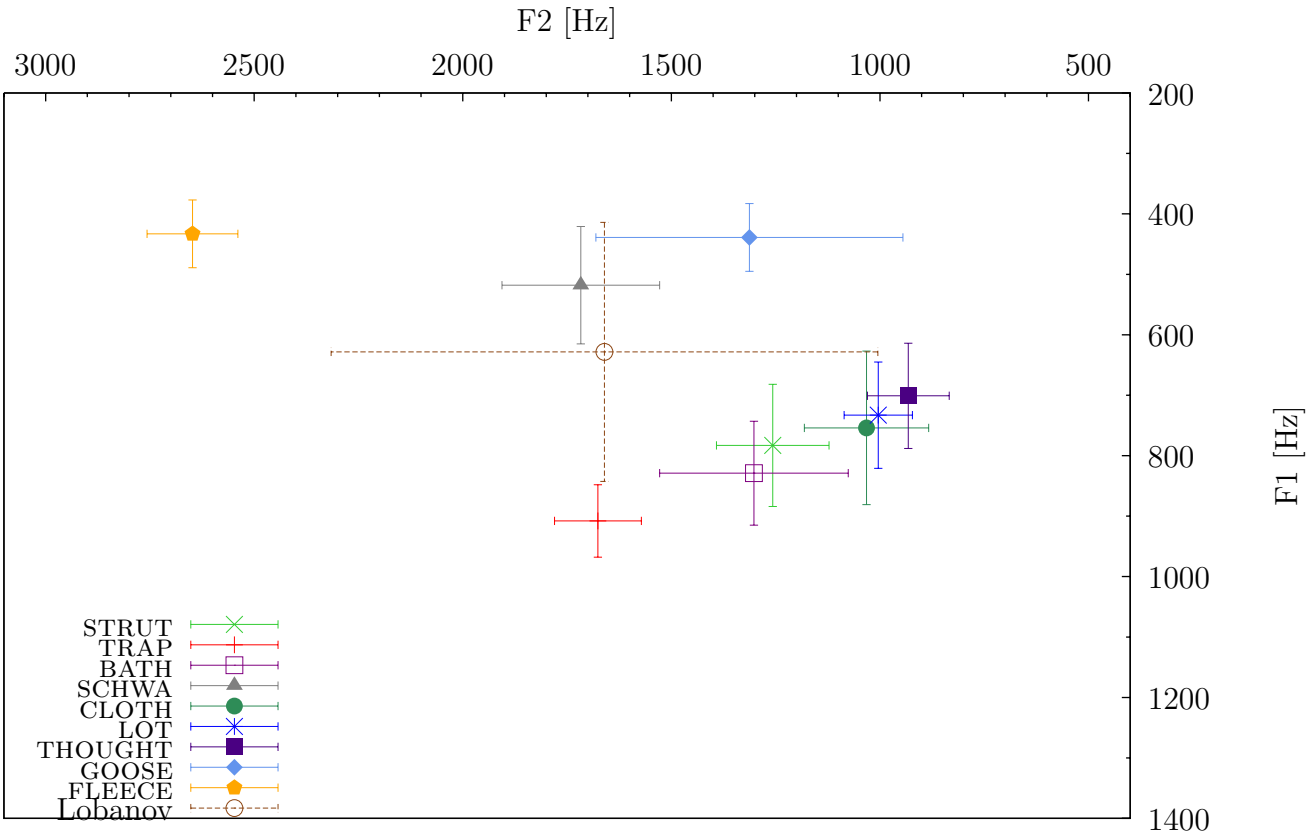
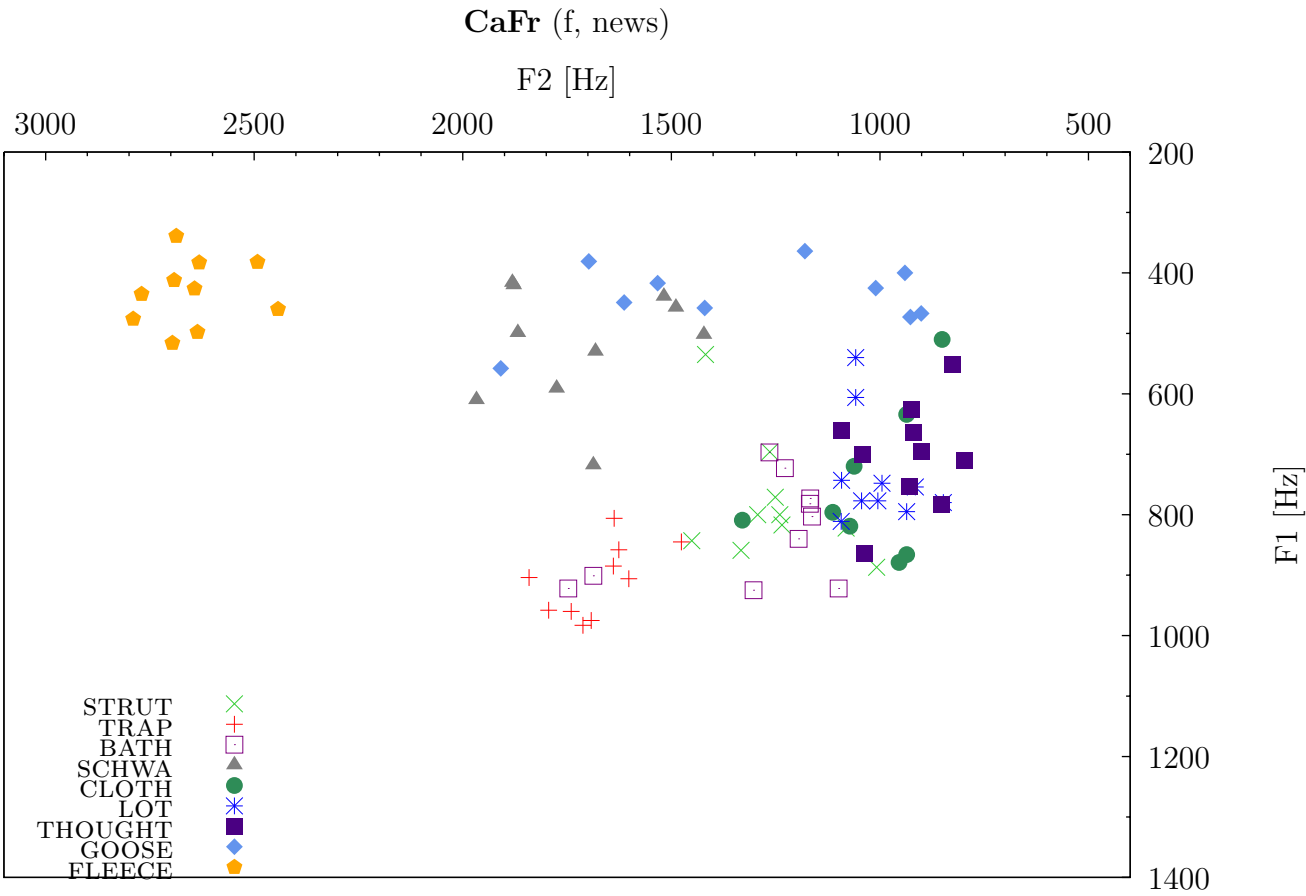


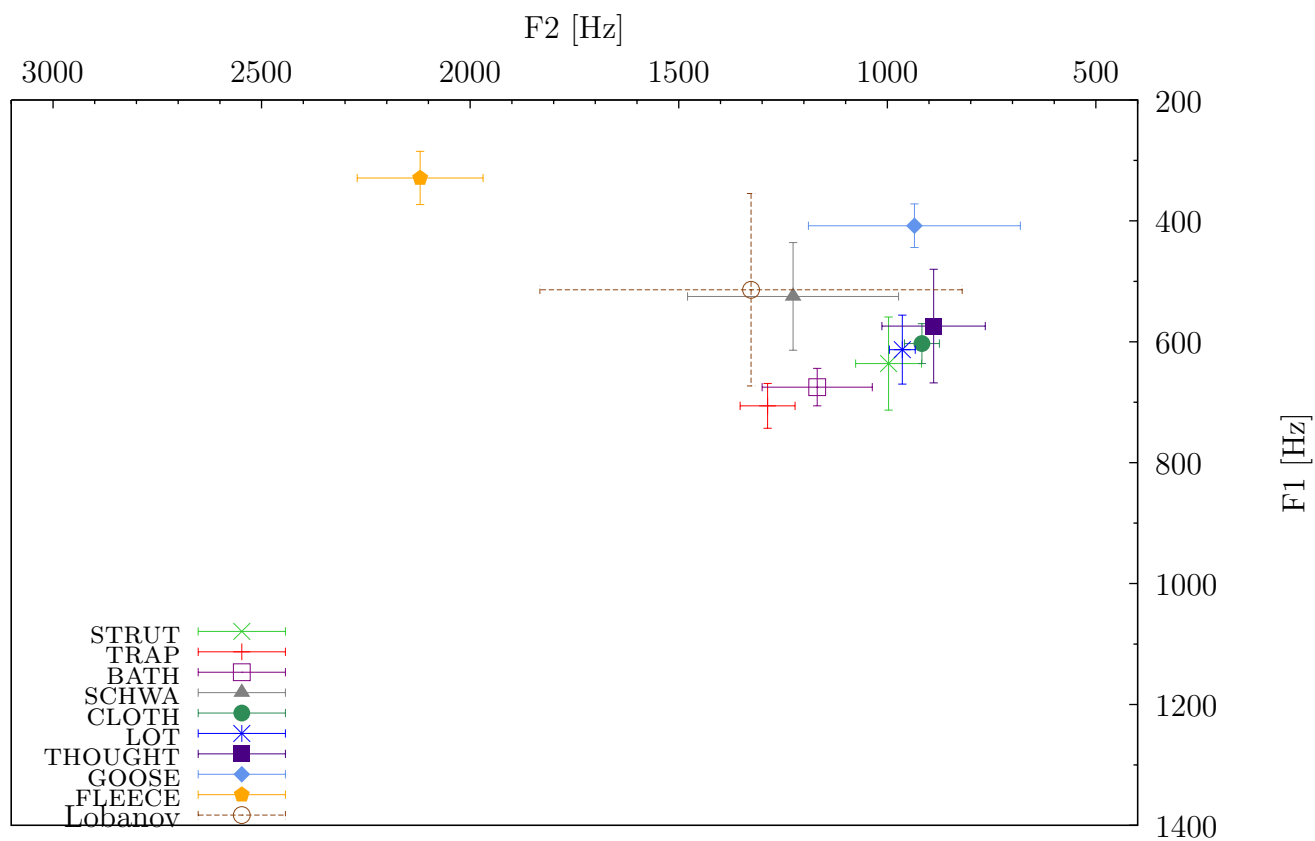
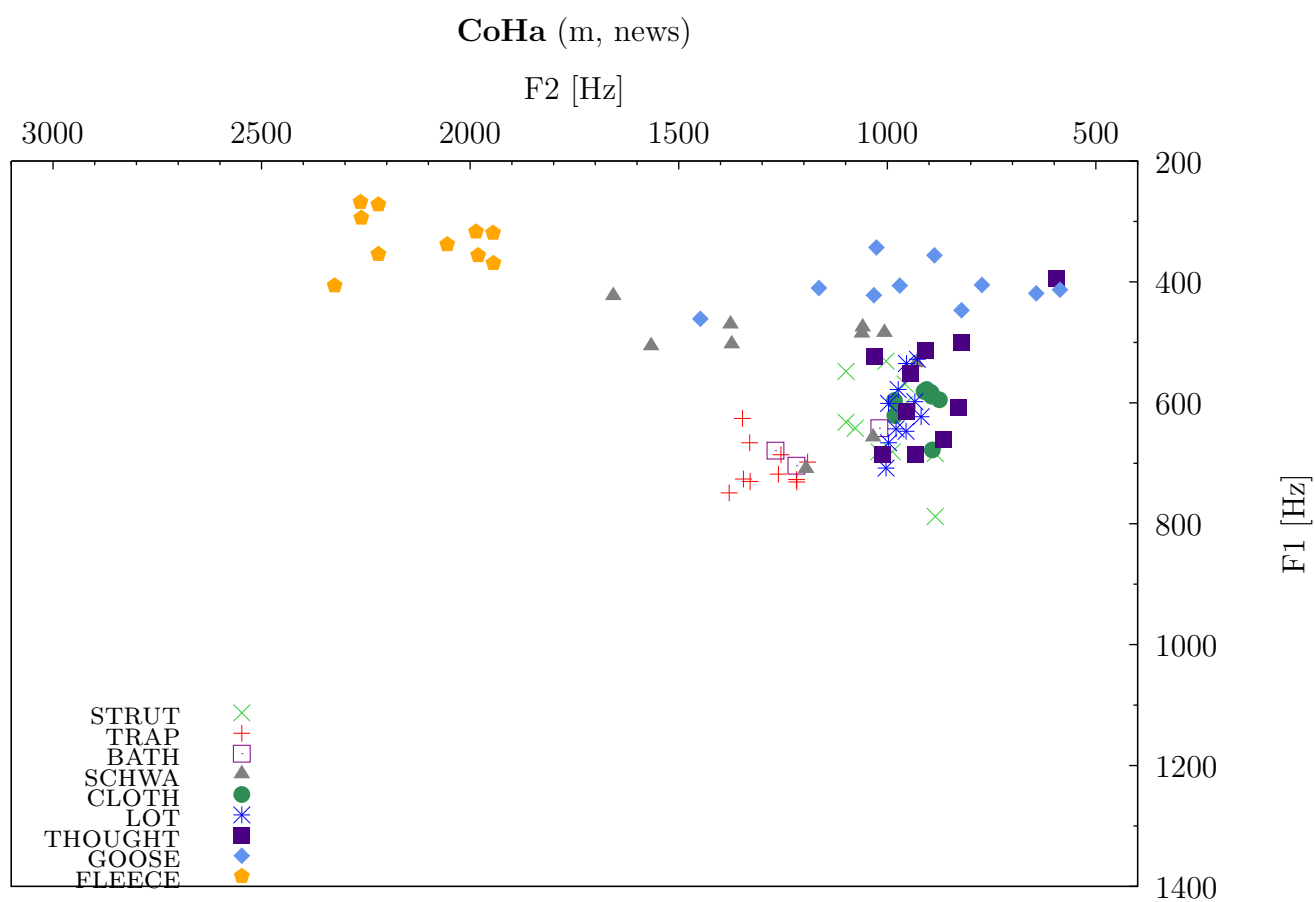


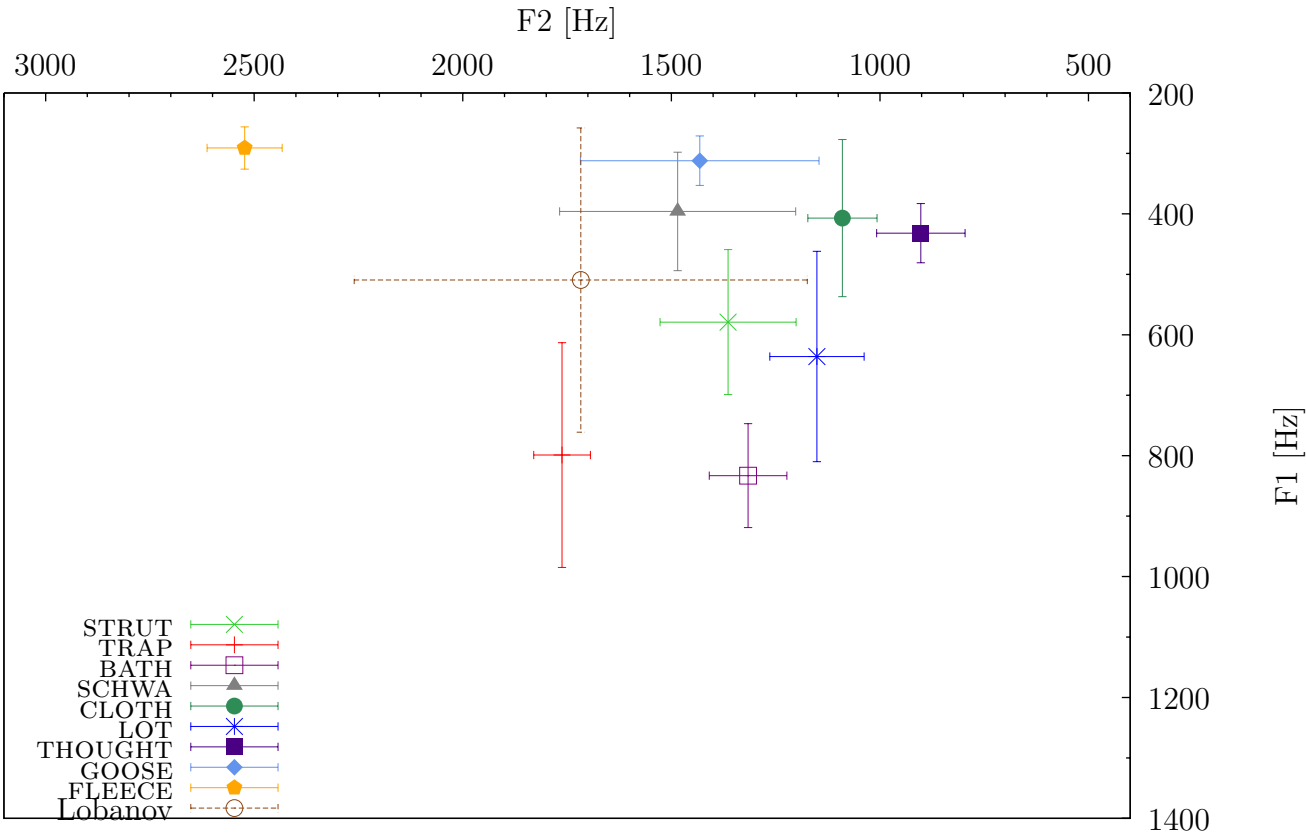
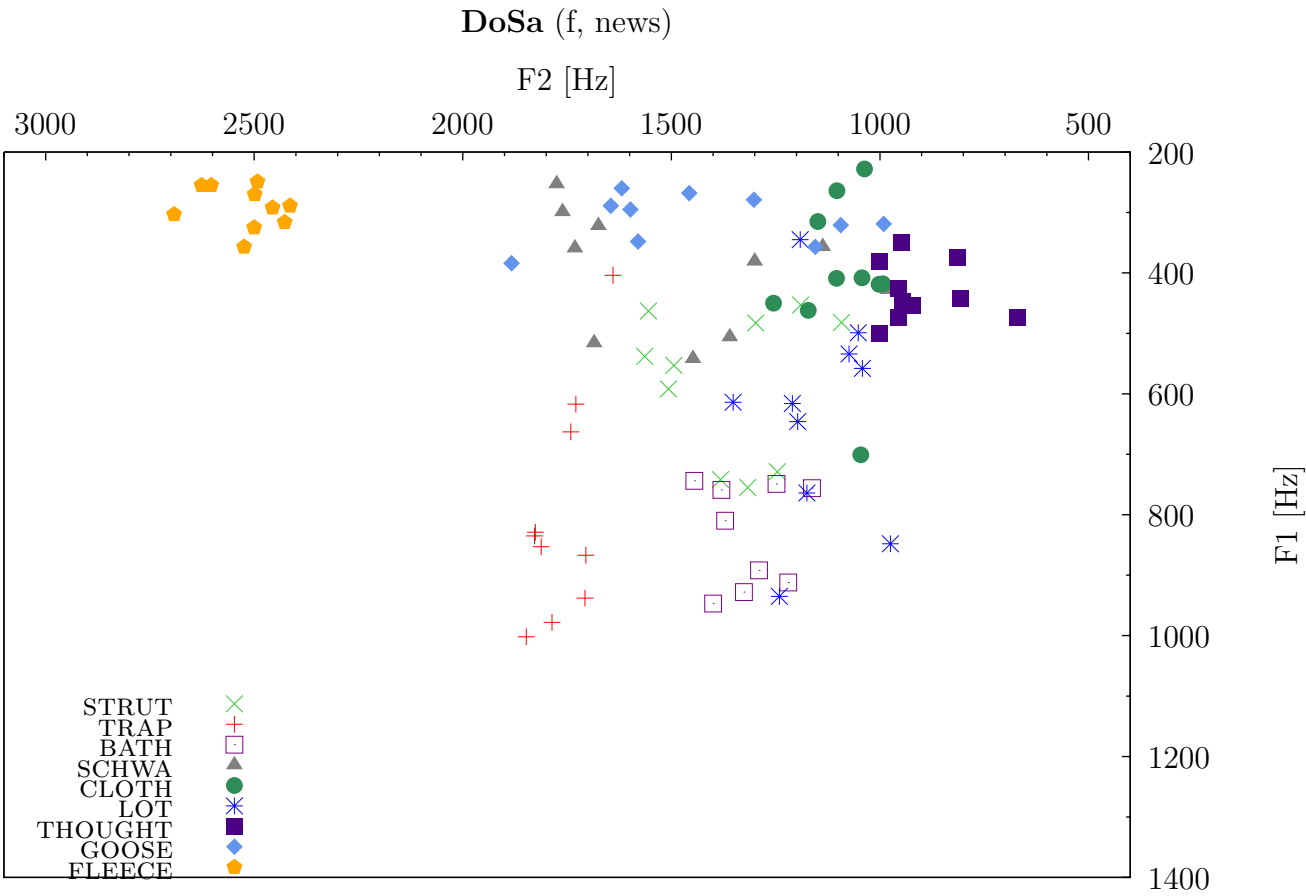


