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The Impact of Rhythmic Distortions in Speech on Personality Assessment

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Abstract

The perennial question as to how perceived otherness in speech projects into listener assessment of one's personality has been systematically investigated within the field of foreign accentedness, vocal communication of affective states and vocal stereotyping. In the present study, we aimed at exploring non-native listeners' capacity to respond to differences in natural and modified native speech, particularly whether the manipulation of temporal structure in both stressed and unstressed syllables gives rise to any changes in the perception of the speaker's personality. The respondents' intuitive judgements were captured in the domain of the 'nervousness category' taken from the five-factor model of personality. Our results indicate an effect of temporal modifications on the listeners' judgements. Analysis of variance for repeated measures confirmed a highly significant shift of personality evaluations towards the undesired traits (e.g., nervousness, anxiety, querulousness). Several interesting interactions with the semantic contents of the utterances and with the intrinsic qualities of the speakers' voices were also found. We argue that the effects of accented speech go beyond conscious willingness to accept "otherness" and suggest a method for studying them.

Keywords: temporal structure, rhythm, neuroticism, perception, stereotype, foreign accent

1. Introduction

With the global spread of English in today's vastly interconnected world and a growing number of non-native speakers using English in international contexts, we are witnessing a significant shift from the previous rejection of foreign-accentedness as something undesirable to the present greater openness to non-native speech. Calling for a wider acceptance of accent variation in the new millennium has replaced the hunt for accent

reduction common three decades ago. The firm adherence to native norms, British and American standards in particular, has been continually challenged along with other fundamental concepts operating within the traditional second language acquisition framework (Walker, 2010). These changes have resulted, apart from other things, in acknowledging both speakers and listeners as equally responsible for the success of communication instead of laying the main share of blame on the speaker, usually a non-native user, when a communication breakdown occurred. The idea of equal partnership in mutual interactions is believed to be implemented through raising general awareness about otherness in speech, or, more tangibly, through the development of supportive listening and phonological accommodation skills, especially on the part of native listeners. (Jenkins, Cogo & Dewey, 2011).

The demand that the listener take a more active role in the communicative process cannot be considered other than praiseworthy. However, without further investigation and deeper understanding of what impact foreign-accented speech has on communication in various settings and what kind of emotions it may stir up in the minds of interlocutors, its fuller acceptance may remain wishful thinking. The research carried out in this field so far has repeatedly confirmed the activation of dormant prejudices or creation of biases on the listener's part triggered by lower comprehensibility of foreign-accented speech and its increased processing load (Volín et al., 2013). This experience may consequently lead to downgrading non-native speakers' credibility, avoiding future interactions with them and other discriminatory acts (Munro & Derwing, 1995; Major, 2007; Lev-Ari & Keysar, 2010). Another strand of research approaches the discussed issue from the speaker's perspective and offers valuable insights into what it is like to speak differently and how the expected stigmatisation projects into the speaker's self-perception, sense of belonging (or anxiety due to experienced exclusion) and willingness to initiate or join conversations with native interlocutors (Gluszek & Dovidio, 2010; Gluszek et al., 2011).

It is truly amazing how much information a voice can reveal about its owner, although not all listener inferences correspond to true attributes of the speaker (Teshigawara, 2003). For example, it was found out that increased vocal attractiveness projects favourably into person perception. In other words, listeners think that people with attractive voices have more likeable and assertive personalities (Zuckerman & Driver, 1989). The vocal attractiveness stereotype offers a strong contrast to the negative reactions caused by the presence of foreign elements in one's speech and leaves researchers with a complicated task to shed some light on the nature of vocal stereotyping in different contexts.

Foreign-accentedness provided the first source of inspiration for the current study which scrutinizes the perception of otherness in speech, the second source being the relationship between prosodic variability and personality assessment. In his comprehensive overview, Scherer (2003) presents and discusses the major findings of research on vocal communication of emotion as well as the employed research paradigms. According to his classification, our experimental design ranks among inference studies which allow the determination of the relative effect of individual acoustic parameters on listener judgement either by cue masking or cue manipulation via synthesis (Scherer 2003, 239). A large number of works investigate the impact of global prosodic features on perceived affective states. The findings indicate, for example, that

increased speech rate signals excitement, agitation or anger while reduced speech rate is associated with qualities such as calm, content, irked (Kehrein, 2002), or that narrow and wide pitch range give rise to sadness and annoyance respectively (Scherer, 2003). Pitch level and loudness belong to other typically explored variables (Trouvain et al., 2006). Our focus turned to more local features, specifically to temporal distortions of vocalic nuclei in stressed and unstressed syllables, which seem to be examined rather sporadically to the best of our knowledge.

From Scherer's complex typology of affective states we chose personality traits for our investigation which the author characterizes as emotionally laden, stable personality dispositions and behaviour tendencies (Scherer 2003, 243). For personality assessment we applied the well-established and largely used five-factor model (see, e.g., Mohammadi et al., 2010; Trouvain et al., 2006) the consistency and adequacy of which with respect to everyday language were empirically verified by McCrae & Costa (1987). In order to narrow down the list of measured personality features and to gain better control of the design of the experiment, the factor of neuroticism was arbitrarily selected and the relevant adjectives – anxious, nervous, shy, open, sensitive and impulsive – created the basis for devising the perception instrument. We formulated the research question as follows: How does the local temporal distortion in speech mirror in listener perception of the speaker's nervousness? We hypothesized that temporal modifications would induce a change in personality evaluation.

2. Method

Our data were amassed via a perception test piloted by Volínová (2013), which was revised and expanded for the purposes of this study. The spoken material comprised 24 sentences devoid of emotionally charged language. The audio clips were from various radio programmes, presentations or read books, and lasted approximately 5 seconds each. They contained speech of 14 different English professional speakers. The local temporal manipulations were carried out in the Praat programme (Boersma & Weenink, 2012), using the PSOLA algorithm. The manipulations involved halving and doubling the duration of vowels in stressed and unstressed positions, respectively. This approach was inspired by the findings of Volín (2005) and Volín & Poesová (2008) in Czech-accented English. The aim was to create minor, yet perceptible alterations in the rhythmical structure of the utterances without any disturbing artefacts. Both original and resynthesized versions were randomized in the perception instrument to avoid the order effect. The potential threat of memory effect was reduced by desensitization in the form of short stretches of music separating individual test items and by the inclusion of fillers, specifically the voices of four BBC newsreaders, which were not manipulated and not included in the subsequent analyses.

The test was administered individually in a sound-treated studio of the Institute of Phonetics in Prague over the period of three weeks. The recordings were played via an *Acer* laptop and a set of headphones. The total number of listeners involved in the perception testing was 45. The majority of them were undergraduate students of the English language at the Faculty of Education, Charles University in Prague. The rest attended the Faculty of Arts of the same university. Their age ranged from 20 to 30

years, and none of the 39 females and 6 males reported any hearing disorder. All the respondents spoke English at the B2-level of CEFR or higher (upper intermediate use of English). They expressed their own voluntary interest to take part in the testing and received no financial compensation.

Reactions to the spoken stimuli were obtained by means of a battery of statements stemming from McCrae & Costa's pair adjectives subsumed within the neuroticism factor (1987). These statements either directly contained one of the key adjectives (e.g., *This person is anxious. This person is calm.*), or they described the typical behaviour of a person with the target attribute (e.g., *Watching a sad movie makes this person cry easily, This person easily strikes up a conversation with a stranger while waiting at a bus stop*). The behavioural type of statements prevailed as they reflect the real life inference processes more adequately. The identical statement was always matched with the natural and modified recordings of the same speaker. The whole test was divided into 4 blocks each comprising 14 statements, out of which 2 functioned as distractors. Statements were balanced so that positive (desired) and negative (avoided) human attributes were not biased towards the left or the right side of the answer sheet. Thus, although the seven-point scale was always oriented in the same way, the desired and undesired human features switched sides. Naturally, before the analyses, all the scores were adjusted so that undesired qualities were scored by negative numbers, while the desired (e.g., calmness, self-confidence) by positive values.

Precise instructions were crucial for the smooth running of the test. The respondents were first reassured that their knowledge of English was not the focus of testing. Subsequently, they were asked to try to capture the first impression of the speakers regardless of the content of the utterances. The testees were further informed that they would be given a few seconds to read each statement in advance and that the corresponding recording would be played only once in order to spark off their immediate reactions to the spoken material. Their percepts were marked on a seven-point scale placed under each statement containing three positive values, zero and three negative values. The respondents had to choose one value that best reflected the extent to which they thought the statement about the speaker was true. They were asked to tick the zero value as a last resort and not to pay any attention to the meaning of the uttered sequences. The perception test lasted approximately 20 minutes including short breaks between the individual blocks.

3. Results

Each of the 48 target items was assessed by 45 listeners. This produced 2,160 evaluations or judgements. The evaluations were not uniform – on the one hand, the distribution of the scores over the 7-point scale was not random (rectangular distribution), on the other hand, individual judgements were sometimes quite spread and conflicted with each other. The standard deviations from the mean score given to an item ranged between 1.16 and 2.07 score points. The mean standard deviation for the natural items (i.e., non-manipulated) was 1.83 points, while the same measure for the manipulated items was 1.77 points. This difference was found insignificant and can be

interpreted by stating that the level of coherence with which our listeners judged the personality of the speaker was roughly equal for both the natural and manipulated items.

Figure 1 shows the difference between the grand mean scores awarded to natural and manipulated items. It is obvious that across all the speakers and items the mean score for the non-manipulated speech is about zero (more exactly 0.03), which, indeed, makes them on average neutral. The manipulated items yielded the mean score of –0.35, indicating more neuroticism for rhythmically distorted speech. One-way ANOVA for repeated (matched) measures was used to find out whether the difference was generalizable. The outcome suggests a high significance of the result: $F (1, 23) = 14.2$; $p < 0.001$.
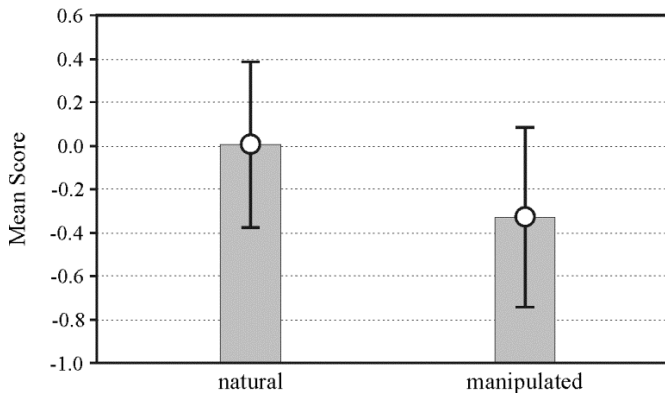
Figure 1: The grand mean scores given to natural (on the left) and rhythmically manipulated (on the right) items.

Table 1 displays the results for individual pairs of items. It can be observed that the shift in perception towards greater neuroticism occurred in 19 out of the 24 pairs of items, whereas in the remaining five pairs the shift happened in the opposite direction. Also, the items that contributed to the resulting overall trend (see above) produced larger individual differences between the natural and modified member of the pair (Δ sc.) than the five deviant pairs.

Pair	Δ sc.	Pair	Δ sc.	Pair	Δ sc.	Pair	Δ sc.
1	-1.000	7	-0.667	13	-0.333	19	-0.156
2	-0.867	8	-0.600	14	-0.289	20	0.022
3	-0.867	9	-0.600	15	-0.267	21	0.156
4	-0.800	10	-0.422	16	-0.267	22	0.244
5	-0.689	11	-0.378	17	-0.222	23	0.600
6	-0.689	12	-0.356	18	-0.178	24	0.622

Table 1: Differences (Δ sc.) between the mean scores of pairs of matched items. Ordered by magnitude. Negative values mean shift toward neuroticism.

Since eight of our fourteen voices were used more than once in the listening test, we were able to compare the 'twin pairs'. Figure 2 shows the mean score which was attributed to the neutral (non-manipulated) items when the speaker occurred the first and second time in the test. The results indicate that the listeners' evaluation of neuroticism was not based on purely intrinsic properties of the speakers' voices. Only speakers S6 and S8 received very similar scores for both of their utterances. However, different aspects of neuroticism were queried for each of their utterances (e.g., anxiety and impulsiveness for S6). Contrary to that, S1 and S7 were queried for the same aspect, but the scores they received for their two utterances clearly differ from each other.
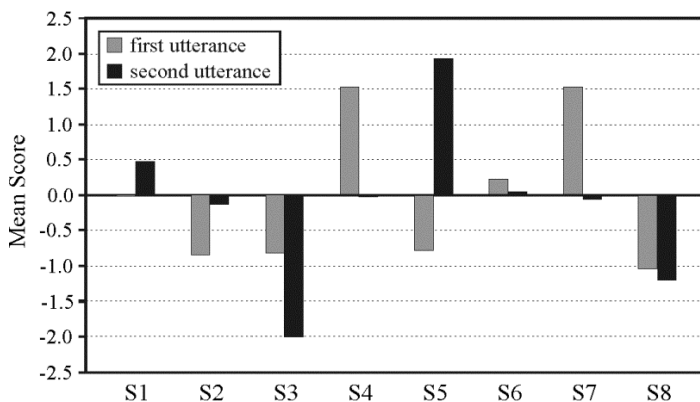
Figure 2: Mean score for eight speakers (S1 to S8) who occurred twice in the test with different utterances.

4. Discussion

The research carried out in the field of foreign accent repeatedly confirms the impact of foreign features on the listeners and ultimately on the speakers themselves. Up to date, however, it has been relatively common to depict them holistically, as an aggregate. It is quite rare to find an experiment with personality perception scaling which assesses the accent attributes analytically from the phonetic point of view or isolates and weighs them against each other. Our study makes a modest step in this direction.

The manipulations or durational ratios of stressed and unstressed vowels affected the listeners' ideas about the personality of the speaking individual. Although we took care not to make the durational changes too conspicuous, let alone distracting, they were still perceived and caused an increase of the neuroticism factor in the image of the speaker. The minds of the listeners used the information about the temporal structure of the utterance to portray the speaking individual.

We were also careful not to sway the respondents' feeling by the content of the utterance and we explicitly asked them to ignore the meaning of the words spoken, but nevertheless the same voice uttering different words did not produce the same results. Our analyses do not permit an unambiguous interpretation of this finding. The meaning of the words could be an obvious answer, but it is also possible that subliminal local

features of the speaker's performance swayed the assessment. After all, one voice does make different impressions on different occasions. It could also have been the number or position of stressed syllables in one or the other utterance, which we did not control for. Similarly, the differences in the size of the resulting effect could have been influenced by an absolute change brought by the manipulation or by subtleties in the questionnaire wordings. All of these variables have to be investigated in future research, since the transparency of the methodology can stimulate comparative research in more than one accent of more than one language. This, in turn, would provide clearer answers concerning the effects of foreignness in speech and lead to more responsible decisions about social issues related to it.

Acknowledgement

References

Boersma, P. and D. Weenink. 2012. Praat: doing phonetics by computer (version 5.3.14). Retrieved from http://www.praat.org/.

Gluszek, A. and J. F. Dovidio. 2010. Speaking With a Non-native Accent: Perceptions of Bias, Communication Difficulties, and Belonging in the United States. Journal of Language and Social Psychology 29: 224–234.

Gluszek, A., Newheiser, A. K. and J. F. Dovidio. 2011. Social Psychological Orientations and Accent Strength. Journal of Language and Social Psychology 30: 28–45.

Jenkins, J., Cogo, A. and M. Dewey. 2011. State-of-the-Art Article: Review of developments in research into English as a lingua franca. Language Teaching 44: 281–315.

Kehrein, R. 2002. The prosody of authentic emotions. Proceedings of Speech Prosody: Aix-en-Provence, France.

Lev-Ari, S. and B. Keysar. 2010. Why don't we believe non-native speakers? The influence of accent on credibility. Journal of Experimental Social Psychology 46: 1093–1096.

Major, R. C. 2007. Identifying a foreign accent in an unfamiliar language. Studies in Second Language Acquisition 29: 539–556.

McCrae, R. R. and P. T. Costa. 1987. Validation of the Five-Factor Model of Personality across the instruments and observers. Journal of Personality and Social Psychology 52: 81–90.

Mohammadi, G., Vinciarelli, A. and M. Mortillaro. 2010. The Voice of Personality: Mapping Nonverbal Vocal Behavior into Trait Attributions. Social Signal Processing Workshop: Firenze, Italy.

Munro, M. and T. Derwing. 1995. Foreign accent, comprehensibility, and intelligibility in the speech of second language learners. Language Learning 45: 73–97

Scherer, K. R. 2003. Vocal communication of emotion: A review of research paradigms. Speech Communication 40: 227–256.

Teshigawara, M. 2003. Voices in Japanese Animation: A Phonetic Study of Vocal Stereotypes of Heroes and Villains in Japanese Culture. Unpublished dissertation thesis.

Trouvain, J., Schmidt, S., Schröder, M., Schmitz, M. and W. J. Barry. 2006. Modelling personality features by changing prosody in synthetic speech. Proceedings of Speech prosody: Dresden, Germany.

Volín, J. 2005. Rhythmical properties of polysyllabic words in British and Czech English. In: J. Čermák et al. (Eds.) Patterns, A Festschrift for Libuše Dušková. Praha: Kruh moderních filologů: 279–292.

Volín, J. and Poesová, K. 2008. Temporal and spectral reduction of vowels in English weak syllables. In: A. Grmelová et al. (Eds.), Plurality and Diversity in English Studies. Praha, UK PedF: 18–27.

Volín, J., Weingartová, L. and R. Skarnitzl. 2013. Spectral Characteristics of Schwa in Czech Accented English. Research in Language 11 v1: 31–39. DOI: 10.2478/v10015-012-0008-6

Volínová, S. 2013. Perceptual Stereotypes in Social Interaction. Unpublished bachelor thesis.

Walker, R. 2010. Teaching the Pronunciation of English as a Lingua Franca. Oxford: Oxford University Press.

Zuckerman, M. and R. E. Driver. 1989. What sounds beautiful is good: The vocal attractiveness stereotype. Journal of Nonverbal Behavior 13: 67–82.

THE BOLD AND THE BEAUTIFUL: HOW ASPECTS OF PERSONALITY AFFECT FOREIGN LANGUAGE PRONUNCIATION

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Abstract
This paper reports on a study into the inter-relationships amongst foreign language pronunciation, mimicry ability and a range of personality and attitudinal factors. It will begin with a brief review of studies into affective influences on pronunciation ability (Arnold 1999, Hu & Reiterer 2009) and research into the importance of mimicry talent (Jilka 2009; Piske, MacKay & Flege 2001). This will be followed by a short description of a pilot study carried out prior to the main experiment.

In the main study, a group of Polish learners of English completed a number of mimicry tasks in three languages: Italian, Dutch and Chinese, as well as a narration task in English. Mimicry performance and English pronunciation were then assessed by native speakers and compared. Participants also completed a questionnaire concerning their feelings about the languages they were to mimic and a second questionnaire designed to detect affective factors such as language learning anxiety, as well as attitudes towards the pronunciation of Polish and English. The pilot study suggested that the perceived attractiveness of the foreign language to be mimicked did not affect the performance of most participants, and that mimicry skill was fairly constant across languages. However, those who were particularly concerned about their personal appearance showed greater fluctuation in their ability to mimic and their performance appeared to be influenced by their attitude towards the language. This is referred to by the author as the Cecily effect. That study also confirmed the results of my previous experimental work showing that mimicry skill is correlated to some degree with English language pronunciation and that both pronunciation and mimicry are negatively affected by high levels of anxiety. The main study sets out to investigate whether or not these conclusions hold true for a larger sample population and also seeks to determine the effect of confidence and willingness to take risks on scores for both foreign language pronunciation and mimicry exercises.

Keywords: mimicry, pronunuciation, affect, Cecily effect

1. Introduction

Foreign language pronunciation, like all other aspects of linguistic performance, is influenced by a range of variables, of which each individual speaker has a unique combination. Some of those factors are related to the learning environment the speaker has enjoyed, others are more personal and, therefore, very hard for the teacher, and often

the student himself, to control. This second group includes cognitive abilities, personality features and attitudes towards the language, as well as the great affective forces of motivation and anxiety. Indeed, pronunciation might well be thought particularly susceptible to affective and emotional factors, since it is the first thing about our speech in a foreign tongue to be judged by those who hear us. The speaker's capacity to handle complex grammatical structures or use appropriate vocabulary is not readily apparent in his first utterance, but his pronunciation, and specifically his accent, is. In addition to being judged by others, the actual quality of the sounds we are making when speaking foreign tongues is also particularly relevant to our self-image and likely to bring fears that one may be sounding foolish before one has really said anything very much at all.

There are two very good reasons to study these effects: firstly, looking at the cognitive processes involved and how they may or may not be influenced by other factors may lead to a properly understood concept of foreign language pronunciation aptitude, for which tests might be developed to predict which learners have the potential to go on to native-like levels of pronunciation and to detect which were likely to need special assistance in the same area. Secondly, the study of how attitudes towards particular languages and sound systems influence learners' ability to pronounce them will assist teachers in identifying reasons for weaknesses in their students and give them the opportunity to attempt to modify those attitudes in a favourable direction. It should be noted too, that where it is not possible to modify the student, it may be possible to modify the material and the approach.

Throughout this paper it is assumed that learners of foreign language should, and to a large extent actually do, aim at a standard pronunciation model approved by the native speaker community. Due to the prevailing preference of teachers and institutions in Poland, this is taken to be a standard British accent generally referred to as Received Pronunciation (RP) for the purposes of assessment. It is accepted, however, that this assumption is somewhat controversial and, indeed, the degree to which native-like accent is in fact striven for is something which the study tools try to capture.

2. Factors affecting pronunciation

This section will provide a very brief review of some of the factors which have previously been identified as relevant to the quality of pronunciation and pay particular attention to those with which the study itself is concerned. In their exhaustive review of work done at that time Piske, MacKay and Flege (2001) list several factors which had been claimed to affect pronunciation in learners. They were: age of learning, length of residence in target language community, gender, degree of formal instruction, motivation, and language learning aptitude.

The impact of age of learning is generally associated with the Critical Period Hypothesis (CPH) which states that after a certain point, children lose the ability to develop accent-free speech in a new language. This theory suffers from the existence of a great many versions, some with more than one cut-off point, many citing different ages, spanning the entire length of childhood. While this variety does not necessarily mean the theory is incorrect: there is no doubt that 'early learners speak L2 with a lower

degree of foreign accent than late learners' (Piske, Mackay & Flege 2001: 197), it has led critics such as David Singleton to cast doubt on it. He points out that as well as different ages at which the critical period is supposed to finish, there are as many as three distinct varieties of explanation for the phenomenon: neuro-biological, cognitive-developmental, and affective-motivational. Rather than trying to argue against it, therefore, he simply notes that 'it is like the mythical hydra, whose multiplicity of heads and capacity to produce new heads rendered it impossible to deal with' (Singleton 2005: 280). At any rate, the lack of direct correspondence between age of learning and pronunciation level makes it clear that, while older learners are far less likely to achieve high levels of proficiency in pronunciation, other factors are at play.

Length of residence is, obviously, only of relevance in natural, second language settings, and the results of studies have been mixed, with the actual use made of the language a possibly decisive factor. This is also the case with gender: where it has been found to be a factor, females have been rated more highly for accent, but not all studies have seen a significant difference. Piske et al. are also unconvinced by the influence of formal instruction on foreign accentedness concluding 'there is little evidence to date that amount of formal instruction as such affects degree of L2 foreign accent' (2001: 201), although this would certainly be disputed by, among others, Derwing and Rossiter (2003) and Graeme Couper (2003, 2006).

Of the factors mentioned so far, only gender will be looked at in this study: the learning experiences of the participants, in terms of age at which learning began and type of instruction they have received, are very similar as they are from a homogeneous age and social group. The two remaining factors, however, are of much greater interest here. Motivation is the only affective factor on the list and to some extent, therefore, stands proxy for affect in general. Piske et al. point out that while motivation has generally been found to have a role in determining pronunciation outcomes, there are problems with the quantification of it in many studies. More recently, Małgorzata Baran-Łucarz (2013) has investigated the effect of anxiety on the learning of phonetics. She points out that although a number of more specific anxieties have been identified since the concept of foreign language classroom anxiety (Horwitz, Horwitz & Cope 1986) was accepted, 'so far no instrument has been designed to examine specifically the nature of pronunciation anxiety, which could address feelings evoked by the way one sounds or looks like when talking in a FL' (Baran-Łucarz 2013: 60-61). The application of her own attempt to construct such a tool leads her to the conclusion that what she refers to as Phonetics Learning Anxiety 'is indeed an important factor determining success in FL pronunciation learning' (2013: 74). This statement must be subject to the usual questions over the direction of the anxiety/performance relationship (Ganschow & Sparks 1996) but represents an interesting step in the understanding of the impact of affective factors on pronunciation.

The final factor mentioned by Piske et al. is that of language learning aptitude. It is important to note that they are not referring to the Carrollian concept (Carroll, 1965), as tested by the Modern Languages Aptitude Test, but rather to innate factors in general: specifically, they discuss musical ability and mimicry. Studies into musical ability have had mixed results, partly because that ability can have various definitions, and few conclusions can be drawn. Mimicry, on the other hand, 'has repeatedly been identified as a significant and independent predictor of degree of L2 foreign accent' (Piske et al. 2001:

202). They refer in particular to a well-known study by Purcell and Suter (1980) which was actually a reassessment of Suter's earlier work, and found only L1 to have a greater influence on accentedness than mimicry skill. A similar pattern has also been found repeatedly in my own work (Hinton 2013).

A recent large-scale study into a range of aptitudinal and affective/psychological factors influencing pronunciation is reported in a book edited by Grzegorz Dogil (2009) and a number of follow-up papers by his team. Using a battery of mimicry (in Hindi) and English pronunciation tests on a large group of German learners, the team divided their subjects into groups of high pronunciation talent, average pronunciation talent and low pronunciation talent. When representatives of each group were subjected to magnetic resonance (MR) brain scanning whilst performing a mimicry task, clear differences were recorded between the talented and untalented participants, leading the researchers to conclude that they had found evidence of 'a distinct neurofunctional/neuro-anatomical signature of speech imitation ability' (Reiterer et al. 2011: 9). This kind of analysis is a vast improvement on vague concepts such as having 'a good ear', traditionally associated with mimicry.

Analysis of the personalities of the same group of German learners of English, however, produced far less clear-cut results. Despite the employment of an extremely wide range of psychological perspectives and tools for measurement, the researchers found only a weak link between pronunciation talent and empathy and an increase in positive affects amongst the more talented when performing phonetic-articulation tasks (Hu & Reiterer 2009: 119). It appears from this study that general personality traits per se do not have great influence on pronunciation ability and that any search for links between the individual's attitudes and character, and degree of foreign accent will have to concentrate on attitudes and beliefs more specific to the target language and its sound.

