Intonation Contours in Spontaneous Speech of Russian Germans: An Experimental Study of German Language Islands

Контуры интонации в стихийной речи русских немцев: экспериментальное исследование немецких островных диалектов

Contornos de entonación en el habla espontánea de alemanes rusos: un estudio experimental de las islas de lengua alemana

Written by:
Olga Baykova[264]
ORCID ID: 0000-0002-4859-8553
https://elibrary.ru/author_items.asp?authorid=267136
Olga Obukhova[265]
ORCID ID: 0000-0002-8658-6000
https://elibrary.ru/author_items.asp?authorid=130771
Galina Porchesku[266]
ORCID ID: 0000-0003-1423-3510
https://elibrary.ru/author_items.asp?authorid=583243

Abstract

Today, there are a few German language islands still existing in the Kirov region. The dialects spoken in these linguistic communities represent unique varieties of the German language as they are functioning in the context of intralingual and interlingual interaction. The research on the German language islands of the Kirov region is not only focused on studying the segment structure of the dialects, but it also looks into the features on the suprasegmental level.

This paper describes an experimental technique used to determine complete and incomplete intonation phrases, identify intonation patterns, and describe the nuclear contours. This new experimental technique is based on the analysis of non-intonation criteria, such as semantic, syntactic, and pragmatic factors. The findings of the research suggest that the intonation contours identified in speech of Russian Germans are characteristic of speakers of both High German and Low German dialects. The study has shown no distinctions in this parameter between the dia lects, which indicates the mixed nature of the dialects spoken in the region.

Аннотация

Как известно, до настоящего времени в Кировской области сохранились отдельные замкнутые языковые острова, в которых проживают носители различных немецких диалектов, представляющих собой уникальную форму языка, функционирующую в рамках внутриязыкового и межъязыкового взаимодействия. В сферу исследования немецких островных диалектов Кировской области вовлекается не только изучение сегментного состава, но и явлений супрасегментного уровня, так как без учета последних невозможно получить полную картину реального функционирования данных диалектов.

В данной работе представлена методика определения завершенных и незавершенных интонационных фраз, выявления тонологической структуры интонационных контуров выбранных интонационных фраз и определение их ядерных контуров. Результаты исследования показывают, что интонационные контуры, представленные в

[264] Vyatka State University, Moskovskaya Str. 36, 610000, Kirov, Russian Federation
[265] Vyatka State University, Moskovskaya Str. 36, 610000, Kirov, Russian Federation
[266] Vyatka State University, Moskovskaya Str. 36, 610000, Kirov, Russian Federation

We believe the suggested technique may become an effective tool in the study of the suprasegmental features of the German language islands. It may be of interest to researchers of suprasegmental properties of spontaneous speech.

Keywords: German language island; complete intonation phrase; incomplete intonation phrase; intonation contour.

речи российских немцев, характерны для говорящих как на верхненемецких, так и на нижненемецких диалектах. Исследование не показало существенных различий в этом параметре, что указывает на смешанный характер исследуемых немецких диалектов рассматриваемого региона. Мы полагаем, что представленная методика может стать эффективным инструментом в изучении супрасегментных особенностей немецких островных диалектов. Данная работа может представлять интерес для исследователей в области супрасегментной организации спонтанной речи.

Ключевые слова: Немецкий языковой остров; завершенная интонационная фраза; незавершенная интонационная фраза; интонационный контур

Resumen

Hoy en día, todavía existen algunas islas de lengua alemana en la región de Kirov. Los dialectos que se hablan en estas comunidades lingüísticas representan variedades únicas del idioma alemán, ya que funcionan en el contexto de la interacción intralingual e interlingual. La investigación en las islas de lengua alemana de la región de Kirov no solo se centra en estudiar la estructura de segmentos de los dialectos, sino que también analiza las características en el nivel suprasegmental.

Este artículo describe una técnica experimental utilizada para determinar frases de entonación completas e incompletas, identificar patrones de entonación y describir los contornos nucleares. Esta nueva técnica experimental se basa en el análisis de criterios de no entonación, como factores semánticos, sintácticos y pragmáticos. Los resultados de la investigación sugieren que los contornos de entonación identificados en el habla de los alemanes rusos son característicos de los hablantes de dialectos de alto alemán y bajo alemán. El estudio no ha mostrado distinciones en este parámetro entre los dialectos, lo que indica la naturaleza mixta de los dialectos que se hablan en la región.

Creemos que la técnica sugerida puede convertirse en una herramienta eficaz en el estudio de las características suprasegmentales de las islas de lengua alemana. Puede ser de interés para los investigadores las propiedades suprasegmentales del habla espontánea.

Palabras clave: Isla de lengua alemana; frase de entonación completa frase de entonación incompleta; contorno de entonación

Introduction

One of the main functions of intonation is segmentation of continuous speech into syntactic and informational units: it makes an utterance a coherent meaningful whole at the same time dividing it into rhythmic groups and syntagmas (Essen, 1964; Crystal, 1969; Danes, 1974; Liberman & Pierrehumbert, 1984; Ladd, 1996; Grice & Baumann, 2002). The purpose of the present study is to develop a technique to analyze intonation of the native speakers of High German and Low German dialects who live in the Verkhnekamsk district of the Kirov region (Baykova 2008). The study analyzes complete and incomplete intonation phrases (IP) which are defined as independent research units, which means that region-specific prosodic features are not taken into consideration. Alternatively, non-intonation criteria, such as semantic, syntactic, and pragmatic factors are used to analyze the intonation phrases. The technique developed and used in this research is based on the method described by Gilles (2006). To describe complete and incomplete intonation phrases of the German language islands of the Kirov region, we

analyzed the so-called substantive intonation phrases. The criteria for substantive intonation phrases were described by Chafe (1994): 1) an intonation phrase must be complete from the prosodic point of view, i.e., there must be a terminal pitch contour of some kind at the end of the intonation phrase; 2) it should carry information (convey substantive ideas of events, states, or referents).

Methods

According to Gilles (2006), when determining complete and incomplete intonation phrases, it is necessary to remember that while syntactic incompleteness of an intonation phrase always indicates its absolute incompleteness, syntactic completeness of an intonation phrase does not always mean that it renders a complete thought. Gilles believes it is possible to determine whether intonation phrases are complete or incomplete only when they are analyzed along the same lines taking into consideration non-intonation criteria, namely, syntactic, semantic, and pragmatic factors (Brenner, 2002; Peters, 2006).