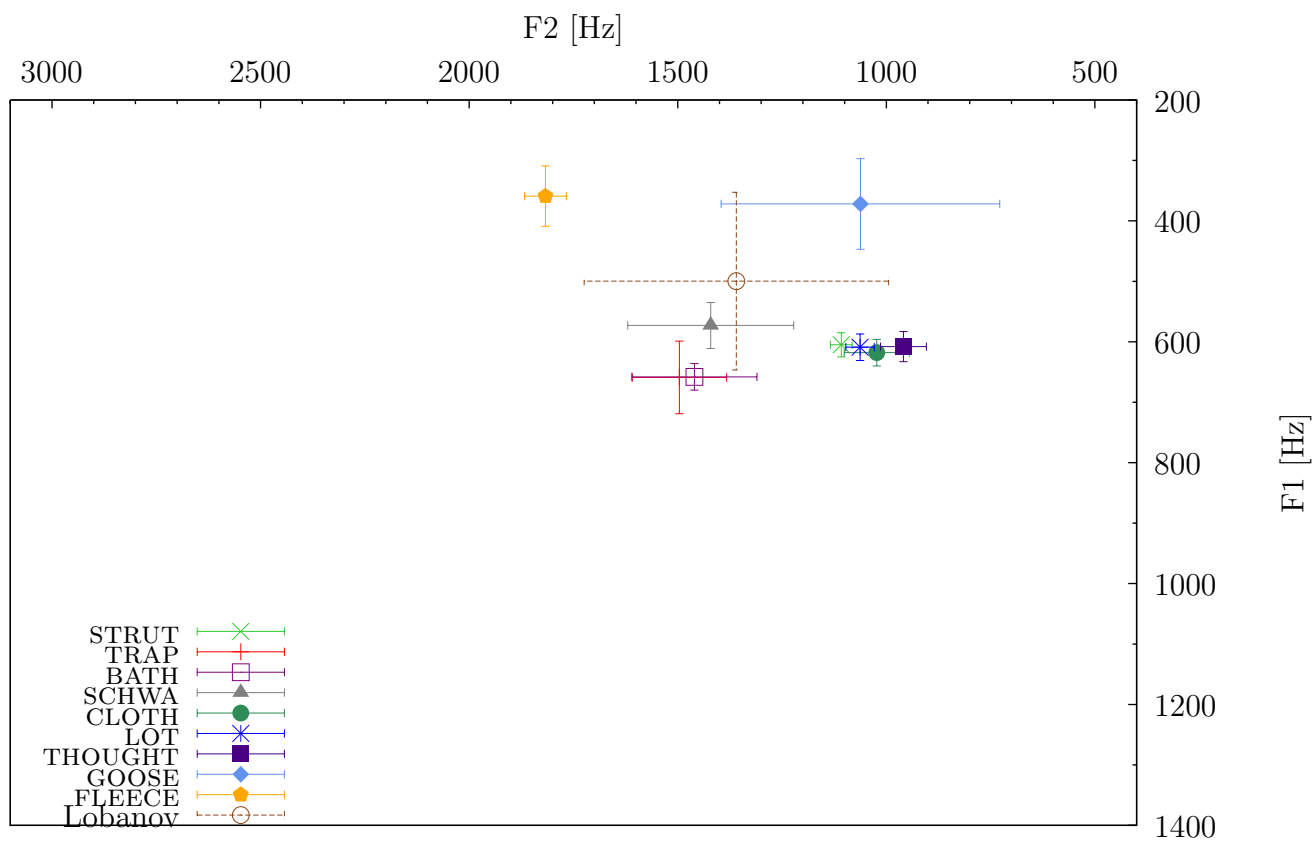
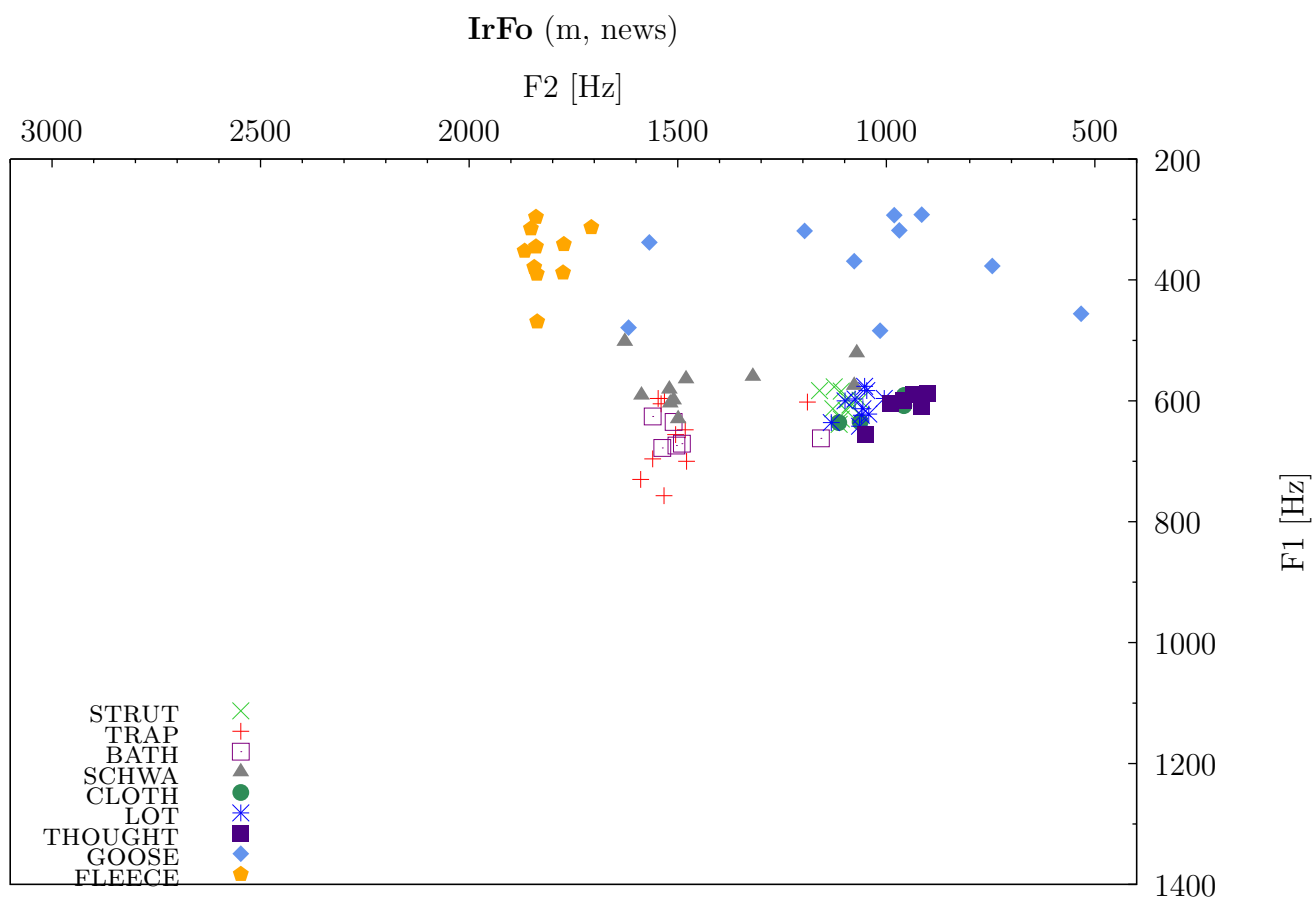


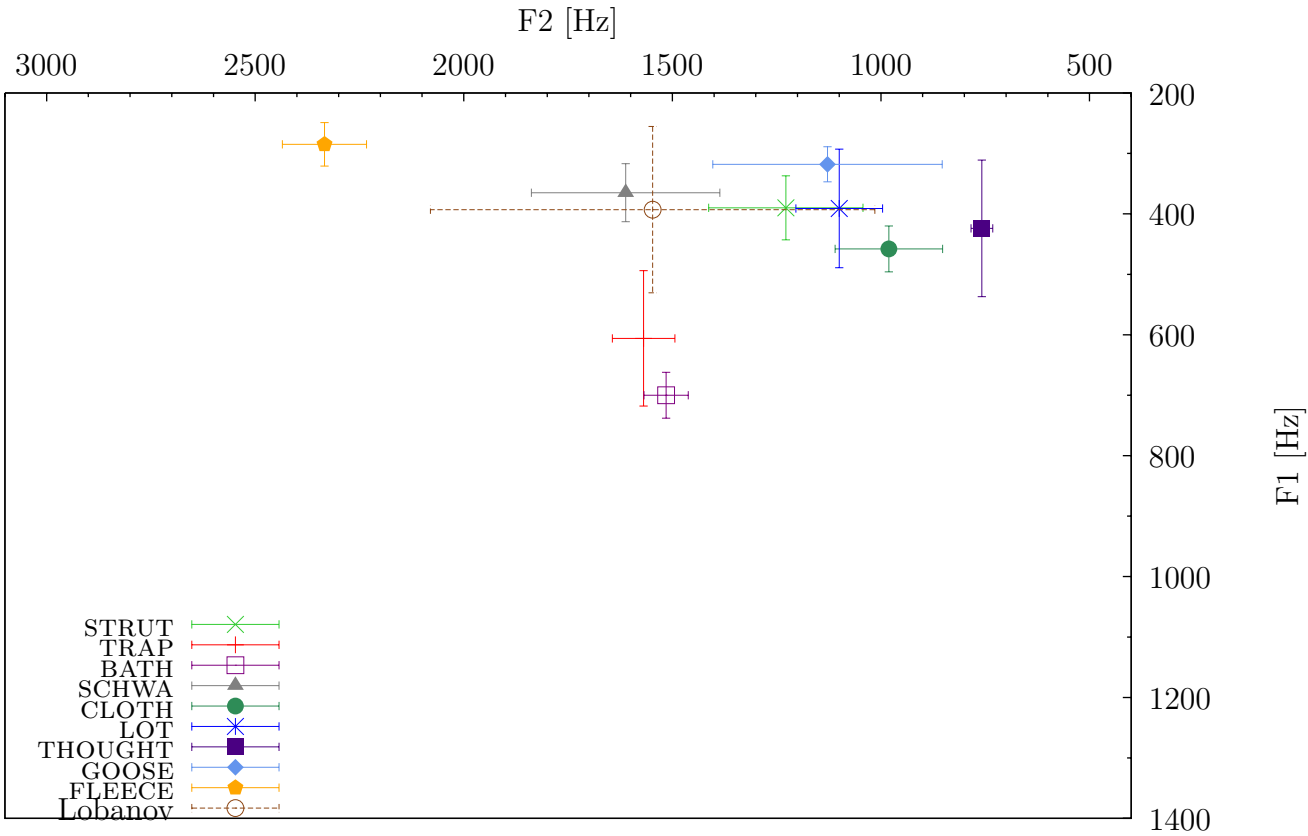
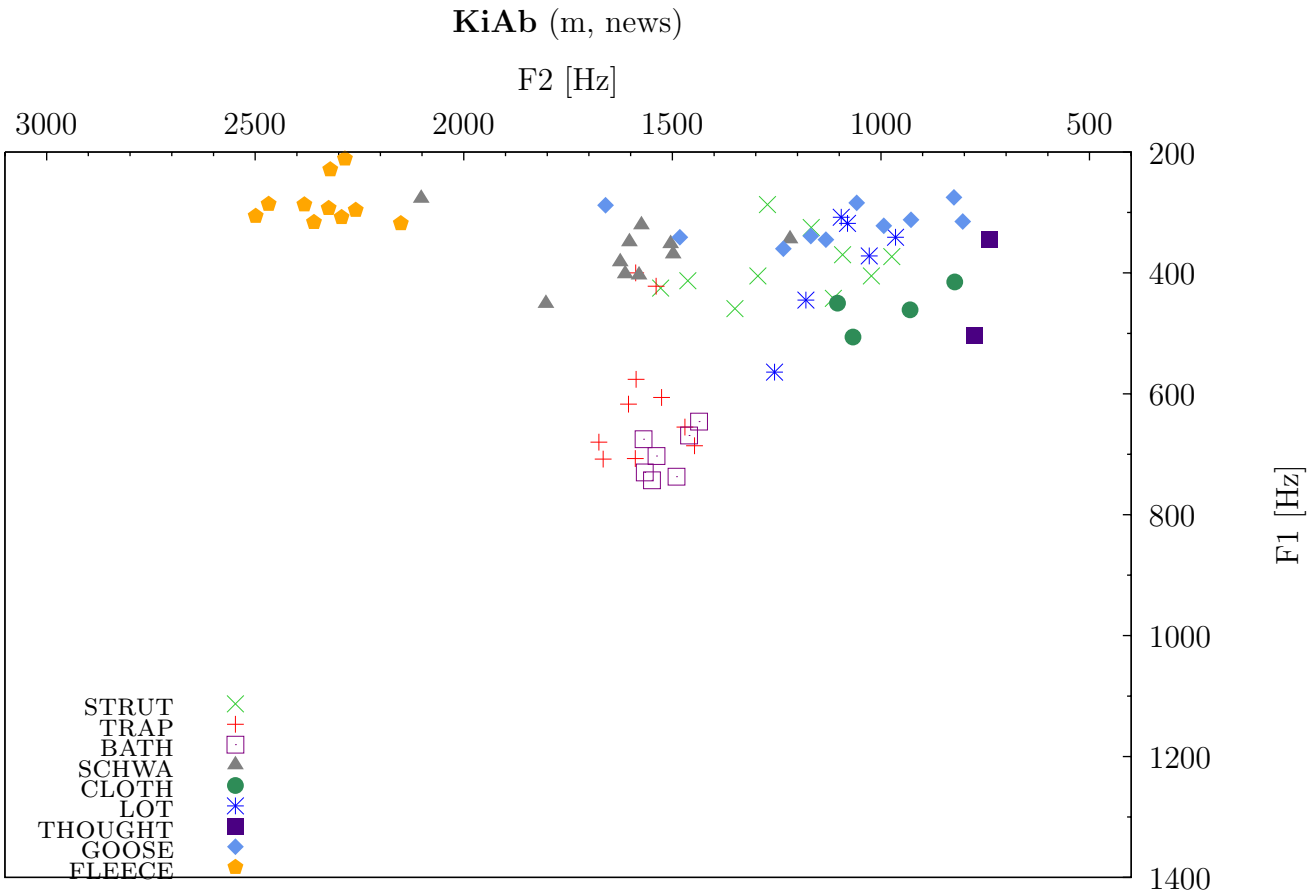