One further complicating factor is the degree to which differing variables of cognitive functioning, motivation and anxiety, and attitudinal or personality attributes may interact. This continued interaction and interdependence has led Zoltan Dornyei to speak of the view of stable, quantifiable individual differences as a 'myth'. He believes that this traditional conception 'does not do justice to the dynamic, fluid and continuously fluctuating nature of learner factors and neither does it account for the complex internal and external interactions that we can observe' (Dornyei 2010: 253). There is no room here to examine what all of those interactions might be or even to discuss which are of most relevance to the study of pronunciation performance, however, the possibility of identifying some key factors and how they affect each other as well as eventual learner outcomes is part of the motivation for this study and is described more fully in the section below which details the results of the pilot study done in preparation for the larger-scale experiment which is the focus of the paper.

3. The pilot study

The motivation behind the present study was a set of anomalous results in earlier work which had used mimicry to assess pronunciation talent as part of a wider investigation into language learning aptitude (Hinton 2012). The results gave the impression that while there was a broad correlation between mimicry skill and pronunciation in English,

certain individuals appeared to under-perform in mimicry tasks involving an exotic language. Further investigation of these individuals showed them all to be well-presented females who obviously took considerable care over their appearance. The possibility that vanity or an anxiety over appearance might have affected the mimicry results led to the suggestion that a Cecily effect, (after the Oscar Wilde character who felt ugly after speaking German) might be in operation. The original intention, then, of this study was to seek further evidence of that effect. A pilot study was conducted on just 10 participants in order to test the tools and determine whether or not the same effect would be reproduced on the original subjects. A full description and assessment of the tools and a discussion of the results has been provided elsewhere (Hinton in press) but below is a brief summary of the key points.

- Although the population was too small for statistical significance, correlations between mimicry and accent ($r=0.42$), and mimicry and anxiety ($r=-0.35$) were around the expected levels.
- No correlation was found between perceived attractiveness of the language and mimicry performance. However, the three participants with the highest interest in their appearance all did relatively worse than the other 7 on the least attractive language (Chinese).
- This under-performance gives greater plausibility to the existence of the Cecily effect among a proportion of the population.
- The tools performed reasonably well, but certain changes were identified as necessary for the main study.

Perhaps the key conceptual addition for the main study was the introduction of a scale for boldness. While anxiety clearly exerted a negative influence on mimicry and pronunciation scores, there was a suspicion that the mimicry scores of certain individuals were being boosted by their boldness or willingness to take risks and the main study set out to examine whether this was in fact the case and whether that boldness also had an effect on degree of accent.

4. An experiment

The aim of the practical study undertaken, then, was to test the following hypotheses:

- 1 – That for the section of the population with very high interest in their appearance, mimicry performance would be affected by feelings about the attractiveness of the input language. (The Cecily effect).
- 2 – That high boldness would lead to improved performance in mimicry but not in foreign language pronunciation.

These hypotheses were to be tested by assessing certain affective variables and comparing their levels in each individual with that individual's performance on a series of mimicry tests and an English accent assessment exercise, as described below.

5. Method

The experiment was conducted in the autumn of 2013 at the foreign language teacher training college in Sieradz, Poland. There were 31 participants in total: 6 males and 25 females; this imbalance reflecting the overall proportions in the college population, not chosen by design. The age range of the participants was from 17 to 24. 29 of the participants were students of the college at the time of the study (aged 19 to 22), one had recently graduated and one was a high school student. The graduate was included as she had previously been identified as possessing a particular talent for pronunciation. The youngest participant was considered to have a similar level of English to the college students, had had significant exposure to a native English accent in a foreign language setting, and had previously expressed high interest in her appearance.

The study was divided into three steps. First, the participants were asked to complete a survey which consisted of 35 statements to be rated on a 5-point Likert scale, from 1 – completely disagree to 5 – completely agree. The statements were grouped into 7 categories of 5 questions each, dispersed randomly throughout the survey. The categories which the statements were intended to assess were as follows: importance of sound, importance of appearance, language learning anxiety, regard for Polish, regard for English, openness to foreign cultures, and boldness. The first six of these categories were trialled in the pilot study (see section 3 above) and the seventh, boldness, was added as a result of the apparent influence that a willingness to take risks in earlier mimicry tests had had on the inflated scores of some participants. A full list of statements is given in appendix A. The scores given to the 5 statements in each category (some reverse-marked) were summed to give a score out of 25 for that variable, for each individual. It should be noted that no measure for motivation was included because in previous experiments all participants had claimed to be highly motivated, and perhaps believed their answers to be truthful. It is hoped, therefore, that other variables, such as importance of sound and regard for English, may stand proxy for a scale of pronunciation motivation.

The second part of the test made use of three input languages: Italian, Mandarin Chinese and Dutch. None of the participants had any experience of learning or working with these languages, although, obviously, the degree of familiarity with each would be expected to vary from individual to individual. The choice of languages was based on an informal survey of students which suggested that Romance languages were the most pleasing to the ear and exotic Asian languages the least. Many respondents also cited German as an unpleasant language. The use of German was not possible since the participants had all spent some time learning that language, with varying degrees of success. However, Dutch was considered to be an intriguing substitute, being a close relative of German without the historical baggage which might be expected to influence Polish speakers in their opinion of its sound. The choice of all three languages was also influenced by the availability of a native speaker to assist with the grading.

At first, participants were played a sound recording taken from a popular television programme in each of the three languages. Each recording featured a male and a female in fluent discussion and lasted around 30 seconds. After each clip, participants were asked to complete a short questionnaire, featuring 4 statements (see appendix B) on a 5-point Likert scale, to measure how attractive they found the sound of the language. They

were also asked to try and identify the language if possible, but were not told immediately if they were correct.

This procedure was followed directly by a series of 3 mimicry tests, one in each of the input languages, featuring 12 words or short phrases. These were either recorded by the native speaker graders or taken from Google Translate sound clips. Participants heard each word or phrase once and repeated it immediately to the best of their ability. These responses were recorded for later marking. The marking system adopted had been used in the pilot study and other mimicry tests I had previously conducted and found to be simple and effective. Each response was graded on a scale of 0-3, where 0 = no response, 1 = a poor effort, 2 = a reasonable effort and 3 = a good effort. Although it could be argued, quite successfully, that 'poor', 'reasonable' and 'good' are subjective terms which cannot possibly be interpreted in the same way by each assessor, that would be to miss the point. The absolute score for each test is not important since no attempt was made to standardise the level of difficulty for each language other than to keep the number of syllables similar: this study did not intend to investigate which languages are more difficult to mimic. What is important is the relative strength of each participant within the group for each language compared to the relative strength of his accent and relative importance of certain other variables. What matters, therefore, in the marking process is only that each assessor is consistent across the 31 participants. Total consistency, of course, is not possible and borderline cases between a 1 and a 2 or a 2 and a 3 may receive a different mark at different times, but, since the responses are recorded, the assessor may listen as many times as necessary to each participant to be sure of fairness. Other problems, however, did appear as a result of this marking scheme and are discussed in the results section below. The scores given below for each language are those of the native speaker assessor.

The third and final part of the test was an exercise in English narration. Each participant was asked to read aloud a passage after looking at it briefly. The passage (see appendix C) was taken from an unpublished story written by the researcher so as to ensure that it was equally unknown to all participants. The recordings were then assessed for quality of English accent by two native speakers of English, one male and one female. Each participant received a mark out of 10 for accent: mistakes in pronunciation and stress due to unfamiliarity with certain words were ignored. The scores given in the results below are an average of the marks of the two assessors.

6. Results and discussion

The various experimental tools produced a large amount of data on each participant. These data are summarised in the following tables and discussed in turn. The number of participants is constant at 31 throughout all the indices. The first table gives information about the results of the survey. The maximum score in each category is 25, the minimum 5.

	Sound	Appearance	Anxiety	Openness to cultures	Regard for Polish	Regard for English	Boldness
Mean	19.06	17.03	16.94	18.87	16.90	18.19	16.23
Standard deviation	3.29	3.72	2.26	3.91	2.26	2.89	2.89
High	24	24	22	24	20	24	22
Low	10	8	10	9	12	12	11

Table 1: Survey – general information

The highs and lows shown in the table make it clear that the categories provoked wide-ranging responses. The higher standard deviations for interest in appearance and openness to other cultures illustrate that these categories produced the most varied responses.

Table 2 gives the same information for the second part of the survey, dealing with the attractiveness of the input languages. The four statements given to participants are listed in appendix B. However, responses to the fourth statement are not included in the results. A similar statement proved troublesome in the pilot study and despite a small change to the wording, again appeared to cause confusion with some participants unsure whether 'sounds funny' was a positive or negative opinion. The scores for each language, therefore, have a maximum of 15 and a minimum of 3.

	Italian	Chinese	Dutch	Total
Mean	11.29	7.52	8.65	27.45
Standard deviation	2.64	3.15	3.33	5.23
High	15	15	15	37
Low	5	3	3	14
Correlation with openness	0.1	0.54	0.05	0.41
Correlation with anxiety	0.15	-0.44	0.22	-0.05

Table 2: Attractiveness of languages survey

This table makes it clear that Italian was, as expected, the most popular language with the sound of Chinese least attractive. At least one person gave maximum points to each of the languages, but only Italian managed to avoid a minimum score. This enormous difference in taste makes clear the potential for feelings about sound to be a significant variable in performance across languages. While these differences in feelings may have been expected, the correlations with the variables from the affect survey make for interesting reading. While neither openness to foreign cultures nor anxiety had much

effect on feelings about the European languages, the correlations with scores for Chinese are significant (p<0.014).

Table 3 provides a summary of the performance statistics. In this table the mimicry scores for each language, out of a maximum of 36, are those of the native speaker graders, and the total the sum of those grades. The number of 3s, the highest mark, awarded to each participant, however, is based on the assessment of the researcher as other graders did not listen to all languages and there were wide differences among them in the degree of generosity in their marking which could distort the figure. The reason for the inclusion of this measure will become clear below.

	Italian mimicry	Chinese mimicry	Dutch mimicry	Total mimicry	Total 3s	English accent
Mean	22.97	24.45	21.87	69.29	8.52	5.48
Standard deviation	3.55	6.00	4.54	11.05	4.15	1.32
High	29	33	30	87	17	9.5
Low	16	12	13	48	3	3.5

Table 3: Summary of performance scores

Interesting points in this table are the low mean and 'high' scores for Italian. Judging from the researcher's own grades (means: 26.68, 20.45, 15.65) and discussions with participants after the tests, there is little doubt that the Italian test was the easiest and the Dutch the hardest for the Poles taking them. The Italian grader reflects this by giving a lowest mark of 16 but is clearly very demanding at the higher end of the scale, expecting a very good Italian accent where the other graders were satisfied with something rather less. This trend is also reflected in the low standard deviation of his results. For this reason, the Italian mimicry score can be said to be less useful than the others in determining differences in mimicry skill, since so many of the responses were grouped together as reasonable but not good.

One more point to note is that the accent score may seem low by normal standards at a mean of 5.48. It is true that the weakness of the participants' language skills did prove to be an obstacle in the grading of the accents but the graders were instructed to try to use the full range of scores from 1 to 10 and not group all grades around 5 to 8 as is often the case when marking out of 10. Taking this into account, a mean in the middle of the range at 5.48, is to be expected.

Table 4 below shows correlations between the survey categories and the performance measures.

	Italian mimicry	Chinese mimicry	Dutch mimicry	Total mimicry	Total 3s	English accent
Sound	-0.01	0.12	0.21	0.15	0.17	0.14
Appearance	0.29	-0.09	0.13	0.10	0.18	0.21

	Italian mimicry	Chinese mimicry	Dutch mimicry	Total mimicry	Total 3s	English accent
Anxiety	-0.21	-0.24	-0.11	-0.24	-0.19	0.18
Openness to cultures	0.21	0.07	0.30	0.23	-0.01	-0.20
Regard for Polish	-0.06	0.13	0.18	0.12	0.31	0.09
Regard for English	0.20	0.45	0.44	0.49	0.41	0.15
Boldness	0.52	0.41	0.43	0.57	0.43	0.14
Fondness for Italian	0.20	-0.16	0.16	0.04	0.11	0.37
Fondness for Chinese	0.11	0.24	0.41	0.33	0.07	-0.03
Fondness for Dutch	-0.08	-0.09	0.18	0.00	0.02	0.09
Total fondness	0.11	-0.01	0.44	0.22	0.11	0.23
English accent	0.04	0.09	0.12	0.12	0.37	

$df=29$
$p<0.05$ rcrit. $= 0.31$
$p<0.01$ rcrit. $= 0.42$
(one-tailed test)

Table 4: Affect/performance correlations

To summarise briefly, the importance of sound variable shows only very weak relationships with other factors. Interest in appearance, however, would certainly have had a more significant correlation with the overall mimicry score if it had not been for the low correlation with Chinese, rated the least attractive of the input languages, this is caused by relatively poor performance in Chinese by those with high scores for appearance, something which will be discussed again below. Anxiety, as expected, correlates negatively, if only weakly, with all measures of mimicry but, surprisingly does not have a negative correlation with accent. Openness to foreign cultures reaches a correlation of 0.28 (significant at $p<0.06$) with total mimicry but not with English accent, while regard for Polish does not seem to influence either. The high correlation between regard for English and mimicry scores, but far weaker relationship with accent is hard to explain, but could possibly be down to a willingness to please the researcher, by praising his language and doing as well as possible at the mimicry task. Such effects are a constant difficulty in studies of this nature, especially where the participants are also students of the researcher.

Perhaps the clearest relationship seen in the table is the correlation between boldness and mimicry score. This is significant across all the measures, reaching 0.57 (significant at $p<0.00045$) for the total score. There is no matching correlation, however, with accent, suggesting that boldness causes a large amount of interference when attempting to predict foreign accent levels from mimicry scores. These data appear to support hypothesis 2 in section 4.

All three languages show a degree of correlation between fondness for their sound and mimicry performance in that language (0.20, 0.24, 0.18) and the totals correlate at 0.22 (significant at $p<0.12$). The correlation between English accent and total mimicry skill is surprisingly weak at just 0.12. Interestingly though, the correlation between good mimicry responses, the number of 3s scored, and accent is much higher at 0.37 (significant at $p<0.02$). This difference suggests that mimicry tests should be designed in such a way as to only reward the best examples of mimicry and not give points for poor attempts which reflect only a willingness to respond, not an ability to mimic well.

One of the factors affecting pronunciation mentioned by Piske et al. (2001) and discussed above in section 2, was gender. There are a number of interesting differences between the results of the female and male participants. Some notable variations are detailed in the table below.

	Appearance	Anxiety	Boldness	English accent	Mimicry total	Mimicry 3s	Mimicry 0s
Male mean (n=6)	14.83	14.17	18.50	5.42	77.83	8.83	1.17
Female mean (n=25)	17.56	17.60	15.68	5.49	67.96	8.44	5.16

Table 5: Male/female differences

The stereotypes may be considered old-fashioned, but the data suggest that females are indeed more concerned about their appearance and less confident than their male counterparts. Nonetheless, the very similar accent means and number of 3s scored suggest that pronunciation talent is distributed evenly between the sexes, with the obvious proviso that only 6 males took part and a larger sample is required to reinforce that statement. The fact that the mimicry total score is higher for the males reflects their willingness to give weak responses: the males remained silent (scored 0) on average only once, the females 5 times. Also, 3 out of 6 males responded to every input, only 3 out of 25 females did the same.

The primary aim of the study was to look for evidence of the Cecily effect. The first result to highlight is that, unlike in the pilot study, table 4 does show some correlation for the whole population between finding the language attractive and mimicry performance in that language. The same table shows a positive but very low correlation between feelings for English and English accent. The mean score for interest in appearance was

17.03 (see table 1). 4 participants, however, scored 20 or more, all of them female. Their performances are detailed below in table 6.

	Fondness for Italian	Fondness for Chinese	Fondness for Dutch	Italian mimicry	Chinese mimicry	Dutch mimicry	English accent
Cecilys mean (n=5)	12.40	6.80	9.40	24.40	24.60	24.20	6.30
Non-Cecilys mean (n=26)	11.08	7.65	8.50	22.42	24.42	21.85	5.32

Table 6: The Cecilys

Although the differences between the two groups are not especially striking, the pattern which was expected from the pilot study has clearly developed. The top scorers for interest in appearance have above average English accent and would be expected to be better than average mimics. This expectation is met in the case of both Dutch and Italian, but their performance drops to just average for Chinese. The same is true for their appreciation of these languages: they have above average fondness for the two European languages but below average for Chinese. The fact that their relative performance drops for the least popular language suggests that this group is particularly sensitive to the unpleasantness of speaking a strange tongue, and that sensitivity may well be linked to their strong concern for their appearance. The variation in performance is not so high as to lead to definite conclusions but hypothesis 1, that the Cecily effect does operate on those with high levels of interest in appearance, has received some support from this study.

7. Conclusions

There can be little doubt, then, that personality and affective factors do influence the success of learners in developing a good accent in their L2, but the way in which that influence is exerted is complex and may vary considerably amongst individuals. As in the studies discussed above, no clear correlations were found between character traits and performance but a number of small steps have been taken towards a greater understanding of the impact of personality on pronunciation.

The results show that mimicry scores, when they include only examples of good mimicry, do correlate with foreign language accent scores and could, therefore, be used as a way of predicting likely success or failure in that field. Some evidence was found, however, to support the two hypotheses of the study, which illustrate the complex nature of the relationship between the two. Hypothesis 1, that the Cecily effect exists, is, to some extent supported: a high interest in one's own appearance does appear to interact

with one's regard for the sound of the target language and, thus, affect performance. In addition to this, hypothesis 2, that boldness influences mimicry scores but not accent, has also received a degree of support. This means that any test of mimicry which hoped to predict accent would need to take into account the willingness to take risks of the participants. This trend is illustrated best by the comparison of the male and female subjects, where the more confident males scored more highly for mimicry but almost exactly the same for good quality mimicry and accent as the females.

There is no room here for a full analysis of the performance of the tools. One worry from the pilot study was the low correlation of accent scores of the English native speakers at r=0.51. A change of second assessor produced an improvement in this regard with the two sets of marks correlating at r=0.64, which, however, still seems rather low. Another question over whether mimicry should, in fact, be treated as a more or less universal skill is left unanswered by the correlations between the scores for the different languages. They are: Italian/Chinese 0.39, Italian/Dutch 0.35, Dutch/Chinese 0.46. The idiosyncrasies of the Italian marker have already been discussed in section 6 above. For my own marks, however, the same correlations are: 0.55, 0.33, 0.61. This raises the question of whether the use of native speaker markers for mimicry tests actually improves the quality of the data. Different raters obviously have different standards and there is also the question of experience in rating foreign accents: none of the three native-speaker raters is involved in teaching or assessment. I have generally found the use of native speakers to be considered essential by other researchers but remain unconvinced: the level of mimicry likely to be achieved after hearing a stimulus once does not need a native's ear to judge its quality.

To conclude, this study represents a very small step towards unravelling the complexity of the many factors which determine a learner's eventual level of accent in the target language. However, it is only by examining interactions one-by-one that we may hope to build a viable working model of the factors affecting foreign language pronunciation. To that end, the identification of the Cecily effect is one piece completed in a very large jigsaw puzzle.

References

Arnold, J. Ed. 1999. *Affect in Language Learning.* Cambridge: Cambridge University Press.

Baran-Łucarz. 2013. Phonetics learning anxiety – results of a preliminary study. Research in Language Vol. 11.1: 57-79. DOI: 10.2478/v10015-012-0005-9

Couper, G. 2003. The value of an explicit pronunciation syllabus in ESOL teaching. *Prospect* Vol. 18, No. 3 December 2003: 53-70

Couper, G. 2006. The short and long-term effects of pronunciation instruction. *Prospect*, *21*, 46-66.

Carroll, J. B. 1965. The prediction of success in intensive foreign language training. In R.Glaser (ed.), *Training, research and education*, 87-136. New York: Wiley.

Derwing, T. M., & Rossiter, M. J. 2003. The effects of pronunciation instruction on the accuracy, fluency, and complexity of L2-accented speech. *Applied Language Learning*, *13*, 1-18.

Dogil, G & S.M. Reiterer, (eds) 2009. *Language talent and brain activity*. Berlin – New York : De Gruyter.

Dornyei, Z. 2010. The relationship between language aptitude and language learning motivation: individual differences from a dynamic systems perspective. In E. Macaro (ed.) 2010. *Continuum companion to second-language acquisition,* 247-267. London: Continuum.

Ganschow, L. & R.L. Sparks. 1996. Anxiety about foreign language learning among high school women. *The Modern Language Journal, 80, ii*: 199-212

Hinton, M. 2012. *The identification and testing of cognitive and affective factors in language learning aptitude with Polish students of English*. Unpublished Ph.D thesis. University of Łódź.

Hinton, M. 2013. An Aptitude for Speech: The Importance of Mimicry Ability in Foreign Language Pronunciation. In Waniek-Klimczak, E. & L. R. Shockey (eds), *Teaching and Researching English Accents in Native and Non-native Speakers, Second Language Learning and Teaching* (Ch. 8). Berlin Heidelberg: Springer-Verlag.

Hinton, M. In press. The Cecily Effect: a pilot study. In *Social, Cultural and Affective Influences on Language Processes.* University of Opole.

Horwitz, E.K., Horwitz, M.B & J. Cope. 1986. Foreign Language Classroom Anxiety. *The Modern Language Journal, 70, ii* : 125-132

Hu, X & S.M. Reiterer. 2009. Personality and pronunciation talent. In Dogil, G & S.M. Reiterer (eds) *Language talent and brain activity,* 97-130. Berlin – New York : De Gruyter.

Jilka, M. 2009. Talent and proficiency in language. In Dogil, G & S.M. Reiterer, (eds) *Language talent and brain activity*, 1-16. Berlin – New York : De Gruyter.

Piske, T., I.R.A MacKay & J. Flege. 2001. Factors affecting degree of foreign accent in an L2 : a review. *Journal of Phonetics (2001) 29* : 191-215.

Purcell, E. & R. Suter. 1980. Predictors of pronunciation accuracy: A re-examination. *Language Learning*. 30/2 : 271-87

Reiterer, S.M, X. Hu, M. Erb, G. Rota, D. Nardo, W. Grodd, S. Winkler & H. Ackermann. 2011. Individual differences in audio-vocal speech imitation aptitude in late bilinguals: functional neuro-imaging and brain morphology. *Frontiers in Psychology, Oct 2011, Volume 2, Article 271*

Singleton, D. 2005. The Critical Period Hypothesis: a coat of many colours, *International Review of Applied Linguistics* (*IRAL*) 43 (2005): 269-285

Appendix A – Statements used in survey

Importance of sound.
Pronunciation should be given more time on foreign language courses. (Question no:1)
Some languages sound nicer than others.10
If someone has an unpleasant voice, I find it hard to concentrate on what he's saying.20
I am sensitive to the rhythm of different languages.21
I feel friendly towards someone if I like his voice.25

Importance of appearance.
I spend a lot of money on clothes and cosmetics. 3
I don't like scruffy, untidy people.18
I never leave the house without checking the mirror.11
I spend a lot of time each day on my appearance. 6
I don't like to be seen when I don't look my best. 26

Language anxiety
I would rather say nothing than say something stupid. 2
I feel nervous when I'm not sure how to pronounce a word. 5
I worry about how other people see me when I speak a foreign language.8
I am happy with the sound of my voice when I speak English. 4 (Reverse score)
I always think other students speak English better than I do. 27

Regard for Polish
I think the Polish language is one of the most beautiful.7
I am proud to be Polish.16
I don't like to hear Polish mispronounced.9
I feel better speaking Polish than other languages.22
I like to hear other languages being spoken in Poland. 28 (Reverse score)

Openness to foreign cultures
I would like to travel in Asia.12
I would like to live in another country.17
I am interested in all languages.13
I would like to learn a non-European language.24
I would like to have friends from other cultures.33

Regard for English
I find the sound of English very attractive.14
Speaking English feels natural to me.19
I like to hear myself speaking English.15
I want to sound like a native when I speak English.23
I would like to live in an English speaking country. 35

Boldness
I like to take risks.6
I like to use new words, even if I'm not sure how to say them.23
I don't like to answer questions in class unless I'm absolutely sure I know the right answer.3 (Reverse score)
I'm confident I can communicate in English, even in difficult situations.34
I like to join in conversations, even if I don't understand everything being said. 16

Appendix B - Statements about attractiveness of input languages.

I would like to speak this language.
I find the sound of this language attractive.
I like the rhythm of this language.
The speaker sounds funny to me.

Appendix C – Reading passage for accent assessment

The more he thought about how the unfortunate woman must be feeling, the more he laughed. Her entire day had been ruined; her husband would have no dinner this evening, perhaps he would beat her; more likely he would try to comfort her, 'It doesn't matter,' he would say, 'We can always buy some more.' He would, of course, completely misunderstand, because he had not been there, he had not seen the incident, felt the indignity of it, the utter hopelessness of standing in a crowded place, with cherry-flavoured yoghurt splashed on his trousers, and being looked at, having a disaster in public. He would not have dropped the bag.

This picture of the weeping wife and consoling husband so tickled Claude that he did not hear the knock at his door over his own laughter. The visitor, however, was on sufficiently intimate terms with the resident to open the door himself and enter the room. The visitor coughed. Claude turned around sharply. (From Claude, by Martin Hinton)

PUTTING PROSODY FIRST — SOME PRACTICAL SOLUTIONS TO A PERENNIAL PROBLEM: THE INNOVALANGUES PROJECT[1]

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Abstract
This paper presents some of the difficulties of teaching languages, in particular English, in the context of LSP/LAP[2] programmes in French universities. The main focus of this paper will be the importance of prosody, especially in English, as an area where these difficulties may be addressed. We will outline the various solutions that are currently being put into place as part of the Innovalangues project, a six-year international language teaching and research project headed by Université Stendhal (Grenoble 3), France. The project has substantial funding from the French Ministry of Higher Education and Research and its mission is to develop innovative tools and measures to help LSP/LAP learners reach B2 on the Common European Framework of Reference for Languages (CEFRL). The languages concerned are English, Italian, Spanish, Chinese, Japanese and possibly French as a foreign language. Initially the project will be focusing on the needs of Grenoble's students, but the objective is to make the tools and resources developed freely available to the wider community. Oral production and reception are at the heart of Innovalangues. We believe, along with many other researchers, that prosody is key to comprehension and to intelligibility (Kjellin 1999a, Kjellin 1999b, Munro and Derwing 2011, Saito 2012), particularly given the important differences between English and French prosody (Delattre 1965; Hirst and Di Cristo 1998; Frost 2011). In this paper, we will present the particular difficulties inherent in teaching English (and other foreign languages) in the context of ESP/EAP[3] in French universities and some of the solutions that we are implementing through this project (Picavet et al., 2012; Picavet et al 2013; Picavet and Frost 2014). These include an e-learning platform for which various tools are being developed, teacher training seminars focusing on prosody and the collection of data for research.

