Ego boundaries and attainments in FL pronunciation

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Abstract

The paper reports on a study designed to examine the relationship between the thickness of ego boundaries and attainments in FL pronunciation after a clearly structured form-focused practical course of phonetics. The research involved 45 first-year students of the Institute of English Studies in Wroclaw, Poland, who had attended around thirty 90-minute classes in phonetics. To measure the thickness of their ego boundaries, the Hartmann Boundary Questionnaire (HBQ) was administered. This permitted an examination of which particular types of ego boundaries are related to accuracy in foreign language (FL) pronunciation. The basis for comparing the pronunciation levels of the participants was the Pronunciation Attainment Test consisting of three parts: reading a passage and two vocabulary lists. A *t* test demonstrated that the differences between the pronunciation levels of the thick and thin ego boundary learners were nonsignificant. However, further statistical analysis (Pearson correlation) showed a positive weak correlation between 3 types of boundaries (represented by Categories 7, 8 and 12 of the HBQ) and attainments in pronunciation. More specifically, the less organized the direct environment (e.g., the working place) of the subjects was and the more preference the participants showed for perceiving and accepting blurred borders between constructs, the better their pronunciation was. A closer look at particular students revealed the importance of boundaries between thoughts and feelings, and boundaries related to defensive mechanisms and to sensitivity in FL pronunciation learning.

Keywords: thickness of ego boundaries, types of ego boundaries, clearly structured course of phonetics, pronunciation attainments

Ego Boundaries and Attainments in FL Pronunciation

Although usually foreign language (FL) learners aim for communicativeness and fluency, there are many who try to reach the highest levels in all aspects, native-like pronunciation being one of them. Among these learners are future FL teachers and translators studying at the tertiary level, majoring in particular FLs. The goal of the practical phonetics course is to help learners reach the highest level in pronunciation. To raise the effectiveness of the course, which at some institutes in Poland is limited to thirty or even fifteen 90-minute meetings, adjusting the treatment to the needs of the participants should be considered. These accommodations, in turn, are shaped by the individual differences between the students. When learning FL pronunciation – the most emotionally loaded language aspect – is concerned, it is the affective and personality factors that seem to be the most powerful predictors of success (Celce-Murcia, Brinton, & Goodwin, 2000; Guiora, 1972). One of the dimensions of personality that can help explain the phenomenon of FL pronunciation learning is the *thickness of ego boundaries*. It is this concept that the paper focuses on, relating it to success in learning of FL pronunciation. Before introducing the construct of anxiety, a brief discussion of the importance of personality in FL acquisition and pronunciation learning in particular is offered. The theoretical introduction is followed by a report on an empirical study aimed at examining the relationship between ego boundaries and pronunciation attainments.

Importance of Personality for FL Pronunciation Acquisition and Learning

In the history of second language acquisition (SLA) there have been times when personality was in the shadow of cognitive variables, that is, when the main areas of research were methods, contents and techniques of instruction. Interest in personality and affective factors as significant determinants of successful FL learning started to flourish in the mid-1970s (Shams, 2005). The importance of personality was stressed by Stevick (1976, p. 18), who posited the following: "We need to go beyond language aptitude and educational or personal experience to see how individuals and their personalities affect the learning process." According to Schumann (1986), ego permeability is the heart of SLA. As his earlier observations show, affective factors and personality, particularly firm ego boundaries, may block one's innate cognitive potentials, debilitating the whole FL learning process. The constraints are most vivid in the case of adult learners (Schumann, 1975). Additionally, it has been recognized that personality can help understand not only the learners' attitudes

towards the target language and its speakers, but also the intensity and type of motivations to master it (Celce-Murcia et al., 2000).