Ford and Thompson (1996) consider an intonation phrase to be complete only if its syntactic structure does not need to be continued. As for the semantic completeness, an intonation phrase is considered complete if it expresses a complete thought, for example, *unddawar's, soistdasebenalles*. In other words, it terminates a longer speech act. The pragmatic structure gives more specific cues to show the completeness of an intonation phrase. According to Ford and Thompson, a statement, as a complex speech act, is complete from the point of view of pragmatics only when its meaning is understood from context, i.e., an intonation phrase is pragmatically complete if the speech act is accomplished (Ford & Thompson, 1996). When determining whether an intonation phrase is complete or incomplete, it is necessary to take into consideration whether there is a conversation turn. The intonation phrase which leads to a conversational turn is absolutely complete. However, it is necessary to distinguish between the "real" change of interlocutors, when the listener joins the conversation, and the reaction of the listener to the speaker's statement expressed by means of such discourse particles as *ja*, *mhm* and others (Gilles, 2006). While in the first case one can easily understand that both the speaker and the listener perceive the speech act as completed, in the second case it is difficult to understand whether the listener considers the speech act to be complete or whether he encourages the speaker to continue talking. Ford

and Thompson suggest that these are signals to continue the conversation, i.e., they should be associated with an incomplete structure of the intonation phrase.

Gilles offers to analyze intonation phrases from the point of view of their syntax, semantics and pragmatics in order to determine if they are complete or incomplete. The syntactic structure of a syntactically incomplete IP needs to be continued in a subsequent phrase/phrases. A subordinate clause preceding the main clause can be an example of a syntactically incomplete IP. These are, for example, subordinate clauses of condition (*wenn…* / *dann…*) which are frequent in the material under study. This category also includes incomplete syntactic constructions that can be divided into several IPs due to their length. According to Gilles, the incompleteness of IP from the point of view of semantics is displayed when the lexical element of the phrase implies a certain continuation in the subsequent phrase. According to Engel, incomplete IPs often include parentheses such as *zwar*, *eigentlich*, *schon*, *sicher*, *erstens*, *vielleicht* (Engel, 1988). Pragmatically, incomplete IPs are characteristic of long speech acts when the speaker tells a story or a description using such speech units which do not allow finishing the narrative.

Summarizing the above, Gilles defines completeness or incompleteness of IPs on the basis of non-intonation criteria. Thus, we can consider a substantive IP absolutely complete only if it is syntactically and pragmatically complete, and it is accompanied by a conversation turn. If there is no conversation turn, we can only talk about a potentially complete IP. If, syntactically and semantically, an intonation phrase is not complete, it is considered to be absolutely incomplete. Talking about potentially incomplete IPs, they are syntactically, semantically, and also pragmatically incomplete IPs.

Description of the Research

Non-intonation criteria are used in our study to identify and analyze complete and incomplete intonation phrases and their intonation contours.

Complete Intonation Phrases
Let us assume that the height of pitch at the borders of absolutely or potentially complete intonation phrases is different depending on the presence or absence of a conversation turn.

The researched material presented below is an extract from a story where one of the informants

tells about her father. The informant is a High German speaker from the Kirov region. There are two participants in the conversation: the interviewer (Int) and the informant (Inf 1). The following notations are used in the analysis: an absolutely complete IP is marked as (=>); a potentially complete IP – (–>); a micropause – (.); a short pause less than 0.25 sec. – (-); a medium pause less than 0.75 sec. – (--); a long pause less than 1.00 sec. – (---); a pause over 1.00 sec. is indicated in figures – (1.5), (2.00); stretching out words – (und=äh); a filled pause – (äh); the syllable written with capital letters bears the main stress (nuclear stress) in an IP (*geSTORben*); the vowel written with a capital letter bears the secondary stress in an IP (*frIher*);

semantic factors: *'yes'* means there is a semantic marker of completeness, *'no'* means there are no semantic markers of completeness; syntactic factors: *'yes'* means there is a syntactic marker of completeness, *'no'* means there are no syntactic markers of completeness; pragmatic factors: *'yes'* means there is a pragmatic marker of completeness, *'no'* means there are no pragmatic markers of completeness; conversation turns: *'yes'* means there is a conversation turn, *'no'* means there is no conversation turn. The conversation is presented in Table 1.

Table 1. Informant 1: *"Die Gründung der Siedlung Tschernigowskij"*

IP Type	IP №	Participants	Intonation Phrases	Semantic Markers	Syntactic Markers	Pragmatic Markers	Conversation Turn
	1.	Int	*Und wissen Sie, wann wurde diese Siedlung gegründet?*				
	2.	Inf 1	Diese SIEdlung wurde gebaut (---)				
	3.		im ANfang (2.0)				
	4.		ENde zwanziger Jahre (--)				
	5.		ENde zwanziger Jahre (---)				
–>	6.		hIEr war mein BRUder (--)	yes	yes	yes	no
	7.		hat ein(e) FRAU von hier (--)				
	8.		die war aus ODEssa hergeschickt worden (---)				
	9.		im DREIßigsten Jahr (---)				
	10.		war DREI Jahr (--)				
	11.		NEUNundzwanzigsten (--)				
	12.		so war DREI Jahre alt erst (.)				
	13.		die ist aus dem SIEbenundzwanzigsten Jahr (1.5)				
	14.		war hierher geschickt (---)				
=>	15.	Int	und die hatte ALles (.)	yes	yes	yes	yes
	16.	Inf 1	*Ja. Und gab es auch die anderen?*				
	17.		und die Anderen waren hier aus GORkovgebiet (.)				
	18.		HERgeschickt ().				
	19.		nu das waren SO: (.)				
	20.		waren vielleicht etwas REIcher oder wie (-)				
	21.		irgendwIE wurde sowas ANgesehen (--)				
=>	22.	Int	und hAm hier das ALles gebaut (---)	yes	yes	yes	yes
	23.		*Ugu. Die Siedlung sieht gut aus.*				