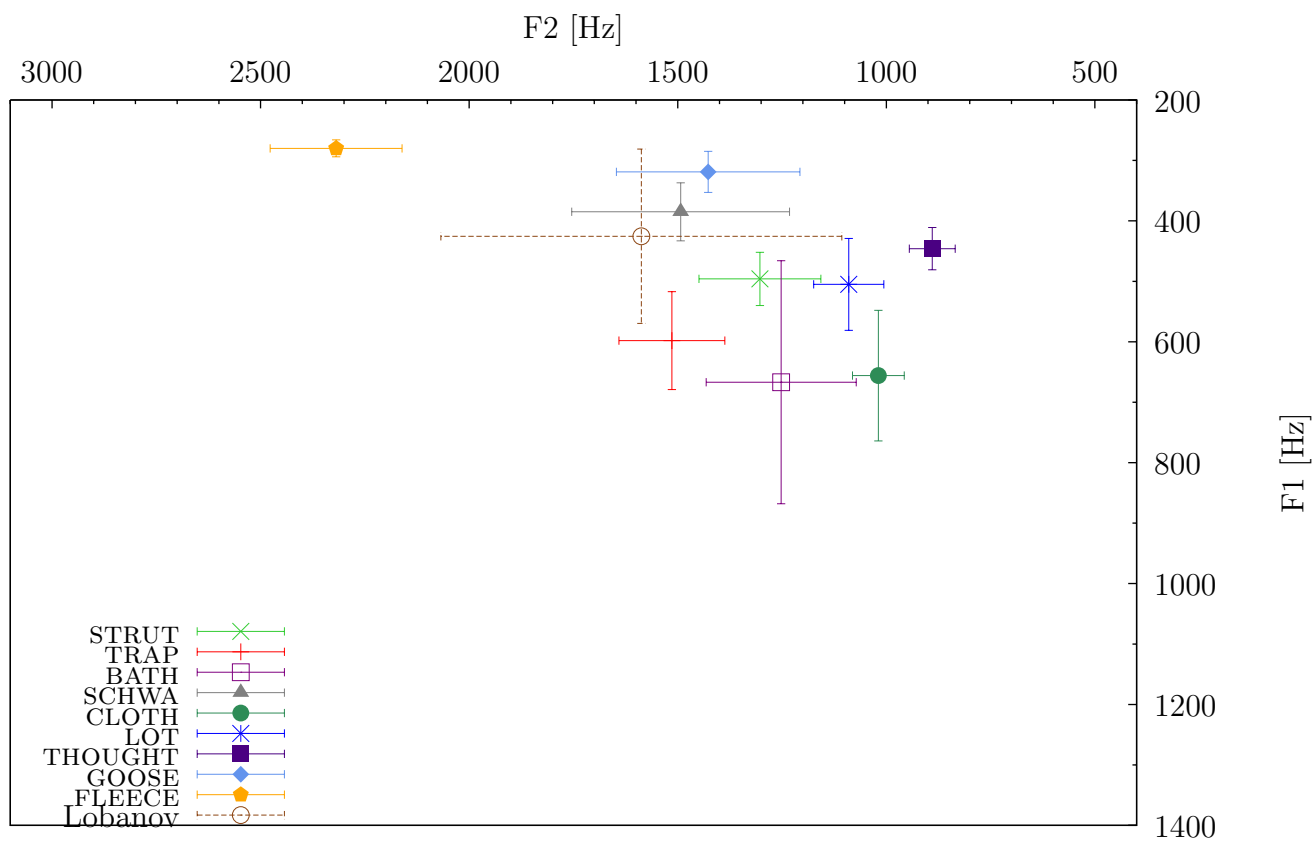
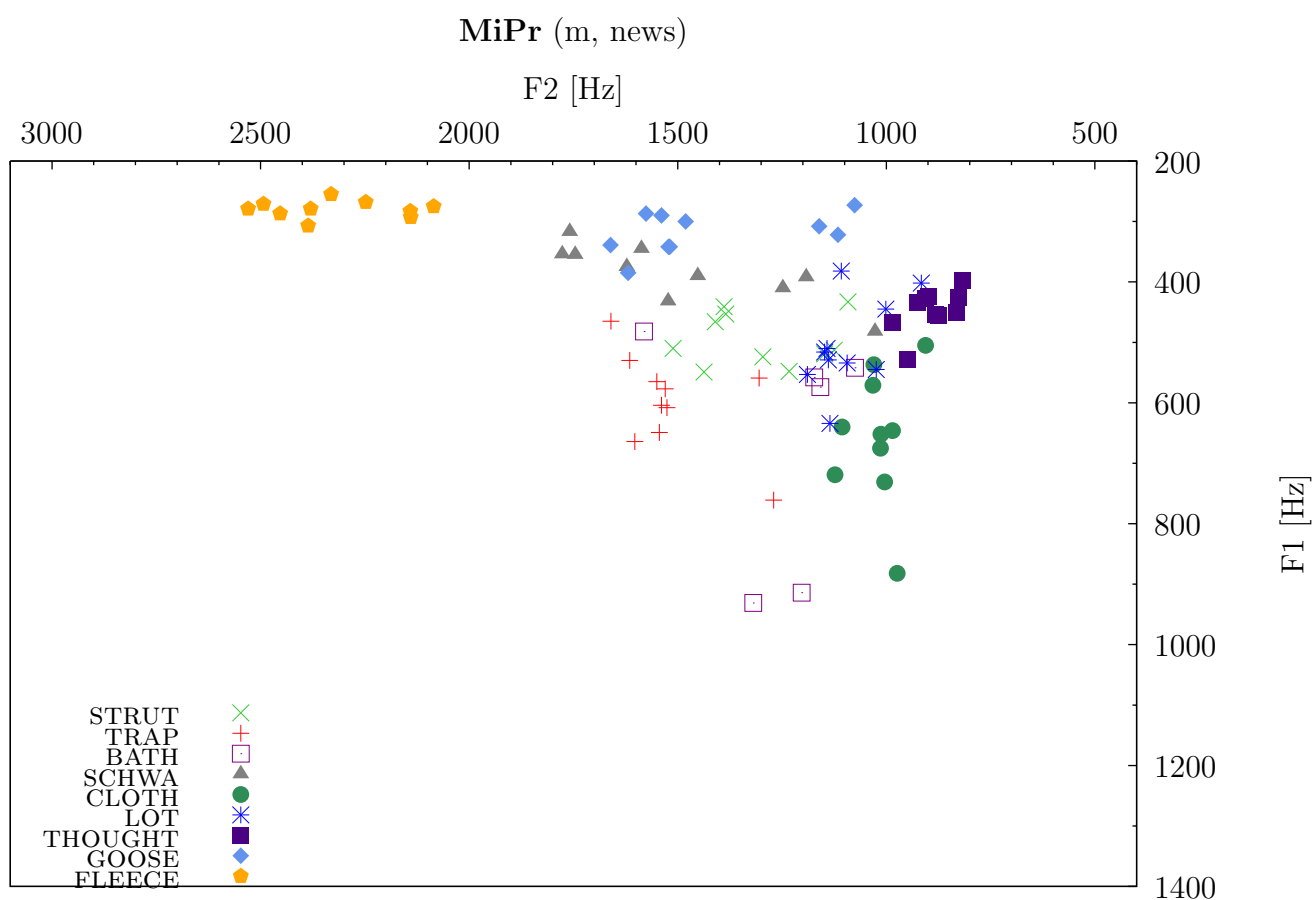


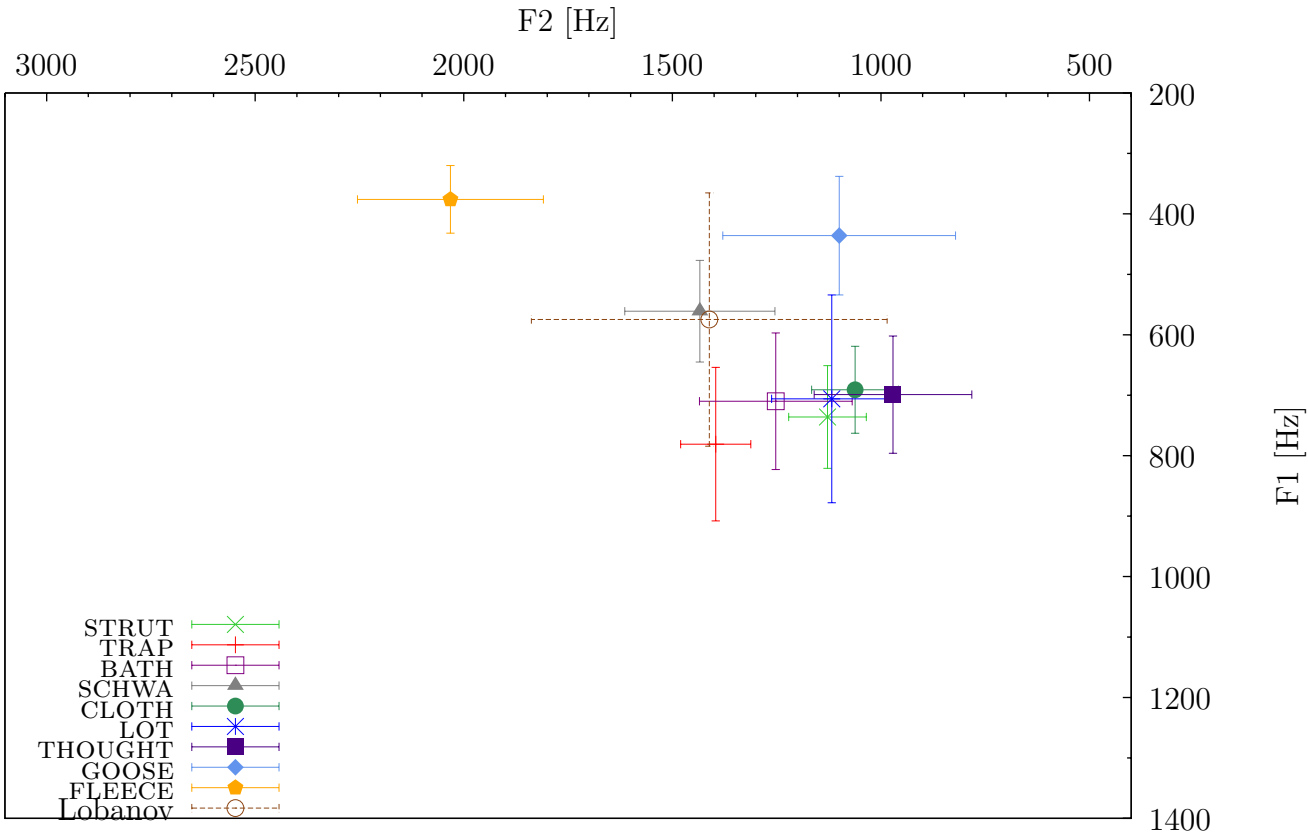
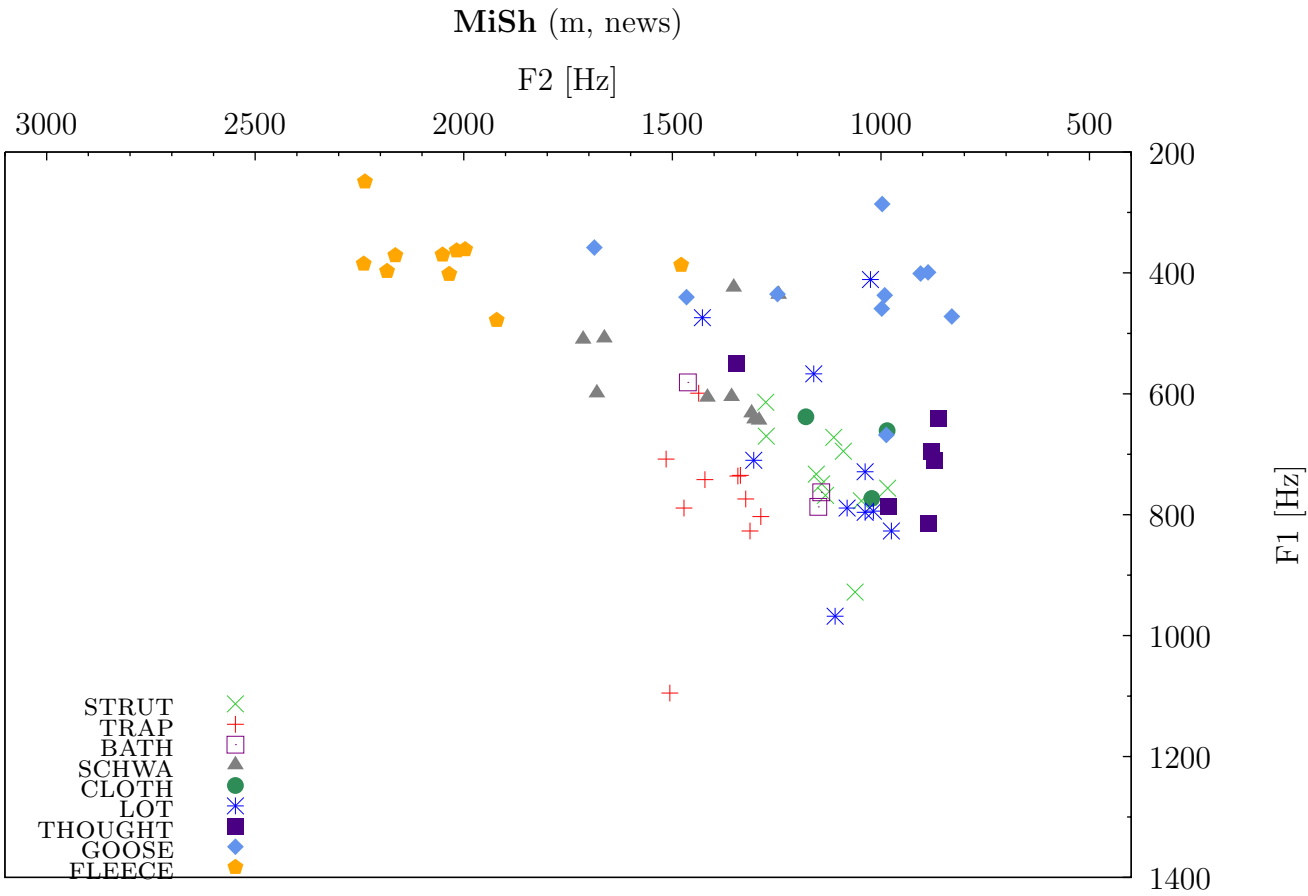


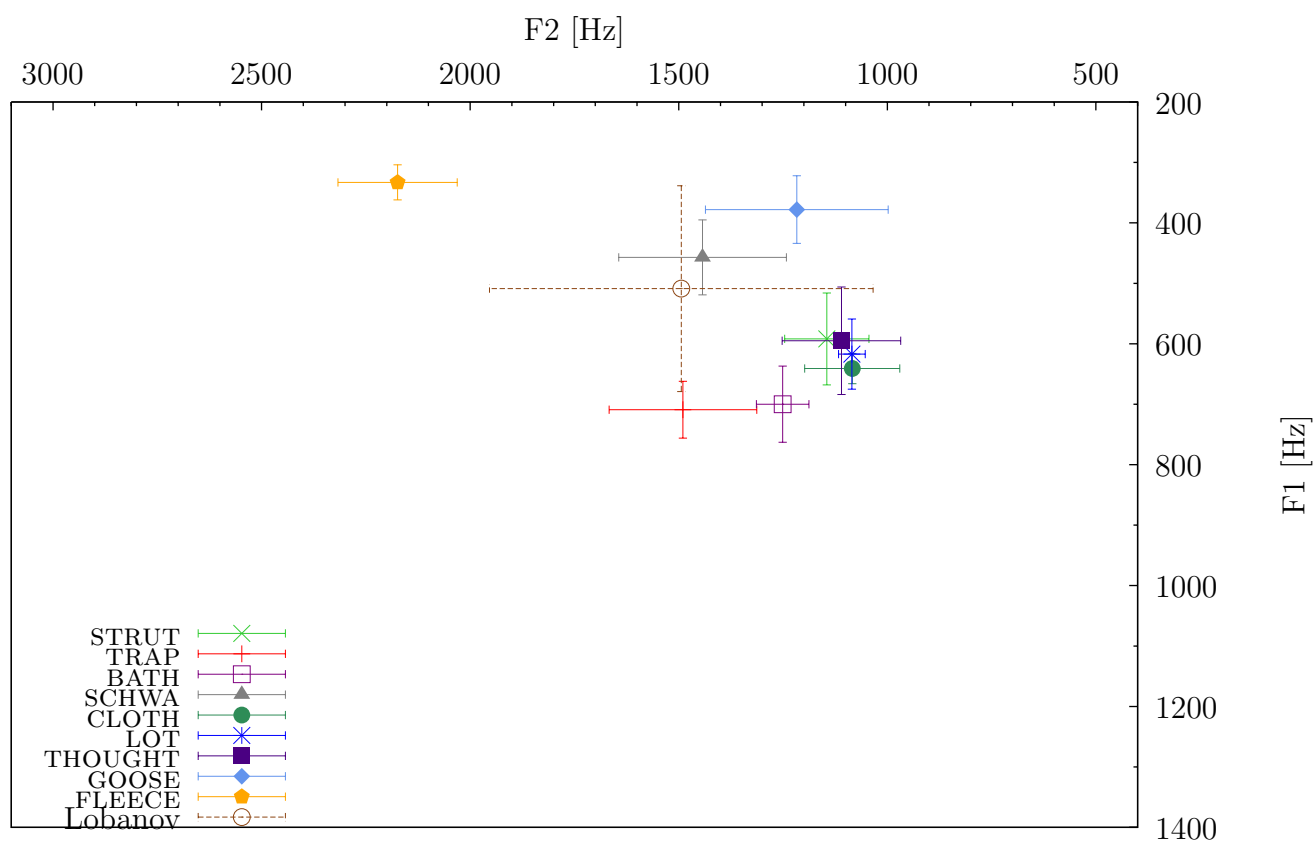
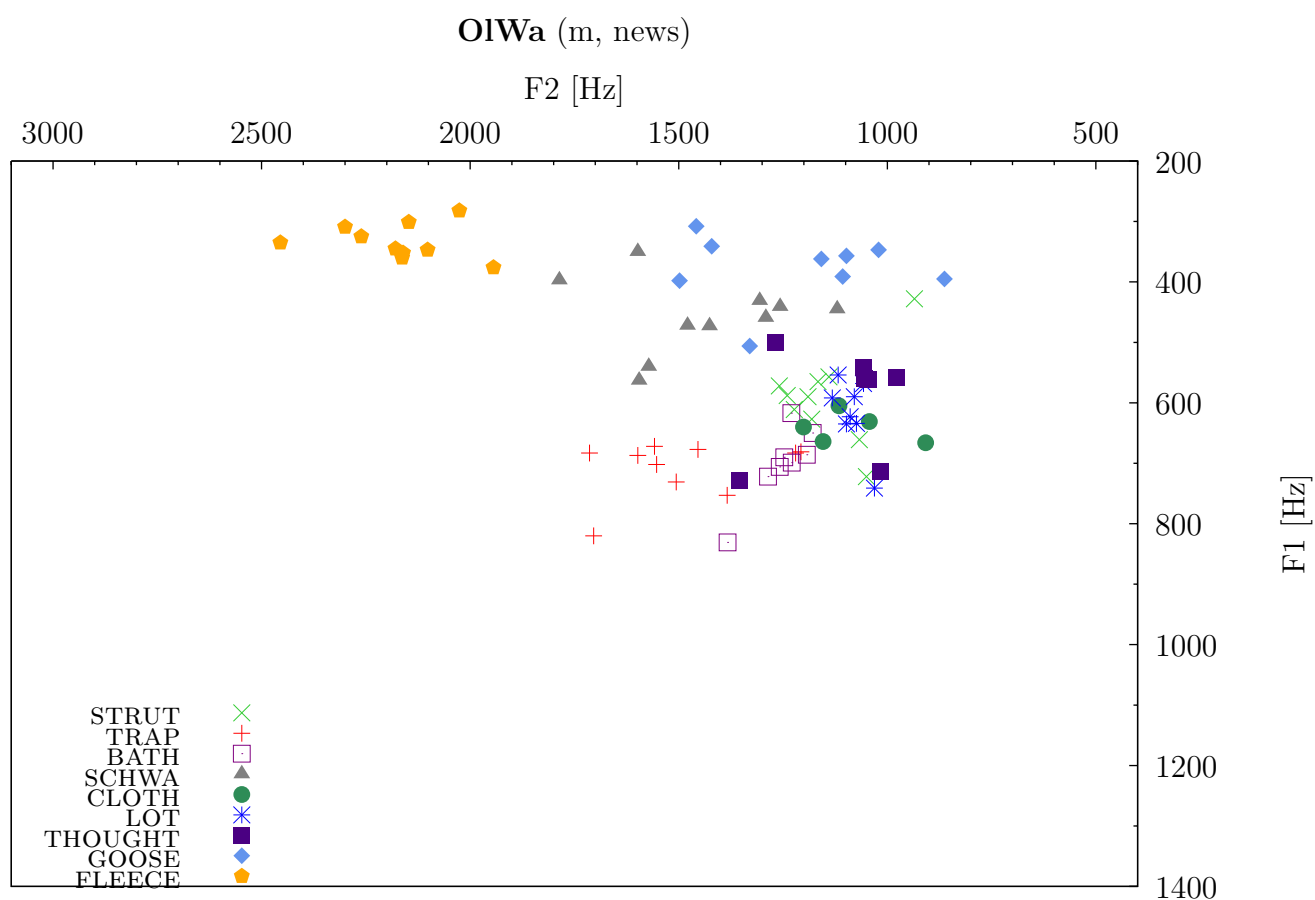