The influence of personality on FL acquisition is best seen in the example of pronunciation. A strong defender of this claim is Guiora (e.g., Guiora, Beit-Hallahmi, Brannon, Dull, & Scovel, 1972), who explains that personality or, as he calls it, "language ego," constitutes the basis for the process of language learning, particularly when pronunciation is concerned. Guiora considers pronunciation to have a peculiar role in FL acquisition. He emphasizes the fact that significant discrepancies are often observed between individuals' attainments in pronunciation and other FL areas, with the former being usually at a lower level than the latter. Consequently, it is postulated by the researcher that pronunciation "is the key to the extent to which the individual is psychologically capable of stepping into a new system of communication" (Guiora 1972, p. 144). He further explains that the way we sound is a fundamental component of our identity, which we are forced to modify when speaking a FL. As Guiora and Acton (1979, p. 199) stress, a FL learner feels like a different person when speaking a second language." The same observation is made by more contemporary researchers, for instance, Spielmann and Radnofsky (2001). The participants of their study acknowledge that learning an L2 indeed requires developing a new identity. This change of identity may be accepted in varying degrees depending on our personality.

Furthermore, it is the critical period for FL pronunciation that Guiora (1975) relates with the concept of ego boundaries. According to the researcher, the problems of post-puberty learners acquiring native-like pronunciation are due to them losing or reducing their ego permeability and flexibility with age.

The conclusions forwarded by Guiora are based on observations carried out mainly among immigrants acquiring the target language in naturalistic contexts. Is the role of ego boundaries equally important for pronunciation learning in the classroom setting? The results of the research described in this paper will hopefully shed some light on this matter.

The Concept of Ego Boundaries

The boundary construct has been captivating the attention of several thinkers for over a century (e.g., Freud, 1923; James, 1907; Lewin, 1935). A more contemporary model of the concept has been offered by Hartmann (1991) – a psychiatrist, psychoanalyst and sleep disorder specialist and therapist – on the basis of his thorough analysis of the personalities of people suffering from nightmares. As the researcher explains, "we became intrigued by the concept of boundaries, since it appeared to represent at the very least a

personality dimension that had been neglected" and "one that can help us understand aspects of our lives that no other measure can explain" (Hartmann, 1991, pp. 17, 21).

While *ego* refers to the system of cognitive and affective operations that form an individual's perceived sense of self, the *thickness of ego boundaries* relates to the tendency to keep several aspects of one's experience apart, or, in other words, the degree to which individuals compartmentalize their experience (Ehrman, 1999). In one of Hartmann's general descriptions of people with thick boundaries (those who could hardly remember any dreams) he stated: "Some people are solid, well-organized; they keep everything in its place. They are well defended. They seem armored. We sometimes think of them as 'thick-skinned'" (Hartmann, 1991, p. 3). At the other end of the continuum are individuals revealing thin ego boundaries (nightmare sufferers), who are characterized as "especially sensitive, open, or vulnerable. In their minds things are relatively fluid. They experience thoughts and feelings – often many different feelings – at the same time" (Hartmann, 1991, p. 3). Usually people mediate between the extreme ends, revealing different levels of fluidity and tendencies to make clear separations among several internal states and among many categories of everyday life.

According to Hartmann (1991), the concept of ego boundaries is very broad and entails several personality dimensions and traits that, at first glance, may appear to be unrelated to each other. The types of boundaries can be traced when analyzing the instrument designed to measure the extent of thickness of ego boundaries, that is, the the Hartmann Boundary Questionnaire (HBQ), which encompasses 12 subscales. The scores on the first eight provide the so-called Personal Total, related with internal boundaries among states in the mind or those referring directly to the individual, his/her identity, and relations with others (i.e., boundaries between states of wakefulness, sleeping and dreaming; between feeling and thinking; between the present and memories from the past; unusual experiences; sensitivity; interpersonal boundaries; preference for neat surroundings and precision; preference for sharp or fuzzy lines). The outcomes on the remaining four types of boundaries show the testees' World Total, which reflects their views about relations and boundaries observable outside the individual and ways in which they perceive the world (i.e., opinions about different age groups, organizations, nations and groups, truth and beauty).