In the above extract, the informant tells the interviewer how the village of Chernigovsky was founded and built. We consider intonation phrases 6, 15, and 22 to be complete as their semantic and syntactic structures are complete. Pragmatically, IP 6 closes the story about the informant's brother; IP 15 summarizes what has been said about the brother's wife; IP 22 closes the story about the village. IP 15 and IP 22 are absolutely complete intonation phrases as there is a conversation turn after each of them. IP 6 is a potentially complete intonation phrase as it does not lead to a conversation turn. The absolutely and potentially complete intonation phrases have the intonation contours as shown in Fig.1 and Fig.2, which have been extracted with PRAAT (www.praat.org).
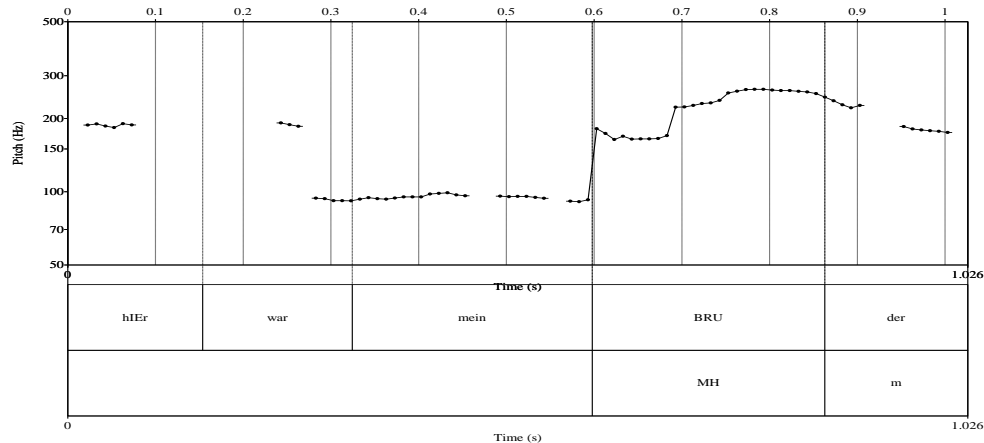

Fig. 1 Informant 1: IP 6 "*hier war mein Bruder*"

Fig.1 illustrates a linear [267] rise-fall intonation contour of potentially complete IP 6. The IP nuclear syllable is marked with capital letters. The nuclear stress of the IP is on the first syllable of the noun *Bruder*. The nucleus of the pattern consists of two syllables: the nuclear syllable *BRU* and the post nuclear syllable *der*. The pitch at the beginning of the nuclear syllable *BRU* is mid-level ($F0_{min}$ 175.83 Hz / $F0_{min}$ 8.99 pt) rising towards the second part of the nuclear syllable up to $F0_{max}$ 275.49 Hz which corresponds to $F0_{max}$ 17.19 pt, so it is marked as MH. The rise-fall intonation contour is marled as MHm%. Further, the nuclear tone descends quite smoothly till the end of the IP. $F0_{max}$ is 275.49 Hz / $F0_{max}$ 17.19 pt, and $F0_{min}$ is 199.32 Hz or $F0_{min}$ 9.20 pt. The pitch of the IP boundary tone (m%) is 199.32 Hz. The range of the rise-fall contour ($F0_{umfang}$) is 76.17 Hz which suggests a narrowed vocal range of Informant 1 in the analyzed IP ($F0_{umfangglobal}$ 169.70 Hz, $F0_{umfangglobal}$ 8.52 pt).

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[267] According to (Gilles 2006), it is necessary to differentiate between linear, arc-shaped and broken configurations of intonation contours of complete and incomplete intonation phrases.
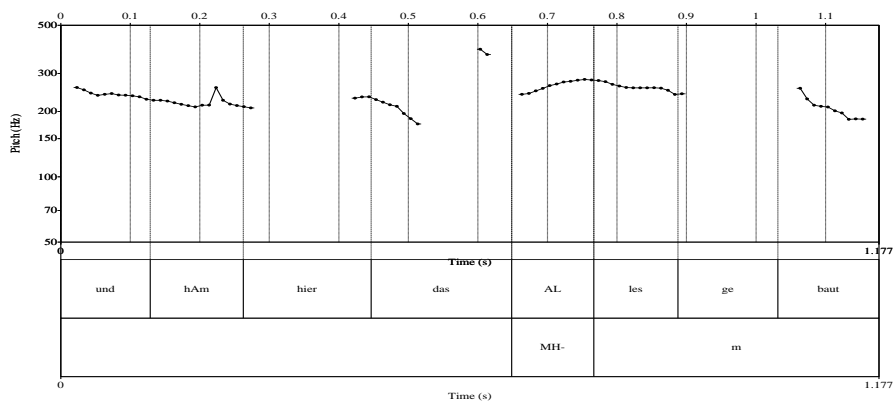
Fig. 2 Informant 1: IP 22 "*und haben hier das alles gebaut*"

Fig. 2 presents a linear rise-fall intonation contour of absolutely complete IP 22. The nucleus of the pattern consists of four syllables: the nuclear syllable *AL* and three post nuclear syllables *les, ge, baut*. The pitch at the beginning of the nuclear syllable *AL* is mid-level ($F0_{min}$269.15 Hz / $F0_{min}$16.95 pt) rising at the second part of the nuclear syllable up to $F0_{max}$ 281.22 Hz which corresponds to $F0_{max}$17.73 pt, so it is marked as MH. The rise-fall intonation contour can be marked as MH–m%. Further, the pitch descends quite smoothly to the end of the IP. $F0_{max}$ is 281.22 Hz which corresponds to

$F0_{max}$17.73 pt. $F0_{min}$ is 184.50 Hz which corresponds to $F0_{min}$8.71 pt. The pitch of the IP boundary tone (m%) is 184.50 Hz which is mid-high, and it is noticeably higher than the boundary tones characteristic of Inf 1 intonation phrases ($F0_{minglobal}$ 109.66 Hz / 1.59 pt). The range of the above rise-fall contour ($F0_{umfang}$) is 100.45 Hz.

Let us analyze one more extract from the conversation between Informant 2 (Inf 2) who is a High German speaker and the interviewer (Int):

Table 2. Informant 2: "*In Kasachstan*"

IP Type	IP №	Participants	Intonation Phrases	Semantic Markers	Syntactic Markers	Pragmatic Markers	Conversation Turn
=>	1.	Inf 2	so: WAR die sache (---)	yes	yes	yes	yes
	2.	Int	*Ja. Es war sehr schwer.*				
	3.		nu: den ERSten winter (-)				
	4.		haben wir ein bischen GELD gehabt (.)				
	5.		konnten wir sich EINkaufen (.)				
	6.		und in zweiten WINter ham gehung(e)rt (---)				
	7.	Int	*Ja?*				
	8.	Inf 2	ja: SE:HR gehungert (---)				
–>	9.		mein grOssvater is geSTORben (-)	yes	yes	yes	no
	10.	Int	*Ja?*				
	11.	Inf 2	ein grossvaters sein BRUder (---)				
	12.		er ist geSTORben (1,5)				
–>	13.		nu: er war schon neunundSIEBzich Jahre alt (2,0)	yes	yes	yes	no
–>	14.		die mama war o:ch ganz KRANK geworden (---)	yes	yes	yes	no
	15.		un im frIher (=im Frühling)				
	16.		hat mich in die trudARmija genommen (.)				
	17.		war ich SECHzehn Jahr alt (---)				
	18.		wot kam hierher auf den saWOT (--)				
	19.		wot der SAWOT da: war= äh: jene Zeit= äh:				
	20.		woJENNyj sawot (2,0)				
	21.	Int	*Ugu.*				