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[1] www.innovalangues.fr
[2] Languages for Specific Purposes / Languages for Academic Purposes.
[3] English for Specific Purposes / English for Academic Purposes.

1. Introduction

The fact that all students in tertiary education in France are obliged to study a foreign language, usually English, regardless of the subject in which they major, is perceived in different ways by the different people involved (Taillefer 2002). Regardless of the perceptions of the various actors, the LSP/LAP sector in French universities is extremely important as regards the number of students taught, the number of teaching hours involved and the number of teachers employed on permanent and temporary contracts. However the teaching conditions vary enormously depending on the institution: class sizes are often very large, courses run for 10 to 60 hours per year, resources are sometimes scant and the methodology is often still influenced by the grammar-translation method, with only passing references to communicative approaches, such as task-based learning, the action-oriented approach, etc. The French Ministry of Education and Research has stipulated the levels which it expects learners to achieve in their L2 and L3 at various stages of the education process, and for LSP/LAP learners, this means B2 according to the CEFRL after 3 years at university (Goullier 2007). The reality is somewhat different from this aim however, with oral reception and production skills in particular being closer to A2 or B1 more often than B2 for most students arriving at university in France (Taillefer 2007). As we shall see below, the Innovalangues project is designed to deal with this disconnect.

Since the predominance of the communicative approach in L2 teaching over the last quarter of a century, many authors have decried the lack of attention given to the teaching of pronunciation in the L2 classroom (Scarcella and Oxford 1994; Derwing et al 1998; Derwing and Murray 2005; Gilbert 2010; Baker and Murphy 2011; Henderson et al. 2012). The amount of time dedicated to pronunciation teaching is generally relatively small, particularly in French LSP/LAP classes. When we add to this the fact that phonological transfer is the most noticeable form of L1 interference throughout the life of a language learner (see Major 2008 for a detailed discussion), it is hardly surprising that pronunciation entails many difficulties for French learners.

For the purposes of this article, we are particularly concerned with learners of English for specific and academic purposes (ESP/EAP), and there are vast differences between the French and English phonological systems (as we shall see in the next part). It is perhaps unsurprising therefore, that pronunciation is an area which French teachers of English often shy away from in their everyday practice and that the methodology of teaching pronunciation is also something which is often neglected in French teacher training programmes, which tend to concentrate on texts, grammar and vocabulary acquisition. These differences between the phonological systems of English and French are particularly pronounced when it comes to prosody. This has resulted in a vicious circle by which poor pronunciation, especially in English, is propagated in many learning situations in France and the effects on the production and comprehension of oral English are evident (Henderson et al. 2012). Indeed, a section entitled "phonology" in the national curriculum for teaching English made its first appearance as late as 1985 (Brossard 1995).

In this article, we shall begin by examining the differences between the phonological systems of English and French in a little more detail, particularly regarding prosody. The rest of the paper will be devoted to presenting the Innovalangues project and more

specifically, some of the proposed solutions which are currently being implemented to improve the oral skills of French LSP/LAP learners in Grenoble and beyond.

2. English and French prosody

As we mentioned in the introduction, the vicious circle of poor pronunciation teaching stems only partly from teaching practices and the hugely variable teaching situations in the LSP/LAP sector in French tertiary education. The Innovalangues project, has as its mission to improve the teaching and learning of several languages, but this article will deal mainly with the question of English, which has been the major focus of our work during the initial stages of the project. At the heart of the vicious circle of poor pronunciation teaching in France are some very real differences between French and English; we shall begin this section by outlining some of these differences, and then we go on to outline some of the implications of these differences for teaching.

French and English, despite sharing much of their vocabulary, are extremely different both phonetically and phonologically. This is particularly evident in the domain of prosody. Regarding intonation, the typical English speaker has a fairly large range between the low and high points his or her F0 curve will attain, whereas the range in French is much narrower (see Campione and Véronis 1998 for a comparison of F0 range in five European languages). Although it is of course somewhat artificial to draw a distinction between intonation and stress as the F0 curve is a factor in both, the real issue for French learners of English is stress. In this regard, the two languages differ so greatly that many French speakers find it very difficult to even perceive prominent syllables in English. More importantly, francophone learners of English find it very hard to perceive the unstressed and reduced syllables and this often leads to serious comprehension problems as these learners are unable to recognise words which they may easily recognise on the printed page. These difficulties are so serious for certain individuals that some French authors have posited the existence of a "stress deafness" concerning some languages such as English, where stress plays a defining role (Dupoux and Peperkamp 1999, Dupoux, Peperkamp and Sebastian-Galles 2001, Peperkamp and Dupoux 2002). Although researchers have not always agreed on the relative importance of the acoustic cues F0, amplitude, duration and formant structure in English, the importance of F0 in English is undeniable – indeed it is the importance of perceived pitch which led Bolinger (1958) to call stress in English "pitch prominence". As we shall see, French does not have lexical stress, and the role of F0 is less important; moreover it does seem clear that there is a difference in the way prominence is perceived by French and English natives (Frost 2011).

The importance of the F0 curve for English, comparably more so than in French in terms of perception of prominent syllables and for other information carried by the intonation curve, may account to some degree for the apparent "stress deafness" of certain French learners of English, but segmental features also have their role to play. As Jenkins (2000: 147) points out, the weak/strong syllable alternation is a characteristic feature of all varieties of English. She also says it is "unteachable", an assertion which she fails to illustrate with any research and with which we disagree strongly. On the contrary, a failure to teach adequately the production and perception of weak forms in

France is, we believe, one of the main reasons for the difficulties of many French learners when it comes to speaking and understanding English.

Although French does not have word stress, there is relative prominence, but to a lesser degree than in English (Rossi 1979) and that prominence is evident at the end of prosodic units (Dahan and Bernard 1996), be they shorter "stress groups" (Di Cristo 1998) or longer "accentual phrases" (Jun and Fougeron 1995). This contrasts with English, which has been characterised as a "leader-timed" language, whereas French is "trailer-timed" (Wenk and Wioland 1982: 204). A further difference between English and French is that French clearly marks this group-final syllable with an increased duration – this is not to say that amplitude and F0 are not factors, but syllable-lengthening is the most salient feature (Benguerel 1973, Di Cristo 1998, Lacheret-Dujour and Beaugendre 1999: 41, Jun and Fougeron 2000, Astesano 2001). Of course, this may be largely explained by purely articulatory factors, i.e. the fact that this final syllable often corresponds to the end of a breath group, so there is less acoustic energy available for the realisation of the final syllable, as Lindblom puts it "Granted the assumption of the energy per syllable being constant final lengthening of segments becomes a consequence of the intensity being lower in the final part of the basic phrase contour" (Lindblom 1968: 10). Indeed, many studies have shown this phenomenon to be present in English and in other languages (see Turk and Hufnagel 2007 for a discussion of phrase-final lengthening).

Perhaps the most important difference between French and English, one which is linked to the previous points, is that of the overall rhythmical or metrical structure. The concept of isochrony (Pike 1945) has been questioned by many authors (see Bertinetto 1989 for an overview) and clearly as a purely binary paradigm, it is not an accurate description of how metrical patterns actually behave in reality; to say that "English is stress-timed" and "French is syllable-timed" is not borne out by the facts, at least not once an utterance goes beyond isolated words or perhaps tone units: pauses, errors, repetitions and other features of real discourse make isochrony more of an abstract concept than an accurate term for describing real language. However, as a concept for raising the awareness of learners and teachers to different metrical structures, it can be useful to discuss isochrony in lessons and teacher-training workshops.

3. Why put prosody first in teaching?

We are not alone, however, in calling for more attention to prosody in language teaching. Its importance has been widely written about over the last two decades in particular, for example in regard to fluency (Wennerstom 2000), comprehensibility (Odlin 1989; Anderson-Hsieh *et al.* 1992; McQueen et Cutler 1997; Murphy 2004; Murphy et Kandil 2004; Rasier and Hiligsmann 2007) and for structuring language (Philippe 2013). In addition, numerous authors have called for more attention to be paid to prosody in teaching (Gilbert 2008; Kjellin 1999a, Kjellin 1999b; Levey 2001; Baker and Murphy 2011; Munro and Derwing 2011; Saito 2012).

In summary then, the reasons for needing to address oral skills in EAP/ESP in France are many: the disparate nature of ESP/EAP in French tertiary education, the vicious circle of poor teacher training feeding into poor teaching with regard to pronunciation

and particularly prosody and the vast differences between the prosody of English and French. These factors have cumulated to produce a situation where many French learners of English simply cannot understand spoken English and struggle to express themselves when speaking English. In the next part, we shall see some of the solutions that we have been putting into place over the last two years and will continue to implement over the next four years of the Innovalangues project, especially (but not only) regarding English and prosody.

4. The Innovalangues project

The Innovalangues project[4] is a six-year project which started on June 14, 2012 and coordinated by Monica Masperi at Université Stendhal (Grenoble 3) and is composed of a large team of teachers, researchers, resource developers and administrative staff, some of whom are employed full-time and some part-time to work on the project. Innovalangues has substantial funding from the *ANR* (*Agence Nationale pour la Recherche*) - the research funding body of the French Ministry of Higher Education and Research - as part of the *IDEFI* programme[5]. Its primary mission is to develop initiatives which will help to bring the levels of LSP/LAP learners to a certified B2 level as defined by the CEFRL over the three years of their university career. Initially, the target learners are in the Universities of Grenoble, but the project will eventually target learners nationally and internationally. The project has several national and international partners, including Mons University, Belgium, The *Réseau Européen des Associations de Langues* (*REAL*), *Lingua e nuova didattica* (*LEND*), Italy and the private company Totemis.

As we mentioned in the introduction, it is obligatory in France to study a foreign language at university for all students; by far the largest demand is for English, but the *Maison des Langues et des Cultures* at Université Stendhal offers courses in many languages (including Polish)[6]. The languages concerned by Innovalangues are initially English and Italian, followed by Spanish, German, Chinese and Japanese.

Blended learning is at the heart of the project, with the development of a digital eco-system, built around a CLMS (Content and Learning Management System), Claroline Connect©[7]. Innovalangues has a team of full-time IT developers who are working with the Claroline developers to produce a set of plug-ins conceived by the various teams on the Innovalangues project, according to their specific demands and in accordance with the principles of agile development. The project currently comprises seven teams all of which have been tasked with providing innovative approaches to the problem of helping the students in the learning situations described above to achieve B2 level (their names are often acronyms in French which we have chosen to paraphrase / translate):

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4   http://lansad.u-grenoble3.fr/version-francaise/a-l-affiche/le-projet-innova-langues-laureat-de-l-appel-aprojets-national-idefi-128927.kjsp

5 *« Initiatives d'Excellence en Formations Innovantes ».*
   http://www.agence-nationale-recherche.fr/investissementsdavenir/AAP-IDEFI-2011.html

6 http://lansad.u-grenoble3.fr/

7 http://www.claroline.net/

- ***THEMPPO*** (oral production and prosody)
- ***COCA*** (oral comprehension – "exerciser" and learning support)
- ***CASSIS*** (application design in support of social interaction)
- ***Parcours*** (conception of model learning paths)
- ***ColOr*** (collaborative oral expression practice)
- ***SELF*** (formative and diagnostic assessments for languages)
- ***GAMER*** (serious gaming techniques applied to language learning)
- ***Approches créatives*** (creative approaches for languages, e.g. dance, music, drama, games-to-learn, etc.)

5. The *THEMPPO* team

The team which the present article is most concerned by is *THEMPPO* (*Thématique Prosodie et Production Orale*). Along with *SELF*, this is one of the largest teams in the project. It started in January 2013. The members of the group are all professional English teachers and researchers and all have interests outside their professional life in areas which are pertinent to this domain, namely music, song, theatre, poetry and dance. The *THEMPPO* team is split into two working groups, who each come at the question of oral production from a different angle: the "prosody" group is concerned primarily with rhythm, stress and intonation and the "voice" group works on the more physical aspects of oral production using voice training techniques, etc. adapted from their background in acting. The team as it is currently organised has a coordinator for the whole group (Francis Picavet) and a coordinator for the development of English-specific tools and resources (Dan Frost). As more languages are brought into the project, each language will have a coordinator to oversee the development of resources in that particular language.

THEMPPO's approach to the problems laid out in the first part of this article is threefold: firstly, a series of teacher-training seminars, secondly, the development of teaching resources for use on within the digital eco-system as part of a blended learning programme and thirdly, an action-research programme.

The teacher-training seminars started almost as soon as the *THEMPPO* team was formed and they serve two purposes: they are a useful way of disseminating information about the project and recruiting new members for the various teams, but essentially, they are a powerful way of breaking the vicious circle described above. As the proverb states, "give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime". Each of the workshops has about 20 participants and there are at least six per year, so by sharing our ideas with this many local teachers, we hope to be able to influence the learning of a great number of students for decades to come. The titles of the seminars in 2013-14 are as follows:

- The "prosody" group:
  o Raising awareness to rhythm
  o From rhythm to meaning
  o Musicality in language learning
  o From melody to the gamut of sounds

- The "voice" group:
  - Freeing the body, liberating the voice
  - Sound and feeling

From the titles of the workshops, all in English for the moment, it is clear that the focus of both groups is not initially on the sounds of the language. It is our belief that when pronunciation is actually taught (which we believe is not often enough in LSP/LAP), the focus is all too often on segmentals, rather than on prosody. Yet if we are to concentrate on the real needs of our learners in the area of oral language, those needs are comprehensibility and comprehension. The numerous studies cited in part 3 above and our own experience over decades of teaching and researching language learning France have convinced us that prosody is the area which must be focused on. This is why the motto of the "prosody" group is "put prosody first"; the workshops provide theory to explain to teachers why this is the case and practical and fun ways of working on prosody with learners. The links between music, language and the brain have been researched extensively (Patel 2008), and although speech and song are of course different, the parallels between prosody and music are evident and music is a very important pedagogical tool in our work. At the production level prosody, especially stress, is extremely iconic (Pennington 1996: 137), i.e. acoustic effort coincides with meaning, a correspondence which is rare elsewhere in the sign / meaning relationship in human language. In order to achieve real changes in the production of prosody, which is an extremely iconic and physical part of human speech production, it is clear to us that this work must be preceded and reinforced by work on the body and on the articulators, hence the very physical approach of the "voice" group".

The second approach is the development of tools for use in the blended learning programme which is the backbone of Innovalangues. Two plugins for the CLMS are currently under development and are at the prototype stage as we write this article, namely a video active comparative tool (VAC) and a metronome. The video active comparative tool is an integral part of the methods employed by both the "prosody" and the "voice" groups. The audio active comparative (AAC) approach favoured by the behaviourist school which saw the spread of language laboratories from the sixties for over thirty years (Ginet 1997) is certainly not the panacea to all the problems of language learning, but repetition and critical listening are particularly useful for prosody (Frost 2004, 2008). The addition of video, which would have been not only technically impossible ten years ago, but would also have been very disconcerting for learners, is now something which is in keeping with the practices of many of the Youtube generation of Internet natives. As the realisation of prosodic features is such a physical phenomenon and is very often accompanied by gestures, the possibility for learners to record video and sound is an extremely useful addition to the traditional AAC approach. The VAC tool will also be essential for the activities developed by the "voice" group, as the learners must become aware of and modify their posture, breathing and the movement of their own bodies and articulators. The metronome is a tool which has been used by language teachers before (Beaucamp, 2008), but its use has been proven to be highly effective with the target learners (Picavet et al. 2012, 2013) and systematized by the *THEMPPO* team and will be used with the VAC tool.

The third tool which is currently at the prototype stage is not actually an IT tool, but is part of the blended learning programme, both for use in the digital eco-system and in the classroom: a set of descriptors for describing and measuring the production of various prosody features, such as the placement of word stress and tonic stress, reductions, connected speech phenomena, etc. Very much work in progress (hence the lack of its inclusion as an appendix to this article), this tool is intended for use both by learners as part of their self-assessment and by teachers as a diagnostic tool and as part of a formative assessment programme. It is inspired by the work of the CEFRL, but as the CEFRL is not language-specific and is concerned with fluency and "can-do" descriptors, the section on "phonological control" is vague to say the least, stating merely "Has acquired a clear, natural, pronunciation and intonation" at B2 level (Council of Europe 2001: 117). The prosody descriptors, currently undergoing pilot tests in an attempt to peg them to the CEFRL levels are an attempt, as was the CEFRL itself, to raise awareness to the issues it highlights rather than to give a grade or a mark as such.

The final approach adopted by the *THEMPPO* team as by most of the other teams in Innovalangues, is that of action-research. According to the cyclical process of action-research, as new approaches are developed by the two groups in the *THEMPPO* team, they are piloted and then tested on the learners for whom they were developed, any necessary modifications are made to the tools and/or contents and/or learning paths and then the process is repeated. A more accurate term, at least insofar as the plugins for the CLMS are concerned, would be action-development ("*recherche-développement*", Guichon 2007), as the results of the process of action-research feed into the process of agile development of the plugins. The results of the testing of the resources developed by *THEMPPO* and the other teams, will of course be shared with other members of the teaching and research communities interested in our work both within France and internationally.

6. Conclusions

The project is still only in its second year and is set to run until 2018 so there are bound to be changes to the structure of the project, the way the teams are organised and the work they produce. For the moment, English and Italian are the only two languages represented in the project, but the approaches developed for these languages will be transferred to the other languages mentioned above and new approaches will be developed according to the needs of those languages. It is true that the combination of teacher-training, resource development and action-research are certainly not, in themselves, innovative. However, the unique combination of the teams which make up the Innovalangues project, along with the tools, content and learning paths being developed to make up the digital ecosystem certainly are. The *THEMPPO* team's approach, i.e. putting prosody first, is one of which we are not aware elsewhere in France or indeed, at least on a comparable scale, elsewhere in the language teaching literature. *THEMPPO* hopes therefore to be able to chip away slightly at the vicious circle outlined at the beginning of this article.

References

Anderson-Hsieh, J. 1994. "Interpreting Visual Feedback on Suprasegmentals in Computer Assisted Pronunciation Instruction », *Calico Journal*, *11*(4): 5-16.

Astésano, C. 2001. *Rythme et accentuation en français. Invariance et variabilité stylistique.* Paris: Editions L'Harmattan, Collection Langue et Parole.

Bailey, T., K. Plunket, and E. Scarpa,. 1999. "A Cross-Linguistic Study in Learning Prosodic Rhythms: Rules, Constraints and Similarities", Language and Speech, 42, (1): 1-38.

Beaucamp, J. 2008. « Enseigner une langue vivante étrangère à l'école (cycle 3) : opportunité d'un début de réflexion métaphonologique et métalinguistique ». *Les Cahiers de l'Acedle*, 3: 15-39.

Benguerel, A-P. 1973. Corrélats physiologiques de l'accent en français. *Phonetica* 27: 21–35.

Bertinetto, P.M. 1989. "Reflections on the dichotomy 'stress' vs. 'syllable-timing'". *Revue de Phonétique Appliquée 91–93*, 99–130.

Baker, A. and J. Murphy. 2011. "Knowledge Base of Pronunciation Teaching: Staking Out the Territory", *TESL Canada Journal / Revue TESL du CANADA*: 29-50.

Bolinger, D. 1958. "A Theory of Pitch Accent in English", *Word*, 14: 109-149.

Brossard, J. (1995) *Enseigner la phonétique anglaise*. Paris : Bordas.

Campione, E., and Véronis, J. 1998. "A statistical study of pitch target points in five languages", *5th International Conference on Spoken Language Processing (ICSLP'98)*, Sidney: 1391-1394.

Council of Europe. 2001. *A Common European Framework of Reference for learning, teaching and assessment.* Cambridge: Cambridge University Press.

Dahan, D. and J-M. Bernard. 1996. "Interspeaker Variability in Emphatic Accent Production in French", *Language and Speech, 39*(4): 341-374.

Delattre, P. 1965. *Comparing the Phonetic Features of English, French, German and Spanish: An Interim report.* Heidelberg: Julius Groos Verlag.

Di Cristo, A. 1998. "Intonation in French", in D. Hirst and A. Di Cristo, (eds). *Intonation Systems: A Survey of Twenty Languages.* Cambridge: Cambridge University Press: 3-45.

Dupoux, E, S. Peperkamp and N. Sebastian-Galles. 2001. A robust method to study stress-deafness. *Journal of the Acoustical Society of America 110*(3.1): 1606–1618.

Dupoux, E. and S. Peperkamp. 1999. Fossil markers of language development: Phonological 'deafness' in adult speech processing. In Laks, B. and J. Durand, (eds), *Cognitive phonology*. Oxford: Oxford University Press: 168–190.

Frost, D. 2004. « L'enseignement de l'accent lexical dans le secteur LANSAD : quelques notes sur une expérience de recherche-action en auto-apprentissage », *ASP 43-44*: 99-106.

Frost, D. 2008. « The *Stress Site* la conception d'un parcours multimédia pour un travail en autonomie sur l'accentuation des mots » *ASP 53-54*: 111-127.

Frost, D. 2010. Stress cues in English and French: a perceptual study. *Journal of the International Phonetic Association, 41*(01): 67-84.

Gilbert, J. 2008. *Teaching Pronunciation Using the Prosody Pyramid. Cambridge:* Cambridge University Press.

Gilbert, J. 2010. "Pronunciation As Orphan: What Can Be Done?", *As We Speak* (TESOL Newsletter) 7(2).

Ginet, A. (dir.) et al. 1997. *Du laboratoire de langues à la salle de cours multi-médias.* Paris: Nathan.

Goulier, F. 2007. *Les outils du Conseil de l'Europe en classe de langue. Cadre européen commun et Portfolios.* Paris, Strasbourg : Conseil de l'Europe, Didier.

Guichon, N. 2007. « Recherche-développement et didactique des langues », *Les Cahiers de l'ACEDLE 4*: 37-54.

Henderson, A., D. Frost, E.Tergujeff, A. Kautzsch, D. Murphy, Kirkova-A. Naskova, E. Waniek-Klimczak, D.

Levey, U. Cunningham, and L. Curnick, Lesley. 2012. "The English Teaching in Europe Survey: Selected Results. *Research in Language 10*(1): 5-28. DOI: 10.2478/v10015-011-0047-4

Hirst, D. and A. Di Cristo (Eds). 1998. Intonation Systems: A Survey of Twenty Languages. Cambridge: Cambridge University Press.

Jenkins, Jennifer. 2000. *The phonology of English as an international language*. Oxford: Oxford University Press.

Jun, S. and C. Fougeron. 1995. "The accentual phrase and the prosodic structure of French". *13th International Congress of Phonetic Sciences (ICPhS 12), vol. 2*: 722–725.

Kjellin, O. 1999a. "Accent Addition: Prosody and Perception Facilitates Second Language Learning". In O. Fujimura, B. D. Joseph, and B. Palek (Eds), *Proceedings of LP'98* (Linguistics and Phonetics Conference) at Ohio State University, Columbus, Ohio, September 1998 (Vol. 2), Prague: The Karolinum Press: 373-398.

Kjellin, O. 1999b. "Five Cornerstones for Second-Language Acquisition – the Neurophysiological Opportunist's Way". Unpublished: 1-9.

Lacheret-Dujour, A. and F. Beaugendre. 1999. *La prosodie du français*. Paris: CNRS.

Levey, D. 2001. "Stressing Intonation", in Harris, T., I. Roldan, I. Sanz, and M. Torreblanco, (eds). *ELT2000: Thinking Back, Looking Forward.* Granada: Greta: 35-45.

Lindblom, B. 1968. "Temporal organization of syllable production". *Speech Transmission Laboratory Quarterly Progress, Royal Institute of Technology, Stockholm, Sweden, 2-3*: 1-6.

McQueen, J. and A. Cutler. 1997. "Cogntive Processes in Speech Perception", in W. Hardcastle and J. Laver, (eds), *The Handbook of Phonetic Sciences*. Oxford: Blackwell: 556-585.

Major, R. C. 2008. "Transfer in second language phonology. A review", in J. Hansen Edwards and M. Zampini, (eds) *Phonology and Second Language Acquisition*. Amsterdam: John Benjamins: 63-94.

Martin, P. 2013. « La structure prosodique opère-t-elle avant ou après la syntaxe ? ». *TIPA. Travaux interdisciplinaires sur la parole et le langage, 29*.

Munro, M.J. and T.M. Derwing, (2011). "The foundations of accent and intelligibility in pronunciation research". *Language Teaching 44* (3): 316 – 327.

Murphy, J. 2004. "Attending to Word Stress while learning new vocabulary", *English for Specific Puposes, 23*: 67-83.

Murphy, John et Kandil, Magdi. 2004. "Word-level stress patterns in the academic word list", *System, 32*: 61-74.

Odlin, T. 1989. *Language Transfer. Cross-Linguistic influence in Language Learning.* Cambridge University Press: Cambridge.

Patel, A. 2008. *Music, Language and the Brain.* Oxford: Oxford University Press.

Pennington, M. 1996. *Phonology in English Language Teaching.* London: Longman.

Peperkamp, S. and E. Dupoux. 2002. "A typological study of stress deafness", in Gussenhoven, C. and Warner, N. (eds). 2000. *Laboratory Phonology 7.* Berlin: Mouton de Gruyter: 203-240.

Picavet, F., V. Aubergé. and S. Rossato. 2012. "Can a guided rhythmic approach contribute to the oral performance of learners of L2 English? A case study". *Methodological Perspective on Second Language Prosody*. M.G. Busà, A. Stella, (eds). Padua, Italy: Cooperativa Libraria Editrice Università di Padova (CLEUP): 73-77.

Picavet, F., V. Aubergé. and S. Rossato. 2013. « Production orale en anglais : travailler en rythme, produire du sens et être compris ». *Les Langues Modernes, 4*: 104-114.

Picavet, F. and D. Frost. 2014. « Le lot THEMPPO dans le projet Innovalangues : recherche-action en prosodie et en production orale ». *LEND - Lingua e Nuova Didattica, 1*: 29-35.

Pike, K. 1945. *The Intonation of American English*. Ann Arbor: University of Michigan Press.

Rasier, L. and P. Hiligsmann. 2007 « Prosodic transfer from L1 to L2. Theoretical and methodological issues », *Nouveaux Cahiers de linguistique française, 28*: 41-46.