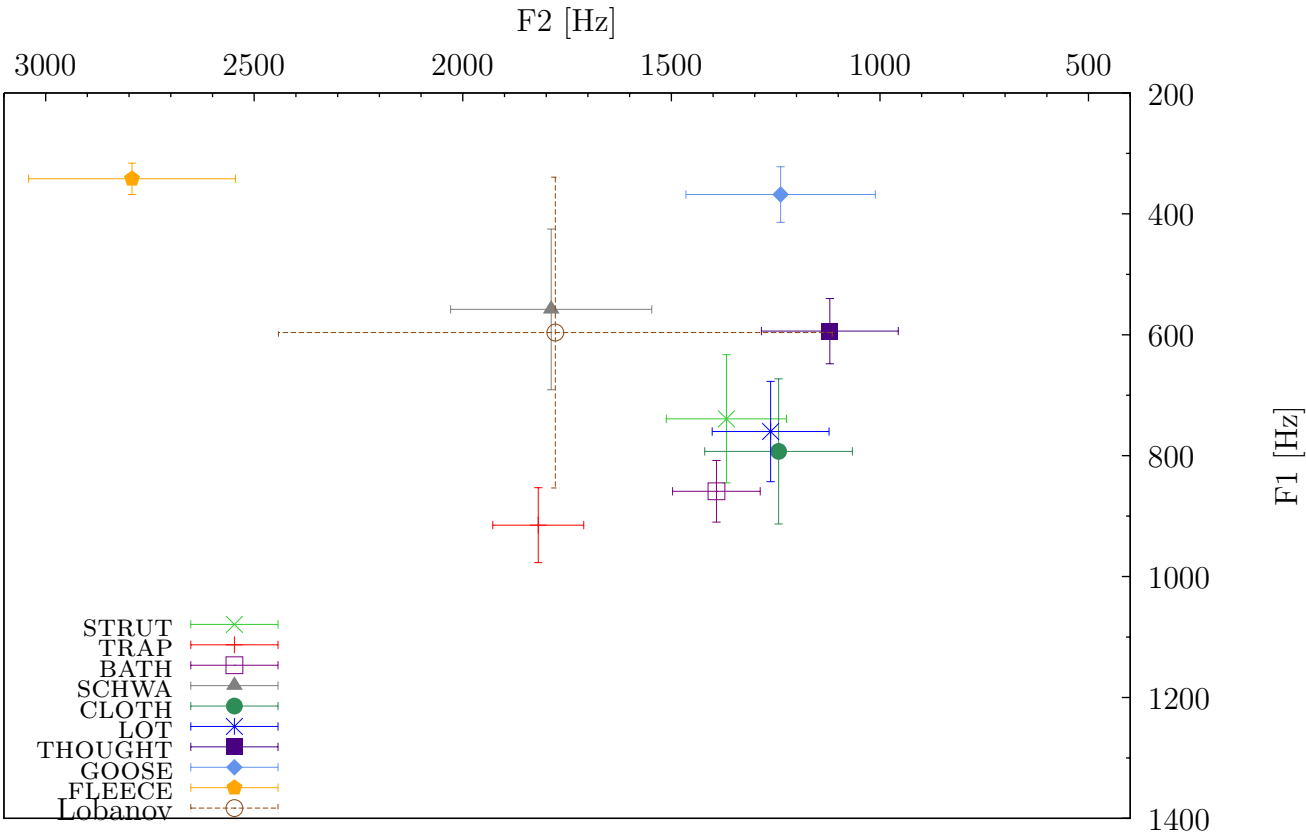
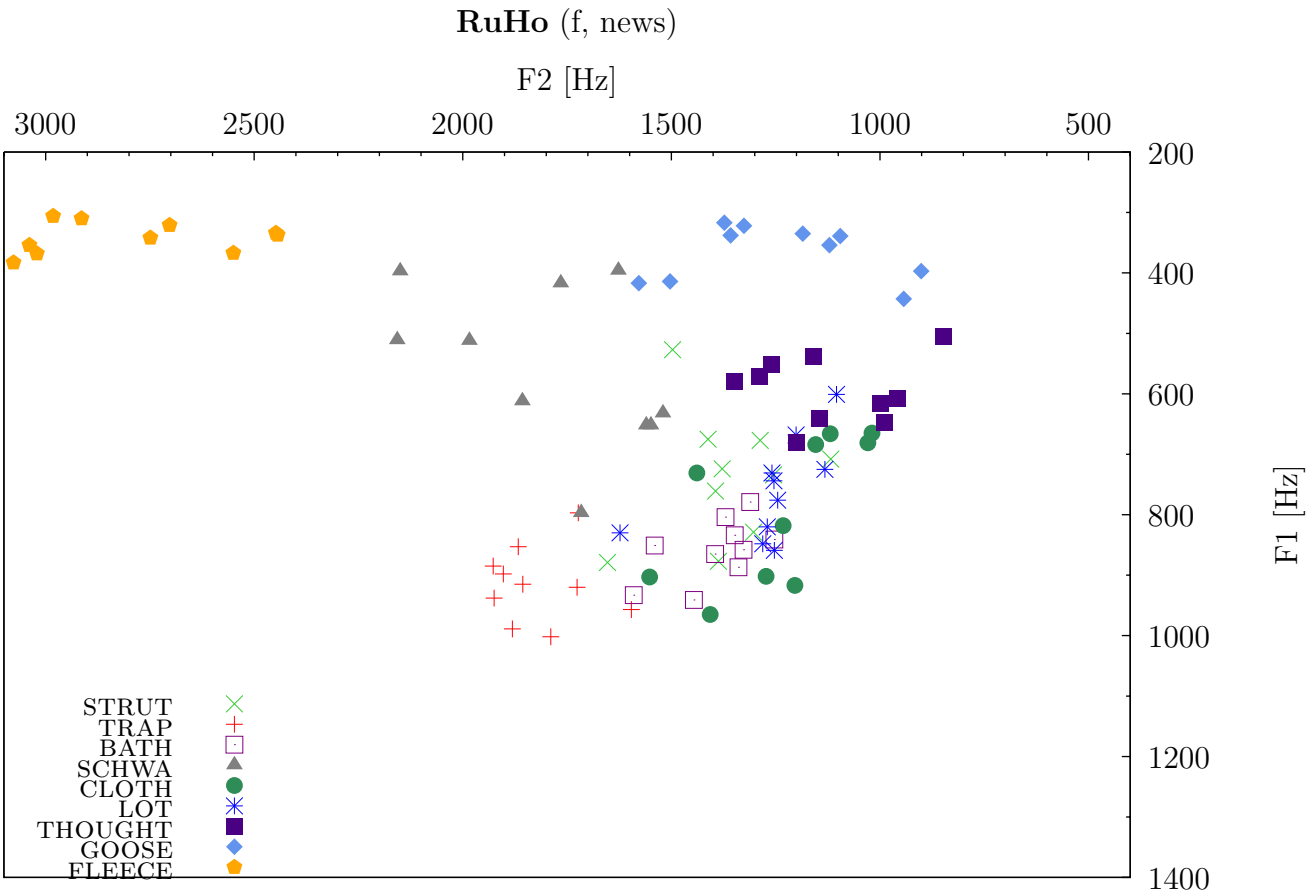


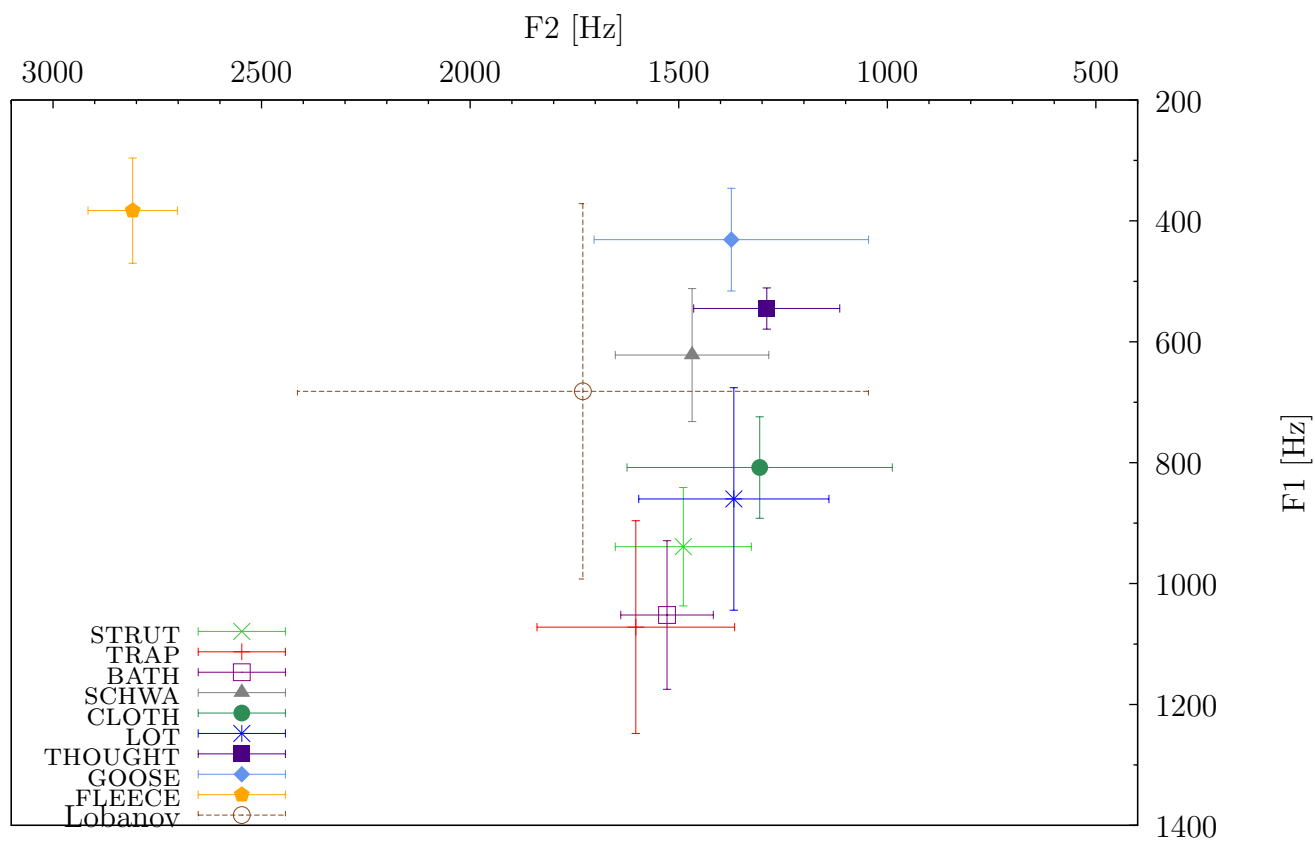
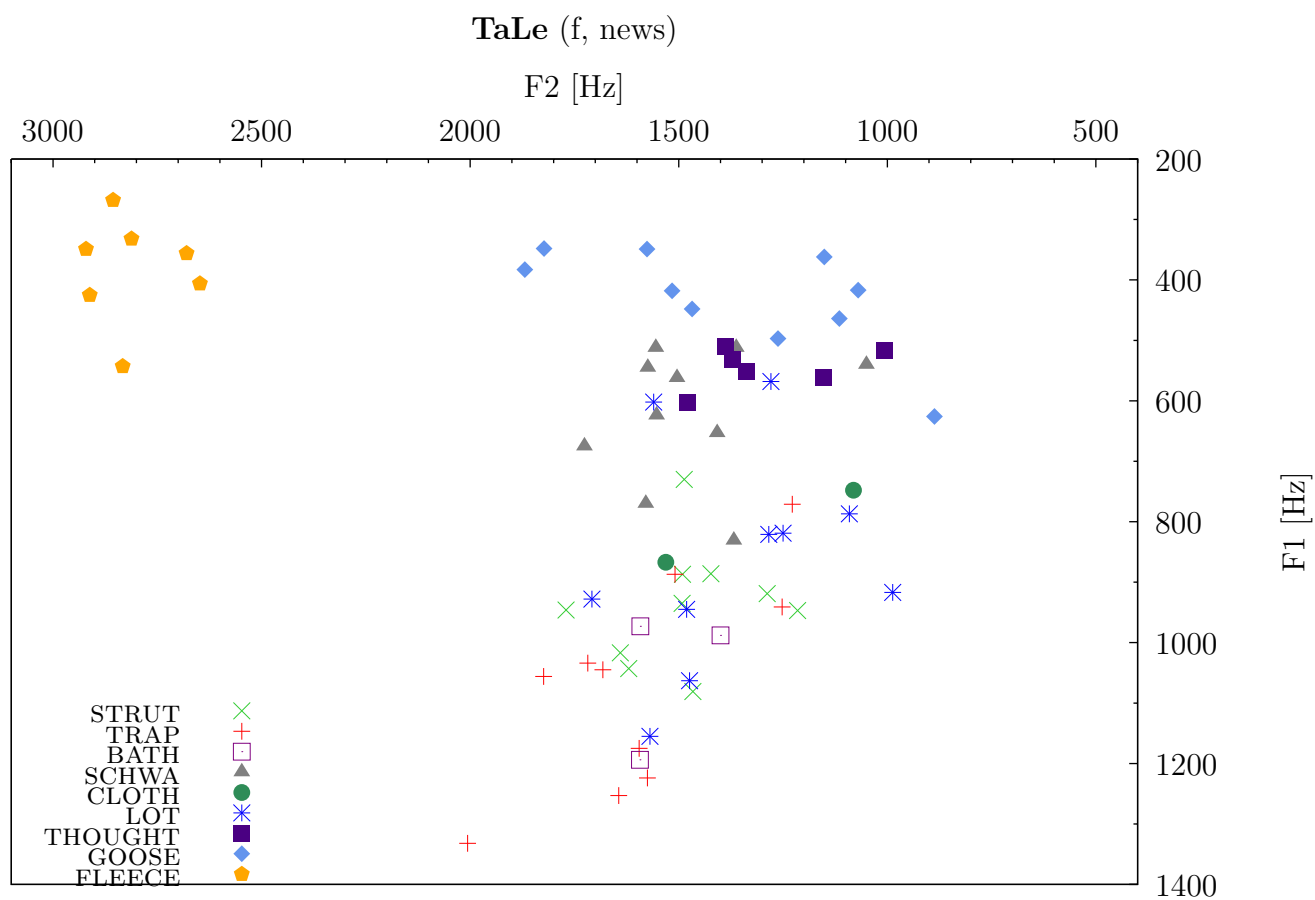












C.3 Formant values - by speaker

C.3.1 Conversations

Speaker	STRUT		TRAP		BATH	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
AnBl	512 ± 48	1189 ± 92	629 ± 58	1287 ± 63	644 ± 28	1277 ± 61
BaBr	614 ± 76	1226 ± 77	733 ± 49	1393 ± 112	749 ± 44	1320 ± 40
CaPi	632 ± 65	1328 ± 132	758 ± 101	1692 ± 94	908 ± 204	1668 ± 104
CaRe	590 ± 72	1174 ± 102	690 ± 83	1365 ± 101	688 ± 26	1278 ± 44
CoGo	649 ± 53	1201 ± 137	722 ± 85	1395 ± 80	708 ± 75	1389 ± 90
JeEd	710 ± 115	1351 ± 148	931 ± 140	1728 ± 67	946 ± 79	1552 ± 74
KaHi	852 ± 178	1442 ± 178	920 ± 123	1721 ± 105	1089 ± 153	1667 ± 98
KiMo	792 ± 82	1419 ± 87	846 ± 89	1643 ± 101	886 ± 93	1601 ± 99
LaCl	769 ± 126	1386 ± 151	934 ± 136	1668 ± 187	873 ± 96	1650 ± 231
LaDa	675 ± 36	1306 ± 105	831 ± 102	1709 ± 65	850 ± 43	1640 ± 139
LiWh	558 ± 123	1108 ± 67	688 ± 90	1367 ± 85	669 ± 76	1285 ± 101
MeDu	596 ± 64	1588 ± 143	771 ± 121	1762 ± 122	832 ± 110	1508 ± 270
MiBr	649 ± 62	1266 ± 136	784 ± 132	1569 ± 122	838 ± 115	1421 ± 142
NaGr	747 ± 36	1325 ± 161	884 ± 84	1627 ± 181	989 ± 140	1648 ± 141
NiDa	586 ± 75	1151 ± 88	709 ± 37	1392 ± 53	743 ± 0	1447 ± 0
OrBu	519 ± 48	1255 ± 104	560 ± 59	1447 ± 134	624 ± 99	1424 ± 76
RaSm	583 ± 26	1318 ± 152	711 ± 49	1388 ± 114	691 ± 25	1376 ± 54
SaWi	718 ± 100	1472 ± 184	913 ± 185	1834 ± 96	932 ± 139	1765 ± 69
ShJo	602 ± 74	1458 ± 176	727 ± 84	1632 ± 176	814 ± 100	1559 ± 219
TrTu	624 ± 47	1284 ± 87	681 ± 31	1418 ± 106	715 ± 26	1449 ± 62