22.	Inf 2	nu: tsellulOsa hat=äh: ausgeARbeit(et) (-)
23.	Int	*Das war schon hier, das war nicht in Kasachstan?*
24.	Inf 2	Ja ja der saWOT=äh: der steht (-)
25.	Int	*Wie lange seid ihr in…?*
26.	Inf 2	von dreiundVIERzich (--)
=> 27.		bin ich HIER schon (---) yes yes yes yes
28.	Int	*Aha. Wie lange ward ihr dann in Kasachstan? Nur in… ein*
29.		*Jahr?*
30.	Inf 2	andertHALBjahr (-)
31.	Int	*AndertHalbjahr.*
32.	Inf 2	noch nicht mal GANZ (-)
33.		von jAnewar (=Januar) bis zum MAI (-)
34.		JAHR undfinf Monat

The informant describes her childhood. Using non-intonation criteria (syntactic, pragmatic, and semantic), we have determined a few absolutely and potentially complete IPs. IP 1 and IP 27 are absolutely complete. Syntactically, these IPs have complete grammar structures; pragmatically, each of them closes a particular topic discussed in the conversation. For instance, IP 27 summarizes the informant's story about her work in the Labour Army. Both of them also result in a conversation turn when the second participant joins the conversation.

Three other IPs are defined as potentially complete as they are finished, both syntactically and pragmatically. However, there are no conversation turns. The potentially complete IPs in this extract are IP 9, IP 13, and IP 14. Syntactically and semantically, their structure is completed. Pragmatically, IP 9 closes the story about the informant's father; IP 13 is the end of the story about her uncle's death; and IP 14 gives information about her mother's disease.

The absolutely and potentially complete IPs have a falling intonation contour which is shown by the example of IP 1 "*So war die Sache*" in Fig. 3.
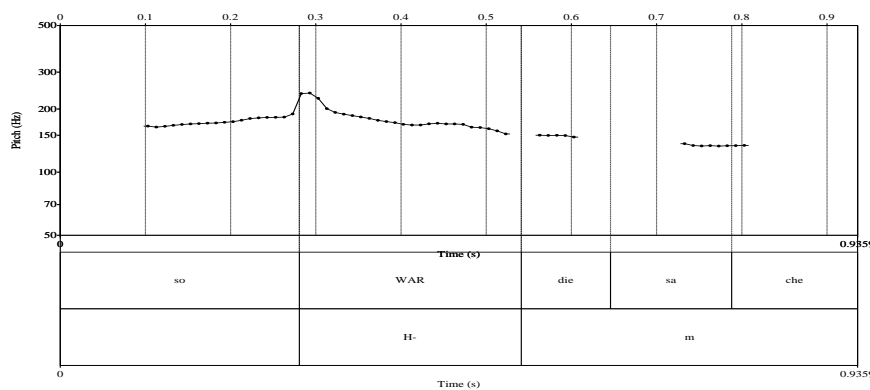

Fig. 3 Informant 2: IP 1 "*so war die Sache*"

Fig. 3 presents a linear falling intonation contour of absolutely complete IP 1. The nuclear syllable is marked with capital letters. The IP nuclear stress is on the verb *war* which is the peak of the intonation contour. The nuclear tone (consisting of four syllables: the nuclear *WAR* and the post nuclear syllables *die*, *sa*, *che*) is descending. The falling intonation contour can be marked as H–m%.

The nuclear tone descends smoothly to the end of the IP: from 237.93 Hz / $F0_{max}$ 13.04 pt at the peak of the nuclear syllable to $F0_{min}$134.12 Hz / $F0_{min}$ 4.55 pt at the end of the IP. The pitch of the IP boundary tone (m%) is 134 Hz or 5.26 pt, which can be described as mid-high. It is a little higher than the boundary tones characteristic of Inf 2 intonation phrases ($F0_{minglobal}$ 106.39 Hz / 0.89 pt). The range of the above falling contour ($F0_{umfang}$) is 103.81 Hz, so it seems that the low pitched nuclear syllable *WAR* does not allow extending the range of the intonation phrase ($F0_{umfangglobal}$ 193.00 Hz, $F0_{umfangglobal}$ 9.87 pt).

The next extract is a conversation between the interviewer (Int) and the informant (Inf 3) who is a Low German speaker. The informant describes her relatives who were born at Christmas. Using non-intonation criteria, we have determined three potentially complete IPs: IP 3, IP 7, IP 13. These IPs have a finished syntactical structure. Semantically and pragmatically, IP 3 answers the interviewer's question to the full *(Und Weihnachten, Ostern feiern Sie? – da: fei(e)re ich objaSAtelno)*. It suggests a conversation turn and changing the subject of conversation. However, only the subject is changed so we define this IP as potentially complete. As for IP 7, which closes the story about the husband of

the informant's granddaughter, its semantic structure implies the end of the speech act. Then the informant starts telling a story about the husband of the informant's other granddaughter. Thus, IP 7 is potentially complete as it does not result in a conversation turn. IP 13 closes the story about the husband of the other granddaughter and then the informant asks how long the fasting period is in Germany. This intonation phrase is also potentially complete as it does not suggest a conversation turn at this point.

Table 3. Informant 3: "*Die Kirchenfeste*"

IP Type	IP №	Participants	Intonation Phrases	Semantic Markers	Syntactic Markers	Pragmatic Markers	Conversation Turn
	1.	Int	*Und Weihnachten, Ostern feiern Sie?*				
	2.	Inf 3	oh: WEIHnachten (.)				
–>	3.		da: fEI(e)re ich objaSAtelno (---)	yes	yes	yes	no
	4.		ich hAbe ein=äh: (-)				
	5.		mein SOhn hat ein(en) SCHWIEgersohn (.)				
	6.		der ist o:chRUss(e)				
–>	7.		der ist gebOren zu UNser(e) weihnachten (--)	yes	yes	yes	no
	8.		un der ANdere (.)				
	9.		der ZWEIte (-)				
	10.		der ist geBOren (.)				
	11.		wenn IHR weihnachten habt (---)				
	12.		am sEchsten net SIEbenten (1,2)				
–>	13.		heilig(en) drEIkönig haben wir am SECHsten (0,7)				
	14.		aber das möchte ich EUCH fra:gen (1,0)	yes	yes	yes	no
	15.		hier die ALten (--)				
	16.		sind schOn alle WEGgestorben (.)				
	17.		und ich wEIss nicht und ich FINd(e) nie (.)				
	18.		wo geSCHRIEb(en) ist (--)				
	19.		WIEviel (--) fast				
	20.		wIEviel wochen fasten wir vor OStern (1,0)				
	21.		WIEviel wochen (--)				
	22.	Int	*Vierzig Tage, vierzig Tage.*				