Rossi, M. 1979. « Le français, langue sans accent ? », in I. Fónagy and P. Léon (eds) *L'accent en français contemporain*. Montréal / Paris / Bruxelles: Didier: 93-106.

Saito, K. 2012. "Effects of instruction on L2 pronunciation development: A synthesis of 15 quasi-experimental intervention studies". *TESOL Quarterly, 46(*4): 842-854.

Scarcella, R. and R. Oxford. 1994. "Second Language Pronunciation: State Of The Art In Instruction", *System 22*(2): 221-230.

Taillefer, G. 2002. « L'anglais dans les formations spécialisées à l'Université : un cheveu sur la soupe? Peut-on rendre le plat plus appétissant ? », *ASP 37-38*: 155-172.

Taillefer, G. 2007. « Le défi culturel de la mise en œuvre du Cadre européen commun de référence pour les langues : implications pour l'enseignement supérieur français ». *Les Cahiers de l'APLIUT 16*(2): 33-49.

Turk, A. and S. Hufnagel. 2007. "Multiple targets of phrase-final lengthening in American English words", *Journal of Phonetics 35(*4): 445-472.

Wenk, B.J. and F. Wioland. 1982. "Is French really syllable-timed? *Journal of Phonetics 10*: 193–216.

Wennerstrom, A. 2000. "The Role of Intonation in Second Language Fluency", in H. Riggenbach (ed) *Perspectives on Fluency*. Ann Arbor, MI: University of Michigan Press: 102-127.

Vaissière, J. 2002. Cross-Linguistic Prosodic Transcription: French versus English. *Problems and Methods in Experimental Phonetics*, in honour of the 70th anniversary of Prof. L.V. Bondarko,. N. B. Volslkaya, N. D. Svetozarova and P. A. Skrelin. St. Petersburg: 147-164.

FLUCTUATIONS IN LEARNERS' WILLINGNESS TO COMMUNICATE DURING COMMUNICATIVE TASK PERFORMANCE: CONDITIONS AND TENDENCIES

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Abstract
A person's willingness to communicate (WTC), believed to stem from a combination of proximal and distal variables comprising psychological, linguistic, educational and communicative dimensions of language, appears to be a significant predictor of success in language learning. The ability to communicate is both a means and end of language education, since, on the one hand, being able to express the intended meanings in the target language is generally perceived as the main purpose of any language course and, on the other, linguistic development proceeds in the course of language use. However, MacIntyre (2007, p. 564) observes that some learners, despite extensive study, may never become successful L2 speakers. The inability or unwillingness to sustain contacts with more competent language users may influence the way learners are evaluated in various social contexts. Establishing social networks as a result of frequent communication with target language users is believed to foster linguistic development. WTC, initially considered a stable personality trait and then a result of context-dependent influences, has recently been viewed as a dynamic phenomenon changing its intensity within one communicative event (MacIntyre and Legatto, 2011; MacIntyre et al., 2011). The study whose results are reported here attempts to tap into factors that shape one's willingness to speak during a communicative task. The measures employed to collect the data – self-ratings and surveys – allow looking at the issue from a number of perspectives.

Keywords: L2 willingness to communicate, classroom interaction, communicative tasks

1. Introduction

The ability to communicate in the target language, which each language learner hopes to achieve, appears to be an indication of the effectiveness of the techniques and methods of instruction applied as well as the expression of the learner's predispositions, diligence or dedication. However, it turns out that the processes leading up to the decision to initiate or contribute to the ongoing interaction involve numerous psychological, linguistic, educational and communicative factors whose interplay is not easy to grasp. It

appears that, as communicative ability is not only the end but also the means of foreign language learning, importance needs to be attached to fostering conditions that promote and develop willingness to communicate (WTC) among students. In fact, not infrequent are cases when otherwise talkative students remain silent during communicative activities, or when students whose extensive knowledge of the target language subsystems is manifested by test results refrain from contributing to classroom discussions (Gregersen and MacIntyre, 2013). The importance of communication and interaction as a means of fostering language acquisition is advocated by a number of theoretical positions, such as the interaction hypothesis (Long, 1985, 1996), the output hypothesis (Swain, 1995, 1998) or the sociocultural framework (Vygotsky, 1978; Lantolf, 2006). All of these positions propose a link between the decision to engage in interaction and the rate of second language acquisition (SLA). Frequency of communication, in turn, depends on the learner's WTC, as confirmed by Clement et al. (2003), MacIntyre and Charos (1996), or Yashima et al. (2004), among others. Given the importance of interaction, there is a major problem that L2 learners need to face: they have to accept the challenge of having to communicate in the language they have not gained full control of, which might lead to losing face and damaging their self-esteem (MacIntyre and Legatto, 2011).

The learner's decision to speak, apart from his or her perceived competence, depends on moment-by-moment management of an array of mutually related variables, including various issues related to culture, personality, motivation, instructional context, etc. Thus, the dynamic character of WTC cannot be denied despite the fact that the construct was initially perceived as a stable characteristic of an individual (cf. McCroskey and Richmond, 1987). The present paper is an attempt to investigate WTC as a constantly evolving feature undergoing the influences of situational variables in the course of a communicative activity performed by learners of English as a foreign language. The understanding of WTC has evolved over the years from its original interpretation as a stable personality trait, through an interplay of context-dependent influences, to a dynamic phenomenon changing its intensity within one communicative event (MacIntyre and Legatto, 2011; MacIntyre et al., 2011). The study whose results are reported below represents an attempt to explore factors underlying one's willingness to speak reported by the participants in the course of performing two types of communicative tasks: a dialogue and a monologue. The data gathered by means of self-ratings employed to collect information on fluctuations of the participants' WTC were supplemented with information provided by a survey tapping into more general dispositions and tendencies. The results, which are admittedly somewhat fragmentary, allow formulating tentative conclusions as well as recommendations for changes of the classroom climate so that it can become more conducive to interaction, and, consequently, second language development.

2. Literature Review

Initially, empirical investigations into WTC involved the use of the mother tongue and rested on Burgoon's (1976) conceptualization of unwillingness to communicate as a stable characteristic. WTC was originally perceived as a predisposition to initiate or

avoid communication with others when given a choice (McCroskey, 1992, p. 17). It was understood as an individual feature which remained relatively stable in different contexts. Although at the very outset the studies conducted concerned speakers' L1, attention was soon shifted to the exploration of second language learners' WTC. Data collection tools, quantitative in nature, which were employed to explore the concept, initially rested on the assumptions offered by personality psychology, influential at that time, and attempted to tap into factors responsible for the decision to speak or withhold communication. Thus, McCroskey and Richmond (1991) offered evidence that a person's WTC is related to their self-esteem, introversion, communication apprehension and perceived communication competence. WTC scales that were then developed recognized the impact of situational variables and hence such contexts as pairs, small groups, meetings and public occasions, with three different types of interlocutors/audiences, namely friends, acquaintances and strangers, being taken into account (e.g., Chan and McCroskey, 1987; McCroskey, 1992; McCroskey and Richmond, 1991). The data accrued in the course of these studies indicated that when speaking a foreign language, despite changing conditions, individuals display similar tendencies with respect to WTC as in their L1. Early studies of L2 WTC involved performing statistical analyses of the cause-and-effect relationship between a language learner's WTC and individual variables believed to underlie the process of language learning (e.g. MacIntyre and Charos, 1996; MacIntyre and Clement, 1996). In 1998, MacIntyre, Clement, Dornyei and Noels (1998) suggested that L2 WTC is a complex phenomenon that cannot be explained as "a simple manifestation of WTC in the L1" (p. 546). They defined it as the "readiness to enter into discourse at a particular time with a specific, person or persons, using a L2" (1998, p. 547).

Using path analysis, MacIntyre (1994) established that WTC is caused by a combination of communication apprehension and perceived competence. The combination of MacIntyre's (1994) model with Gardner's (1985) socio-educational model of language learning allowed the formulation of a hybrid model of L2 WTC (cf. MacIntyre and Charos, 1996), in which statistically significant paths from perceived competence, anxiety, and opportunity for contact with target language speakers to L2 WTC were identified. Moreover, a statistically significant relationship, leading from L2 WTC, perceived L2 communication competence and language learning motivation to the frequency of communication, was found.

MacIntyre et al. (1998) conceptualised L2 WTC as the outcome of an interplay of diverse factors, such as social and individual context, affective and cognitive context, motivational propensities, situated antecedents, and behavioural intentions. The famous pyramid model presents WTC antecedents as bricks arranged in layers from intergroup climate and personality at the bottom (layer 6), through the affective and cognitive context that comprises intergroup attitudes, social situation and communicative competence (layer 5), motivational propensities with L2 self-confidence, and interpersonal and intergroup motivation (layer 4), followed by situated antecedents: state communicative self-confidence and the desire to communicate with a specific person (layer 3), to the layer immediately preceding language use, the layer of WTC (MacIntyre et al., 1998, p. 550-551).

The findings of numerous studies have suggested that anxiety and self-perceived communicative competence largely impinge on L2 WTC. When conceptualized

separately (Hashimoto, 2002; MacIntyre and Charos, 1996) or as one construct (Clement, Baker and MacIntyre, 2003; Yashima, 2002), these variables have been found to be the immediate antecedents of L2 WTC. Using the path model, MacIntyre and Charos (1996) established that perceived competence and lack of anxiety were equally effective in predicting L2 WTC. In the study by Clément and Kruidenier (1985), L2 perceived communicative competence and lack of L2 communication anxiety were conceived of as one factor. Much in the same vein, Yashima (2002) employed the concept of self-perceived communication confidence which she defined as a combination of L2 perceived communicative competence and lack of L2 communication anxiety. The results implied that self-perceived communication confidence turned out to be the strongest predictor of L2 WTC in the sample consisting of Japanese learners. Similar results were observed in the study carried out in the same context by Yashima et al. (2004), and the study by Peng and Woodrow (2010) conducted among Chinese university students.

The impact of context has also been evidenced by the data collected in the studies by Baker and MacIntyre (2000), and MacIntyre et al. (2002), where antecedents of WTC among immersion and non-immersion students were taken into account. It turned out that immersion students' WTC depends on their L2 confidence that is directly linked to anxiety, whereas non-immersion students' WTC is built upon their perceived L2 competence. Immersion students will engage in communication if their anxiety levels are low; non-immersion students need to value their L2 competence to initiate communicate. According to Yashima (2012, p. 124), immersion contexts resemble the characteristics of L1 situations in which anxiety is "the single best predictor of WTC."

Investigations of language learners' WTC have understandably involved the issue of motivation. Although motivation seems more directly linked to achievement in language learning, its role in facilitating communication cannot be denied (Clement and Gardner, 2001). The conceptualizations of motivation which have been taken into account have included Gardner's (1985) integrative and instrumental dichotomy (e.g. MacIntyre et al., 1998), Noels' (Noels, 2001; Noels, Pelletier, Clément, and Vallerand, 2000) intrinsic and extrinsic motivation (e.g. Hashimoto, 2002; Peng, 2014), and Dörnyei's (2005, 2009) Ideal L2 Self (e.g. Ryan, 2009; Yashima, 2009). MacIntyre et al. (1998) pointed out that, although motivation undeniably plays a role in creating conditions for L2 communication, its impact may depend on anxiety and perceived competence, more immediate antecedents of WTC (MacIntyre et al., 2002). Baker and MacIntyre (2000) as well as MacIntyre et al. (2002) have provided evidence for positive correlations between motivation and L2 WTC; however, as reported by Yashima (2002), Yashima et al.(2004), and Peng and Woodrow (2010), anxiety can counterbalance the impact of motivation.

Concerns over the applicability of Gardner's (1985) socio-educational model to foreign language contexts, where language learners have little contact with target language speakers and where the need to aspire to the target language community may not prevail, have led Yashima (2002) to propose a new concept of international posture (IP) that could account for L2 learners' need for increased contacts with foreigners, thus boosting their WTC. The construct, defined as "openness and favourable disposition towards other languages and cultures, interest in foreign affairs and non-ethnocentric outlook on life" (Yashima, 2002, p. 57), comprises, among other things, interest in

foreign international affairs, willingness to work or study abroad, and a readiness to interact with people from other countries. The results of Yashima's (2002) study indicate that international posture predicted L2 WTC and L2 motivation, which, in turn, predicted L2 proficiency. Structural equation modelling applied by Yashima et al. (2004) provided a basis for the claim that IP directly affects motivation, L2 WTC, and frequency of communication. Yashima (2009) has also shown that high levels of IP lead to increased WTC. More recently, in the study conducted by Munezane (2013) in the Japanese context a path from IP to motivation was found, much in line with the results obtained by Yashima (2002) and Yashima et al. (2004), showing that learners with interest in international affairs, work, travel and people from other countries are more motivated to study English. In the same study, Munezane established that Ideal L2 Self was the second most significant predictor of overall L2 WTC with linguistic self-confidence being the first. Not only the Ideal L2 Self paradigm has been applied to account for learners' willingness to take part in conversations, but also Julius Kuhl's (1994a, 1994b) theory of action control, as is evident in an attempt by MacIntyre and Doucette (2010) who used this framework to explore L2 WTC. They hypothesized that the basic concepts underlying action control, that is preoccupation, volatility, and hesitation, should be incorporated into the array of factors from which WTC originates. The researchers claim that unwillingness to communicate both in the classroom and outside is related to a disruption in action control.

Questionnaire-based studies investigating relationships between numerous factors enhancing or hindering communication have been supplemented with qualitative research where such data collection tools as observations, immediate report, interviews or self-ratings were used to tap into the relationship between L2 WTC and a number of contextual factors, such as topic, interlocutors, group size, and cultural background, as well as classroom contexts. Kang (2005), for example, having investigated the emergence and fluctuations of L2 WTC in a conversation, reported that momentary changes in WTC may be brought about by feelings of excitement, responsibility and security. Kang posits that L2 WTC is "an individual's volitional inclination towards actively engaging in the act of communication in a specific situation, which can vary according to interlocutor(s), topic, and conversational context, among other potential situational variables" (2005, p. 291). Peng (2007), in turn, investigated the interaction of individual, classroom and cultural factors fostering or hampering L2 WTC among Chinese EFL students. He identified themes related to the learner, including communicative competence, language anxiety, risk-taking, and learners' beliefs, as well as those concerning the social context, that is classroom climate, group cohesiveness, teacher support, and classroom organization. In a more recent publication, Peng (2014) attempted to reconcile the quantitative and qualitative traditions, and chose the ecological perspective to explore classroom WTC. The dynamic character of the WTC of Chinese learners' of English was evident in its fluctuations among the participants of this longitudinal multiple-case study. The fluctuations resulted from the impact of a number of factors that were assumed to be part of three contexts: the distal individual context (i.e. learner beliefs and motivation), the proximal individual context (i.e. cognitive, linguistic, and affective factors), and the situational social context (i.e. classroom environment). According to Peng (2014), the qualitative findings indicate that while belief systems and motivational thinking may shape learners' learning and

communication behaviour, in the language classroom, learners' momentary cognitive, linguistic and affective conditions embedded in such an environment exert a direct influence on situational WTC. Variations of these individual and environmental contingencies lead to the ups and downs of students' WTC in class.

Cao and Philip (2006) investigated the levels of learners' WTC in three classroom organizational modes: pair work, group work and whole class. They failed to establish correlations between trait WTC and situational WTC; what they did establish, though, was that changes in WTC levels could be attributed to the size of the group, the level of self-confidence, the degree of familiarity with other participants in interaction, and the extent of the interlocutors' participation. Also Peng and Woodrow (2010) attempted to explore the role that classroom environmental factors play in L2 WTC. Their study concerned relationships among WTC, communication confidence, motivation, learner beliefs and the classroom setting. The analysis of the collected data led Peng and Woodrow to state that communication confidence was the most significant predictor of WTC, "primary and universal precursor to L2 WTC regardless regional diversity" (p. 855).

More recently MacIntyre, Burns and Jessome (2011) investigated the fluctuations of individuals' WTC from high willingness to unwillingness to communicate. The researchers observed that a learner can be both willing and unwilling to communicate under certain circumstances and these are often similar even to the extent of being identical. Apparently, a small alteration affecting one of the components involved in a communicative event may result in a turnover of the decision to speak. A novel approach to ways of investigating L2 WTC has been put forward by MacIntyre and Legatto (2011), who developed the *idiodynamic* method and applied it to explore fluctuations in the speaker's affective state. The participants, while watching the video recordings of the communicative activities they took part in, rated their WTC using a computer mouse. Additional data were derived by means of a review and discussion of the changes reported by the learners. The researchers were interested in the influence of task type on learners' WTC, changes of WTC in the course of task duration as well as explanations the participants provided for fluctuations of their WTC. Characteristic tendencies for individual students were identified in the study along with the link between perceived competence and task demands.

The aim of the study undertaken by the present authors was to delve into antecedents of WTC in the Polish educational context. Being the participants' regular teachers of English and teacher educators, the researchers attempted to identify factors and conditions leading to WTC growth, thus contributing to the learners' linguistic development, and gain insight into ways of fostering WTC, which could be instrumental in training prospective teachers to create WTC-rich classrooms. The Polish context, bearing obvious resemblance to the Japanese or Chinese contexts, not least because English is taught and learnt here as a foreign rather than second language, naturally also involves an interplay of tendencies and features of unique character. These have been of main interest to the researchers who also looked for the relationship between trait-like characteristics and learners' fluctuating WTC in the course of two communicative tasks.

3. The Study

The main focus of the study was recording fluctuations that the participants' WTC underwent during the performance of a communicative task. Two types of tasks requiring the production of output were chosen with a view to observing characteristic patterns or tendencies as well as identifying which of the tasks generates more willingness to participate. More specifically, the learners were required to perform a monologue and a dialogue. This particular choice was prompted by the fact that these two types of tasks are most frequently employed by teachers at this type of university course. Moreover, these are the tasks that students are most likely to be confronted with during their oral exams. The other aim of the study was establishing those predictors of WTC that would correlate with the students' WTC while performing particular tasks. Naturally, the existence of correlations between factors leading to WTC was also anticipated and an attempt was made to look into the relationship between task WTC and a number of trait characteristics believed to underlie L2 WTC. In particular, the study set out to investigate the following research questions:
1. Are there any typical patterns in fluctuations of interlocutors' WTC?
2. Are there any differences between the participants' task WTC as reported in the course of a dialogue and a monologue?
3. How is the reported task WTC related to reported frequency of L2 use in the classroom, perceived competence, communication anxiety, WTC in English, classroom WTC and classroom anxiety?

3.1 Participants

The sample consisted of 44 second- and third-year students majoring in English, 33 females and 11 males who had volunteered to take part in the study. On average, they were 22 years of age, and their experience in learning English extended over the period of 12.07 years. They came from two institutions of higher education, 24 from a university and 20 from a higher vocational school, both of which offered exactly the same training for those who intended to become teachers of English. The participants from both locations had also been following the same course of studies, which, apart from extensive instruction in English as a foreign language, included classes in history, literature, linguistics and teaching methodology, all of which were conducted in the target language. The proficiency level represented by the students could be described as ranging from B2 to C1, as specified in the levels laid out in the *Common European Framework of Reference for Languages*. According to the grading systems applied in the institutions the students attended, their average result for the end-of-the year examination in English amounted to 3.17 (on the scale from 2, or *fail*, to 5, or *very good*). The self-evaluation score was slightly higher and amounted to 3.68.

3.2 Data collection and analysis

The study involved the application of two data collection procedures. In the first one, the students were requested to self-rate their WTC as they were engaged in the performance of communicative tasks. This happened during an especially arranged session which was not part of the students' regular program. The other procedure consisted in filling in a questionnaire intended to gather information on various individual propensities, which was accomplished following the completion of the communication-based tasks. For the purpose of the study, the respondents were randomly divided into pairs, with each pair sitting at a distance so as not to disturb the others. The first phase of the experiment involved performing a monologue which required the participants to describe and discuss a picture showing people at a restaurant or at a business meeting. While one of the students was talking about the assigned topic, the other was instructed to control the time. The students took turns in completing the task and their speeches were not recorded. The second task entailed discussing in pairs the choice of items to be contained in the time capsule and also in this case no audio-recording took place. Each time the participants were informed that the production phase should not exceed 5 minutes. The choice of themes for the monologue and dialogue, which might be deemed too easy for this group of learners, was dictated by the need to avoid topics that would overwhelm the participants or be overly challenging so as not to discourage them from speaking from the very outset. It seemed advisable that the researchers should not listen to the students' presentations and conversations so as not to affect the atmosphere; however, they remained in the room throughout the experiment. Unfortunately, the order in which the two tasks were performed was not counter-balanced and the whole sample first produced their monologues and then took part in dialogues, which may be perceived as a weakness inherent in the design of the study, and, it needs to be admitted, might have had a bearing on the learners' WTC. During both tasks the respondents rated their WTC on a special grid on hearing a beep every 30 seconds, a time span which was chosen arbitrarily as likely to provide sufficient data in the course of a task as well as reflective of the amount of time most exchanges or presentations typically took in the students' regular English classes. This undoubtedly somewhat unnatural scheme was chosen in order to make sure that the participants reported their WTC in real time, thereby avoiding the limitations inherent in post-task reflection, such as interpretation of specific behaviors once the task has been completed rather than indications of changes on a minute-by-minute basis. The scale allowed the students to indicate the level of WTC at 30 sec intervals from -10, indicating extreme unwillingness to communicate, to +10, standing for extreme willingness to communicate, with the zero point meaning indifference. The self-ratings were analyzed quantitatively and a paired samples *t*-test was computed to compare the results for the two tasks.

In the second phase of the study, the participants were asked to fill in a battery of questionnaires, which included items related to the following issues: *WTC in English*, *Perceived Competence in English*, *Frequency of Communication in English*, based on the survey applied by MacIntyre and Charos (1996), *Classroom WTC*, which was adapted from MacIntyre, Baker, Clement, and Conrod (2001), *Communication Anxiety in English* in the form presented by Yashima (2002), and, finally, a widely used tool, the *Foreign Language Classroom Anxiety Scale* (FLCAS) by Horwitz, Horwitz, and Cope

(1986). The choice of WTC antecedents was dictated by the fact that the above-mentioned constructs as well as the data collection tools, specifically designed and believed to measure them, have been applied in numerous studies investigating this concept (cf. Cao and Philip, 2006; Hashimoto, 2002; McCroskey and Richmond,1991; Peng, 2012). All of these instruments have been shown to demonstrate high reliability (Asker, 1998), as well as to manifest strong content and construct validity (McCroskey, 1992). It was also decided that, apart from communication anxiety, the students' classroom anxiety needs to be inspected as the main focus of the present study was on the participants' behavior in an instructional context. Much in the same vein, the authors were interested both in the general and classroom WTC of the students with a view to investigating the relationship between these two attributes and the willingness to speak as manifested in task performance. A short description of the instruments follows:

1. *Willingness to Communicate in English* ($\alpha = .97$ in MacIntyre and Charos, 1996). The questionnaire consists of twenty items checking the percentage of time participants would choose to communicate in different situations. A probability estimate scale between 0% and 100% is used here.
2. *Perceived Competence in English* ($\alpha = .98$ in Macintyre and Charos, 1996). This survey includes twelve items tapping into the average percentage of time from 0% to 100% that participants feel competent in speaking English in 12 situations.
3. *Frequency of Communication in English* ($\alpha = .97$ in Macintyre and Charos, 1996) The scale uses the same items as those included in the perceived competence survey but it is altered to refer to the frequency of communication in English for each of the 12 situations.
4. *Classroom WTC*. The scale, adapted from MacIntyre, Baker, Clement, and Conrod (2001) ($\alpha = .92$), refers to various situations that are likely to take place in the classroom; respondents indicate, using a 5-point Likert scale, the frequency with which they choose to communicate in them.
5. *Communication Anxiety in English* ($\alpha = .92$ in Yashima, 2002). The questionnaire consists of 12 items which measure the average percentage of nervousness from 0% to 100%, experienced by respondents while communicating in English in 12 situations.
6. *FLCAS* ($\alpha = .93$ in Horwitz et al., 1986) is a 33-item individual self-report Likert scale that reflects communication apprehension, test anxiety and fear of negative evaluation. A 5-point scale corresponds to psychophysiological symptoms, negative expectations concerning performance, comparison to others, and avoiding language-related behavior.

Once the data collected by means of these instruments were analyzed, Pearson product-moment correlations were computed between the self-ratings for the monologue and the dialogue, and the constructs measured in the ways that were described above.

3.3 Findings and Discussion

As illustrated in Table 1, which presents minute-by-minute fluctuations of the respondents' WTC, the self-ratings provided by the students indicated that the more preferred type of task, or a task during which their willingness to speak proved to be

higher was, a monologue. The mean value on the 20 (from -10 to +10) point scale was 4.0977 (SD = 2.11129) for the monologue and 3.6182 (SD = 2.99195) for the dialogue. A *t*-test which was performed on the data revealed that the difference was statistically significant, with the *p* value standing at .046 (t = -2.058). Cohen's *d* reached the level of 0.31, which testifies to moderate effect size. The higher level of the participants' willingness to speak in this case might have resulted from the fact that while performing the task on their own, they were not dependent on another person's decisions and choices and they could plan their contribution as they saw fit. Moreover, they avoided embarrassing situations, surprising questions or instances when somebody else presents arguments or opinions they would have liked to bring up before they had a chance to do it. In a word, exercising a greater control over the task undeniably lowered anxiety and led to a higher level of WTC (cf. Pawlak and Mystkowska-Wiertelak, in press). Another tendency that could be detected was that initially high WTC in monologue tasks tended to decrease in the course of task performance, which can perhaps be attributed to running out of arguments or ideas or tiredness and weariness which could have set in during the 5 min time span. In the case of a dialogue, a reverse trend was visible, since the initial unwillingness to talk tended to fade away as the students became more engaged in the task, perhaps in response to the points raised by the other participants. It should also be noted that when grids of the students working in individual pairs were compared, it turned out that at the very start usually one person's WTC was much higher than the other's and it might be assumed that it was this person that most likely started the conversation.

Minute/Task	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Dialogue	2.67	3.36	3.36	3.82	3.44	3.84	4.04	4.20	3.91	3.96
Monologue	4.36	4.91	5.22	5.09	4.87	4.69	4.69	4.51	4.27	3.84

Table 1: Fluctuations of learners' WTC during a dialogue and a monologue

As regards the relationships between the willingness to communicate reported in the course of task performance (see Table 2) and the constructs investigated in the study (see section 3.2.), it was revealed that the correlations were low on the whole. Nevertheless, statistically significant correlations (at the .01 level) were observed between WTC in English and Perceived Competence (r = .607), and between Classroom WTC and Frequency of Communication (r = .401), with the variables accounting for about 36% and 16% of the variance in each other, respectively. Somewhat predictably then, it turned out that a positive picture that learners hold with respect to their competence translated into their eagerness to speak. Equally unsurprisingly, the students whose classroom WTC was high enjoyed making a contribution to classroom discourse. Since correlations indicate only the relationship between variables without determining causality, it can only be hypothesized that students who actively participate in classroom activities increase their classroom WTC, with the caveat that this relationship could in fact be reciprocal. Correlations significant at the .05 level were detected between Classroom WTC and Perceived Competence (r = .344), between WTC in English and Frequency of Communication (r = .325), and between Perceived Competence and

Frequency of Communication ($r = .362$), with the constructs accounting for about 10% of the variance in each case.