Speaker	SCHWA		CLOTH		LOT	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
AnBl	642 ± 5	1186 ± 182	550 ± 29	1223 ± 85	521 ± 72	1255 ± 75
BaBr	730 ± 52	1247 ± 66	736 ± 44	1280 ± 78	654 ± 75	1464 ± 157
CaPi	842 ± 155	1530 ± 153	830 ± 81	1463 ± 92	636 ± 61	1613 ± 182
CaRe	743 ± 85	1215 ± 156	643 ± 53	1131 ± 102	414 ± 52	1460 ± 167
CoGo	670 ± 50	1231 ± 41	654 ± 70	1348 ± 64	635 ± 77	1396 ± 203
JeEd	784 ± 147	1326 ± 90	844 ± 168	1349 ± 113	614 ± 99	1607 ± 161
KaHi	967 ± 71	1492 ± 128	909 ± 128	1528 ± 121	747 ± 140	1588 ± 233
KiMo	847 ± 81	1367 ± 49	868 ± 112	1385 ± 105	809 ± 90	1471 ± 154
LaCl	850 ± 96	1428 ± 191	843 ± 129	1449 ± 272	659 ± 127	1648 ± 254
LaDa	801 ± 17	1375 ± 18	804 ± 42	1408 ± 103	697 ± 63	1556 ± 307
LiWh	582 ± 55	1087 ± 55	605 ± 64	1086 ± 46	572 ± 135	1326 ± 151
MeDu	733 ± 72	1444 ± 163	743 ± 26	1568 ± 229	532 ± 88	1800 ± 315
MiBr	815 ± 150	1263 ± 163	805 ± 57	1278 ± 45	674 ± 65	1445 ± 254
NaGr	933 ± 84	1402 ± 188	800 ± 119	1300 ± 180	828 ± 124	1703 ± 314
NiDa	0 ± 0	0 ± 0	694 ± 25	1130 ± 108	554 ± 44	1470 ± 277
OrBu	572 ± 58	1313 ± 23	561 ± 82	1386 ± 122	522 ± 86	1447 ± 136
RaSm	666 ± 31	1234 ± 111	660 ± 59	1247 ± 145	562 ± 36	1552 ± 304
SaWi	843 ± 84	1354 ± 124	807 ± 93	1531 ± 140	625 ± 99	1760 ± 109
ShJo	637 ± 83	1278 ± 94	704 ± 54	1361 ± 75	671 ± 127	1633 ± 157
TruTu	691 ± 25	1217 ± 149	678 ± 52	1318 ± 53	592 ± 58	1488 ± 145

Speaker	THOUGHT		GOOSE		FLEECE	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
AnBl	561 ± 72	1058 ± 48	390 ± 48	1123 ± 174	370 ± 32	1756 ± 94
BaBr	694 ± 43	1254 ± 96	430 ± 100	1184 ± 204	420 ± 69	2162 ± 128
CaPi	892 ± 217	1417 ± 144	395 ± 27	1243 ± 276	382 ± 62	2512 ± 135
CaRe	644 ± 45	1023 ± 94	369 ± 43	1278 ± 172	347 ± 44	2003 ± 139
CoGo	749 ± 80	1294 ± 107	417 ± 66	1203 ± 254	399 ± 68	2093 ± 129
JeEd	661 ± 75	1206 ± 93	425 ± 52	1404 ± 166	498 ± 79	2500 ± 188
KaHi	941 ± 134	1502 ± 128	504 ± 46	1420 ± 401	485 ± 119	2598 ± 146
KiMo	895 ± 69	1341 ± 91	508 ± 77	1465 ± 214	564 ± 89	2400 ± 285
LaCl	799 ± 112	1272 ± 151	458 ± 51	1124 ± 288	468 ± 71	2542 ± 222
LaDa	779 ± 59	1245 ± 103	444 ± 67	1221 ± 277	482 ± 37	2619 ± 142
LiWh	575 ± 35	967 ± 107	306 ± 26	1118 ± 216	317 ± 40	1997 ± 148
MeDu	679 ± 93	1550 ± 219	417 ± 58	1546 ± 233	416 ± 75	2616 ± 183
MiBr	770 ± 87	1202 ± 136	390 ± 76	1130 ± 278	393 ± 108	2425 ± 160
NaGr	873 ± 61	1400 ± 192	447 ± 89	1267 ± 259	489 ± 92	2626 ± 298
NiDa	589 ± 38	976 ± 61	409 ± 53	1131 ± 327	363 ± 65	2397 ± 113
OrBu	608 ± 131	1334 ± 152	331 ± 37	1222 ± 104	324 ± 34	2049 ± 284
RaSm	644 ± 24	1159 ± 67	425 ± 55	1379 ± 236	410 ± 55	2119 ± 231
SaWi	758 ± 73	1340 ± 112	473 ± 55	1283 ± 359	370 ± 59	2618 ± 309
ShJo	756 ± 83	1263 ± 107	422 ± 44	1334 ± 225	480 ± 63	2281 ± 146
TruTu	678 ± 67	1215 ± 101	478 ± 81	1106 ± 270	410 ± 54	1992 ± 86

C.3.2 Interviewees

Speaker	STRUT		TRAP		BATH	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
AlGr	626 ± 85	1082 ± 112	703 ± 61	1374 ± 97	701 ± 41	1327 ± 146
BaCl	695 ± 102	1233 ± 86	847 ± 90	1639 ± 343	939 ± 163	1435 ± 179
DeJo	703 ± 94	1044 ± 86	741 ± 68	1320 ± 45	693 ± 14	1232 ± 104
DeRi	575 ± 53	1112 ± 86	666 ± 54	1317 ± 73	740 ± 84	1225 ± 109
IjKl	513 ± 62	1080 ± 108	618 ± 42	1296 ± 80	608 ± 39	1209 ± 50
JeMa	832 ± 115	1181 ± 106	1084 ± 98	1638 ± 65	1130 ± 52	1468 ± 7
JoHe	650 ± 92	1192 ± 180	762 ± 113	1507 ± 124	768 ± 50	1313 ± 51
MaHe	727 ± 63	1297 ± 134	864 ± 60	1580 ± 99	925 ± 156	1477 ± 80
RaFr	663 ± 114	1113 ± 155	708 ± 71	1394 ± 144	673 ± 46	1370 ± 101
WiHa	586 ± 51	1139 ± 58	642 ± 51	1462 ± 81	655 ± 0	1271 ± 0

Speaker	SCHWA		CLOTH		LOT	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
AlGr	650 ± 50	1378 ± 142	640 ± 88	1156 ± 134	678 ± 64	1240 ± 260
BaCl	640 ± 81	1675 ± 282	0 ± 0	0 ± 0	749 ± 129	1138 ± 147
DeJo	584 ± 59	1305 ± 157	747 ± 74	1162 ± 39	737 ± 61	1145 ± 57
DeRi	474 ± 70	1420 ± 214	627 ± 24	1232 ± 85	642 ± 41	1227 ± 73
IjKl	475 ± 50	1415 ± 152	613 ± 46	1155 ± 88	578 ± 41	1205 ± 101
JeMa	737 ± 168	1697 ± 352	952 ± 0	1142 ± 0	960 ± 107	1266 ± 59
JoHe	510 ± 46	1465 ± 165	691 ± 103	1364 ± 80	769 ± 61	1280 ± 43
MaHe	672 ± 70	1747 ± 223	797 ± 61	1292 ± 102	810 ± 54	1404 ± 78
RaFr	611 ± 82	1417 ± 93	730 ± 34	1247 ± 40	674 ± 77	1324 ± 145
WiHa	562 ± 47	1534 ± 164	595 ± 13	1062 ± 141	639 ± 51	1170 ± 100

Speaker	THOUGHT		GOOSE		FLEECE	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
AlGr	662 ± 54	1141 ± 163	371 ± 39	891 ± 86	345 ± 41	2496 ± 155
BaCl	0 ± 0	0 ± 0	386 ± 0	905 ± 0	396 ± 43	2848 ± 86
DeJo	622 ± 59	911 ± 65	361 ± 57	817 ± 142	319 ± 52	2067 ± 90
DeRi	639 ± 66	1140 ± 112	364 ± 38	876 ± 165	303 ± 39	1857 ± 67
IjKl	588 ± 52	1047 ± 62	385 ± 39	1003 ± 111	306 ± 34	1983 ± 114
JeMa	843 ± 134	1163 ± 96	549 ± 101	764 ± 94	368 ± 87	2552 ± 157
JoHe	712 ± 74	1056 ± 162	412 ± 74	966 ± 192	331 ± 32	2036 ± 94
MaHe	774 ± 84	1266 ± 97	436 ± 95	1155 ± 283	406 ± 93	2369 ± 88
RaFr	649 ± 48	1203 ± 135	423 ± 35	1145 ± 85	426 ± 59	2032 ± 257
WiHa	530 ± 42	919 ± 131	349 ± 39	1115 ± 337	325 ± 41	2155 ± 68

C.3.3 Radio Hosts

Speaker	STRUT		TRAP		BATH	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
DeHa	802 ± 117	1545 ± 250	773 ± 90	1662 ± 139	839 ± 0	1693 ± 0
EfGh	715 ± 64	1143 ± 74	828 ± 76	1476 ± 53	866 ± 47	1274 ± 51
JoCo	645 ± 51	1201 ± 148	717 ± 32	1488 ± 63	730 ± 51	1360 ± 84
PaBa	671 ± 72	1197 ± 82	750 ± 55	1490 ± 71	728 ± 71	1427 ± 97
StVa	598 ± 61	1192 ± 90	732 ± 48	1486 ± 98	768 ± 2	1407 ± 51

Speaker	SCHWA		CLOTH		LOT	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
DeHa	644 ± 73	1714 ± 144	894 ± 0	1323 ± 0	844 ± 133	1626 ± 334
EfGh	574 ± 106	1404 ± 149	0 ± 0	0 ± 0	771 ± 75	1118 ± 70
JoCo	610 ± 52	1462 ± 144	661 ± 46	1224 ± 130	692 ± 44	1294 ± 89
PaBa	571 ± 56	1358 ± 158	662 ± 75	1231 ± 30	707 ± 29	1228 ± 138
StVa	567 ± 65	1366 ± 153	634 ± 32	1186 ± 127	671 ± 33	1251 ± 66

Speaker	THOUGHT		GOOSE		FLEECE	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
DeHa	894 ± 99	1368 ± 213	508 ± 17	1288 ± 132	564 ± 78	2687 ± 95
EfGh	569 ± 9	946 ± 95	403 ± 18	935 ± 228	329 ± 91	2205 ± 186
JoCo	678 ± 68	1315 ± 126	404 ± 39	1059 ± 238	351 ± 47	2106 ± 202
PaBa	649 ± 76	1106 ± 127	434 ± 56	1111 ± 228	391 ± 41	2187 ± 83
StVa	621 ± 30	1115 ± 53	392 ± 49	992 ± 226	352 ± 56	2179 ± 223

C.3.4 Speeches

Speaker	STRUT		TRAP		BATH	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
CaHu	741 ± 45	1156 ± 216	874 ± 56	1689 ± 97	806 ± 30	1456 ± 79
ChHe	766 ± 113	1222 ± 49	936 ± 51	1476 ± 83	902 ± 135	1311 ± 78
ChHy	716 ± 109	1286 ± 92	853 ± 114	1656 ± 64	801 ± 72	1510 ± 85
DeBe	624 ± 91	975 ± 101	722 ± 74	1281 ± 213	716 ± 57	1133 ± 87
EdSe	602 ± 27	1192 ± 69	642 ± 46	1454 ± 51	673 ± 45	1377 ± 86
MiWi	640 ± 80	1059 ± 82	852 ± 57	1473 ± 52	907 ± 53	1407 ± 66
RaTy	607 ± 47	980 ± 59	774 ± 43	1159 ± 55	732 ± 29	1111 ± 38
RuLe	683 ± 48	1089 ± 48	787 ± 59	1452 ± 68	773 ± 27	1412 ± 85
SaAl	729 ± 103	1165 ± 97	920 ± 90	1628 ± 112	799 ± 104	1290 ± 95
VaSh	880 ± 102	1426 ± 110	1126 ± 97	1760 ± 129	1103 ± 70	1690 ± 101

Speaker	SCHWA		CLOTH		LOT	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
CaHu	674 ± 106	1752 ± 405	698 ± 89	1116 ± 108	740 ± 56	1264 ± 119
ChHe	450 ± 104	1516 ± 117	746 ± 106	1166 ± 100	710 ± 81	1165 ± 83
ChHy	592 ± 101	1604 ± 208	788 ± 81	1251 ± 111	744 ± 55	1269 ± 165
DeBe	506 ± 79	1399 ± 214	598 ± 43	884 ± 128	702 ± 43	1086 ± 57
EdSe	500 ± 112	1509 ± 185	634 ± 46	1123 ± 76	622 ± 34	1196 ± 93
MiWi	628 ± 143	1433 ± 173	779 ± 63	1146 ± 39	837 ± 72	1098 ± 46
RaTy	494 ± 112	1112 ± 131	652 ± 37	989 ± 48	683 ± 36	992 ± 99
RuLe	609 ± 86	1480 ± 215	685 ± 39	1116 ± 77	705 ± 65	1138 ± 101
SaAl	491 ± 78	1696 ± 138	689 ± 78	1103 ± 97	702 ± 60	1150 ± 106
VaSh	788 ± 132	1692 ± 249	947 ± 138	1263 ± 138	1052 ± 134	1364 ± 107

Speaker	THOUGHT		GOOSE		FLEECE	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
CaHu	607 ± 56	916 ± 73	400 ± 56	795 ± 188	413 ± 66	2882 ± 102
ChHe	651 ± 65	961 ± 105	295 ± 44	1064 ± 154	277 ± 37	2603 ± 183
ChHy	679 ± 64	1111 ± 145	432 ± 55	1132 ± 252	349 ± 71	2352 ± 222
DeBe	563 ± 46	841 ± 97	317 ± 32	849 ± 195	299 ± 32	2054 ± 184
EdSe	567 ± 29	957 ± 112	350 ± 45	994 ± 99	325 ± 72	2046 ± 178
MiWi	651 ± 91	1030 ± 60	401 ± 64	849 ± 158	398 ± 105	2352 ± 176
RaTy	633 ± 25	898 ± 63	348 ± 49	805 ± 184	273 ± 26	1888 ± 73
RuLe	588 ± 41	898 ± 91	424 ± 31	1073 ± 192	390 ± 36	2150 ± 81
SaAl	538 ± 64	866 ± 98	288 ± 25	1393 ± 389	289 ± 49	2528 ± 153
VaSh	750 ± 60	1069 ± 64	427 ± 72	999 ± 172	358 ± 50	2655 ± 139

C.3.5 News

Speaker	STRUT		TRAP		BATH	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
CaFr	783 ± 101	1257 ± 135	908 ± 60	1676 ± 104	829 ± 86	1302 ± 226
CoHa	636 ± 77	997 ± 79	706 ± 37	1287 ± 66	675 ± 31	1168 ± 132
DoSa	579 ± 120	1364 ± 163	799 ± 186	1762 ± 68	833 ± 86	1316 ± 93
IrFo	605 ± 20	1108 ± 26	659 ± 60	1496 ± 113	658 ± 22	1460 ± 150
KiAb	390 ± 53	1228 ± 185	606 ± 112	1569 ± 75	700 ± 38	1515 ± 53
MiPr	496 ± 44	1303 ± 146	598 ± 81	1514 ± 127	667 ± 201	1252 ± 180
MiSh	736 ± 85	1128 ± 93	781 ± 127	1396 ± 84	710 ± 113	1252 ± 183
OlWa	592 ± 76	1145 ± 101	709 ± 47	1490 ± 177	700 ± 63	1251 ± 63
RuHo	739 ± 106	1368 ± 144	915 ± 62	1819 ± 109	859 ± 51	1392 ± 105
TaLe	939 ± 98	1489 ± 163	1072 ± 176	1603 ± 237	1052 ± 123	1528 ± 111

Speaker	SCHWA		CLOTH		LOT	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
CaFr	518 ± 97	1717 ± 189	754 ± 127	1032 ± 149	733 ± 88	1004 ± 82
CoHa	525 ± 89	1226 ± 253	603 ± 33	917 ± 42	613 ± 57	964 ± 31
DoSa	396 ± 98	1485 ± 283	407 ± 130	1090 ± 83	636 ± 174	1151 ± 113
IrFo	573 ± 38	1421 ± 199	618 ± 22	1023 ± 78	609 ± 22	1063 ± 34
KiAb	365 ± 48	1612 ± 226	458 ± 38	981 ± 129	391 ± 98	1100 ± 104
MiPr	385 ± 48	1493 ± 261	656 ± 108	1019 ± 62	505 ± 76	1090 ± 84
MiSh	561 ± 84	1434 ± 180	691 ± 72	1062 ± 104	706 ± 172	1118 ± 144
OlWa	457 ± 62	1443 ± 201	641 ± 25	1084 ± 114	617 ± 58	1085 ± 32
RuHo	558 ± 133	1788 ± 241	793 ± 120	1243 ± 177	760 ± 83	1262 ± 140
TaLe	622 ± 110	1468 ± 184	808 ± 84	1306 ± 318	860 ± 184	1368 ± 228

Speaker	THOUGHT		GOOSE		FLEECE	
	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]	F1 [Hz]	F2 [Hz]
CaFr	701 ± 87	932 ± 98	439 ± 56	1313 ± 368	433 ± 56	2648 ± 109
CoHa	574 ± 94	889 ± 124	408 ± 36	935 ± 254	329 ± 44	2120 ± 151
DoSa	432 ± 49	902 ± 106	312 ± 41	1432 ± 286	291 ± 35	2523 ± 90
IrFo	608 ± 25	959 ± 55	372 ± 75	1062 ± 334	359 ± 50	1817 ± 50
KiAb	424 ± 113	758 ± 26	318 ± 29	1128 ± 275	285 ± 36	2334 ± 101
MiPr	446 ± 35	890 ± 55	319 ± 34	1427 ± 220	280 ± 14	2319 ± 158
MiSh	699 ± 97	971 ± 189	436 ± 98	1100 ± 279	376 ± 56	2032 ± 223
OiWa	595 ± 89	1110 ± 142	378 ± 56	1217 ± 219	333 ± 29	2174 ± 143
RuHo	594 ± 54	1120 ± 164	368 ± 46	1238 ± 227	342 ± 26	2793 ± 248
TaLe	545 ± 34	1289 ± 175	431 ± 85	1374 ± 329	383 ± 87	2809 ± 107

C.4 Reference vowel systems

Data for the reference vowel systems plotted in this section come from the following studies: Deterding (1997:55) for RP; Peterson & Barney (1952:183), Lehiste & Peterson (1961:269), Hillenbrand, Getty, Clark & Wheeler (1995:3103), Yang (1996:250), and Hagiwara (1997:656) for varieties of American English. An overview of the types of data available from all studies is given in Table C.1.