Prosodically, these potentially complete intonation phrases have a rise-fall intonation contour.
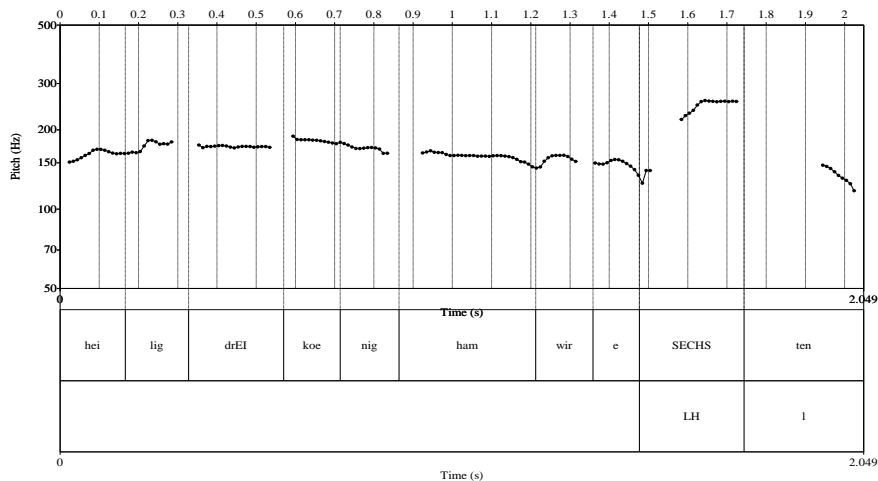
Fig. 4 Informant 3: IP 13 "*heiligen Dreikönig haben wir am sechsten*"

Fig. 4 presents a linear rise-fall intonation contour of potentially complete IP 13. The nucleas of the pattern consists of two syllables: the nuclear syllable *SECHS* and the post nuclear syllable *ten*. The pitch at the beginning of the stressed syllable *SECHS* is quite low ($F0_{min}$130.68 Hz / $F0_{min}$3.62 pt), but it reaches its maximum of $F0_{max}$ 256.32 Hz which corresponds to $F0_{max}$ 14.19 pt at the second half of the stressed syllable. It is marked in Fig. 4 as LH. The rise-fall intonation contour can be labeled as LHl%. The pitch of the boundary tone (l%) is low; it is 117.50 Hz, which is characteristic of the boundary tones of Inf 3 intonation phrases ($F0_{minglobal}$ 106.27 Hz / 1.02 pt). The range of the analyzed rise-fall intonation contour ($F0_{umfang}$) is 138.82 Hz which indicates quite a narrow vocal range of the informant in this intonation phrase ($F0_{umfangglobal}$ 196.51 Hz, $F0_{umfangglobal}$ 10.17 pt).

Table 4 presents one more extract from a conversation of the interviewer (Int) with another informant (Inf 4) who is a Low German speaker from the village of Chernigovsky in the Kirov Region.

Table 4. Informant 4: "*Die Verwandten in Deutschland*"

IP Type	IP №	Participants	Intonation Phrases	Semantic Markers	Syntactic Markers	Pragmatic Markers	Conversation Turn
	1.	Inf 4	nu: ich WEISS o:ch jetzt nicht (-)				
	2.		wo wer geBOren ist (-)				
	3.		welchen JAHR… (--)				
–>	4.		da muss mAn äh: ALLes wissen (.)	yes	yes	yes	no
	5.		dAmals waren wir JUNG und dumm (.)				
	6.		hab(en) NICHTS gebraucht(-)				
	7.		jEtzt sind wir ALT geworden (.)				
=>	8.		sind wir KLÜger jetzt (---)	yes	yes	yes	yes
	9.	Int	*Und Sie… Sie schreiben ihnen auch nicht. Ja? Diesen Verwandten?*				
	10.	Inf 4	Erst hat mir geSCHRIEb(en) (-)				

	11.	mein HALBschwester (0,7)	
	12.	sie hat dort gehEIrat(et) 'n REICHdeutschen (---)	
	13.	und IHRen Namen (.)	
	14.	wie sie jetzt hat gehabt mit ihrem Mann (---)	
	15.	ihre mUtter hat noch geLEbt (.)	
	16.	zwar meine TANte (.)	
	17.	meiner Mutter ihre SCHWEster (.)	
	18.	hab(en) immer auf IHR geschrieben (--)	
	19.	Bis SIEbzig (-)	
	20.	bis EINundsiebzig (--)	
	21.	EInundsiebzig haben sie mir geSCHRIEben (-)	
	22.	ich soll NICHT schreiben (-)	
	23.	bis eine neue ANschrift kommt (-)	
	24.	Und so ist nicht mehr (2,0)	
=>	25.	keine nEUe ANschrift gekommen (---) yes yes yes yes	
	26.	Int	*Ja. Und Sie wohnen jetzt allein?*

The informant tells about her relatives who live in Germany. Using non-intonation criteria, we have determined three absolutely complete intonation phrases and one potentially complete intonation phrase. IP 8 and IP 25 are, in our opinion, absolutely complete, as their syntactic structure is complete. Pragmatically and semantically, IP 8 closes the first story of the informant about her young and old days, and IP 25 is the end of the story about letters to their relatives living in Germany. There is also a conversation turn after each of these two phrases. There is only one intonation phrase that can be considered potentially complete. It is IP 4. It has a complete syntactic structure. Pragmatically, it closes the story about the importance of always knowing everything. Both absolutely and potentially complete intonation phrases of the analyzed extract have a falling intonation contour. Let us consider the intonation contour of potentially complete IP 4 "*Da muss man alles wissen*".