	Monologue	WTC in E	C WTC	P Compet	FREQ	C ANXIETY	FLCAS	Dialogue
Monologue	1	.062	-.049	-.026	-.269	.023	-.102	.157
WTC in E	.062	1	-.049	.607**	.325*	-.025	-.084	.259
C WTC	-.049	-.049	1	.344*	.401**	.016	-.049	.125
PCompet	-.026	.607**	.344*	1	.362*	-.123	-.026	.210
FREQ	-.269	.325*	.401**	.362*	1	-.163	-.165	.013
C ANXIETY	.023	-.025	.016	-.123	-.163	1	.252	-.086
FLCAS	-.102	-.084	-.049	-.026	-.165	.252	1	-.175
Dialogue	.157	.259	.125	.210	.013	-.086	-.175	1

Table 2: Pearson correlations for the self-ratings and the remaining factors**: WTC in E = willingness to communicate in English; C WTC = classroom WTC; P Compet = perceived competence; FREQ = frequency of communication; C ANXIETY = classroom anxiety; FLCAS = foreign language classroom anxiety scale.**
* Correlation is significant at the .05 level.
** Correlation is significant at the .01 level.

The relationships among the constructs measured by means of the questionnaires were expected as they remain in line with previously reported empirical investigations of L2 WTC (e.g. Macintyre and Charos, 1996; MacIntyre and Legatto, 2011; MacIntyre et al., 2001; Munezane, 2013; Yashima, 2002). It came as a surprise, however, that no statistically significant correlations were established between any of the constructs and the respondents' WTC during the tasks they participated in. This may cast doubt either on the procedure adopted for tapping the moment-by-moment fluctuations in the levels of WTC during task performance or the adequacy of the instruments employed to measure the constructs under study, as the tools used apparently proved unable to detect a relationship between the students' self-ratings in the monologue and dialogue, and factors leading to communication. A discussion of limitations of data collection procedures as well as tentative conclusions on the issue will be offered in the section to follow. What is also interesting is the low correlation between the participants' self-rated WTC in the two tasks, which may indicate that speaking on one's own and interacting with others may place quite different demands on learners, a point that is surely in need of further empirical investigation.

4. Conclusions, Implications and Directions for Future Research

The foregoing discussion clearly shows that the models of WTC that the present-day empirical investigations have been based on may still be inadequate in some respects and may require further development and fine-tuning. The results of the present study, far from being conclusive, show clearly that determining and analyzing conditions and factors capable of shaping WTC in the target language pose a considerable challenge and deserve attention and careful examination. Still, some pedagogical implications can be offered in view of the fact that more WTC can be generated by tasks that allow students to decide on the choice of linguistic means as well as the content of their output. The statistically significant difference between the participants' WTC in the course of performing monologues and dialogues clearly indicates which classroom procedures might help quiet students to gain more confidence and practice before embarking on more demanding tasks. The results also indicate that even the most captivating communicative activities in the classroom should not last for too long since, with the passage of time, boredom and weariness may decrease the level of WTC.

What appears disconcerting is the fact that neither Classroom WTC nor WTC in English, as measured by the relevant questionnaires, correlated with WTC, as self-reported by the participants in the course of task performance. Actually, none of the constructs taken into account in the present study proved to correlate with the students' WTC self-ratings. What is more, the relationships among these constructs themselves turned out to be weak and only in a few cases was statistical significance reached. This, as indicated in the section above, might have its roots either in the limitations of the WTC self-rating procedure or the inadequacy of the surveys applied following the literature on the subject. Thus a possibility cannot be ruled out that the data collection tools employed in the present study failed to some extent to tap into the underlying qualities of the learners or the situational variables in the context under investigation. One reason for this could be that, as indicated by some of the participants, certain situation types described in the questionnaires may not occur in this specific educational context, which might have distorted the outcomes to some extent. The procedure for tapping WTC during task performance chosen by the authors is also not without its limitations. A situation in which the participants are disturbed every 30 sec. with a beep and required to indicate the level of willingness to participate in a task is undoubtedly unnatural and might be disconcerting, which in turn might be reflected in the ratings. Nevertheless, it was assumed that measuring fluctuations in learners' WTC performed after the task would not have provided a sufficient reflection of on-line changes. All the same, the interpretation of the self-ratings would have been far more insightful if the procedure had included some kind of introspection (e.g. a stimulated recall). This would have enabled the students to comment on the ebbs and flows of their WTC, thus allowing a more in-depth analysis of the data. Finally, it should also be noted that students majoring in English constitute a very unique set, not necessarily sharing the characteristics of typical language learners. Most of them will join the teaching profession and that is why their standards and expectations as well as knowledge about the learning process may be higher, which will undoubtedly shape their responses and behavior. For this reason, engaging other age groups, educational levels and study programs would have offered a much broader picture of the issue. To conclude, it

appears warranted to say on the basis of the findings that the interplay of numerous trait-like features and situation-bound influences evade questionnaire-based studies and thus a more focused person-in-context perspective (Ushioda, 2009) should also be included, as has been attempted in the present study.

References

Asker, B. 1998. Student reticence and oral testing: A Hong Kong study of willingness to communicate. Communication Research Reports 15(2): 162-169. DOI: 10.1080/08824099809362110

Baker, S. C. and MacIntyre, P. D. 2000. The role of gender and immersion in communication and second language orientations. Language Learning, 50(2): 311-341. DOI: 10.1111/0023-8333.00119

Burgoon, J. K. 1976. The unwillingness-to-communicate: Development and validation. Communication Monographs 43, 60-69. DOI: 10.1080/03637757609375916

Cao, Y. and Philp, J. 2006. Interactional context and willingness to communicate: A comparison of behavior in whole class, group and dyadic interaction. System, 34(4): 480-493. DOI: 10.1016/j.system.2006.05.002

Chan, B. M. and McCroskey, J. C. 1987. The WTC scale as a predictor of classroom participation. Communication Research Reports 4: 47-50.

Clément, R. and Gardner, R. C. 2001. Second language mastery. In H. Giles and W. P. Robinson (eds) Handbook of language and social psychology. London, UK: Wiley: 489-504.

Clément, R., Baker, S. C., and MacIntyre, P. D. 2003. Willingness to communicate in a second language: The effects of context, norms, and vitality. Journal of Language and Social Psychology 22(2): 190-209. DOI: 10.1177/0261927X03022002003

Clément, R. and Kruidenier, B. G. 1985. Aptitude, attitude and motivation in second language proficiency: A test of Clément's model. Journal of Language and Social Psychology 4(1): 21-37. DOI: 10.1177/0261927X8500400102

Dörnyei, Z. 2005. The psychology of the language learner: Individual differences in second language acquisition. Mahwah, NJ: Lawrence Erlbaum.

Dörnyei, Z. 2009. The L2 Motivational self system. In Z. Dörnyei and E. Ushioda (eds) Motivation, language identity and the L2 self. Bristol: Multilingual Matters: 9–42.

Gardner, R. C. 1985. Social psychology and second language learning: The role of attitude and motivation. London: Edward Arnold.

Gregersen, T. and P.D. MacIntyre 2013. Capitalizing on language learners' individuality. Bristol: Multilingual Matters.

Hashimoto, Y. 2002. Motivation and willingness to communicate as predictors of reported L2 use. Second Language Studies 20(2): 29–70.

Horwitz, E. K., Horwitz, M. B., and Cope, J. 1986. Foreign language classroom anxiety. The Modern Language Journal, 70(2): 125–132. DOI: 10.1111/j.1540-4781.1986.tb05256.x

Kang, S. 2005. Dynamic emergence of situational willingness to communicate in a second language, System 33: 277–292. DOI: 10.1016/j.system.2004.10.004

Kuhl, J. 1994a. A theory of action and state orientations. In J. Kuhl and J. Beckmann (eds),Volition and personality. Gottingen: Hogrefe & Huber Publishers: 9–46

Kuhl, J. 1994b. Action vs. state orientation: Psychometric properties of the Action Control Scale (ACS-90). In J. Kuhl and J. Beckmann (eds),Volition and personality. Gottingen: Hogrefe & Huber Publishers: 47–59

Lantolf, J. P. 2006. Sociocultural Theory and L2: State of the art. Studies in Second Language Acquisition 28: 67-109. DOI: http://dx.doi.org/10.1017/S0272263106060037

Long, M. H. 1985c. Input and second language acquisition theory. In S.M. Gass and C.G. Madden (eds). Input in second language acquisition. Rowley, MA: Newbury House: 377–393.

Long. M. H. 1996. The role of the linguistic environment in second language acquisition. In W. C. Ritchie and T. K. Bhatia (eds). Handbook of research on second language acquisition. New York: Academic Press: 413–468.

MacIntyre, P. D. 1994. Variables underlying willingness to communicate: A causal analysis. Communication Research Reports 11: 135–142. DOI: 10.1080/08824099409359951

MacIntyre, P. D. 2007. Willingness to communicate in the second language: Understanding the decision to speak as a volitional process. The Modern Language Journal 91(4): 564–576. DOI: 10.1111/j.1540-4781.2007.00623.x

MacIntyre, P. D., Burns, C., and Jessome, A. 2011. Ambivalence about communicating in a second language: A qualitative study of French immersion students' willingness to communicate. The Modern Language Journal 95(1): 81–96. DOI: 10.1111/j.1540-4781.2010.01141.x

MacIntyre, P. D. and Charos, C. 1996. Personality, attitudes, and affect as predictors of second language communication. Journal of Language and Social Psychology 15(1): 3–26. DOI: 10.1177/0261927X960151001

MacIntyre, P. D. and Clement, R. 1996. A model of willingness to communicate in a second language: The concept, its antecedents and implications. Paper presented at the 11th World Congress of Applied Linguistics, Jyväskylä, Finland.

MacIntyre, P. and Doucette, J. 2010. Willingness to communicate and action control. System 38: 161–171. DOI: http://dx.doi.org/10.1016/j.system.2009.12.013

MacIntyre, P. D. and Legatto, J. J. 2011. A dynamic system approach to willingness to communicate: Developing an idiodynamic method to capture rapidly changing affect. Applied Linguistics 32(2): 149–171. DOI: 10.1093/applin/amq037

MacIntyre, P. D., Baker, S. C., Clément, R., and Conrod, S. 2001. Willingness to communicate, social support, and language-learning orientations of immersion students. Studies in Second Language Acquisition 23(3): 369–388. DOI: http://dx.doi.org/

MacIntyre, P. D., Baker, S. C., Clément, R., and Donovan, L. A. 2002. Sex and age effects on willingness to communicate, anxiety, perceived competence, and L2 motivation among junior high school French immersion students. Language Learning 52(3): 537–564. DOI: 10.1111/1467-9922.00194

MacIntyre, P. D., Clément, R., Dörnyei, Z., and Noels, K. A. 1998. Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. Modern Language Journal 82: 545–562. DOI: 10.1111/j.1540-4781.1998.tb05543.x

McCroskey, J. C. 1992. Reliability and validity of the willingness to communicate scale. Communication Quarterly 40(1): 16–25. DOI: 10.1080/01463379209369817

McCroskey, J. C. and Richmond, V. P. 1982. Communication apprehension and shyness: Conceptual and operational distinctions. Central States Speech Journal 33: 458–468. DOI: 10.1080/10510978209388452

McCroskey, J. C. and Richmond, V. P. 1991. Willingness to communicate: A cognitive view. In M. Booth-Butterfield (ed), Communication, cognition, and anxiety. Newbury Park, CA: Sage: 19–37.

Munezane, Y. 2013. Attitudes, affect and ideal L2 self as predictors of willingness to communicate. In R. Leah, A. Ewert, M. Pawlak, and M. Wrembel (eds), EUROSLA Yearbook: Volume 13: 176–198. DOI: http://dx.doi.org/10.1075/eurosla.13.09mun

Pawlak, M. and Mystkowska-Wiertelak, A. (in press). Investigating the dynamic nature of L2 willingness to communicate.

Noels, K. A. 2001. New orientations in language learning motivation: Toward a contextual model of intrinsic, extrinsic, and integrative orientations and motivation. In Z. Dörnyei and R. Schmidt (eds), Motivation and second language acquisition. Honolulu, HI: Second Language Teaching and Curriculum Center, University of Hawaii at Manoa: 43–68.

Noels, K.A., Pelltier, L.G., Clément, R. and Vallerand, R.J. 2000. Why are you learning a second language? Motivational orientations and self-determination theory. Language Learning 50: 57–85. DOI: 10.1111/0023-8333.00111

Peng, J. 2007. Willingness to communicate in the Chinese EFL classroom: A cultural perspective. In J. Liu (ed), English language teaching in China: New approaches, perspectives, and standards. London: Continuum: 250–269.

Peng, J. E. 2012. Towards an ecological understanding of willingness to communicate in EFL classrooms in China. System 40(2): 203–213. DOI: 10.1016/j.system.2012.02.002

Peng, J. E. 2014. Willingness to communicate inside the EFL classroom: An ecological perspective. Bristol: Multilingual Matters.

Peng, J. E. and Woodrow, L. J. 2010 Willingness to communicate in English: A model in the Chinese EFL classroom context. Language Learning 60: 834–876. DOI: 10.1111/j.1467-9922.2010.00576.x

Ryan, S. 2009. Self and identity in L2 motivation in Japan: The ideal L2 self and Japanese learners of English. In Z. Dörnyei and E. Ushioda (eds), Motivation, language identity and the L2 self. Bristol: Multilingual Matters: 120–143.

Swain, M. 1985. Communicative competence: Some roles of comprehensible input and comprehensible output in its development. In S. Gass, and C. Madden (eds) Input in second language acquisition. New York: Newbury House: 235–256.

Swain, M. 1998. Focus on form through conscious reflection. In C. Doughty and J. Williams (eds), Focus on form in classroom second language acquisition. Cambridge: Cambridge University Press: 64–81.

Ushioda, E. 2009. A person-in-context relational view of emergent motivation, self and identity. In Z. Dörnyei and E. Ushioda (eds), Motivation, language identity and the L2 self. Bristol: Multilingual Matters: 215-228).

Vygotsky, L.S. 1978. Mind in Society Cambridge, Mass.: MIT Press.

Yashima, T. 2002. Willingness to communicate in a second language: The Japanese EFL context. The Modern Language Journal 86(1): 54–66. DOI: 10.1111/1540-4781.00136

Yashima, T. 2009. International posture and the ideal L2 self in the Japanese EFL context. In Z. Dörnyei and E. Ushioda (eds), Motivation, language identity and the L2 self. Bristol: Multilingual Matters: 144–192.

Yashima, T. 2012. Willingness to communicate: Momentary volition that results in L2 behaviour. In S. Mercer, S. Ryan and M. Williams (eds), Psychology for language learning: Insights from research, theory and practice. Basingstoke: Palgrave Macmillan: 119–135.

Yashima, T., Zenuk-Nishide, L., and Shimizu, K. 2004. The influence of attitudes and affect on willingness to communicate and second language communication. Language Learning 54(1): 119–152. DOI: 10.1111/j.1467-9922.2004.00250.x

Desperately Seeking a Communicative Approach: English Pronunciation in a Sample of French and Polish Secondary School Textbooks

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Abstract
This paper compares the treatment of English pronunciation in school textbooks from France and Poland, in order to see what resources teachers have at their disposal. It is limited to textbooks used at the secondary level of each education system. Recent research has shown that European teachers do not find teaching English pronunciation easy and that many are unsatisfied with their training in relation to teaching pronunciation (Bradford & Kenworthy 1991; Burgess and Spencer 2000; Henderson et *al.* 2012; Frost and Henderson, 2013; Iivonen, 2005). Textbooks are a widespread resource with the potential to alleviate a lack of extensive pedagogical training.

The first part of this paper analyses pronunciation exercises in a representative sample of textbooks from each country. Pronunciation exercises were classified based on the degree to which they mobilize communicative abilities, according to the five categories of a Communicative Framework for teaching pronunciation (Celce-Murcia et al., 2010, p45): Description & analysis, Listening discrimination, Controlled practice, Guided practice, Communicative practice. The first category involves little risk-taking by the learner, usually focusses on form and allows little freedom. At the other end of the spectrum, communicative practice involves a focus on meaning and interaction, with the concomitant greater freedom to make mistakes. The exercises were then analysed to see which segmental and/or prosodic features they favoured and to what extent.

1. Introduction

In European education systems, a communicative approach is usually the dominant paradigm in foreign language textbooks and teaching materials. Attaining communicative competence (Hymes, 1972) is the overall goal, as is clear in CEF "can-do" descriptors for Spoken Interaction and for Spoken Production, such as Level B2 Interaction: "I can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. I can take an active part in discussion in familiar contexts, accounting for and sustaining my views". Strategic competence

(Canale and Swain, 1980) underlies this goal, with its focus on use more than on usage; success involves learners expressing themselves and understanding others in interaction.

It follows that, if interaction is both the means and the ultimate goal in a communicative approach (ibid.), then speaking should logically receive at least as much attention as reading, writing and listening. Concurrently, given what is now known about the importance of intelligible pronunciation in spoken interaction, one could also reasonably expect pronunciation to be a primary focus of school textbooks, teaching materials and classroom activities. Unfortunately, for a variety of reasons pronunciation teaching "does not always make for a comfortable fit with instructors who support communicative language teaching" (Foote et al., 2013, 1). Foote et al. (ibid.) summarize four reasons for this: **a belief** that explicitly teaching pronunciation has little or no effect – and might even be counter-productive; **a perception** that integrating pronunciation into all-skills classes is hard; **the assumption** that factors beyond a teacher's control (notably age of learning, native language and aptitude) have more impact on pronunciation learning than on other skills; **the reality** of mixed-levels groups despite streaming based on placement tests- which typically do not test pronunciation skills. It is understandable that European teachers, who often feel dissatisfaction with pre-service training concerning the teaching of pronunciation (Bradford and Kenworthy 1991; Burgess and Spencer 2000; Henderson et *al.* 2012; Frost and Henderson, 2013; Iivonen, 2005), would focus their efforts elsewhere. They might, for example, use a number of English pronunciation teaching materials available on the market as a supplementary and additional teaching aid, but the earlier study by Szpyra-Kozłowska (in Sobkowiak and Waniek-Klimczak, 2006, 216) shows that even though they "contain a wealth of interesting ideas how to teach English pronunciation" (ibid.) they are not perfect and they provide descriptions of phonetic articulation which are too "simplified". Moreover, taking into account the limited number of hours of English in a secondary school (where it is just another subject in an already busy school day) and the time pressure resulting from the school-leaving exams, it seems obvious that teachers will not reach for extra pronunciation tasks to add to coursework.

But textbooks could help solve the problem, as they have the potential to guide teachers in effective pronunciation teaching: "Because many ESL instructors have limited training and confidence in teaching pronunciation, it falls to general-skills textbooks to ensure that pronunciation is addressed in L2 classrooms." (Derwing et al., 2012, 25). Despite the rise of on-line resources[1], printed textbooks are the prevalent tool to which teachers have access. And while they should not be confused with classroom reality, textbooks nonetheless constitute a useful window onto teaching practices; in Finland, for example, "the teacher's guides offer ready-made course schedules and lesson plans" (Tergujeff, 2010, 191). Furthermore, Bragger and Rice (2000) argue that textbooks are used "for curriculum design, for lesson planning, as a basis for assessment, and perhaps too often, to define their [instructors'] approach to teaching" (107). European school textbooks may or may not be designed for the local context by publishers but they tend to be all-inclusive general course books in which publishers take

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[1] Publisher-controlled digital textbooks and resources (Bruillard, 2011; SOFRES 2010) are more and more common, but teachers can and do search the Web for exercises and/or "raw" content (which they then transform into teaching materials).

into account the national curriculum; for example, in Poland British publishers regularly invite Polish authors to contribute their expertise to textbook series. Curricula, in turn, tend to be aligned with the *Common European Framework of Reference for Languages* (Council of Europe, 2001), which emphasizes a communicative approach to language teaching. To conclude, teachers would seem to need to address pronunciation if their learners are to meet CEFR criteria and textbooks could potentially reduce the gap left by inadequate pre-service training.

While the CEFR emphasizes the goal of spoken interaction, it is clear that for many learners and teachers pronunciation work to that end will be an uncomfortable experience. Spoken interaction involves bringing one's ideas into the public domain and this can be daunting for many speakers; voicing ideas in a foreign tongue involves even greater risk. One's pronunciation is "a powerful sociological force; it reveals our group affiliation and often how we see ourselves" (Celce-Murcia et al., 2010, 279); teachers might lack confidence in their own accent. Pronunciation work is therefore likely to be a more affective experience than, say, doing grammar exercises. For learners this could be especially true because, as exercises become more communicative, moving away from a focus on form and a limited potential for error, the level of freedom and risk concomitantly increases. Therefore, either textbooks need to provide a structured approach to pronunciation work or teacher training needs to sufficiently prepare teachers to fill-in the gaps and prioritise.

Any textbook analysis needs to address the issue of which types of pronunciation features are important for communication. A long-standing debate continues about the relative importance of segmental or prosodic features and research has started to generate useful evidence. One significant influence in recent decades comes from studies of English as a Lingua Franca (ELF) (e.g. Jenkins 2000; Seidlhofer 2001). Seidlhofer defines ELF as "any use of English among speakers of different first languages for whom English is the communicative medium of choice, and often the only option." (2011, 7)[2]. Based on the analysis of interactions between non-native speakers, Jenkins proposes a lingua franca core (LFC) syllabus with only two prosodic elements (tone units/word groups and nuclear stress). Other research shows that focussing on intonation and both nuclear and lexical stress affect intelligibility (Munro and Derwing, 2011; Field, 2005; Derwing et al. 1998). Yet more research shows that distinguishing between certain segments rather than others is also important. For example, the *ship-sheep* distinction should be preserved (e.g. Munro and Derwing, 2006). This is in concordance with Jenkins including vowel length (tense/lax) and *consistency* in vowel quality in the Lingua Franca Core; it is not problematical to pronounce <bat> as <bet> but it should always be pronounced that way. Catford's principle of relative functional load (RFL), which takes into account frequency of occurrence, is another useful criterion for prioritizing segmental features (1987). The RFL of a phonemic contrast is measured by determining how many pairs of words are differentiated by that contrast, e.g. *ship-sheep, tin-thin*. It might not be worth spending time on features with low RFL, e.g. dental

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[2] Native speakers of English could be involved in ELF interactions but would be in the minority and would have to adapt to their listeners' needs in terms of intelligibility and ease of understanding.

fricatives, even if learners have difficulty with them and/or the features do not exist in their mother tongue.

Therefore, our research questions are:

- Are textbooks providing exercises to guide teachers in a structured approach to teaching pronunciation?
- And if yes, does that structure lead towards progressively more communicative work?
- Do pronunciation exercises tend to deal with segmental features more or less than prosodic ones?

We hypothesize that textbooks are not providing structured, communicative materials in relation to pronunciation and that what pronunciation work there is tends to focus on segmental features. In an attempt to confirm or refute these hypotheses, we start by describing the national contexts in which teachers use certain textbooks, before explaining our methodology. Results are discussed in relation to contrastive analysis, common claims about learners' potential difficulties, the Lingua Franca Core, and relative functional load, to partially assess the appropriateness of features dealt with in textbooks.

1.1 National Contexts

The societal perceptions of English are notably different between France and Poland. In France the "Toubon Law" of 1994 and the influence of the Académie Française (whose objective is to protect the purity of the French language) reveal that English is seen as being in direct competition with French and as a threat to national identity. For example, the Toubon Law stipulates that the French language is a fundamental element of the "personality and heritage of France" and that it is "the language of teaching, of work, of exchanges and public services »[3]. However, the official line is undergoing forced change, perhaps due to the influence of Internet (e.g. streaming), the best example being the decision taken in December 2012 by the French national TV channel to show an American series in English with subtitles every Monday evening. Conversely, in Poland learning English is seen as a necessity for a variety of reasons, including economic, and concomitant questions of status and purity do not seem to be at the fore. According to Spiewak and Golebiowska (in Swan and Smith, 2001, 162), since 1989 "the role of English, always a popular language, has dramatically increased. English is now considered an essential part of a good education, and is widely taught in and out of schools. Many employers organize in-service EFL courses."

The education systems in Poland and France are similar, with obligatory primary education being from age 6-10 (France also provides schooling from age 3-5), followed by secondary education. In France the system is divided into lower/*collège* (11/12 – 14/15 yrs) and upper/*lycée* levels (15+ yrs). Pupils in the language and literature stream (the "*Bac L*") should have obtained the CEFR level of B1/B2 at the end of the lower

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[3] Law n° 94-665, August 4, 1994.

collège, rising to C1/C2 level at the end of *lycée*; pupils in other streams are not expected to reach as high a level. Secondary education in Poland is also divided into two levels: lower/*gimnazjum* (12/13 – 14/15) and upper*/liceum* (15/16 – 18/19). At the end of the upper secondary school students have a choice of two levels of the English school-leaving written exam: B1 or B2+ depending on their linguistic competence gained throughout their education.

In both countries the official texts and rules governing textbook use are very similar. A wide variety of textbooks exists as well as a plethora of accompanying resources (workbook, on-line workbook, CDs, websites). Textbooks tend to change every 2-4 years, either due to reforms in the system or, in Poland due to changes in school-leaving exams. If publishers hope to sell textbooks, they must conform to official national curricula; anecdotal evidence reveals that using approved textbooks gives teachers the feeling that they are therefore following the guidelines. In France, no obligatory titles are imposed by the Ministry of Education. However, a list of suggested titles is published annually, as in Poland, where it can be quite long: 33 textbooks for primary elementary level, 23 for upper primary level, 40 at *gimnazjum* level and 32 at *liceum* level.

In contrast with Poland, in French schools teachers often decide to not use a textbook, especially at *lycée* level. One teacher went so far as to say "We don't use any textbooks any more (what's the point with the internet and all this constantly updated information, easily downloadable videos etc.)", whereas another at *collège* level wrote "as far as phonetics is concerned, I tend to use my own documents, as there is not much in the books." (E-mail, October 2013).