Vowel normalization for these studies proceeded as follows: For Deterding (1997), where raw formant values were given for each speaker, speakers' systems were normalized individually using the same lexical sets as in the main part of the present study (vowels /i:, u:, æ, ɒ/). Vowel systems were then plotted both individually (one data point per speaker for each lexical set) and summarily (one overall mean for each lexical set), with standard deviations for the lexical sets calculated from the mean normalized formant values of all individual speakers.

Although none of the studies on American English provided formant data for individual speakers, all of them divided raw formant values between the groups of men and women (and, in some cases, children). Moreover, a number of studies (see Table C.1) also gave standard deviations for each lexical set for each of these groups. Vowel normalization in these cases proceeded as follows:

Where only mean formant values were available, the two/three groups (men/women/children)¹ were normalized separately, using the same vowels for normalization as outlined above. Weighted averages and standard deviations were then calculated in proportion to the absolute number of speakers in each group, i.e.

$$\bar{x} = \frac{N_m}{N} \bar{x}_m + \frac{N_f}{N} \bar{x}_f + \left(\frac{N_c}{N} \bar{x}_c \right),$$

where \bar{x} is the overall (weighted) formant average for a given lexical set; \bar{x}_m , \bar{x}_f and \bar{x}_c mean formant values for this lexical set for the subgroups of men, women and children, respectively; N_m , N_f and N_c absolute numbers of speakers in the male, female and children's speaker groups;² and $N = N_m + N_f(+N_c)$ the total number

¹In the case of Lehiste & Peterson (1961), the two groups were speaker GEP (for whom mean formant values were given individually), and a comparison group of five speakers.

²Unfortunately, Hagiwara (1997) does not indicate the absolute numbers of male and female

<i>Source</i>	<i>Data</i>	<i>Speakers</i>				
		<i>Origin</i>	<i>male</i>	<i>female</i>	<i>children</i>	<i>Total</i>
Peterson & Barney 1952	means only	Middle Atlantic/ “General American”	33	28	15	76
Lehiste & Peterson 1961	means only	“General American”	1	5		6
Hillenbrand <i>et al.</i> 1995	means only	upper Midwest	45	48	46	139
Yang 1996	means/stdvs	South/Southwest	30	30		60
Hagiwara 1997	means/stdvs	southern California	?	?		15

Table C.1: Studies of AE vowels - sources, speakers and types of data.

of speakers. Similarly, weighted standard deviations

$$\sigma_x = \sqrt{\frac{N_m(\bar{x}_m - \bar{x})^2 + N_f(\bar{x}_f - \bar{x})^2 (+N_c(\bar{x}_c - \bar{x})^2)}{N_m + N_f(+N_c) - 1}}$$

were calculated from the mean formant values for each group.

For those studies that did provide data on standard deviations for each lexical set and each group, weighted means were calculated as above. Standard deviations, however, were calculated according to the principle of Gaussian error propagation, i.e.

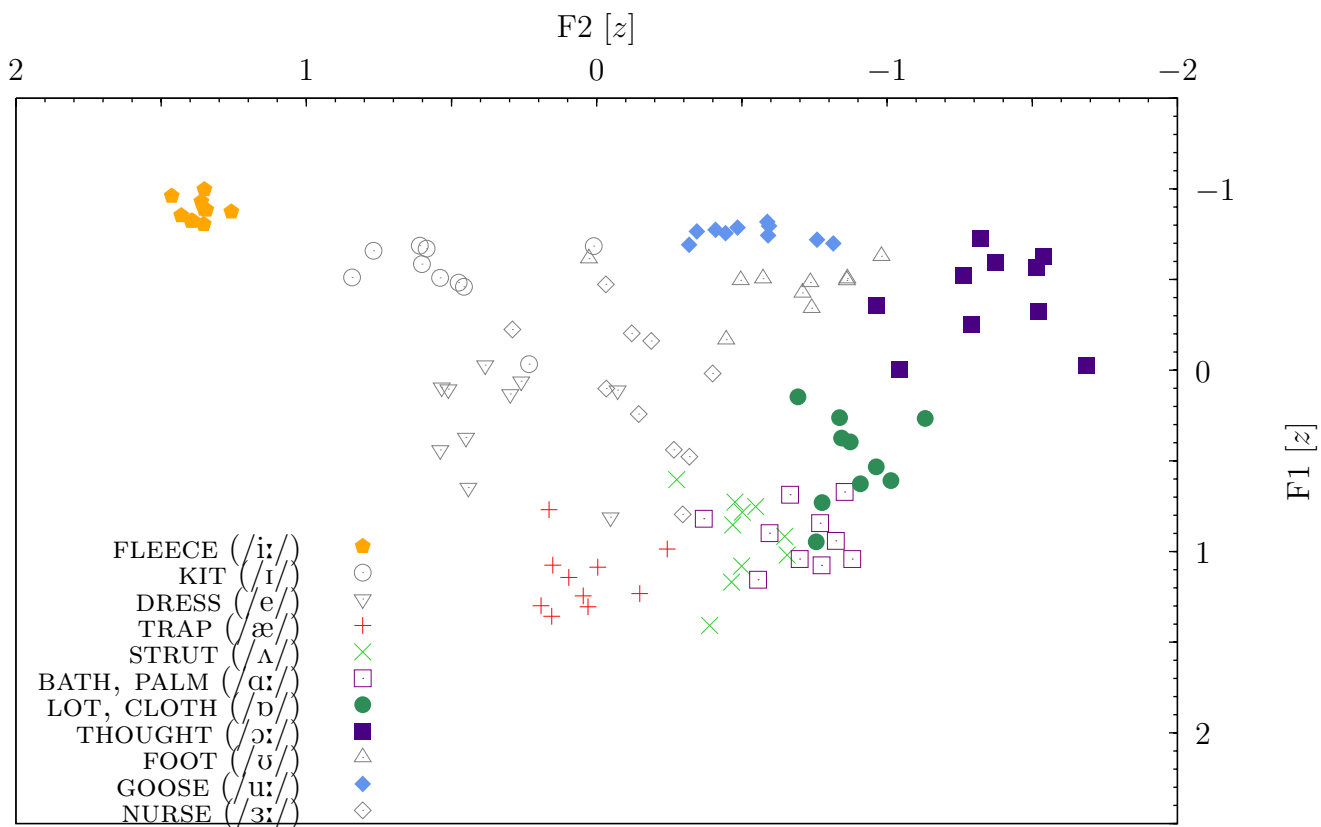
$$\begin{aligned}\sigma_x &= \sqrt{\left(\frac{\partial \bar{x}}{\partial \bar{x}_m} \sigma_m\right)^2 + \left(\frac{\partial \bar{x}}{\partial \bar{x}_f} \sigma_f\right)^2} \\ &= \sqrt{\left(\frac{N_m}{N} \sigma_m\right)^2 + \left(\frac{N_f}{N} \sigma_f\right)^2}\end{aligned}$$

As can be seen from the plots, this latter procedure resulted in much more realistic error bars compared to those studies that did not provide information on standard deviations.

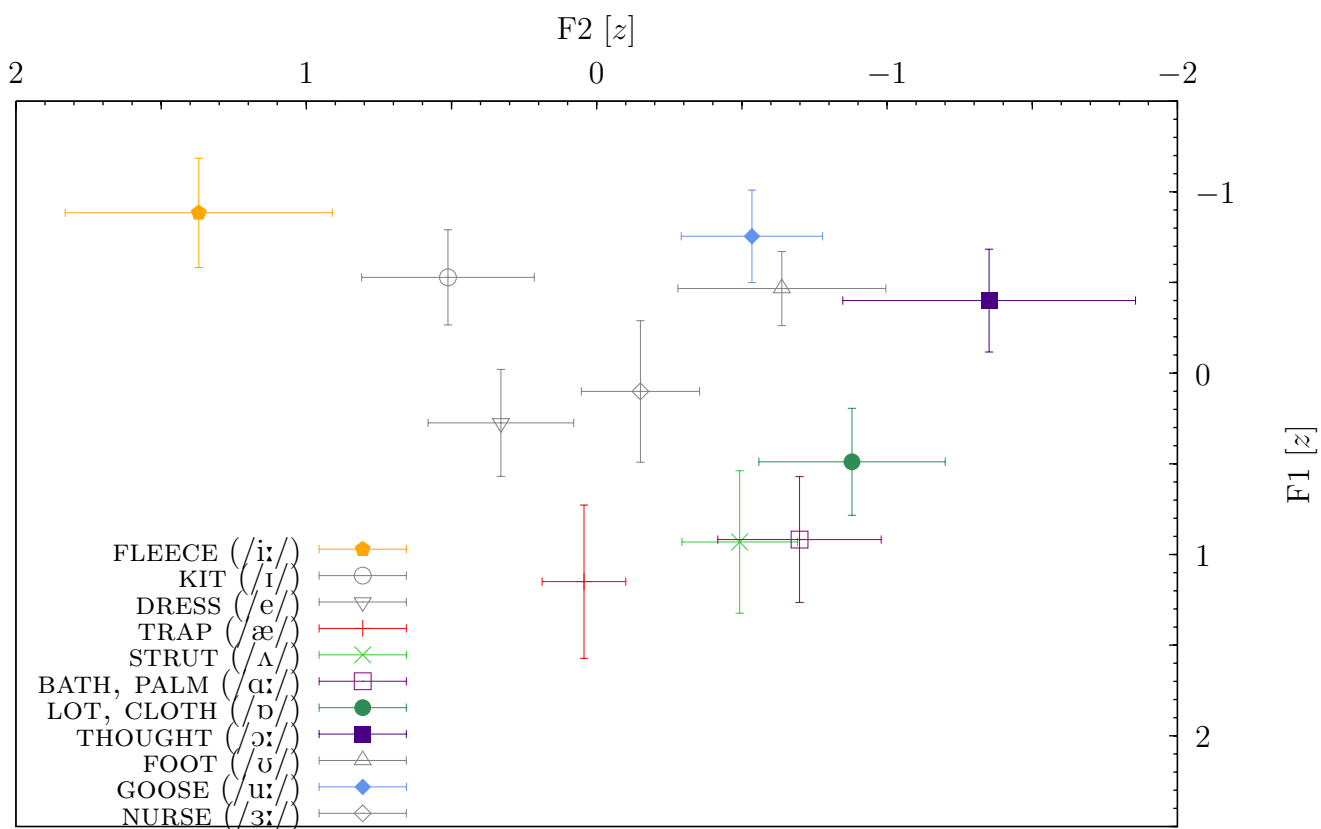
speakers for his 15 informants anywhere in the paper. A proportion of 50:50 was therefore assumed in order to minimize the average deviation from the correct but unknown values.

C.4.1 Received Pronunciation

RP - individual speakers (Deterding 1997)

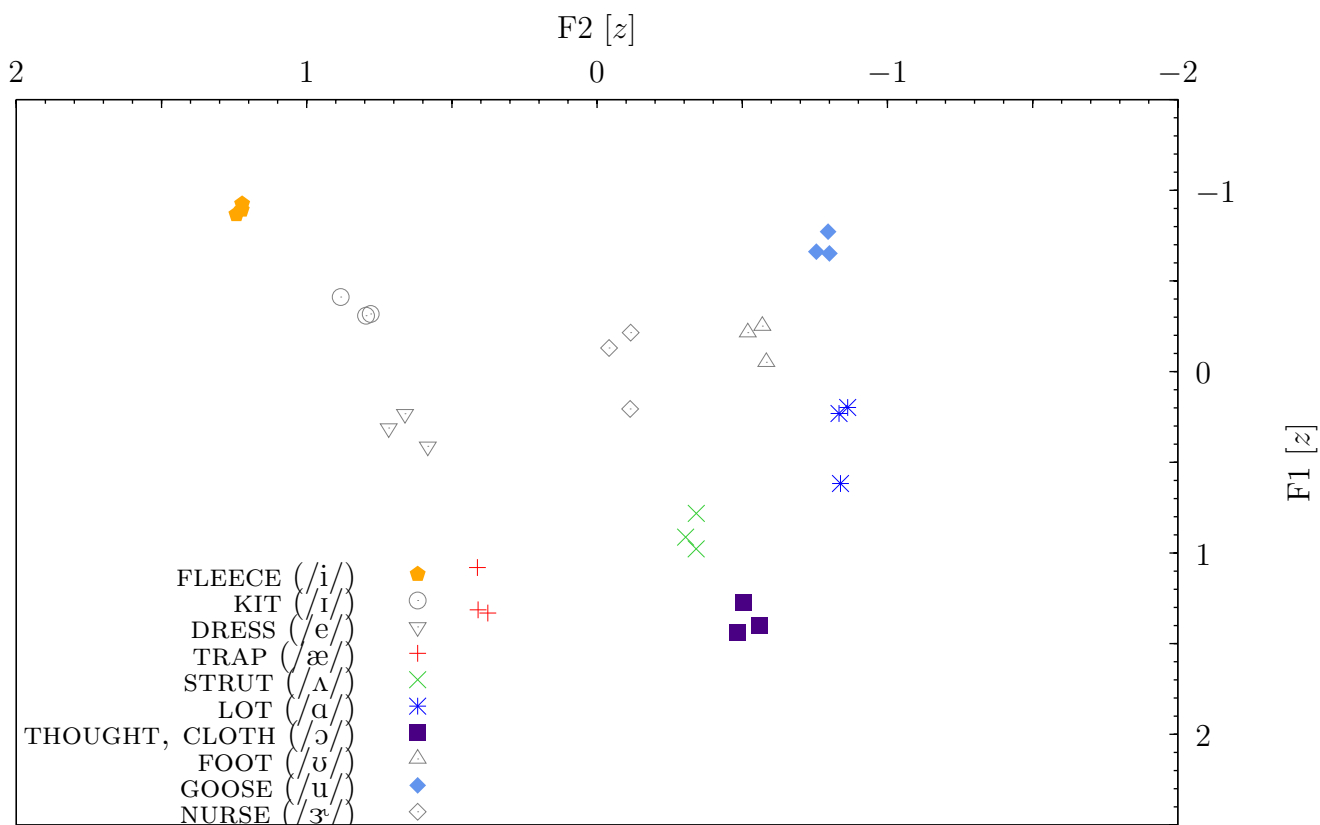


RP - all speakers (Deterding 1997)

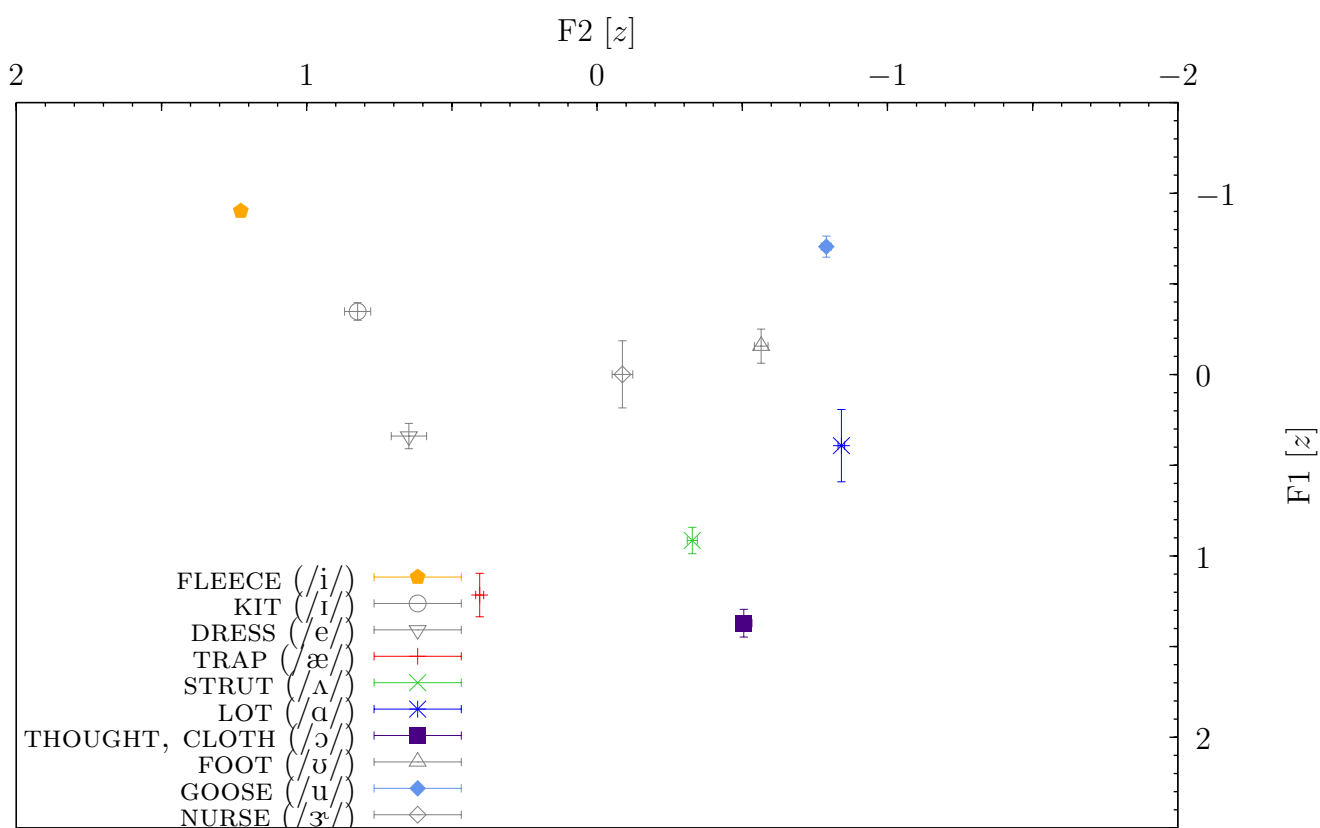


C.4.2 American English

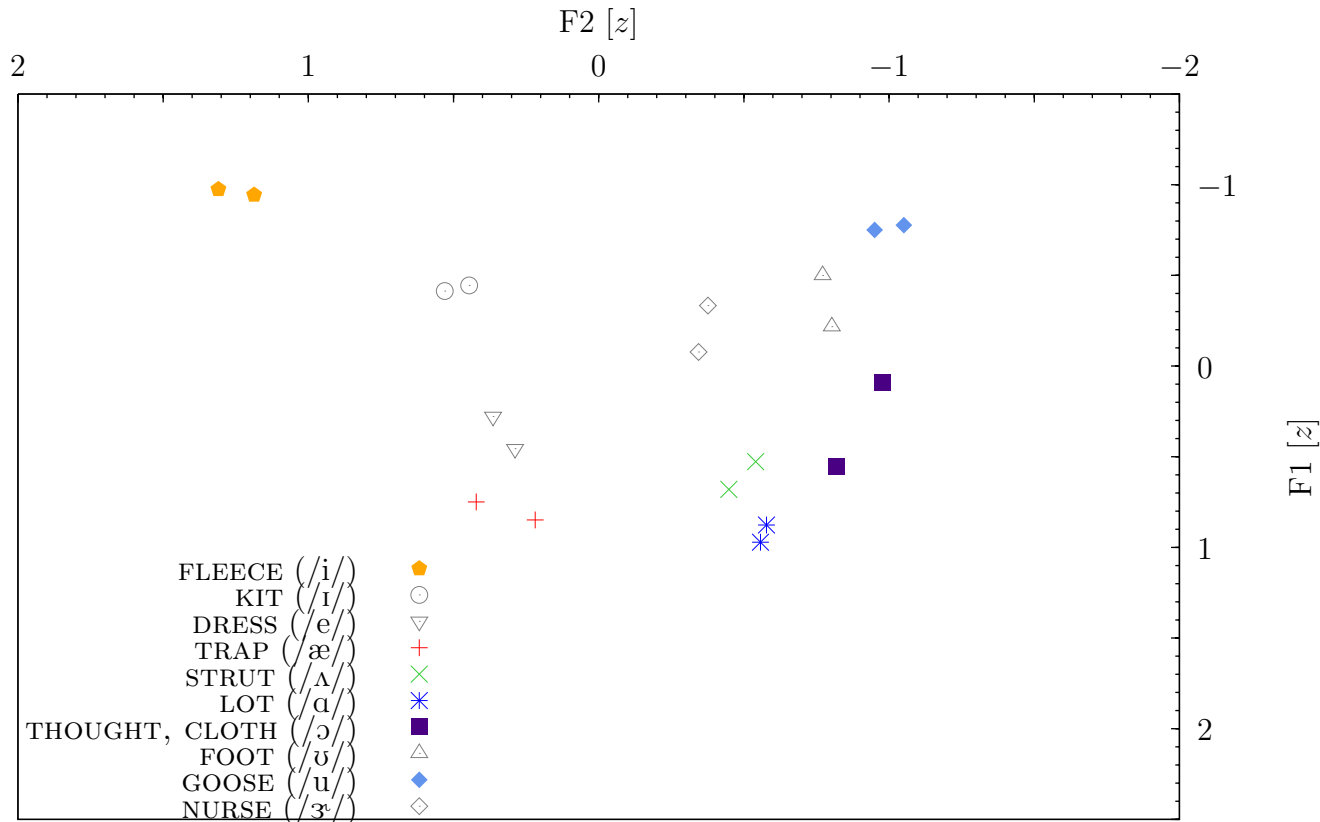
AE - men, women and children (Peterson & Barney 1952)