Fig. 5 presents the linear falling intonation contour of potentially complete IP 4. The stressed syllable is marked with capital letters. The main stress of the IP falls on the first syllable of the verb *wissen*; it is the peak of the intonation contour. The nuclear contour (which consists of the nuclear syllable *WIS* and the post nuclear syllable *sen*) is falling. The falling nuclear contour is shown in Fig. 5 as Hl%. The tone falls in a quite steep drop, i.e., a steeply falling pitch movement starts from 227.15 Hz at the stressed syllable descending to 122.56 Hz at the end of the IP. $F0_{max}$ is 227.15 Hz which corresponds to $F0_{max}$ 13.78 pt; $F0_{min}$ is 122.56 Hz which is $F0_{min}$ 3.51 pt. The pitch of the IP boundary tone (l%) is 122.56 Hz, or 3.51 pt which is quite characteristic of the boundary tones in the speech of Informant 4 ($F0_{minglobal}$ 128.03 Hz / 3.54 pt). The range ($F0_{umfang}$) of the analyzed falling intonation contour is 104.59 Hz, which shows that the vocal range of the informant ($F0_{umfangglobal}$ 156.71 Hz, $F0_{umfangglobal}$ 6.76 pt) is a little narrowed in the IP under analysis.
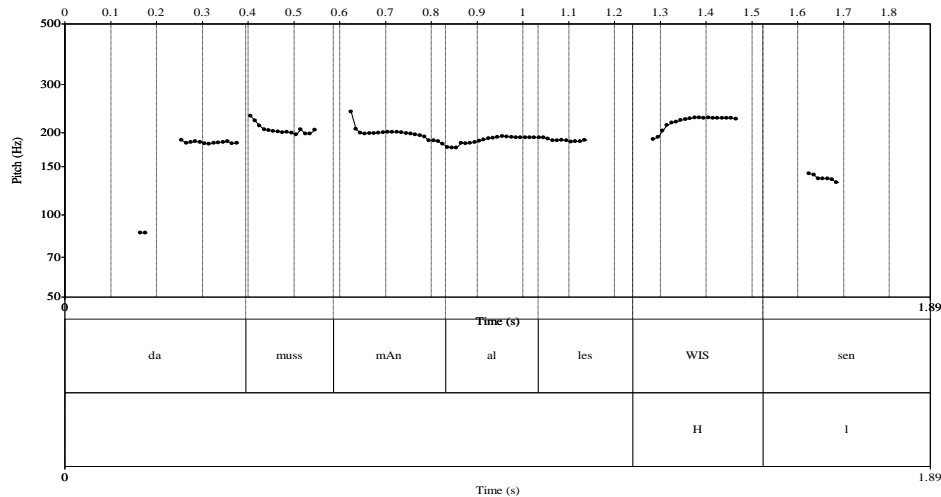
Fig. 5 Informant 4: IP 4 "*da muss man alles wissen*"

Incomplete Intonation Phrases

The paper further describes the use of non-intonation criteria in determining incomplete intonation phrases and analyzes IP intonation contours by the example of a few conversations below. The notations introduced in the previous part of the article are used to describe absolutely and potentially incomplete IPs; there are also some new notations: (--->) for absolutely incomplete IPs, and (==>) for potentially incomplete IPs.

Table 5. Informant 2: "*In Kasachstan*"

IP Type	IP №	Participants	Intonation Phrases	Semantic Markers	Syntactic Markers	Pragmatic Markers	Conversation Turn
	1.	Inf 2	so: war die SAche (---)				
	2.	Int	*Ja. Es war sehr schwer.*				
--->	3.		nu: den ERSten winter (-)	yes	no	no	no
	4.		haben wir ein bischen GELD gehabt (.)				
	5.		konnten wir sich EINkaufen (.)				
	6.		und in zweiten WINter ham gehung(e)rt (---)				
	7.	Int	*Ja?*				
	8.	Inf 2	ja: SE:HR gehungert (---)				
	9.		mein grOssvater is geSTORben (-)				
	10.	Int	*Ja?*				
--->	11.	Inf 2	ein grossvaters sein BRUder (---)	yes	no	no	no
	12.		er ist geSTORben (1,5)				
	13.		nu: er war schon neunundSIEBzich Jahre alt (2,0)				
	14.		die mama war o:ch ganz KRANK geworden (---)				
	15.		un im frIher (=im Frühling)				
	16.		hat mich in die trudARmija genommen (.)				
	17.		war ich SECHzehn Jahr alt (---)				
	18.		wot kam hierher auf den saWOT (--)				
	19.		wot der SAWOT da: war= äh: jene Zeit= äh:				

	20.		woJENNyj sawot (2,0)			
	21.	Int	*Ugu.*			
	22.	Inf 2	nu: tsellulOsa hat=äh: ausgeARbeit(et) (-)			
	23.	Int	*Das war schon hier, das war nicht in Kasachstan?*			
	24.	Inf 2	Ja ja der saWOT=äh: der steht (-)			
	25.	Int	*Wie lange seid ihr in…?*			
--->	26.	Inf 2	von dreiundVIERzich (--)	yes no	no	no
	27.		bin ich HIER schon (---)			
	28.	Int	*Aha. Wie lange ward ihr dann in Kasachstan? Nur in…*			
	29.		*ein Jahr?*			
	30.	Inf 2	andertHALBjahr (-)			
	31.	Int	*AndertHalbjahr.*			
	32.	Inf 2	noch nicht mal GANZ (-)			
--->	33.		von jAnewar (=Januar) (-)	yes no	no	no
	34.		bis zum MAI (-)			
	35.		ein JAHR unfinf Monat(e)			

Using non-intonation criteria, we have determined four absolutely incomplete IPs: IP 3, IP 11, IP 26, and IP 33. Syntactically, these intonation phrases are defined as subsequently incomplete as their syntactic structure is expected to be continued in the subsequent intonation phrases. The incomplete IPs of the analyzed extract have a rising intonation contour. Let us analyze the intonation contour of absolutely incomplete IP 33 "*von Januar*" as an example.
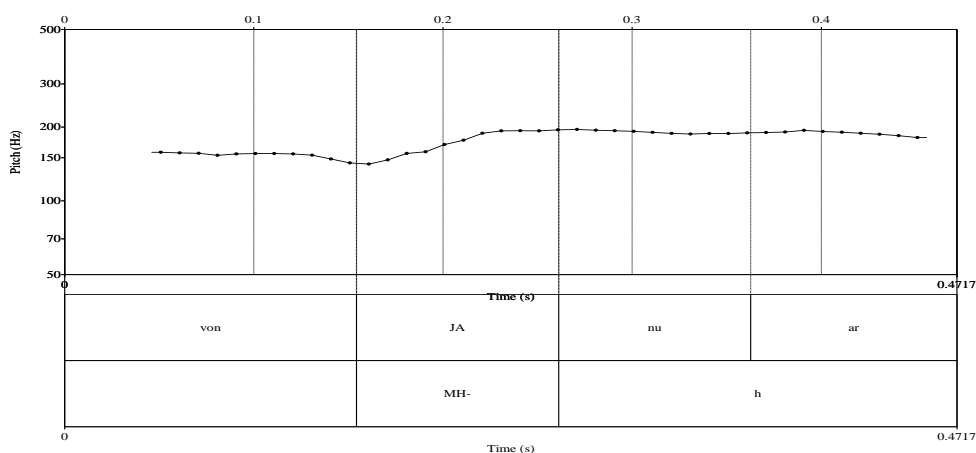

Fig. 6 Informant 2: IP 33 "*von Januar*"

The nuclear contour of the subsequently incomplete IP is realised through the rising intonation at the nuclear syllable of the IP. The intonation contour descends a little at the prenuclear syllable *von* ($F0_{max}$159.22 Hz / 6.95 pt) and then continues going down to $F0_{min}$ 143.57 Hz / 5.15 pt at the beginning of the nuclear syllable. It rises at the second half of the nuclear syllable up to $F0_{max}$ 192.93 Hz / 9.88 pt and remains approximately at the same level till the end of the IP (189.17 Hz / 8.93 pt). So, the intonation contour of the nuclear syllable is marked as MH. The pitch of the boundary tone (h%) is 189.17 Hz / 8.93 pt. The nuclear contour is represented as MH–h%. The pitch range is 52.63 Hz. Comparing the mean values of $F0_{umfangglobal}$ 193.00 Hz and $F0_{umfangglobal}$ 9.87 pt of the informant's pitch, we can see that the vocal range is a little narrowed.