2. Methodology

2.1 Textbooks

This study focusses on secondary school textbooks. In France this includes both *collège* and *lycée* levels (learners aged 11-18). In Poland this covers both lower and upper secondary (*gimnazjum* and *liceum*) (learners aged 12-18/19). Twenty teachers in each country were asked (via e-mail and in person) which books they use and, from among those titles, the most popular or frequently mentioned were selected; the final list includes books from different publishers. Accompanying resources such as CDs or Web sites[4] were excluded not only because teachers use them differently, but also because it could be argued that their use "will be reflected in the number and range of pronunciation activities in the textbooks themselves." (Derwing et al., 2012, 22).

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[4] For example, the French publisher Nathan has a Web site to accompany their textbook series *New Bridges* : http://www.nathan.fr/webapps/cpg2-5/default.asp?idcpg=1389&accueil=1. This provides videos, sound files, an on-line textbook, interactive exercises, PDF documents, etc. and seems to be common practice amongst French publishers.

Level	Name of book	Publisher	School Year
Lycée (15+ yrs : 2nde, 1ère and Terminale)	Meeting Point 2011*	Hatier	$1^{ère}$
	New Bridges 2010	Nathan	2, 1, Terminale
Collège (11-14 yrs : 6ème- 3ème)	Enjoy English (2006-2008)*	Didier	$6^{ème}$, $4^{ème}$, $3^{ème}$

Table 1: French secondary school textbooks analysed (*Workbook also analysed)

Focussing on the most popular French books in each school level, 7 textbooks and 4 workbooks were examined, from 3 different publishers (Table 1). As for the Polish textbooks, each textbook is accompanied by a separate workbook, but pronunciation tasks are usually included in the textbooks; a recent trend seems to be to include a pronunciation section (about three pages altogether) at the end of the workbook. Therefore, 11 textbooks and 11 workbooks from 3 publishers were analysed, as shown in Table 2 below.

Level	Name of book	Publisher
Upper Secondary	Matura Prime Time Upper-Intermediate	Express Publishing 2011
	New Matura Solutions Upper-Intermediate	Oxford 2011
	New Matura Solutions Intermediate	Oxford 2011
	New Matura Solutions Pre-Intermediate	Oxford 2011
Lower Secondary	Upstream Intermediate	Express Publishing 2010
	Blockbuster 3	Express Publishing 2009
	Exam Challenges 3	Pearson Longman 2009
	English Plus 1,2,3,4 (Workbooks with the pronunciation section at the back)	Oxford 2011

Table 2: Polish textbooks analysed

For the first 7 titles the pronunciation work is included in the textbook, whereas in the *English Plus* textbook pronunciation work is non-existent; all pronunciation work has been relegated to the special pronunciation section at the end of the workbook.

2.2 Categorizing Data

Three questions probe aspects of the exercises relevant to this study:

- To what extent do they encourage communicative interaction?
- Do they treat segmental or prosodic features?
- Which features in particular do they cover?

In response to the first question, the Communicative Framework of Celce-Murcia et al. (2010, 45) was used to categorize exercises. Table 3 presents the Framework's five categories and their description in the middle and right-hand columns; a left-hand column has been added, to present a continuum of levels of risk and freedom, as well as of degrees of focus on form.

Level of risk & freedom, degree of focus on form	Exercise categories	Description of exercises
Low risk Little freedom Focus on form ↕ High risk Great freedom Focus on meaning	Description & Analysis	Oral & written descriptions of how the feature is produced & when it occurs within spoken discourse
	Listening discrimination	Focussed listening practice on learners' ability to correctly discriminate the feature
	Controlled practice	Focus on highlighted feature in order to raise learner consciousness, e.g. oral reading of minimal pair sentences, short dialogues, etc.
	Guided practice	Learner monitors for the specified features, e.g. structured communication exercises, information-gaps, cued dialogues, etc.
	Communicative practice	Learner attends to both form & content, less structured, fluency-building, e.g. role play, problem solving

Table 3: Exercise categories (adapted from Celce-Murcia et al., 2010, 45)

While the implied goal is for exercises to provide communicative practice, exercises in the other categories also provide valuable practice in the progression towards greater learner autonomy and focus on meaning or, to refer to Canale and Swain (1980) towards *use* rather than *usage*.

Table 4 provides examples of typical textbook instructions or criteria used in this study to classify exercises according to the above categories.

Description and Analysis	Rules; classifying; reflecting, noticing ('think about'/'what do examples show?') *(to illustrate how/when a feature occurs)*
Listening discrimination	Explicit comparing: 'Listen & check/note' *(to correctly discriminate a feature)*
Controlled practice	Oral reading aloud: 'Listen & repeat', 'Now you try' *(to raise consciousness of a feature)*
Guided practice	At least 1 open-ended model is provided, visually or orally *(to allow monitoring of a feature's form)*
Communicative practice	*Excluding speaking exercises lacking explicit reference/clear link to pronunciation work *(to allow monitoring of form & content)*

Table 4: Typical instructions for each exercise category

In the Description & Analysis category we included writing exercises which required noticing or thinking about a pronunciation feature, even though Celce-Murcia et al. do not mention them. A distinction was then made between "Listen and Check/Note" and "Listen and repeat/Now you try", the latter being seen as more active. Guided Practice exercises often accompanied a drawing with an open-ended structural model provided; the following example from a *collège* level textbook follows on from a Controlled Practice exercise on compound nouns (e.g. *sunscreen, fishing rods, car tyres*):

Figure 1: Example of a Guided Practice exercise, from *Enjoy English* (4ème) (Martin-Cocher et *al.,* 2012, 71)

Finally, numerous speaking and listening exercises were excluded from the category Communicative Practice unless they explicitly referred to a pronunciation feature. Moreover, numerous exercises actually involved two categories of communicative level, for example one separate instruction would encourage the learner to pay attention to a

feature ("put the words with a similar sound in the same column") followed later by a separate instruction "now practice with a partner". These count as two separate exercises, the former as Description & Analysis and the latter as Controlled Practice. The pair "Listen & Repeat" when written together was counted as one instruction and categorised as Controlled Practice.

In order to determine whether each exercise focussed on segmental or prosodic features, the instructions for individual exercises were analysed. Classifying features can be interesting in its own right, especially as textbooks may not concur with basic linguistic theory. The most striking case is the –ED ending, which is frequently worked on in textbooks as a segmental, along with consonants. However, it should be seen as a prosodic feature; a frequent learner error involves syllabification of –ED and final –ES as a coda. Similarly, the 'LL or "dark L" of contracted forms is presented as a segmental in a Polish textbook, where the exercise contrasts *I go* and *I'll go* - without mentioning *I will go*. In the case of *I will go*, arguably a more usual contrast with *I'll go*, there would be a change in sentence stress or focus and for this reason 'LL is categorized as prosodic.

The final step simply involved listing the features which were covered and the number of occurrences. This data revealed which features tend to be addressed most and least frequently.

3. Results and Discussion

The data will be presented from three perspectives: the communicative degree of exercises, the segmental or prosodic nature of each exercise's main pronunciation focus, and which particular feature. In order to assess the value of including features in textbooks, results will be compared to several references: the contrastive analyses of Swan and Smith's 2001 *Learner English* and of Rogerson-Revell's more recent *English Phonology and Pronunciation Teaching* (2011), Jenkins' 2000 Lingua Franca Core, and Catford's 1987 principle of relative functional load.

3.1 Exercise Types: How communicative?

The degree to which each exercise promotes communicative interaction was established by categorizing exercises according to Celce-Murcia's framework for the teaching of pronunciation (2010, 45). Table 5 displays the percentage of occurrences of exercises for each category of this framework: Description & Analysis, Listening Discrimination, Controlled Practice, Guided Practice, and Communicative Practice:
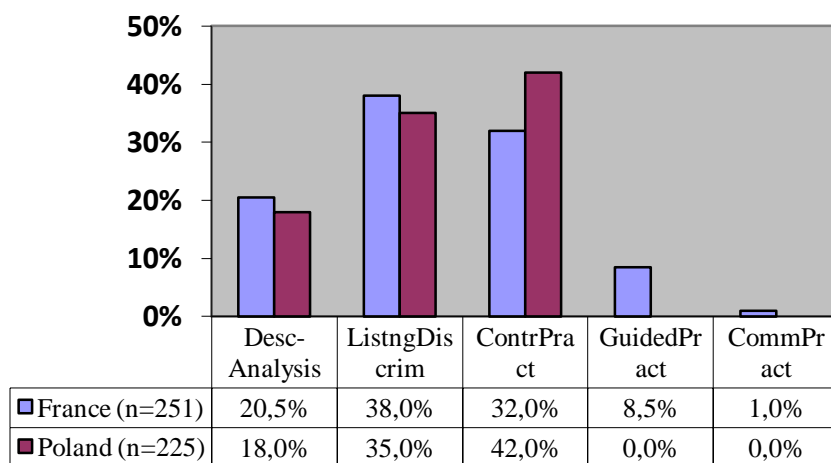
	Desc-Analysis	ListngDiscrim	ContrPract	GuidedPract	CommPract
France (n=251)	20,5%	38,0%	32,0%	8,5%	1,0%
Poland (n=225)	18,0%	35,0%	42,0%	0,0%	0,0%

Table 5: Percentage of occurrences of exercises per category (*Only occurred in upper secondary school textbooks)

The predominant category types for both sets of textbooks are Listening Discrimination and Controlled Practice. The percentages in the Desc-Analysis category (20.5% FR//18% PL) are perhaps higher than they should be, because the category includes written exercises which required thinking/noticing/inductive reasoning. At the other end of the scale, CommPract is non-existent in Poland and almost non-existent in France. Excluded from this category were speaking exercises which did not follow directly from explicit pronunciation work or which did not make explicit reference to pronunciation features in instructions. The results confirm those of Tergujeff's (2010) data-driven study, wherein Finnish textbook exercises came primarily from the Desc-Analysis and Controlled Practice categories. Moreover, in their study of general skills ESL textbooks Derwing et al. found that listen & repeat was "the task most consistently used across all the series analysed" (2012, 35).

3.2 Segmentals or prosodic features?

The segmental or prosodic nature of pronunciation focus in textbook exercises is presented in Table 6 as percentages of the total number of exercises:
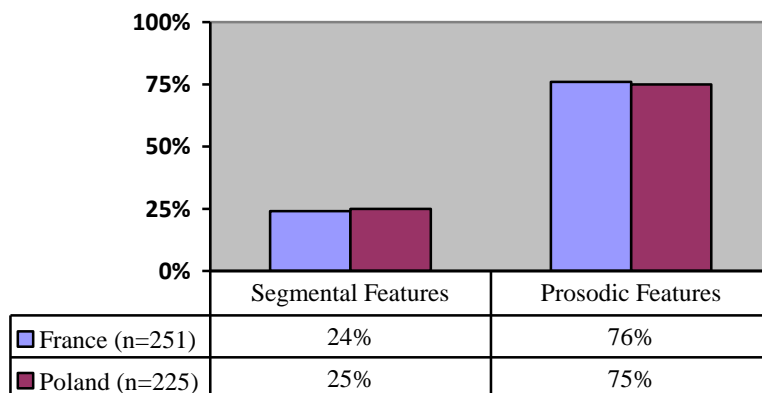
	Segmental Features	Prosodic Features
France (n=251)	24%	76%
Poland (n=225)	25%	75%

Table 6: Percentage of occurrences of segmental and prosodic exercises

Table 6 shows clearly how prosody dominates in both the French and Polish textbooks. However, when the Polish 25% for segmentals is further broken down, segmentals are barely dominant at lower secondary level (53.5%) but are nearly non-existent at upper secondary level (7%)[5]. This "heavier weighting toward suprasegmentals" was also found in Derwing et al. (2012, 33). Conversely, in her study of Finnish EFL textbooks, Tergujeff found that prosodic elements were totally absent, except for a brief mention of Linking –<r> and intonation in one-word questions (2010).

3.3 Which segmental features?

Table 7 lists the segmental features dealt with in textbooks, revealing overall variety, and further similarities and differences between French and Polish textbooks. A key word (e.g. EAT, SNOW) is provided when no IPA symbols were used in the textbook; inversely, if a symbol appears in the table, it appeared that way in the textbooks. The entry "stressed vowel" refers to instructions like "Group together words that rhyme"; this instruction was used several times for various vowels. It is worth remembering that 22 Polish books were analysed; therefore, despite the similar numbers of exercises in Table 7 (n=51 , n=57), the 11 French textbooks provide proportionately almost twice as many exercises on pronunciation. In the Polish data, it is notable that the exercises come solely from lower secondary textbooks, except for one exercise on *used/used to*.

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[5] Furthermore, unpublished preliminary data from primary school level shows that segmentals dominate 93% of textbook exercises in a French sample and 70% in a Polish sample.
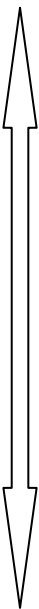
	Segmental features (n° of occurrences)		
	France TOTAL n= 51		Poland TOTAL n= 57
Most common ↕ **Least common**	n=5	SNOW, EAT	n=10	/iː ɪ/
			n=9	schwa
			n=6	/eɪ aɪ əʊ aʊ/
			n=6	/eɪ aɪ əʊ ɪə eə/
			n=6	/θ ð f v/
			n=5	silent letters
	n=4	/θ ð s z/, Diphthongs in general	n=4	-ing /ŋ/
	n=3	<H>, CAT/CAR, Explicitly /ə/	n=3	/æ ʌ/
	n=2	/tʃ ʃ/, THERE, IT, BED, COST/BLOOD, Vowels in general	n=2	Spelling/pronunciation: <OU>, <G>, <A>
	n=1	<TH> & <CH>, "T in the middle", FEAR, DOWN, BOY, DAY, Spelling/pron: <OW> - <O> - <I>, CUT/COT, Stressed vowel	n=1	/θ ð t d/, Spelling/pronunciation: used/used to

Table 7: Occurrences of segmental exercises (n= number of occurrences)

The vowel of EAT and diphthongs, esp. that of SNOW, are the most commonly dealt with segmental features in both countries; this seems appropriate given that the minimal pairs /iː ɪ/ and /ɔː əʊ/ have a high relative functional load, 95% and 88% respectively (Catford, 1987). Explicit reference to schwa – and not just "weak forms" or unstressed syllables- was found in both sets of textbooks, as was explicit work on letter-to-sound correspondence and dental fricatives. The latter have a low functional load (ibid.) and yet TH-variation can be stigmatized or at least sociolinguistically salient (e.g. Labov 1966, Hickey 2000.); however, in these books dental fricatives might be given more attention than they should receive simply because they are absent from the consonant inventory of both Polish and French.

According to Spiewak and Golebiowska (in Swan and Smith, 2001), major problems for Polish learners include predicting sounds from spelling, accurately producing consonants (especially the dental fricatives, the voiced velar nasal and inappropriate final

devoicing), and vowels represent "an area of great difficulty and potential confusion. […] open vowels are the single most difficult area" (164). Diphthongs do not exist in Polish and the second element of closing diphthongs tends to be pronounced with a /j/ or /w/ approximant. Moreover, maintaining the length of diphthongs is a priority in the LFC. For all these reasons, it is appropriate that they be covered in the textbooks.

Rogerson-Revell (2011, 286) mentions difficulty distinguishing between tense and lax vowels, specifically citing the /iː ɪ/ minimal pair, which is the most frequently occurring feature in the exercises. This is in concordance with vowel length (tense/lax) being included the LFC. Rogerson-Revell also mentions /æ e ʌ/ as being difficult, of which the pair /æ ʌ/ has a non-negligible relative functional load (65%) (Catford, 1987). It is interesting that schwa is the second most frequently occurring segmental feature in the Polish textbooks' exercises and yet it is not a priority in the LFC, either as an explicitly addressed segmental or related to a prosodic feature. Conversely, the Polish textbooks analysed make no mention of either the English affricates or /ʃ ʒ/, though they are mentioned by Spiewak and Golebiowska (in Swan and Smith, 2001) as potentially troublesome.

French learners share certain difficulties with Polish learners, so one would expect some overlap in the segmental features addressed in their textbooks. There is no distinction between tense and lax vowels in French and the exercises provide partial cover of this. Presumably the /æ ɑː/ distinction is covered not for its relative functional load, which is only 38% (Catford, 1987), but rather because it is a common salient feature distinguishing between American and British varieties (e.g. *grass, bath, example, advantage*). Schwa is explicitly referred to, and not merely mentioned in exercises on "weak forms" or "unstressed syllables". Aspiration of initial voiceless plosives is not mentioned but is obligatory in the LFC (when in initial position in a stressed syllable) whereas the French textbooks give diphthongs and dental fricatives top priority. In Swan and Smith (2001) the latter are described as problematical in production for French learners; for Poles "interdentals are a nightmare" according to Spiewak and Golebiowska (ibid.).The dental fricatives are given relatively more attention in the French textbooks, despite being unnecessary in the LFC (Jenkins, 2000) and having low functional load (Catford, 1987).

Exercises dealing explicitly with letter-to-sound mismatches should arguably focus on the more predictable aspects. For example, Carney (1994) found that in 94% of occurrences of <oa> , the pronunciation is /əʊ/. It is therefore unclear why such exercises address less productive relations, such as <ow> (53%) and <o> (76%).

3.4 Which prosodic features?

Table 8 lists the prosodic features dealt with in textbooks, showing that exercises treating intonation dominated while other preferences differed, most notably for –ED, –S/–ES endings.
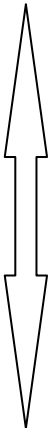
	Prosodic features (n° of occurrences)	
	France TOTAL n= 200	**Poland TOTAL n= 168**
Most common ↕ **Least common**	Intonation (n=40) Sentence stress (n=35)	Intonation (n=52) Word Stress (n=26)
	Word Stress (n=27)	Past tense ED (n=22) Weak Forms (n=18) 3rd pers. sing. (n=16)
	Focus (n=25)	Sentence Stress (n=12)
	Weak forms (n=20) Rhythm (n=10) Pausing/Breath groups (n=9)	Contractions (n=7)
	Endings (S, ES, ED) (n=5) Speed (n=5) Linking in general (n=5)	Linking (n=6) Syllables (n=4) « dark L » (n=2)
	Linking C+V, CAN'T (hearing negatives) (n=3) Linking R (n=2) Article a/an (n=1)	Focus (n=2) Hearing negatives (n=1)

Table 8: Occurrences of prosodic exercises

Intonation and word/lexical stress are top priorities in both sets of books whereas linking is not. Derwing et al.'s (2012) study of general ESL textbooks revealed the same hierarchy of prosodic foci as in the French textbooks: Intonation, Sentence Stress and Word stress. The most puzzling difference between the two sets of European school textbooks is the frequency of exercises highlighting focus: 25 exercises deal with focus in the French textbooks but only 2 were found in the Polish textbooks. Focus, or nuclear stress, and word groups are the only two prosodic features included in Jenkins' LFC. Without explicitly mentioning focus, Swan and Smith's *Learner English* mentions that both French and Polish learners have trouble with the predominantly stress-timed rhythm of English, so one could extrapolate and assume that focus would also be difficult (2001). Moreover, according to Gray, (2013) "The importance of teaching nuclear placement strategies to non-native learners is widely accepted". Its low priority in the Polish textbooks is therefore questionable.

Conversely, the Polish books attend extensively to –ED endings and 3rd person singular endings; this is understandable, given that the English spelling system isn't phonemic (whereas Polish is). However, French learners also struggle with English letter-to-sound correspondences so it is hard to explain the low frequency of exercises on this feature.

In terms of stress, the French books pay proportionately more attention to both lexical/word stress and sentence stress. Both sets of books lend intermediate status to Weak Forms, with the French ones including exercises explicitly on Rhythm. Exercises on speed are totally absent from the Polish books. Interestingly enough, the Polish books included 4 exercises on counting syllables. Two exercise-features (CAN'T or Hearing negatives and Article a/an) were not re-categorized (as Focus or Linking, for example) in order to show how textbooks present them. They are the least common features covered. It is worth remembering that 22 Polish books were analysed; therefore, despite the similar overall numbers of exercises in Table 8 (n=200, n=168), the 11 French textbooks provide proportionately more than twice as many exercises on prosodic features.

4. Conclusion

This study set out to compare how English pronunciation was treated in a sample of secondary school textbooks in France and Poland, with the hope of finding a variety of exercises leading toward communicative language practice. Our first hypothesis has, unfortunately, been confirmed; the secondary school textbooks sampled do not provide much communicative material in relation to pronunciation. However, our second hypothesis is refuted; their pronunciation exercises do not tend to focus on segmental features.

It was suggested, on the basis of preliminary data, that segmental features are the focus of primary level education and further research would be necessary to confirm this. This groundwork could also be extended in other directions. It would doubtless be interesting to compare books intended for private sector use and those for public sector use, as publishers produce different books for the two. The *Headway* series by Oxford University Press, for example, is quite popular in the private sector but does not seem to be officially used in the public sector. Secondly, correlations between the exercise types and specific features could prove informative; for example, segmentals might tend to be dealt with more frequently in Listening Discrimination rather than Guided Practice.

Overall, the French textbooks in the current study cover pronunciation much more frequently than the Polish textbooks. More particularly, the results show that the predominant prosodic features are intonation and word/lexical stress but that the French textbooks attend to focus much more extensively than the Polish ones. On the other hand, the Polish textbooks treat –ED endings and 3rd person singular endings much more than the French ones. Exercises devoted to segmental features are more varied, with the tense/lax distinction, diphthongs and dental fricatives being the most frequent. The continued presence of work on dental fricatives is perhaps due to a tradition of contrastive analysis or error analysis in prioritizing features in syllabi, although it was suggested that sociolinguistic issues might also influence choices. In any case, the exercises in both sets of textbooks failed spectacularly to provide exercises from the communicative end of Celce-Murcia's framework, as the predominant types of exercises were: Description & Analysis, Listening Discrimination and Controlled Practice.

The onus is therefore on (well-trained and/or talented) teachers to extend such exercises into communicative pronunciation work, as part of a communicative approach where interaction is both the means to success and the hallmark of it. This has its own

dangers, in that many teachers tend to feel time-starved and ill-equipped to design and deliver such work. It could be said that for the desperately seeking teacher, the search thus continues.

References

Bradford, B. and J. Kenworthy. 1991. Phonology on teacher training courses. Speak Out! 9: 12–15.

Bragger, J. and D. Rice. 2000. Foreign language materials: Yesterday, today and tomorrow. In R. Terry (ed) Agents of Change in a Changing Age. Lincolnwood, IL: National Textbook Company: 107-140.

Bruillard, E. 2011. Current textbook research in France: An overview. Proceedings of the international textbook symposium, ITS 2011. April 28, 2011, Seoul, Korea: 120-133.

Burgess, J. and S. Spencer. 2000. Phonology and pronunciation in integrated language teaching and teacher education. System 28/2: 191–215. DOI: 10.1016/S0346-251X(00)00007-5

Canale, M. and M. Swain. 1980. Theoretical bases of communicative approaches to second language teaching and testing. Applied Linguistics 1, 1-47.
DOI: 10.1093/applin/I.1.1

Carney, E. 1994. Survey of English spelling. London: Routledge.

Catford, J.C. 1987. Phonetics and the teaching of pronunciation. In J. Morley (ed) Current Perspectives on Pronunciation: Practices Anchored in Theory. Washington, DC: TESOL: 87-100.

Celce-Murcia, M. et al. 2010. Teaching Pronunciation: A Coursebook and Reference Guide, 2nd edition. Cambridge: Cambridge University Press.

Council of Europe. 2011. Common European Framework of Reference for Learning, Teaching, Assessment. Strasbourg: Language Policy Unit, Council of Europe. Available at: http://www.coe.int/t/dg4/linguistic/Source/Framework_en.pdf.

Derwing, T., Diepenbroek, L., and J. Foote. 2012. How well do general-skills ESL textbooks address pronunciation. TESL Canada Journal 30/1: 22-44.

Derwing, T., Munro, M. and G. Wiebe. 1998. Evidence in favour of a broad framework for pronunciation instruction. Language Learning 8/2: 217-235.
DOI: 10.1111/0023-8333.00047

Field, J. 2005. Intelligibility and the listener: the role of lexical stress. TESOL Quarterly 39/3: 399-423. DOI: 10.2307/3588487

Foote, J. A., Trofimovich, P., Collins, L., and F.S. Urzúa. 2013. Pronunciation teaching practices in communicative second language classes. The Language Learning Journal: 1–16. DOI: 10.1080/09571736.2013.784345

Frost, D. and A. Henderson. 2013. Les résultats du sondage EPTiES (English Pronunciation Teaching in Europe Survey): Un aperçu des pratiques de l'enseignement de la prononciation dans plusieurs pays européens vu par les enseignants. Les Cahiers de l'APLIUT: Les langues de spécialité en Europe 32/1: 92-113. DOI: 10.4000/apliut.3586

Gray, M. 2013. Training French-speaking learners to interpret accentually-signalled focus in English declarative sentences. Presentation at English Pronunciation: Issues and Practices (EPIP3): Proceedings of the Third International Conference. May 8-10, 2013, University of Murcia, Spain.,

Henderson, A., Frost, D. et al. 2012. The English Pronunciation Teaching in Europe Survey (EPTiES): Selected results. In Waniek-Klimczak, E., (ed.), Research in Language 10 v1: 5-27. DOI: 10.2478/v10015-011-0047-4

Hickey, R. 2000. Salience, stigma and standard. In L. Wright (ed) The Development of Standard English 1300-1800. Theories, Descriptions, Conflicts. London: Cambridge University Press: 57-72.

Hymes, D. 1972. On communicative competence. In J. Pride. and J. Homes (eds) Sociolinguistics: Selected Readings. Harmondsworth, England: Penguin: 269-293.

Iivonen, A. 2005. Fonetiikan merkitys kielenomaksumisessa ja – opetukessa. In Iivonen, A., Aulanko, R. and M. Vainio (eds) Monikäyttöinen Fonetiikka. 3rd edition. Helsinki: University of Helsinki.

Jenkins, J. 2000. The Phonology of English as a Lingua Franca. Oxford: Oxford University Press.

Labov, W. 1966. The Social Stratification of English in New York City. Washington, D.C.: Center for Applied Linguistics.

Martin-Cocher, O. et al. 2012. Enjoy English (4ème). Didier: Paris.

Munro, M. and T. Derwing. 2006. The functional load principle in ESL pronunciation instruction: An exploratory study. System 34: 520-531.
DOI: 10.1016/j.system.2006.09.004

Munro, M. and T. Derwing. 2011. The foundations of accent and intelligibility in pronunciation research. Language Teaching 44/3: 316-327.
DOI: 10.1017/S0261444811000103

Rogerson-Revell, P. 2011. English Phonology and Pronunciation Teaching, London: Continuum.

Seidlhofer, B. 2011. Understanding English as a Lingua Franca. Oxford: Oxford University Press.