Although few studies have been carried out to examine the relationship between the concept of ego boundaries and other personality dimensions, the data at our disposal show that the construct is distinguishable and divergent from commonly known personality traits. For example, when compared to

Carl Jung's psychological types measured with the Myers-Briggs Personality Type Indicator, low to moderate correlations were found, with thin boundaries relating to intuition, perceiving and feeling, and thick boundaries to sensing, judging and feeling (Barbuto & Plummer, 1998; Myers & McCaulley, 1985). Additionally, the Eysenck Personality Inventory demonstrates a significant positive correlation between neuroticism and the degree of thickness of boundaries ($r = .50$, $p < .01$; Sand & Levin, 1996).

Ego Boundaries and FL Acquisition and Learning

Where FL learning is concerned, it is usually the thin boundary people who are believed to be more effective. This, however, is an oversimplification, resulting from the concept of ego boundaries being either treated only as identity and group flexibility or as a general construct, encompassing all 12 subtypes of boundaries. When considered in the former manner, thin boundary individuals may indeed outperform the thick ego boundary people in the case of language acquisition in naturalistic settings, which is heavily determined by one's ability and desire to acculturate. According to Ehrman's observations (1993, 1996), it is again thin boundary students (those who scored from one to two standard deviations above the mean of Hartmann's general population) who are more effective than thick boundary individuals and hence are reported to show "advantages for communicative second language acquisition." Although Ehrman refers to the general thickness of ego boundaries (the Sumbound score on HBQ), she adds a crucial disclaimer, that is, they indeed are better, but only when they "have means to impose cognitive structure on [their] experience" (Ehrman, 1999, p. 70). Since this ability is connected to one of the specific categories of ego boundaries (boundaries related to the preference for neat and organized environment), we may forward the claim that next to examining the general thickness of ego boundaries, it is necessary to look more carefully at how particular types of boundaries may relate to the process and success in L2 acquisition.

Some of the categories of boundaries suggested by Hartmann in his model of personality may be particularly important for FL learning and/or acquisition. It seems that thin boundaries in the case of some types (e.g., interpersonal boundaries, group boundaries, boundaries related to identity) and thick in the case of others (boundaries related to thoughts and feelings) can facilitate the process of mastering a FL. A similar view is held by Ehrman (1999, p. 74), who explains that individuals revealing thin "external boundaries" (Categories 7-12) and "average to thick internal boundaries" (Categories 1-4) "suggest a learner who does well, at least in FSI classroom, with a minimum of anxiety." It seems that the criteria according to which Ehrman considers a learner to "do well" is

the level of communication skills and the amount of experienced anxiety. Are the same combinations of ego boundaries beneficial in accuracy-oriented classrooms with form-focused instruction? Does thickness in particular ego boundaries have different effects on success in learning different language aspects and skills? Answers to these questions require further investigation.

The direction worth following when researching the relationship between ego boundaries and FL learning is indicated by Ehrman (1993), who postulates that success of learners revealing a different extent of flexibility in ego boundaries is related to the complexity level of the learning task and the amount of structure present in the FL course. Ehrman (1993) further claims that the extent of thickness of ego boundaries determines several capacities, such as the capacity to take in new information, to store data contradictory with our expectations and previous experience without rejecting or changing any, to maintain interest in incomplete information, and, finally, to restructure the intellectual, emotional and social schemata already existing in the long-term memory when confronted with novel data. All the capabilities are strongly related to the construct of ambiguity tolerance.

Profiles of Thick and Thin Ego Boundary FL Learners

On the basis of objective observations and the declarations of the learners themselves, several learning preferences of thin and thick ego boundary[1] people can be identified. They have been gathered and displayed in the table below.