The next fragment of the conversation is "*Die Kirchenfeste*". Using non-intonation criteria, we have defined the following intonation phrases as absolutely incomplete: IP 2, IP 8, IP 9, and IP 15. The potentially incomplete intonation phrases are IP 10, IP 17, IP 18, and IP 19.

Table 6. Informant 3: "*Die Kirchenfeste*"

IP Type	IP №	Participants	Intonation Phrases	Semantic Markers	Syntactic Markers	Pragmatic Markers	Conversation Turn
	1.	Int	*Und Weihnachten, Ostern feiern Sie?*				
--->	2.	Inf 3	oh: WEIHnachten (.)	yes	no	no	no
	3.		da: fEI(e)re ich objaSAtelno (---)				
	4.		ich hAbe ein=äh: (-)				
	5.		mein SOhn hat ein(en) SCHWIEgersohn (.)				
	6.		der ist o:chRUss(e)				
	7.		der ist gebOren zu Unser(e) weihnachten (--)				
--->	8.		un der ANdere (.)	yes	no	no	no
--->	9.		der ZWEIte (-)	yes	no	no	no
==>	10.		der ist geBOren (.)	yes	да	no	no
	11.		wenn IHR weihnachten habt (---)				
	12.		am sEchsten net SIEbenten (1,2)				
	13.		heilig(en) drEIkönig haben wir am SECHsten (0,7)				
	14.		aber das möchte ich EUCH fra:gen (1,0)				
--->	15.		hier die ALten (--)	yes	no	no	no
	16.		sind schOn alle WEGgestorben (.)				
==>	17.		und ich wEIss nicht (.)	yes	yes	no	no
==>	18.		und ich FINd(e) nie (.)	yes	yes	no	no
==>	19.		wo geSCHRIEb(en) ist (--)	yes	yes	no	no
	20.		WIEviel (--) fast				
	21.		wIEviel wochen fasten wir vor OStern (1,0)				
	22.		WIEviel wochen (--)				
	23.	Int	*Vierzig Tage, vierzig Tage.*				

The syntactic structure of the represented IPs needs to be continued in the subsequent intonation phrases, so we define them as subsequently incomplete, except for IP 9 ("*der zweite*"), which clarifies incomplete IP 8 without changing the general idea of the utterance.

These incomplete IPs have a rising intonation contour. As an example, Fig. 7 represents the intonation contour of potentially incomplete IP 10 which we consider subsequently incomplete.
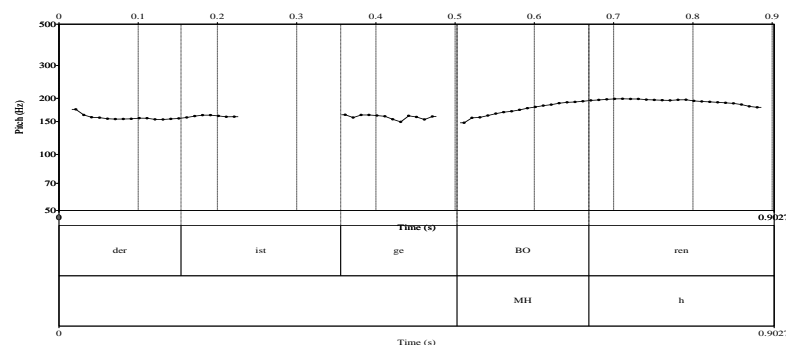
Fig. 7 Informant 3: IP 10 "*der ist geboren*"

The nuclear tone of subsequently incomplete IP 10 in Fig. 7 is an arc-shaped rising intonation contour which is characterized by the relatively low frequency at the beginning of the nuclear syllable ($F0_{min}$ 147.95 Hzц / 6.77 pt) rising up to $F0_{max}$ 198.87 Hz / 11.90 pt at the end of the syllable. It is marked as MH. The pitch of the boundary tone (h%) is 187.20 Hz/ 9,62 pt.

The main stress is on the second syllable of the word *geBOren* which is the nuclear syllable of IP 10. The next syllable terminates with a high boundary tone which is shown as h%. Thus, the nuclear tone is represented as MHh%. The mean range is 50.12 Hz. Comparing the mean values of $F0_{umfangglobal}$ 192.12 Hz and $F0_{umfangglobal}$ 10.17 pt of the informant's pitch, we can note that the vocal range in the IP under analysis is relatively narrow.
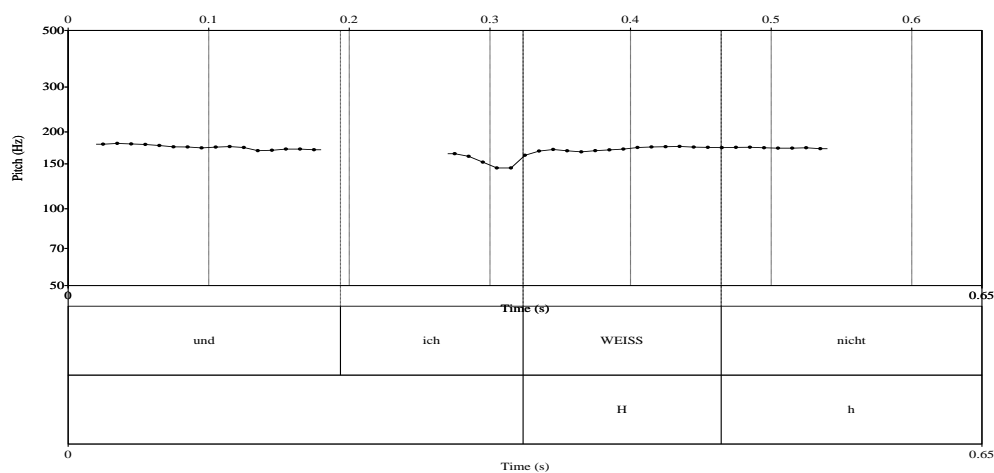

Fig. 8 Informant 3: IP 17 "*und ich weiss nicht*"

Fig. 8 represents one more potentially incomplete IP of the arc-shaped configuration which is defined as a subsequently incomplete IP. It has a rising intonation contour. The pitch is raised at the nuclear syllable up to $F0_{max}$178.80 Hz / 6.77 pt and it remains the same till the end of the intonation phrase. So, the intonation contour is marked as H. The pitch of the boundary tone (h%) is 178.80 Hz / 9.62 pt.