Seidlhofer, B. 2001. Pronunciation. In R. Carter and D. Nunan (eds.) The Cambridge Guide to Teaching English to Speakers of Other Languages. Cambridge: Cambridge University Press: 56-65.

SOFRES 2010. Textbooks 2010: Paper and digital uses in lower secondary schools, (TNS Sofres/Savoir Livre survey). Available at
http://www.sne.fr/img/file/pdf/SNE/Groupes/SOFRES-Digitools-Eng.ppt.

Spiewak, G. and L. Golebiowska. 2001. Polish speakers. In M. Swan and B. Smith (eds) Learner English: A Teacher's Guide to Interference and Other Problems, 2nd edition. Cambridge: Cambridge University Press: 162-178.

Swan, M. and B. Smith 2001. Learner English: A Teacher's Guide to Interference and Other Problems, 2nd edition. Cambridge: Cambridge University Press.

Szpyra-Kozłowska, J. 2006. Phonetic instructions in English pronunciation teaching materials – how useful are they? In W. Sobkowiak and E. Waniek-Klimczak (eds.) Dydaktyka Fonetyki Języka Obcego w Polsce. Referaty z szóstej Konferencji Naukowej w Mikorzynie. May 8-10 2006, Konin, Państwowa Wyższa Szkoła Zawodowa w Koninie: 216-230.

Tergujeff, E. 2010. Pronunciation teaching materials in Finnish EFL textbooks. In A. Henderson (ed) English Pronunciation: Issues and Practices (EPIP): Proceedings of the First International Conference. June 3–5 2009, Université de Savoie, Chambéry, France. Université de Savoie, Laboratoire LLS: 189–205. DOI: 10.4304/jltr.3.4.599-607

THE INFLUENCE OF ATTENTION TO LANGUAGE FORM ON THE PRODUCTION OF WEAK FORMS BY POLISH LEARNERS OF ENGLISH

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Abstract

The paper discusses a study whose aim was to examine the impact of attention to language form and task type on the realisation of English function words by Polish learners of English. An additional goal was to investigate whether style-induced pronunciation shifts may depend on the degree of foreign accent. A large part of the paper concentrates on the issue of defining 'weakness' in English weak forms and considers priorities in English pronunciation teaching as far as the realisation of function words is concerned. The participants in the study were 12 advanced Polish learners of English, who were divided into two groups: 6 who were judged to speak with a slight degree of foreign accent and 6 who were judged to speak with a high degree of foreign accent. The subjects' pronunciation was analysed in three situations in which we assume their attention was increasingly paid to speech form (spontaneous speech, prepared speech, reading). The results of the study suggest that increased attention to language form caused the participants to realise more function words as unstressed, although the effect was small. It was also found that one of the characteristics of English weak forms, the lack of stress, was realised correctly by the participants in the majority of cases. Finally, the results of the study imply that, in the case under investigation, the effect of attention to language form is weakly or not at all related to the degree of foreign accent.

1. Attention to language form in L2 pronunciation

Tarone (1979; 1982) hypothesised that a learner's interlanguage is a continuum of styles, which range from the superordinate on one end and the vernacular on the other. Following Labov's (1969) work, Tarone argues that the superordinate is the style that is used in formal situations, when the learner pays the greatest amount of attention to language form. The vernacular style, on the other hand, is used in informal situations, when the learner pays least attention to language form. The crucial difference between the two styles is that the interlanguage superordinate is most permeable to invasion from the rule system of the target language (TL). It follows from this assumption that more

formal elicitation tasks such as word-list reading (in which, presumably, the learner's attention is maximally focused on language form) will induce the L2 speaker to use more TL forms than less formal tasks such as free speech (in which we might assume the learner is less focused on the language form). Support for Tarone's (1979; 1982) claims can be found in a study by Dickerson and Dickerson (1977), who examined the pronunciation of Japanese learners of English. The variable under investigation was the participants' production of /r/ in the context of a preceding consonant and a following high vowel. It was found that the subjects produced /r/ almost 100% correctly in a word-list reading task but only 50% correctly in free speech. Similar results were obtained by Gatbonton (1975), who investigated the English pronunciation of French Canadians. Schmidt (1987) examined the influence L1 transfer and style on the production of English dental fricatives by native speakers of Egyptian Arabic. The results revealed that the frequency of the produced TL forms increased when moving from a reading passage to word-list reading and minimal-pair reading. Since it could be assumed that the participants were maximally focused on the investigated pronunciation feature when asked to read the minimal pairs, the findings of Schmidt lend further support for Tarone's (1979; 1982) hypothesis. Beebe (1980) examined the realisation of initial and final /r/ by Thai learners of English and also found that the distribution of the investigated pronunciation feature shifted according to task type. However, her results show that the relationship between style/attention to speech and the production of TL forms may be more complex than as suggested by the findings of Dickerson and Dickerson (1977), Gatbonton (1975) and Schmidt (1987). More specifically, she observed that, in the case of final /r/s, the participants supplied more TL forms in a word-list reading task than in a conversation task. In the case of initial /r/s, an opposite pattern was observed. As regards initial /r/s, it was also found that the participants used more prestige native language forms in the word-list reading task than in free speech, which suggests that the superordinate style is permeable to invasion not only from the target language but also from the native language.

The results of several other studies that investigate stylistic changes in L2 pronunciation run counter to Tarone's (1979; 1982) claim that a formal context prompts learners to use more TL forms. For instance, Weinberger (1987) studied epenthesis and deletion in the English pronunciation of Mandarin Chinese speakers and found no significant change in the overall frequency of final cluster simplifications across different elicitation tasks (word-list reading, paragraph reading and storytelling). It also transpired that epenthesis was used more frequently in word-list reading, which was taken to mean that it is the linguistic context provided by the elicitation task rather than task formality that motivates shifts in the use of different simplification patterns. Lin (2001) also explored stylistic variations in Chinese learner's pronunciation of English consonant clusters. The obtained results accorded with Weinberger's findings in that increased accuracy was not significantly correlated with increased task formality. Zampini (1994) focused on the acquisition of the spirantized allophones of Spanish voiced stops by native speakers of English. The participants were required to answer a series of questions (the informal task) and read a text passage (the formal task). The results of the study showed that more TL forms were produced during the conversation task than during the reading task. Zampini explains that the participants might have used more spirantised variants in the informal task, because spirantization of /b/ and /g/ is also

possible in casual native English pronunciation. The finding that the participants exhibited more stop realisations in the reading tasks could, according to Zampini, be accounted for by the effect of orthography (the spirantized allophones are spelled as <b, d, g>).

Taken together, the results of the previous studies suggest that task type and the amount of attention paid to speech form may have a considerable bearing on the learner's phonetic performance. It also appears that the magnitude of the difference in performance depends on factors such as the phonological patterns of the learner's L1 (e.g. the existence of a given L2 pronunciation feature in casual L1 speech or the impact of L1 prestige pronunciation forms on L2 performance) or the phonetic complexity of the investigated pronunciation feature (e.g. single segments vs. consonant clusters). Finally, it seems worth mentioning that the effect of attention to speech form can also be approached from the perspective of contextualisation, i.e. the notion that learners may succeed in producing a given L2 sound in controlled contexts, but fail to produce the sound in real-life communication, when they are focused on meaning (Bowen, 1972).

2. Weak forms in L2 pronunciation

The present study is concerned with the impact of attention to speech form on Polish learners' realisation of English weak forms. As given in many pedagogical books, function words in English usually have two alternative pronunciations. One of them is the strong form, i.e. the stressed pronunciation of a given function word that contains a full vowel, e.g. *had* /hæd/, *from* /frɒm/, *the* /ðiː/. A weak form, on the other hand, can be defined as the reduced and unstressed realisation of a given function word, e.g. *had* /əd/, *from* /frəm/, *the* /ðə/ (Collins and Mees, 2009). More specifically, "[a]s compared with the accented realizations of [function] words (the [strong] forms), the unaccented [weak] forms of these words show reductions of the length of sounds, obscuration of vowels towards /ə, ɪ, ʊ/ and the elision of vowels and consonants" (Cruttenden, 2008: 266). Importantly, weak forms are the more frequent realisations of function words in English. Strong forms are only used in certain circumstances, e.g. when two function words are being contrasted as in the phrase "The letter's *from* him, not *to* him" (Roach, 2010: 90). As regards L2 speakers' realisations of this pronunciation feature, Lane (2010: 73) states that "there have been few studies of nonnative speakers' abilities to reduce function words. They suggest that while proficient learners are able to pronounce function words with shorter length than content words, they rarely use reduced vowels in function words." One of the studies referred to by Lane (2010) was conducted by Setter (2006) and is concerned with the duration of weakened, unstressed, stressed [1] and tonic syllables in the English pronunciation of native Cantonese speakers. The participants were university students from Hong Kong, who were recorded while giving oral presentations

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[1] The three terms were used by Setter (2006); the authors of the current study take 'weakened' to mean an unstressed syllable containing a reduced vowel, while 'unstressed' is interpreted by the authors as an unstressed syllable containing an unreduced vowel. It is worth mentioning here that different classification criteria are applied in the current study, i.e. lack of stress and vowel reduction are treated as independent parameters (see section 3.3.)

in class. The syllables produced by the subjects were assigned to different stress categories using auditory/perceptual judgements from the author and were contrasted with native speakers' realisations. The results of the study revealed that, among other things, the Hong Kong Cantonese speakers produced over 40% of the syllables as unstressed and less than 20% as weakened, whereas the native reference group realised more syllables as weakened than unstressed (over 34% vs. over 26%). As referred to by Lane (2010), this finding suggests that using reduced vowels in function words was more difficult for the participants than realising the words as unstressed.

3. The study

The primary goal of the current study was to examine the impact of attention to language form and task type on the realisation of English function words by Polish learners of English. An additional aim was to investigate whether style-induced pronunciation shifts may depend on the degree of foreign accent in a given learner's pronunciation. As opposed to English, in Polish, "[...] vowels tend to maintain their quality and they may reduce to schwa (or be devoiced or deleted) only when phonostylistically conditioned" (Dziubalska-Kołaczyk et al., 2006). Given that the L1 sound system has been found to have a considerable influence on a learner's L2 productions, it seems safe to assume that realising English function words as unstressed and reduced may prove problematic for Polish learners. Indeed, as reported by Sobkowiak (2001), one of the errors that Polish learners of English make when pronouncing function words is the lack of reduction. He explains that, "[j]ust like most *content* words are pronounced fully, i.e. *according to the way they are spelled*, so are function words pronounced as *strong forms* rather than weak (Sobkowiak, 2001: 293).

Interestingly, literature on reduction processes in casual speech and previous research on the effect of task type on L2 productions lead to the formation of conflicting hypotheses about the influence of attention to language form on the realisation of weak forms by learners of English. Following Tarone (1979; 1982), Polish learners can be expected to produce more weak forms when using the superordinate style (i.e. the style in which the maximum amount of attention is paid to language form), as it is the speech style most permeable to invasion from the TL. Thus, a more formal elicitation task such as reading should prompt Polish learners to use more weak forms than a less formal elicitation task such as free speech. With regard to the current study, it could be hypothesised that the greatest amount of attention will be paid to speech form when the participants are asked to read a text in English, and so the number of weak forms produced during this stage of the experiment should increase. Correspondingly, it could be hypothesised that the least amount of attention will be paid to language form when the informants are asked to deliver spontaneous speech, and so the number of weak forms should decrease during this stage of the experiment.

On the other hand, reduction processes are generally more common in less careful, casual speech (Shockey, 2003) and realising a function word as weak may be considered a reduction. Looked at from this standpoint, Polish learners could be assumed to use more weak forms in less formal elicitation tasks. Also, the results of some studies (e.g. Weinberger, 1987; Lin, 2001) have shown no significant correlation between increased

pronunciation accuracy and increased task formality. Hence, it could be hypothesised that the greatest amount of weak forms will be produced by the participants in more informal elicitation tasks, when they are instructed to deliver prepared and spontaneous speech, and that the amount of weak forms will decrease when the subjects are required to read a text in English.

Given that entirely different predictions can be made about the effect of attention to speech form on the productions of weak forms in L2 pronunciation (the greatest amount of TL forms used either in the most formal task or in the least formal task), the issue seems an interesting and promising object of study. To recapitulate, the primary aim of the current investigation is to examine how attention to speech form influences the production of weak forms by Polish learners of English by analysing their production in different elicitation tasks.

3.1 Data elicitation

The study is based on the data elicited when the participants, second-year students of English Studies, were asked to perform several reading and speaking tasks as a phonetics course completion requirement. The data was elicited and tape recorded (IC Recorder ICD-UX200) in two stages. First, the students were instructed to read the *Please call Stella* (http://accent.gmu.edu/) text. Next, the students took part in a mock job interview, which comprised two components (each circa 3 minutes long): delivering a prepared speech where the students answered questions they were familiar with beforehand and instructed to prepare for, e.g. *Why are you suitable for this kind of a job?* or *What do you expect from your supervisor?,* and delivering a spontaneous speech where the students were asked questions they did not know prior to the recording, e.g. *Do you prefer to work alone or in a team?* or *Do you think there are any disadvantages of being a translator/a teacher?*

3.2 Participants

Twelve second-year students of English Studies from the University of Łódź (six females and six males) were selected out of a group of approximately 60 students on the basis of the degree of foreign accent in their pronunciation. All of the students were enrolled in a phonetics course that covered practice in suprasegmentals, focusing on sentence stress and the realisation of weak forms in particular. The students' pronunciation was auditorily rated for accentedness by the authors, who acted as teachers of pronunciation. The authors used a 5-point scale that ranged from heavily-accented speech on the one end (1), and native-like pronunciation on the other (5). The assessment of the students' pronunciation took place during the mock job interviews described in the previous subsection. The selection of the participants was conducted in two stages. First, the students were divided into two groups: those who were judged to speak with a slight degree of foreign accent (students who received a 4 or a 5 mark on the 5-point scale) and those who were judged to speak with a relatively heavy Polish accent (students who received a 1 or a 2 mark on the 5-point scale) . Next, six

participants with the most native-like pronunciation and six participants with the heaviest Polish accent were chosen from each group (females and males evenly).

3.3 Data analysis

The recordings of each participant were transcribed by the authors. As each stage of the data elicitation procedure was based on different material, a selection of weak forms that were present in all three elicitation tasks had to be made. Ultimately, the production of six function words was taken into consideration for the purpose of the current study: *to*, *the*, *of*, *and*, *a*, *for*.

The key element in data analysis was the operationalisation of 'weakness' in the forms treated as weak. Initially, it was assumed that the selected function words would be assessed as weak forms when realised with a reduced vowel /ə/. Nevertheless, it transpired that the participants repeatedly produced the chosen function words with various vowel qualities different than /ə/. At the same time, they mostly realized the function words as non-prominent, regardless of the elicitation task. Given that, a new approach was applied, i.e. a particular function word was considered a weak form if realized as a non-prominent element of an utterance (one that did not stand out amongst other elements of an utterance). Thus, unlike in Setter's (2006) study (who concentrated on both the stress/unstressed feature of English syllables as well as the reduced/unreduced vowel aspect), it was only the prominence or non-prominence of a given function word that was taken into consideration in the current investigation. Weak forms in the current study were assigned to prominent/non-prominent category by using auditory analysis, which was based on the authors expertise as pronunciation instructors and their experience with Polish-accented English and native accents of English. It is also important to note that some utterance-initial and utterance-final function words were excluded from the analysis, e.g.

1. *yes I (.) because children nowadays are (.) very disobedient (.)* **and** *they do not respect teachers actually*
2. *so firstly I er really enjoy translating (.)* **and** *er (.) I suppose it`s (.) it's important* **to** *(.) to be involved in what you are doing*
3. *ahm due* **to** *(.) ahm (.) feedback fro- you receive from other people (.) mmm (.)* **and** *(.) exchange of ideas er but on the other hand.*

The abovementioned examples show some of the instances where the function word *and* was treated as an utterance-initial discourse marker by the authors, as it was used by the participants in order to emphasise they had not finished their thought and had something additional to say. Given that the conjunction *and* was realised in its strong form in such contexts, it was excluded from analysis in the current study. Additionally, as referred to by Cruttenden (2008), function words which occur utterance-finally receive stress and therefore are pronounced in their strong forms. Hence, function words used in such circumstances, e.g. the function word *to* in the examples above, were excluded from the analysis.

In order to determine whether the number of weak forms used by the two groups of participants change across the three elicitation tasks, the overall percentage of the selected function words pronounced as weak forms by the two groups of subjects in three elicitation tasks was estimated. What is more, with regard to the question of whether target-like production of any of the investigated words was especially problematic for advanced Polish students of English, the percentage of weak forms in the overall number of realizations of a particular function word across three elicitation tasks in the productions of the two groups of participants, one with a relatively heavy Polish accent and the other with close to native-like pronunciation, was calculated.

3.4 Results

When analysed in terms of a proportion of function words realised as weak (i.e. unstressed but not necessarily produced with a reduced vowel), the results show a slight tendency for the subjects to use more weak forms in the reading task than in the prepared and free speech tasks, although the differences are rather small. Also, the vast majority of function words were realised as weak in all three tasks (Fig. 1).
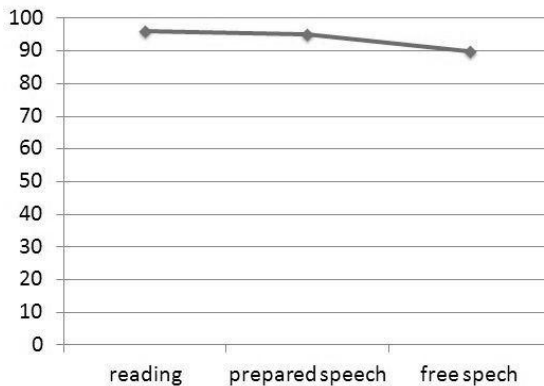

Figure 1: Percentage of function words realised as weak across three tasks (total no. of function words in: reading task=167, prepared speech task=273, free speech task=244).

A similar tendency can be observed when the proportion of function words realised as weak is analysed separately for the two groups of participants, i.e. those speaking with a relatively heavy Polish accent and those with a near native-like pronunciation (Fig. 2). It can be seen that although both groups of participants used more weak forms in the reading task than in the two remaining elicitation tasks, the difference in the number of function words realised as weak between different tasks is extremely small. Overall, the vast majority of the function words were produced as weak. The results also show that the participants with foreign-accented pronunciation realised fewer function words as weak as compared with the participants with a lower degree of foreign accent in their pronunciation.
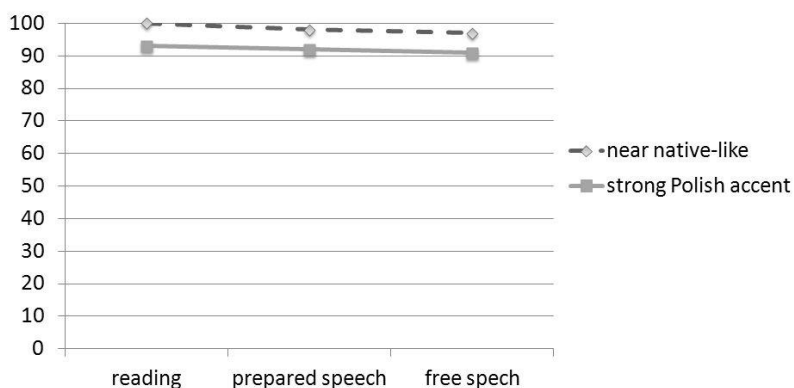
Figure 2: Percentage of function words realised as weak by the two groups of participants.

Table 1. shows the percentage of weak forms in the total number of realizations of a particular function word across three tasks in the productions of the participants with a relatively heavy Polish accent. The results show that there are no marked differences between individual function words as far the number of TL forms is concerned, although the determiner *a* was always realised as weak, while the conjunction *and* is the function word with the greatest amount of strong realisations.

function word	reading	prepared speech	free speech
to	100	80	85
the	100	97	79
of	83	100	90
and	83	78	70
a	100	100	100
for	92	100	55

Table 1: Percentage of weak forms in the total number of realizations of a particular function word across three tasks in the productions of the participants with foreign-accented pronunciation.

A similar tendency can be observed in the case of participants with a close to native-like pronunciation (Table 2), i.e. no substantial differences between individual function words can be observed as far the number of target-like realisations is concerned. The function words with the largest amount of weak forms are the determiner *a* and *the*, while the function word with the greatest amount of strong realisations is the conjunction *and.*

function word	reading	prepared speech	free speech
to	100	100	98
the	100	100	100
of	100	100	95
and	100	88	91
a	100	100	100

function word	reading	prepared speech	free speech
for	100	100	94

Table 2: Percentage of weak forms in the total number of realizations of a particular function word across three tasks in the productions of the participants with near native-like pronunciation.

4. Discussion

The results of the study show that, overall, more TL forms were produced by the participants in the most formal elicitation task. It appears that the more attention the participants paid to language form, the greater number of weak forms was used. The finding lends some support to Tarone's claims (1979; 1982) about the impact of attention and task type on learners' phonetic performance and runs counter to the assumption that a relatively informal task would elicit more reduced productions. Nonetheless, the participants produced the investigated function words as weak in the majority of cases and so the effect of task type appears to be rather small. The fact that the subjects produced slightly more TL forms when reading the *Please call Stella* text may also be due to the fact that the task took place soon after discussing and practicing weak forms in the phonetics course. As a result, the subjects were probably mindful of weak forms and this aspect of English pronunciation may have figured relatively high in their consciousness at that particular point in time. Furthermore, the participants were already quite familiar with the *Please call Stella* text before the recordings for the current study took place, which could also facilitate target-like productions. Finally, all of the participants could be considered to be advanced learners of English and hence it is possible that producing English function words as unstressed no longer causes great difficulties for them.

As far as the amount of foreign-accentedness in a particular learner's productions is concerned, the results of the study revealed no marked differences between the group of participants who spoke with a relatively heavy Polish accent and the group of participants who used close to native-like pronunciation. The finding indicates that, with respect to the degree of prominence (but not necessarily with respect to vowel reduction), realising function words as unstressed is relatively easy for advanced Polish learners of English. It also suggests that, in this particular case, the effect of task type on L2 phonetic performance is weakly or not at all related to the degree of foreign accent in a given learner's pronunciation.

Although the primary goal of the current study was to examine the effect of task type and attention to language form on L2 pronunciation, some far more interesting questions arose in the course of the investigation. Namely, how exactly should one define 'weakness' in a weak form and what should be the teaching aims as regards the pronunciation of English function words? If one looks at weak forms only from the point of view of their 'non-prominence', the results of the current study illustrate that this particular feature of English pronunciation is not especially difficult for advanced Polish learners (the analysed function words were predominantly realised as unstressed), which could mean that weak forms do not need to receive high priority in pronunciation

teaching. Indeed, Jenkins (an advocate of looking at English as an international rather than foreign language), once stated that

> […] learners can safely abandon weak forms (the production of words like 'to' and 'from' as /tə/ and /frəm/ in fast speech) […] I would argue that it is possible to highlight some syllables without necessarily reducing others, and that some native varieties do precisely this, along with the vast majority of fluent bilingual speakers. Lack of weak forms may prove disconcerting for some native receivers, but is unlikely to do so for non-natives (Jenkins, 1998: 123).

Thus, if one defines 'weakness' in English function words solely as the lack of prominence (not coupled with vowel reduction), aims in English pronunciation teaching could be redefined so that little or no emphasis is placed on the production of weak forms. The results of the current study suggest that learners pick up on the 'unaccentedness' of weak forms fairly quickly (and possibly without direct instruction to do so). Additionally, as argued by Jenkins (ibid.), obscuration of vowel quality could reduce the intelligibility of a given learner's pronunciation to other non-native speakers of English.

On the other hand, if one was to define 'weakness' in English function words as a lack of prominence coupled with vowel reduction, it seems that considerable importance should be given to weak forms in English pronunciation teaching. Although vowel quality as such was not the object of study in this particular investigation, the authors' impression is that the participants exhibited considerable variability as far as this phonetic feature is concerned. The observation accords with Lane's (2010: 73) statement that "proficient learners [...] rarely use reduced vowels in function words." Hence, one could argue that weak forms should be given high priority in English pronunciation teaching. The 'weakening 'of English function words (seen as the obscuration of vowel quality and lack of stress) can be viewed as a crucial element of English pronunciation also if one is more inclined to treat English as a foreign language and assumes that its learners aspire to be intelligible to native speakers. As stated by Roach (2010: 88), "[...] most native speakers of English find an "all-strong form" pronunciation unnatural and foreign-sounding." In addition, "[...] speakers who are not familiar with the use of weak forms are likely to have difficulty understanding speakers who do use weak forms [...] (Roach, 2010: 88)."

At this point, another interesting question arises. If one is interested in the vowel quality of weak forms in non-native speech (and not focuses solely on the prominent/non-prominent distinction), how is one to decide what vowel quality is to be considered as reduced and what combination of spectral characteristics should be treated as a full vowel? Given the high variability of reduced vowel qualities, using acoustic measures and spectral analysis seems to be a rather complex and essentially arbitrary solution to the problem. Perhaps it would be possible to determine whether a given realisation should be treated as reduced by asking a separate group of listeners (native and non-native?) for perceptual judgements. With a sufficiently numerous and diverse group of listeners, such a method could allow one to objectively determine whether the learners' are producing reduced vowels in weak forms or not. It could also shed some light on which acoustic characteristics are necessary for a vowel to be perceived as reduced in a given phonetic context.

Interestingly, when analysing the elicited data, the authors of the study observed that it was not only the vowel quality in weak forms that was realised with considerable variability by the participants. In fact, vowels in the strong forms of function words were also realised differently by the participants and their productions often deviated from the TL forms. If one's goal in English pronunciation teaching is for the learners to sound native-like, it seems that vowel quality in strong forms of function words should also receive closer attention.

5. Conclusions

The results of the study indicate that although increased attention to language form seems to have caused the participants to realise more function words as unstressed, the effect was very small and may be interrelated with the fact that the investigated pronunciation feature was placed relatively high in the learners' consciousness. Overall, the „unaccented" aspect of English weak forms appears to cause little difficulties for advanced Polish learners of English. What seems worth exploring further is the vowel quality of English function words (both weak and strong forms) as used by Polish learners. The results of the study also suggest that, in this particular case, the effect of attention to language form is weakly or not at all related to the degree of foreign accent measured with the use of accentedness ratings provided by the authors of the study) in a speaker's L2 pronunciation.

References

Beebe, L. (1980) Sociolinguistic variation and style shifting in second language acquisition. Language Learning 30, 433-447.

Bowen, D. J. (1972) Contextualizing pronunciation teaching in the ESOL classroom. *TESOL* 5, 83-97.