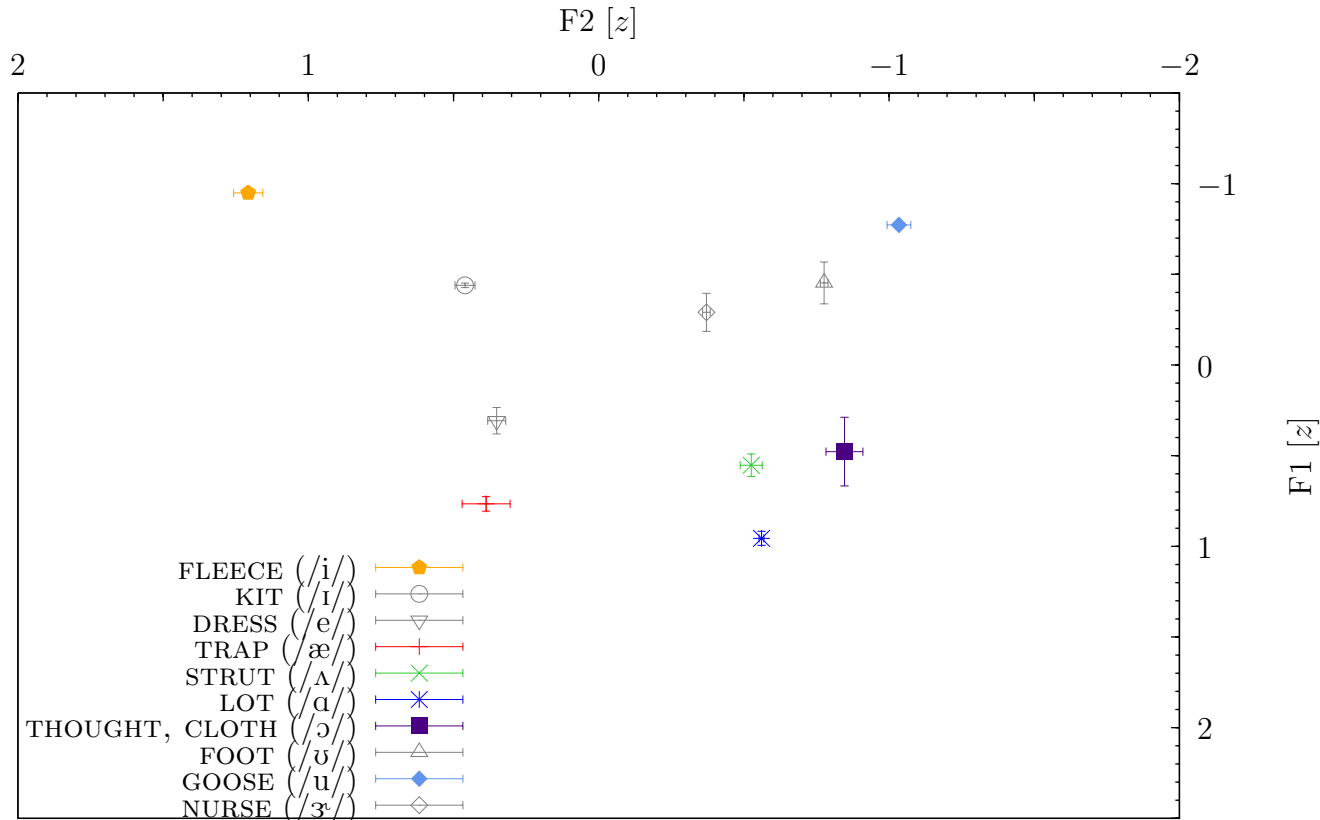
AE - all speakers (Peterson & Barney 1952)

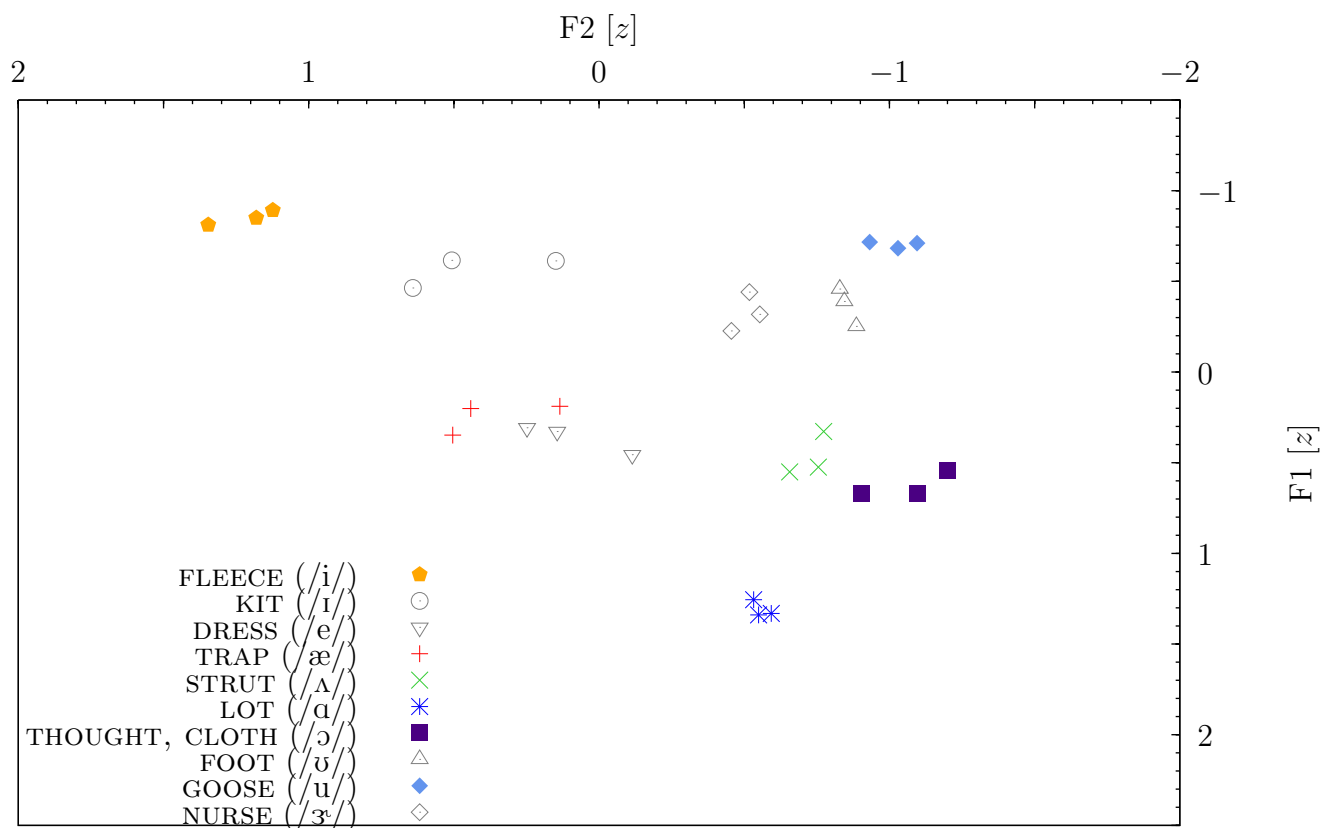
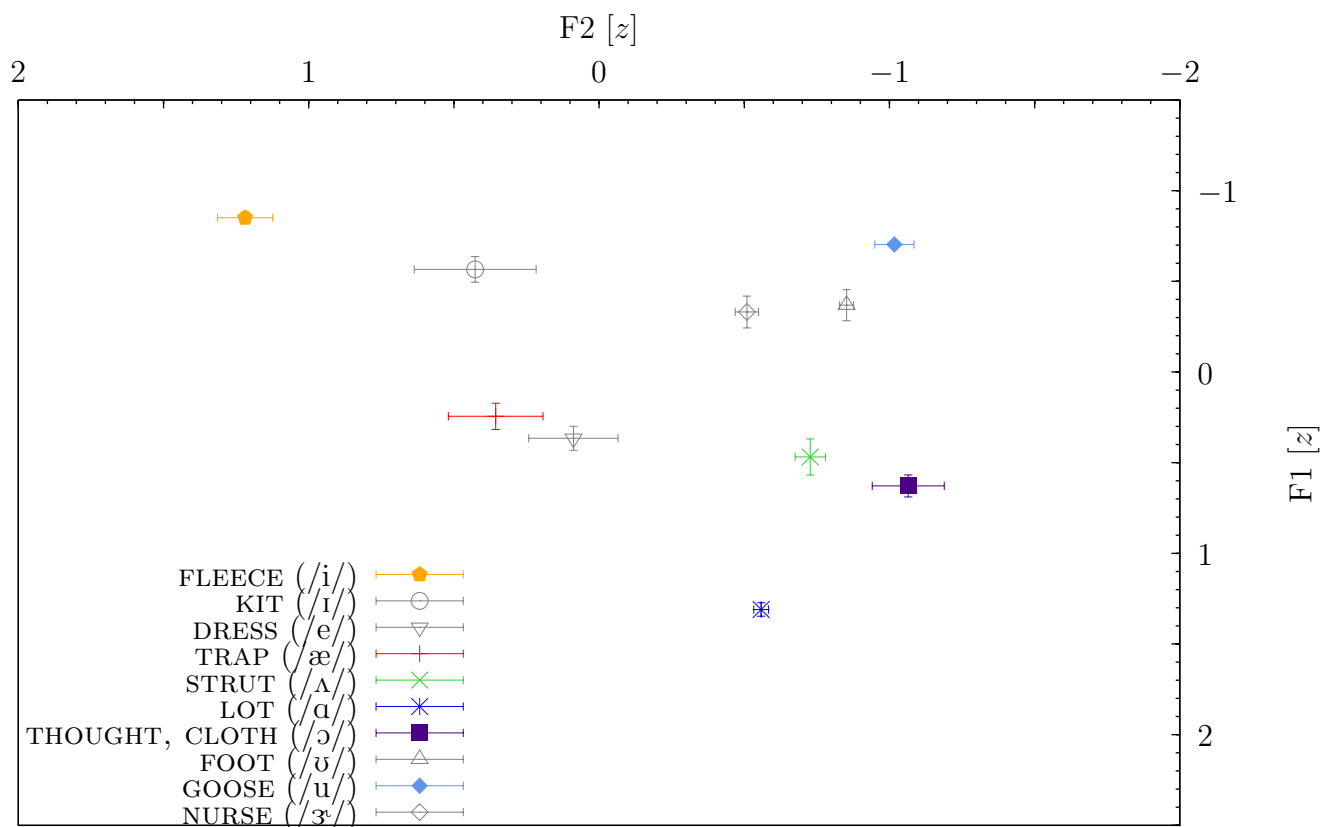


AE - speaker GEP, five speakers (Lehiste & Peterson 1961)

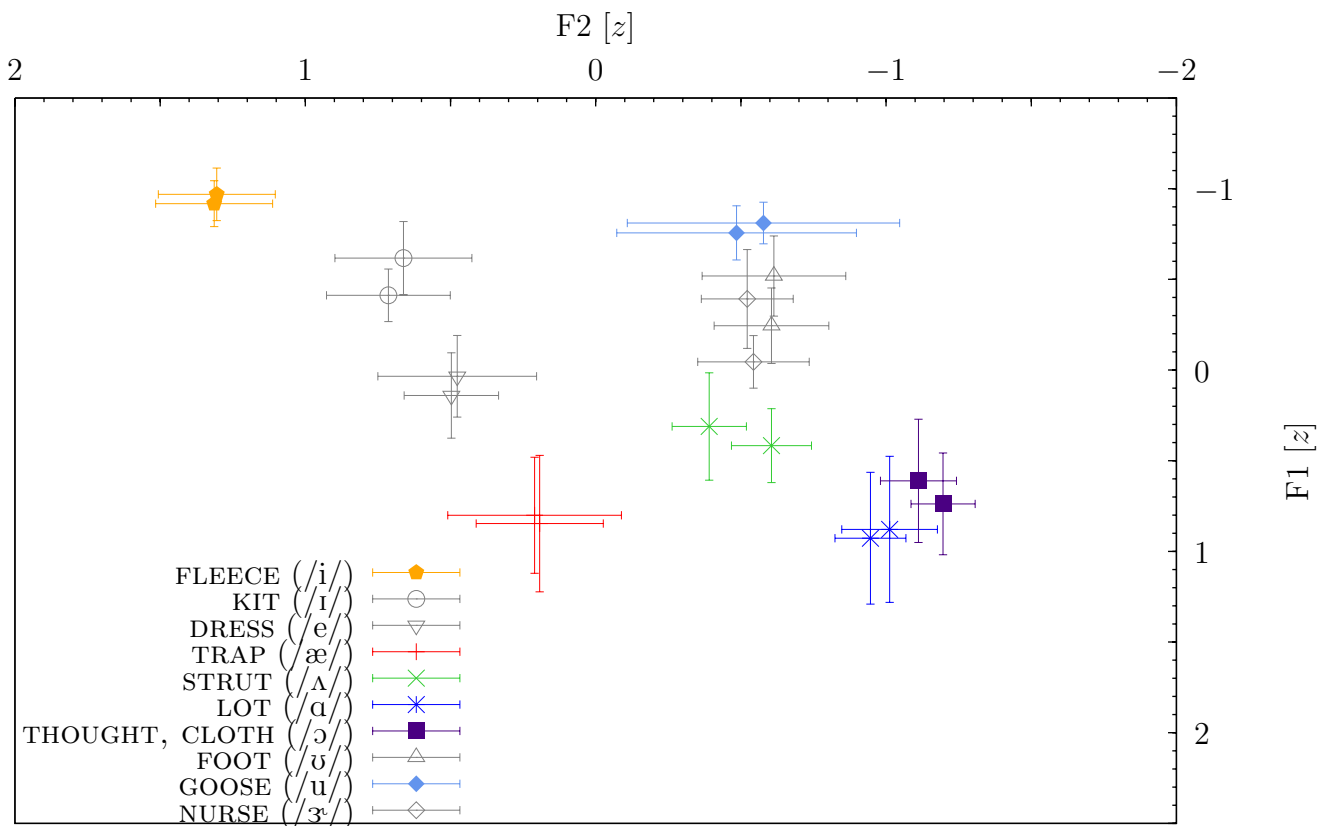


AE - all speakers (Lehiste & Peterson 1961)

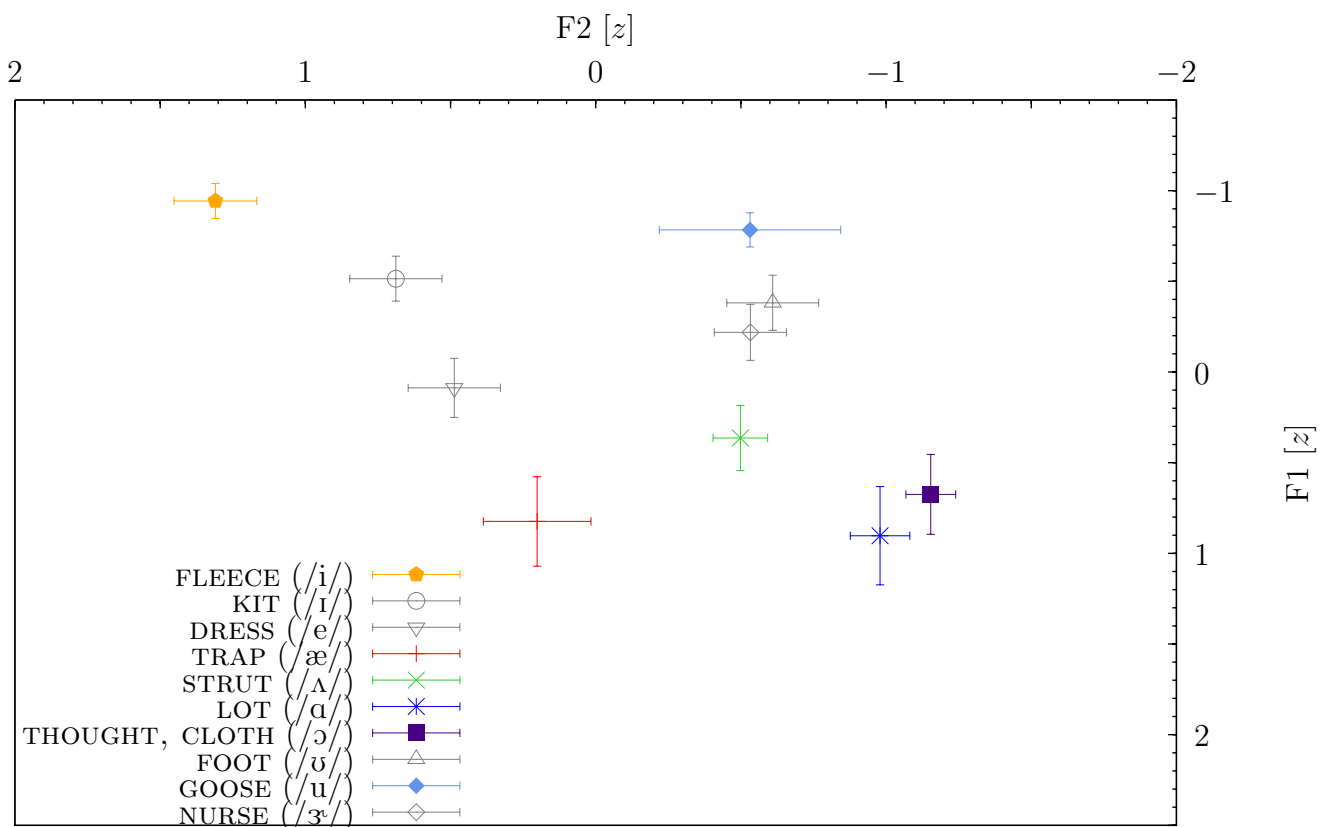


AE - men, women and children (Hillenbrand, Getty, Clark & Wheeler 1995)**AE - all speakers** (Hillenbrand, Getty, Clark & Wheeler 1995)