Thus, nuclear contour is represented as Hh%. The mean range is 34.20 Hz.

While there are quite a lot of subsequently incomplete IPs (235) in the material under study, we have revealed only 15 incomplete intonation phrases of clarifying nature. Fig. 9 represents an example of an incomplete IP of clarifying nature.
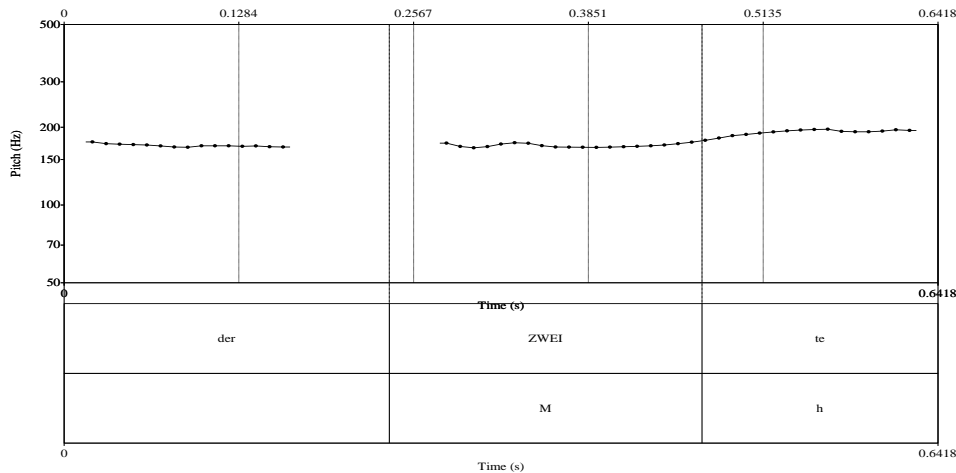
Fig. 9 Informant 3: IP 9 "*der zweite*"

Incomplete IP 9 of the clarifying nature has a low pitch level at the nuclear syllable *ZWEI*- ($F0_{min}$166.50 Hz / 8.82 pt) rising gradually to its end. The intonation contour rises up to $F0_{max}$ 196.84 Hz / 11.69 pt at the post nuclear syllable -*te* and further remains the same till the end of the IP. Thus, the incompleteness of clarifying nature is realized by means of the rising tone at the end of the IP. The pitch of the boundary tone (h%) is 196.84 Hz / 11.69 pt. The stressed syllable of the two-syllable nuclear contour has a mid pitch level rising only at the end of the nuclear syllable, so it is marked as M. The nuclear contour is represented as Mh%. The mean range is 30.34 Hz which is considered to be a narrowed vocal range. We define this intonation contour as an intonation contour of the arc-shaped configuration described with three values of control: low pitch at the onset of the nuclear syllable, high pitch at the end of the nuclear syllable, and the pitch value of the IP boundary tone.

Conclusion

This study has described intonation contours of complete intonation phrases used in the speech of the informants (Low German and High German speakers from the villages of Sozimsky and Chernigovsky). In total, 500 complete intonation phrases were analyzed. Our hypothesis was that absolutely and potentially complete phrases should have a different pitch at the borders of intonation phrases depending on whether there is or there is no conversation turn. Our findings do not confirm this hypothesis.

Our findings show that the intonation phrases (both absolutely complete and potentially complete) have two intonation contours: the falling contour (Hm%) and its variant (Hl%); and the rise-fall contour (MHm%) and its variant (LHl%). The syllable structure of the nuclear contours also has two variants: two-syllable nuclear contours are Hm%, MHm% and their Hl% and LHl% variants; multi-syllable nuclear contours are H–m%, MH–m% and their H–l% and LH–l% variants. The falling and the rise-fall contours have a linear configuration which is manifested as an uninterruptedly linear tone steeply falling from the nuclear syllable to the end of the intonation phrase. According to Gilles, the linear configuration is described with two values of control: the pitch of the nuclear syllable and the pitch of the IP boundary tone (Gilles, 2006). According to these control values, the falling intonation contour and the rise-fall intonation contour are defined as linear contours. As Gilles (2006) states, complete intonation phrases of Standard German do not have a linear configuration, they are usually characterized by curved and broken configurations of the falling and rise-fall intonation contours (Wunderlich, 1988).

We have also analyzed the intonation contours of 250 absolutely and potentially incomplete IPs (235 subsequently incomplete intonation phrases and 15 incomplete intonation phrases of clarifying nature). The analysis has revealed one intonation contour: rising intonation contour (Hh%) and MHh% contour which is its variant. The analysis has also shown that two-syllable nuclear contours have the Hh% realization and its MHh% variant, while H–h% and its MH–h% variant are multi-syllable intonation contours. The rising nuclear contour of subsequently incomplete IPs (both absolutely and potentially incomplete) starts with a high pitch level at the nuclear syllable which is followed by a rise at the

end of the nuclear syllable or remains the same. Incomplete IPs of clarifying nature also have only one intonation contour: it is a rising intonation contour (Mh%) and its MHh% variant (two-syllable nuclear contours); and M–h% and MH–h% contours (multi-syllable nuclear contours). There are no potentially incomplete IPs of clarifying nature in the researched material. The intonation contours described above are observed in the speech of both Low German and High German speakers.

Having measured the values of control we have identified the arc-shaped configuration of the intonation contour of incomplete IPs, which is manifested as a gradual rise of the nuclear tone starting from the nuclear syllable to the end of the IP (Zimmermann, 1998).

In our research, we used the experimental technique developed by Gilles in his study of German regional dialects at the suprasegmental level (Gilles, 2006). We used this technique to study the German language islands of the Kirov region, that is, the scope of application of this technique can be considered as a new one. The study analyzed complete and incomplete intonation phrases, their intonation patterns, and intonation nuclear contours. The results of the study suggest that all the intonation contours described above are characteristic of the speech of the informants who are speakers of High German and Low German dialects. The study has shown no distinctions in this parameter between the dialects, which indicates the mixed nature of the dialects spoken in the region.

Acknowledgements

Disclosure Statement

The authors have no conflict of interest to report.

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