Table 1 FL learning preferences of thin and thick ego boundary people (based on Ehrman, 1993, 1996, 1999; Hartmann, 1991; Leaver et al., 2005)

Thin ego boundary learners	Thick ego boundary learners
• rely on intuition • prefer content-based learning curricula • treat form and structure as of secondary importance • favor non-linear approaches to learning • prefer to get all the information at once; like to see the 'big picture' • do not like and have difficulties with segmenting data • are less analytic in their approach to learning • like diversity of materials and tasks requiring using imagination • prefer learning through exposure and experience	• try to compartmentalize and organize their learning process • like order, clear rules, explicit objectives • prefer well-planned, clearly structured courses and classes • dislike unexpected events in the teaching/learning process • favor an analytic approach • do not like role-plays, simulations, where spontaneous reaction and changing identity is needed • like drills • usually hard working perfectionists

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[1] Any time the term *thick* or *thin ego boundary* is used, without any reference to a particular type of boundary, it concerns the general level of thickness revealed by the Sumbound score of HBQ.

Interestingly, almost all the classroom learning preferences are related not to identity or group boundaries, but boundaries connected with preferred manners of perception, preferences in the organization of one's direct environment, preferences for sharp or fuzzy lines, or with boundaries connected with viewing truth.

Next to learning preferences, several other features of thin and thick ego boundary students have been observed. The former have been found to have higher language aptitude, to be good risk-takers (Ehrman, 1993) and to use compensation and affective strategies more often (Ehrman & Oxford, 1995). As stated earlier, they prove to be better at oral skills and interactive comprehension (e.g., Ehrman, 1993, 1994). Although they do not give up when faced with obstacles and failures, they are more effective when they experience early successes (Ehrman, 1999). However, there are a few features that may debilitate the FL progress of these learners. First of all, thin boundary people are generally said to be more anxious learners. Secondly, wanting to learn everything at once, they may become overloaded after some time. Thirdly, their learning of FLs may be more difficult if they prove to be too tolerant of ambiguity. If this is the case at the intake level, they can be overwhelmed with new material and information. Their too high "ambiguity tolerance proper" (Ehrman, 1999, p. 75) can result in problems with separating the relevant data from the ocean of information taken in and with deciding what to internalize. Finally, difficulties can appear during the process of accommodation, when trying to organize the knowledge to accommodate the new information and reconstruct one's prior cognitions. All in all, despite the declared preference of thin ego boundary individuals for learning by osmosis, in a nonlinear manner, and to focus on content rather than form, they may find scaffolding offered by the teacher during the FL course particularly helpful.

Where thick boundary individuals are concerned, it is important to stress the fact that they are more resistant to stress, both long-term and short-term, than their thin boundary counterparts, and generally reveal lower levels of anxiety (Ehrman, 1993). Moreover, they have been reported to use metacognitive and memory strategies more often and effectively (Ehrman & Oxford, 1995). Although they indeed do not feel comfortable in situations demanding from them a change of identity, they can learn to "thin down" their boundaries (Ehrman, 1999, p. 72). What constitutes the biggest challenge for them is perceiving and taking in new ambiguous (i.e., incomplete, unstructured, contradictory) information, which is related to their intolerance of ambiguity at the intake level. Ambiguous stimuli may be perceived by them only superficially, without any attempt to associate them with earlier knowledge. However, once new ambiguous linguistic data are finally taken in successfully

and accepted cognitively and emotionally, their organization among prior cognitive constructs, demanding restructuring of the earlier schemata, does not usually constitute a problem for these learners (Ehrman, 1999).

Ego Boundaries and FL Pronunciation Learning

Preferences for thick or thin ego boundaries in some of the specific types mentioned above may be particularly important for learning and acquisition of FL pronunciation. For example, thin perceptual boundaries (a type of boundary classified by Hartmann among unusual experiences), which encompass the tendency to focus on many things at a time, may be considered disadvantageous in the case of pronunciation acquisition, since it may not only result in the feeling of being overwhelmed by the massive amount of language input, but also not allow to perceive accurately properties of individual segments.