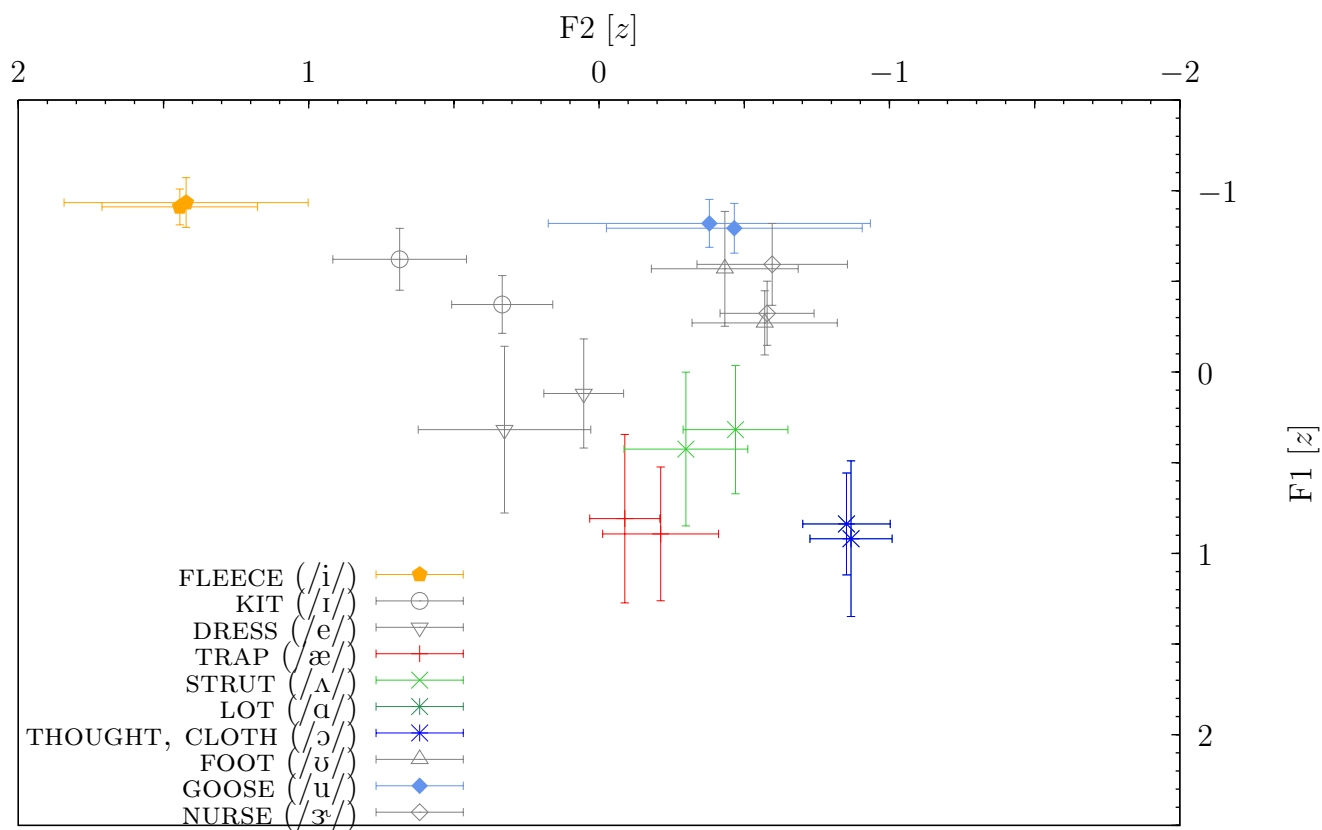
AE - men and women (Yang 1996)



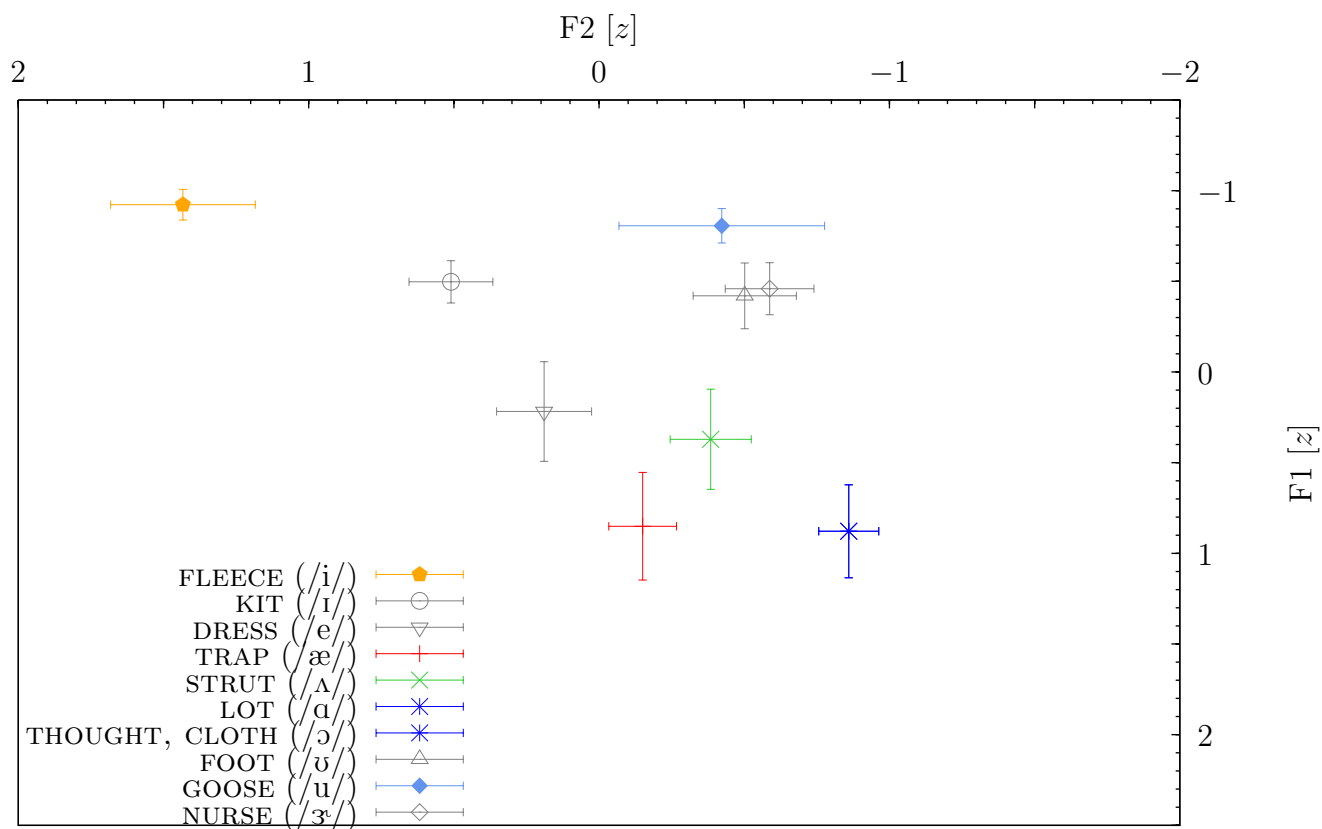
AE - all speakers (Yang 1996)



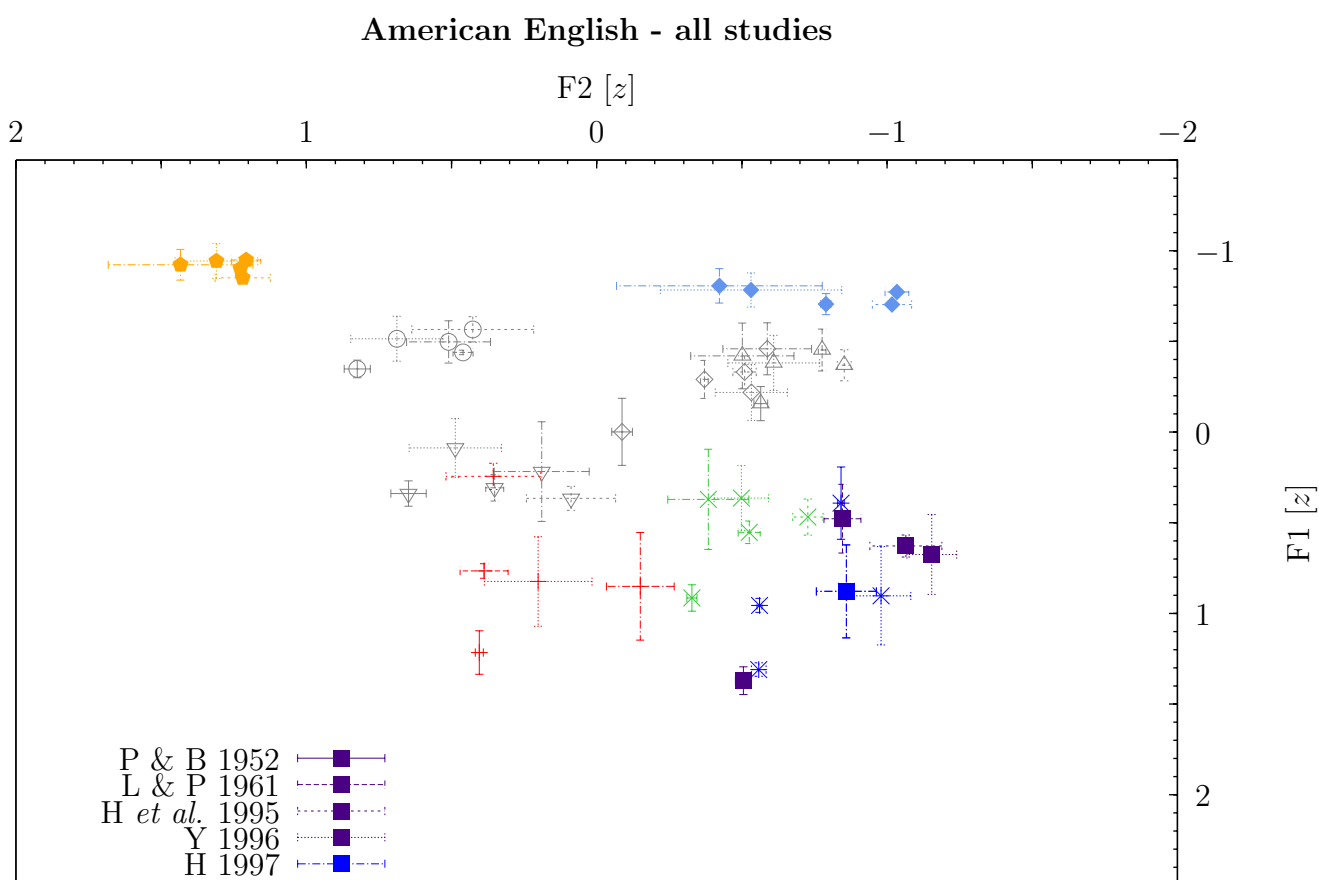
AE - men and women (Hagiwara 1997)



AE - all speakers (Hagiwara 1997)



The following plot summarizes the vowel systems of all five studies. It can be observed that considerable variation exists between the various dialect regions of the United States from which the speakers in these studies were recruited, especially with regard to the lower vowels.³



³Please note that Hagiwara (1997), reporting data from Southern California, a region where the *cot-caught* merger is well established, does not distinguish between the phonemes /ɑ/ and /ɔ/. A single symbol (blue square) has therefore been adopted to indicate the location of both vowel classes in this graph.

Zusammenfassung in deutscher Sprache

Gegenstand der vorgelegten Dissertation ist das akrolektale Englisch gebildeter jamaikanischer Sprecher. Während sich der Schwerpunkt der linguistischen Forschung historisch gesehen auf die in Jamaika gesprochene Kreolsprache (*Jamaican Creole*) konzentriert hat, ist den jeweiligen nationalen Varietäten des Englischen in der Karibik nur wenig Aufmerksamkeit gewidmet worden, da traditionell davon ausgegangen wurde, dass diese entweder identisch mit dem britischen Standard seien oder von diesem nur leicht abweichen.

Seit der politischen Unabhängigkeit Jamaikas von Großbritannien im Jahre 1962 ist jedoch nicht nur ein Wandel in den Einstellungen der dortigen Bevölkerung gegenüber dem *Jamaican Creole* aufgetreten, es entwickelte sich ausserdem eine verstärkte Verwendung des jamaikanischen Kreols in Domänen, die traditionell dem Englischen vorbehalten waren. Damit einhergehend vollzog sich ein Wandel im Konzept dessen, was innerhalb Jamaikas als korrekte Sprachverwendung angesehen wurde; es begann sich also eine eigenständige lokale Norm herauszubilden. Studien aus neuerer Zeit (Shields 1989, Mair 2002a) belegen die Entwicklung dieses lokalen Standards in Jamaika, der sich sowohl auf lexikalischer, morphosyntaktischer und phonologischer Ebene von der historischen Norm, dem britischen Englisch, unterscheidet (Shields 1989; Sand 1999; Mair 2002a; Irvine 2004; Deuber 2009; Jantos 2010a, 2010b).

Mair (2002a) identifiziert drei Faktoren, die bei der Herausbildung dieses lokalen jamaikanischen Standards eine mögliche Rolle spielen: der Einfluss der jamaikanischen Kreolsprache, der des amerikanischen Englisch, sowie universelle Entwicklungen, wie sie in den sogenannten “New Englishes”, postkolonialen Varietäten des

Englischen, auftreten. Genauere Beschreibungen der sich entwickelnden jamaikanischen Norm sind bisher nur in einzelnen Studien vorgenommen worden, die sich zudem mit Ausnahme von Irvine (2004) hauptsächlich auf in die Bereiche Syntax, Morphologie und Lexikon konzentrieren (Shields 1989; Sand 1999; Mair 2002a; Deuber 2009; Jantos 2010a, 2010b). Der Bereich der Phonetik und Phonologie des akrolektalen jamaikanischen Englisch ist bisher nur in Einzelfällen empirisch untersucht worden.

Die vorliegende Studie verwendet Material aus dem jamaikanischen Subkorpus des *International Corpus of English (ICE)*. Anhand von Aufnahmen jamaikanischer Sprecher aus den Jahren 1999-2004 werden drei linguistische Variablen untersucht: das Auftreten von /r/ in post-vokalischer Umgebung ("rhoticity"), welches, obwohl als stark variabel bekannt, bisher nicht empirisch untersucht wurde; das Bindephänomen des sogenannten "linking /r/"; sowie ein Teil des jamaikanischen Vokalsystems, in dem sich ein postulierter amerikanischer Einfluss besonders gut beobachten ließe. Ziel der Studie ist zum einen, bestehende Forschungslücken durch eine genauere phonetische und phonologische Beschreibung des gegenwärtigen jamaikanischen Akrolekts in Bezug auf die drei genannten Variablen zu füllen, diese im Hinblick auf Anhaltspunkte für einen sich entwickelnden lokalen Standard zu untersuchen sowie den Einfluss verschiedener Faktoren im Hinblick auf die Herausbildung dieses Standards einzuschätzen. Zu diesem Faktoren gehören zum einen das britische Englisch, das in Jamaika in der Kolonialzeit als historische Norm fungierte, zum anderen das *Jamaican Creole* sowie das amerikanische Englisch, dem ein immer stärkerer Einfluss in der Region zugeschrieben wird.

Die Ergebnisse der Studie zeigen, dass sich sowohl "rhoticity" als auch "linking /r/" im jamaikanischen Englisch in hohem Grade variabel verhalten, im Gegensatz zu traditionellen Beschreibungen, die das jamaikanische Englisch als katorisch "rhotic" klassifizieren. Beide Variablen werden von einer Reihe phonetischer und soziolinguistischer Faktoren beeinflusst, darunter die den jeweiligen Sprechern zugeordnete Textkategorie. "Linking /r/" wird zudem häufig durch Einsetzen eines Glottalverschlusses ersetzt. Im Bereich der Vokale sind hauptsächlich die Einflüsse des britischen Englisch sowie des *Jamaican Creole* relevant, zwischen deren phonetis-

chen Realisierungen die in der Studie untersuchten Sprecher in Abhängigkeit vom Grad der Formalität der Sprechsituation variieren. Einzige Ausnahme hiervon ist der Vokal STRUT, der keinerlei stilistische Variation zeigt und damit als stabiler Bestandteil des lokalen jamaikanischen Standards anzusehen ist. Amerikanischer Einfluss auf das akrolektale gebildete jamaikanische Englisch erscheint im Bereich der Vokale höchst unwahrscheinlich, ist jedoch im Hinblick auf “rhoticity” nicht vollkommen auszuschliessen. Hinweise auf einen eigenständigen jamaikanischen Standard finden sich in der Tatsache, dass sich das jamaikanische Englisch in Bezug auf die beiden /r/-Variablen, “rhoticity” und “linking /r/”, stark von anderen Varietäten des Englischen, nicht zuletzt vom britischen Englisch, unterscheidet, sowie im Bereich der Vokale, die, obwohl deutlich beeinflusst vom britischen Englisch, mit dessen phonetischer Realisierung jedoch nicht vollkommen übereinstimmen.