Cruttended, A. (2008) Gimson's pronunciation of English. London: Hodder Education.

Dickerson, L. and Dickerson, W. (1977) Interlanguage phonology: current research and future directions. In S. P. Corder and E. Roulet (eds). The Notions of Simplification. Interlanguages and Pidgins: Actes du Seme Colloque de Linguistique Applique de Neufchatel, 18-30.

Dziubalska-Kołaczyk, K., Bogacka (Balas), A, Pietrala, D., Wypych, M. and Krynicki, G. (2006) PELT: An English language tutorial system for Polish speakers, MultiLing, Volume ISCA Tutorial and Research Workshop on Multilingual Speech and Language Processing, Stellenbosch, South Africa, p.on CD.

Collins, B. and Mees, I. M. (2009) Practical phonetics and phonology. A resource book for students. New York: Routledge.

Gatbonton, E. (1975) Systematic variations in second language speech: a sociolinguistic study. PhD Dissertation, McGill University.

Jenkins, J. (1998) Which pronunciation norms and models for English as an International Language? ELT Journal, 52/2:119-126.

Labov, W. (1969) The study of language in its social context. Studium Generale 23, 30-87.

Lane, L. (2010) Tips for Teaching Pronunciation: A Practical Approach. Harlow: Pearson Longman.

Lin, Y. (2001) Syllable simplification strategies: a stylist perspective. Language Learning 51, 681-718.

Roach, P. (2010) English Phonetics and Phonology. A practical course. Cambridge: Cambridge University Press.

Schmidt, R. (1987) Sociolinguistic variation and language transfer in phonology. In G. Ioup and S. H. Weinberger (eds), Interlanguage phonology: The acquisition of a second language sound system. Rowley, MA: Newbury House.

Shockey, L. (2003) Sound Patterns of Spoken English. Oxford: Blackwell Publishing.

Setter, J. (2006) Speech rhythm in World Englishes. The Case of Hong Kong. TESOL Quarterly 40, 763-782.

Sobkowiak, W. (2001) English Phonetics for Poles. Wydawnictwo Poznańskie.

Weinberger (eds), Interlanguage phonology: The acquisition of a second language sound system. New York: Newbury House, 365-377.

Tarone, E. (1979) Interlanguage as chameleon. Language Learning 29, 181-191.

Tarone, E. (1982) Systematicity and attention in interlanguage. Language Learning 32, 69-84.

Weinberger, S. H. (1987) The influence of linguistic context on syllable structure simplification. In G. Ioup and S. H. Weinberger (eds), Interlanguage phonology: The acquisition of a second language sound system. Rowley, MA: Newbury House, 401-417.

Zampini (1994) The Role of Native Language Transfer and Task Formality in the Acquisition of Spanish Spirantization. Hispania 77, 470-481.

GEMINATION STRATEGIES IN L1 AND ENGLISH PRONUNCIATION OF POLISH LEARNERS

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Abstract

Polish is a language where true geminates appear and the occurrence of a double consonant letter in spelling corresponds with double or at least prolonged consonant articulation regardless of the morphological structure of the word. The above principle also concerns most borrowings, such as the English word 'hobby', for instance. In English, true geminates do not occur and a morpheme-internal double consonant letter is only a fairly reliable indication of the way the preceding vowel should be pronounced. This discrepancy may lead to negative transfer in Polish learners of English. Our recent research of native Polish speech (Rojczyk and Porzuczek, in press) generally confirmed the results reported by Ladefoged and Maddieson (1996), among others, who found geminates to be 1.5-3 times longer than singletons. In our study we investigate the influence of double consonant letters on L1 and English pronunciation of Polish learners. They read trochaic family names containing intervocalic <nn>. Each name is preceded by a first name suggesting the nationality (Polish, English, German or Italian) of the person mentioned. By placing each tested item in a Polish and an English semantically and rhythmically equivalent sentences (This is .../To jest...), we measure the level of consonant length variation with respect to the language in which the potential geminates appear, the language context and the learning experience of the students. In this way we collect evidence and formulate observations concerning the learners' awareness of the status of geminates in various languages and the probability of transfer in EFL learning.

1. Introduction

Double consonant letters in written Polish regularly refer to geminates, which are realised phonetically by relatively longer duration or, less frequently, rearticulation. Italian is another example of a 'geminating' language, while English and German only allow fake, non-contrastive geminates. Double consonant letters usually indicate a consonant preceded by a short/lax vowel. Such examples as 'lenis' vs. 'leanness', where a within-word geminate can create lexical contrast are extremely rare. Therefore, transferring the L1 habit of lengthening or, especially, rearticulating double-letter consonants into a 'non-geminating FL' leads to pronunciation problems.

The Polish speakers' pronunciation of potential geminates in family names seems to depend on the perceived origin of the name. *Villas* or *Callas* are more often pronounced with a double (prolonged) /l/, while /l/ in *Miller* is rarely geminated. Similarly, we expect a short /n/ in *Kenner* and a long /n/ in *Senna*.

2. The phonetic features of (Polish) geminates

Polish has attested geminate consonants both within a word and across the word boundary. Geminate sequences within a word may be contrastive with singletons, e.g., *leki* 'medicines' - *lekki* 'light', *pana* 'gentleman's' - *panna* 'maiden', or *ceny* 'prices' - *cenny* 'precious' (Pająk 2009; Rubach 1986; Rubach and Booij 1990; Sawicka 1995; Thurgood 2002; Zajda 1977). In the corpus of 12650 words Kozyra (2008) found 157 geminates of all types. The most common were sonorants in intervocalic positions, such as *wanna* 'bathtub', *panna* 'maiden', *fontanna* 'fountain', *gamma* 'gamma', *ballada* 'ballad', *mułła* 'mullah', *horror* 'horror'. No sonorant geminates were observed word-initially, and sequences such as /jj/ occurred only across the morpheme boundary. Obstruent geminates were attested both word-initially, e.g., *ssak* 'mammal', *dżdżownica* 'earthworm', as well as in intervocalic positions, e.g., *getto* 'ghetto', *oddać* 'give back'.

The phonetic realization of Polish geminates is conditioned by factors such as tempo, hypo- or hyper-articulation, segmental context, morphological structure, etymology of a word, or the degree of assimilation (Kozyra 2008). Thurgood (2001) reported that another factor influencing the production of geminate sequences may be the voicing of geminate consonants. In this study voiceless geminate affricates /tɕtɕ/ were more often produced as rearticulated than the voiced /dʑdʑ/. Later, Thurgood and Demenko (2003) looked into the production of geminate affricates in pairs such as *Grecy* 'the Greeks' - *greccy* 'Greek' (Pl.), *lecie* 'summer' (Loc.) - *lećcie* 'fly' (Imp.), *uczę* 'I teach' - *uczczę* 'I will celebrate'. They reported a 68% rate of rearticulation in those geminates. Most recently, Rojczyk and Porzuczek (in press) analysed the production of nasal geminates /nn/ both within a word and across the word boundary and found that the vast majority of such sequences had single continuous articulation; in fact only 3.8% of the measured tokens were rearticulated. Those results stand in contrast to Kozyra's (2008) observation that contemporary Polish exhibits a tendency for recurrent rearticulation of geminates.

The durational parameters of Polish geminates together with neighbouring sounds appear to be largely underresearched, especially compared to languages such as Japanese (Kawahara in press), and have been taken up by only a few studies. Thurgood and Demenko (2003) reported the ratio of singletons to singly articulated geminates as 1: 1.7. Malisz (2013) found the singleton-to-geminate ratio to be 1: 2.4 for stops and 1: 2.1 for fricatives. Voicing was reported to contribute to the observed ratios: voiced consonants contributed to higher singleton-to-geminate ratios. Rojczyk and Porzuczek (in press), in the analysis of nasal geminates /nn/, found the singleton-to-geminate ratio to be 1: 2.8 for word-internal geminates and 1: 2.4 for word-boundary geminates. Even fewer studies have investigated durational variability of vowels neighbouring geminate consonants. Malisz (2013) found that vowels preceding geminates were longer by 12 ms for stops and by 17 ms for fricatives relative to those preceding singletons. No post-geminate vowel duration variability was observed in the same study. Thurgood (2002) reported

lengthening of vowels following geminates in *wozi* 'transports' and *wwozi* 'brings in' by the ratio of 1: 1.4. However, in the 22% of the measured instances the pattern was reversed: vowels following singletons were longer than those following geminates. In the study by Rojczyk and Porzuczek (in press) vowels preceding the singleton /n/ were shorter (73 ms) than those preceding word-internal geminate /nn/ (85 ms). However, when geminates straddled the word boundary /n#n/, the preceding vowels were not significantly longer (76 ms) than those preceding singleton /n/. The durational variability of vowels following singletons and geminates was not attested.

To our knowledge, there is only one study investigating gemination in the English spoken by Poles. Thurgood (2003) had the Polish learners perform two tasks to analyze the production of English affricate geminates across the word boundary: repetition of sentences and responding to multiple choice questions. The results revealed that a gemination strategy was correlated with the proficiency level. Contrary to the predictions, more advanced learners produced more Polish-like singly articulated affricates than intermediate learners. It was taken by Thurgood (2003) to suggest that intermediate speakers had paid more attention to the phonetics of the English cues and thus produced more rearticulated affricates.

3. The current study

In the current study, we investigated how advanced Polish learners of English pronounce potential nasal geminates in Polish, English, German and Italian family names embedded in Polish and English sentences. This allowed us to observe the learners' realisation of double-letter consonants in native and foreign words and how it depends on the language they are speaking. Considering this, we formulated the following research questions:

-   How consistent are Polish speakers in signalling Polish geminates?
-   How much do the geminates differ in length from singletons?
-   Do Polish speakers make a distinction between 'geminating' and 'non-geminating' languages?
-   Does the realisation depend on the origin of the tested word (Polish, English, German, Italian)?
-   Does it depend on the language they are speaking (Polish, English)?

3.1 Participants

The participants were thirty-six native speakers of Polish, all of them second-year undergraduate students in the Institute of English, University of Silesia. They ranged in age from 20 to 22 years. None of the subjects reported any speech or hearing impediments. There were twenty-four females and twelve males.

3.2 Materials

The tested items were phonologically similar Polish, English, German and Italian family names containing the letter combination <nn>. Each name was preceded by a first name suggesting the nationality (Polish, English, German or Italian) of the person mentioned, and followed by a sentence indicating those people's home towns.

Placing each tested item in a Polish and an English semantically and rhythmically equivalent sentences (This is .../To jest...) made it possible to measure the level of consonant length variation with respect to the language in which the potential geminates appeared and the language context. The actual sentence list used in the study was thus as follows:

> Polish:
> To jest Paweł Senna. Mieszka w Łodzi.
> To jest Colin Senner. Mieszka w Luton.
> To jest Helmut Senner. Mieszka w Dreźnie.
> To jest Bruno Senna. Mieszka w Rzymie.
> To jest Paweł Cena. Mieszka w Łodzi.
> To jest Tomasz Kammel. Mieszka w Łomży.
>
> English:
> This is Paweł Senna. He's from Warsaw.
> This is Colin Senner. He's from London.
> This is Helmut Senner. He's from Hamburg.
> This is Bruno Senna. He's from Venice.
> This is Paweł Cena. He's from Warsaw.
> This is Tomasz Kammel. He's from Cracow.

The last example in each set was added to avoid the list effect. The Polish family name *Cena* /ˈtsɛna/ in the penultimate sentence was used to establish the personal baseline singleton duration.

3.3 Procedure and recording

The sentences were presented as a printed list. The participants were given time to get acquainted with the material. They were instructed to read in their normal speaking style and to repeat any disfluent examples. The recording took place in the Acoustic-Phonetic Laboratory at the Institute of English, University of Silesia in a sound-proof booth. The signal was captured with a headset dynamic microphone Sennheiser HMD 26, positioned approximately 20 cm at an angle from the speaker's mouth, preamplified with USBPre2 (Sound Devices) into .wav format with the sampling rate 48 kHz, 24-bit quantisation.

3.4 Measurements

The analysed productions were inspected as waveforms and spectrograms in Praat 5.3.10 (Boersma 2001). Boundaries between a vowel and a nasal consonant were identified by a drop or rise in acoustic energy, changes in F1, diminishment or enhancement of F2 and the intensity of higher formants (Fig. 1). The rearticulation of geminates was identified by the presence of higher formants in the spectrogram (Fig. 2).
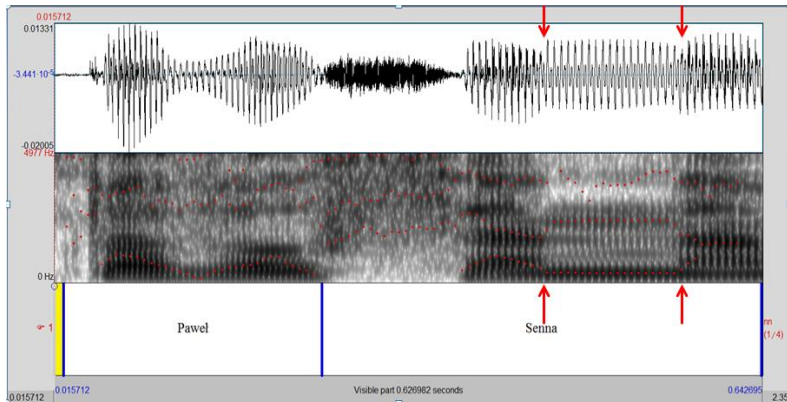

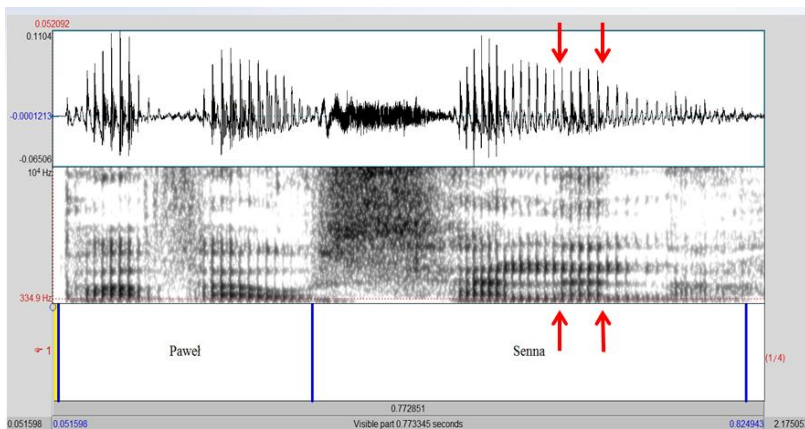**Figure 1**: Intervocalic nasal geminate in *Senna*

Figure 2: Nasal rearticulation in *Senna*. A vocalic segment (between red arrows) separates nasal consonants

4. Results

4.1 Rearticulation

As mentioned in the introduction, rearticulation can appear in slow and careful speech. We identified three such cases (cf. Fig. 2), provided by two speakers.

4.2 Absolute nasal duration

The mean durations of /n(n)/ in individual words differed with respect to the word origin and the language of carrier phrases. Table 1 shows a slight tendency to prolong /n/ in English and German words, and significant ($\approx$90ms/>100%) lengthening of /n/ in Polish and Italian words in Polish speech. In the English speech of the learners the mean duration of the nasal in English and German words did not differ from the singleton. Polish and Italian words were pronounced with an average nasal 50% longer than the singleton.

word\carrier	Polish	English
Senna (POL)	157	93
Senner (ENG)	80	54
Senner (GER)	83	54
Senna (ITA)	151	86
Cena (POL singleton)	64	57

Table 1: Mean durations (ms) of /n(n)/ in tested items

The mean singleton durations were similar in Polish and English contexts.

4.3 Individual tendencies

The tendencies shown in 4.2 are also reflected in Table 2, which presents the number and proportion of respondents who lengthened the nasal consonant spelt with <nn> (G) by more than 50ms with respect to the singleton (S) in *Cena*.

word\carrier	Polish	English
Senna (POL)	32 (89%)	13 (36%)
Senner (ENG)	6 (17%)	1
Senner (GER)	7 (19%)	0

word\carrier	Polish	English
Senna (ITA)	30 (83%)	12 (33%)

Table 2: The number of responses with G-S>50ms. N=36

The data suggest a clear distinction between 'geminating' and 'non-geminating languages' made by the participants. An overwhelming majority (83% and 89%) significantly lengthened /n/ in *Senna* in Polish phrases but the duration of /n/ in *Senner* in an English or German phrase only once (by a minimum of 51ms) exceeded the length of the corresponding singleton. With respect to the carrier language, 33-36% of the participants retained a long /n/ in *Senna* in English, while 17-19% applied gemination to *Senner* in Polish sentences.

After the presentation of basic descriptive statistics in sections 4.2-4.3, more detailed statistical analysis follows in section 4.4.

4.4 Statistics

A two-way independent repeated-measures ANOVA was designed to analyze the geminate durations both in absolute and relative measures. The first independent variable was the language of carrier phrases with two levels (Polish, English). The second independent variable was the word origin with four levels (Polish, English, German, Italian). The relative measure was calculated as the ratio of geminate duration to singleton duration. The statistics will be first reported separately for each carrier language and then the interaction between the two carrier languages will be calculated.

The main effect of the word origin on absolute geminate duration in ms in Polish sentences was highly significant [$F_{(2, 105)}$=65.05, p<.001]. The Post Hoc Bonferroni tests revealed that the significant effect was contributed to by a clear pattern of individual differences in which /nn/ sequences in both Polish (M=157; SE=6.87) and Italian (M=151; SE=7.94) words were significantly longer (p<.001) than the same sequences in English (M=78; SE=6.98) and German (M=83; SE=6.91) words. No significant differences were found between Polish and Italian, and English and German (both p=*ns*)

The relative geminate-to-singleton ratio in Polish sentences also produced a highly significant main effect of the word origin [$F_{(3, 105)}$=58.87, p<.001]. The Post Hoc Bonferroni tests showed the same pattern of significant differences as in the case of absolute measures. Namely, Polish (M=2.5; SE=0.14) and Italian (M=2.4; SE=0.14) words had a larger geminate-to-singleton ratio (p<.001) than English (M=1.2; SE=0.1) and German (M=1.29; SE=.01) words. Again, no significant differences were found between Polish and Italian, and English and German (both p=*ns*)

There was the main effect of the word origin on absolute duration in ms in English sentences [$F_{(3, 105)}$=18.421, p<.001]. As shown below, the pattern of differences was very similar to the one calculated for Polish sentences, however the durations of /nn/ geminates were observably lower for Polish and Italian. The Post Hoc Bonferroni tests indicated that Polish (M=93; SE=7.5) and Italian (M=86; SE7.27) words had significantly longer geminates (p<.001) than English (M=54; SE=2.72) and German

(M=54; SE=2.79) words. No significant differences were found between Polish and Italian, and English and German words.

There was also the main effect of the word origin on the geminate-to-singleton ratio in English sentences [F(3, 105)=14.9, p<.001]. As in the case of absolute measures in ms, the Post Hoc Bonferroni tests revealed a clear pattern in which the /nn/ geminates in Polish (M=1.7; SE=0.16) and Italian (M=1.6; SE=0.15) had a larger ratio (p<.001) than the geminates in English (M=1; SE=0.06) and German (M=1; SE=0.15). No significant difference was observed between these two groups of languages.

The interaction between Polish and English sentences, and the absolute duration of geminates in ms in the words from the four languages was highly significant [F(3, 105)=12.13, p<.001].
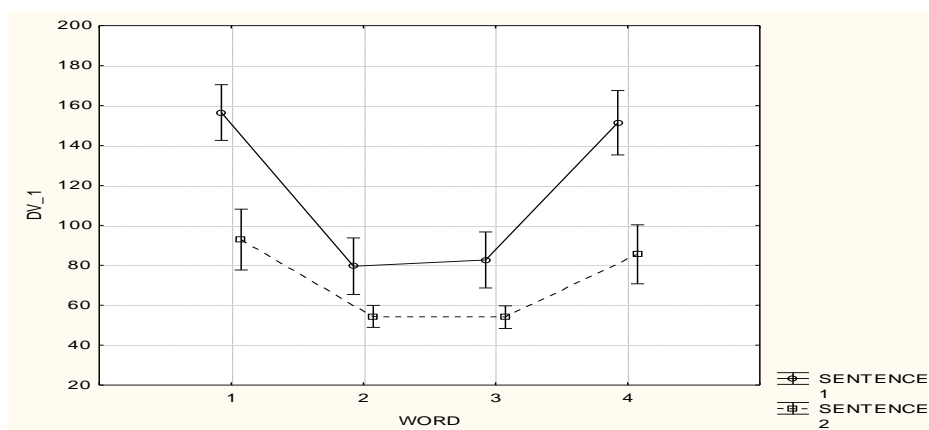

Figure 3: The interaction between the sentence language (1 Polish; 2 English)
and the word language (1 Polish; 2 English; 3 German; 4 Italian) in ms.

As shown in Fig. 3, the interaction is mainly contributed to by significant decreases in durations of geminates in Polish and Italian in English sentences compared to Polish sentences (p<.001). A significant, however less pronounced, decrease is also observed for geminates in English and German words in English sentences compared to Polish sentences (p<.001).

The analysis of the geminate-to-singleton ratio showed a similar significant interaction between the language of sentences and the words [F(3, 105)=9.2, p<.001].
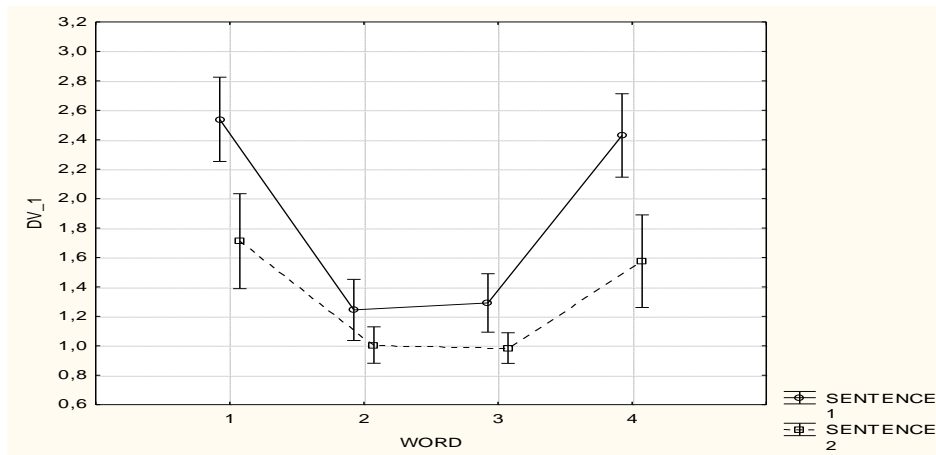
Figure 4: The interaction between the sentence language (1 Polish; 2 English)
and the word language (1 Polish; 2 English; 3 German; 4 Italian)
in the geminate-to-singleton ratio

Similar to the absolute measures, the interaction is contributed to by lower ratios for Polish and English in English sentences compared to Polish sentences (p<.001). However, in the case of the relative ratio, the Posh Hoc Bonferroni tests did not show significant differences of /nn/ geminates in English and German words between Polish and English sentences (p=*ns*)

5. Discussion and conclusions

Polish learners of English significantly (1.5-4 times) prolong intervocalic nasal consonants indicated by a double letter in Polish words. Polish and Italian, contrary to English and German, are perceived as 'geminating' languages, which is reflected in the subjects' production. Polish and Italian names were pronounced by Polish learners with significantly longer /n/ than English and German ones. Gemination was inhibited in English contexts but the distinction between the 'geminating' languages (Polish, Italian) and the 'non-geminating' ones (English, German) was still noticeable.

Interestingly, an observable proportion of native Polish speakers (4 in 36 in the present study) may tend to degeminate double consonants. In their responses all the nasal consonants were within a 50-ms range, while the other subjects varied the duration of their nasals within ranges exceeding 100ms, except two (81ms and 96ms). This might indicate a general tendency in Polish speakers, which would need to be verified by investigating the production of various age groups. Moreover, a perception study could be carried out in order to attempt to establish a possible durational threshold of nasal geminate recognition.

References

Boersma, P. 2001. Praat, a system for doing phonetics by computer. *Glot International* 10: 341-345.

Kawahara, S. (in press). The phonetics of obstruent geminates, *sokuon*. In S. Shibatani and K. Taro (eds.), *Handbook of Japanese Language and Linguistics*. Berlin: Mouton Gruyter.

Kozyra, A. 2008. Geminaty w językach słowiańskich. *LingVaria* 1(5): 257-266.

Ladefoged, P. and Maddieson, I. 1996. *The sounds of the world's languages*. Oxford: Blackwell Publishers.

Malisz, Z. 2013. Speech rhythm variability in Polish and English: A study of interaction between rhythmic levels. Ph.D. Diss., Poznań: University of Adam Mickiewicz.

Pająk, B. 2009. Contextual constraints on geminates: The case of Polish. *Proceedings of the 35th Annual Meeting of Berkley Linguistic Society* 35.

Rojczyk, A. and Porzuczek, A. (in press). *Acoustic features of nasal geminates in Polish*. Paper presented at the APAP conference, Maria Curie-Sklodowska University, Lublin.

Rubach, J. 1986. Does the obligatory contour principle operate in Polish? *Studies in the Linguistic Sciences* 16: 133-147.

Rubach, J. and G. E. Booij. 1990. Edge of constituent effects in Polish. *Natural Language and Linguistic Theory* 8(3): 427-463.

Sawicka, I. 1995. Fonologia. In H. Wróbel (ed.), *Gramatyka Współczesna Języka Polskiego. Fonetyka i Fonologia*. Kraków: Instytut Języka Polskiego PAN: 105-195.

Thurgood, E. 2001. The phonetic realization of phonologically geminate affricates in Polish: The long and short of it. *Speech and Language Technology* 5: 9-19.

Thurgood, E. 2002. The recognition of geminates in ambiguous contexts in Polish. *Speech Prosody 2002*: 659-662.

Thurgood, E. 2003. Affricate gemination in the English of Polish speakers. A study in second language variability. *Journal of the Acoustical Society of America* 113: 2330.

Thurgood, E. and G. Demenko. 2003. Phonetic realization of Polish geminate affricates. In M. J. Solé, D. Recasens, and J. Romero (eds.), *Papers in Honor of Frederick H. Brengelman on the Occasion of the Twenty-Fifth Anniversary of the Department of Linguistics, CSU Fresno*. Fresno: Department of Linguistic, California State University: 129-139.

Zajda, A. 1977. Some problems of Polish pronunciation in the Dictionary of Polish Pronunciation. In M. Karaś and M. Madejowa (eds.), *Słownik Wymowy Polskiej / The Dictionary of Polish Pronunciation*, L-LXII, Warszawa: Państwowe Wydawnictwo Naukowe.