Moreover, we can hypothesize that thin ego boundary learners might find FL pronunciation learning more difficult due to their tendency to link and filter thoughts through feelings. Many of the feelings may be unpleasant, being caused by prior negative experience or the fear of being evaluated poorly by others, because they consider themselves to look and sound silly or childish, for example, when articulating sounds differently than the L1 counterpart segments. At the same time, when taking into account the fact that thin boundary people are more "undefended" (Hartmann, 1999, p. 3), that is, they use defense mechanisms less often, consistently and consciously, and are more sensitive to other people's opinions, we may risk stating that indeed they are more prone to be anxious than learners revealing thick boundaries.

However, thin ego boundary people may be considered to be in an advantageous position when taking into account their thin interpersonal and group boundaries. Their ability to change identities with ease and to get involved with others, for example, treating the teacher or native speakers as models with whom they can easily identify, their lack of firm group distinction and capability to see themselves as members of various groups not only allow them to acculturate more successfully in natural settings than individuals with thick ego boundaries in these categories, but can also positively influence their pronunciation learning in formal contexts. However, as observations on competence-based and identity-based anxiety in the FL classroom (Stroud & Wee, 2006) seem to imply, learners with thin identity boundaries may be in a disadvantageous position if they strongly identify themselves not with the target language community but with their classmates, whose level of pronunciation may be low. Despite having the potential for speaking with pronunciation lacking L1 features, their worries about appearing different than the rest of the

group by being better than the others, and about their friends rejecting them due to being praised by the teacher, they might consciously resign from achieving higher levels in pronunciation than most of their classmates. This phenomenon can be observed particularly in the case of adolescents, when the need for identifying with and being accepted by the peers is strong.

Finally, it is also boundaries in opinions and judgments, connected with the degree of ambiguity tolerance, that can be vital in the case of learning particular FL aspects. In some cases, for example, when learning grammatical exceptions, the thin boundary students are found to outperform those revealing thick ego boundaries, due to their ease in accepting contradictions and ambiguities. The situation may be analogous when learning the phonetic form of words that one has been pronouncing incorrectly for a long time or when memorizing the stress in cognates that is differently placed than in L1. However, when accuracy in pronunciation at the segmental level is concerned, we may assume that it is better to perceive the borders sharply and to classify features of pronunciation in black or white categories, which thick boundary people are more prone to do.

Reports on studies examining the relationship between flexibility of ego boundaries and accuracy in pronunciation resulting from formal instruction seem to be scarce. Ehrman (1999) described two approaches to pronunciation learning. According to her, there are students who like and expect conscious focus on this aspect and rely heavily on clear explanations and drills. Among them are mainly thick ego boundary learners. Others feel overburdened with focus on form and would rather allow pronunciation to take care of itself, while they get involved in performing content-based tasks. These are the likes of people revealing thin ego boundaries. However, the question of whether the preferences of these learners lead to accuracy, and which of these types of learners achieve a higher level of attainment in pronunciation is neither addressed nor answered. The problem was touched on by Waniek-Klimczak (2011), whose main aim was to examine the relationship between the level of speaking skills and pronunciation of university students majoring in English after one semester of practical courses in English, and to observe how different dimensions of personality affect the learning of the two. One of the affective variables whose influence on accuracy in pronunciation and speaking skills was investigated was ego permeability. Interestingly, correlation analysis proved no significant relationship between the extent of ego permeability and the level of pronunciation. The results in this area, however, ought to be viewed with caution, since a simplified instrument to measure the thickness of ego boundaries was used (i.e., the Language Learning Attitudes Questionnaire available online from the Summer Institute of Linguistics), whose validity and reliability is not reported.

The Study

Research Questions and Hypotheses

My interest in why some students are more reserved and stressed during the practical phonetic classes and why some reach higher levels than others in pronunciation after being offered formal instruction and systematic practice in this FL aspect led to a study aimed at providing answers to the following research questions:

- Are attainments in FL pronunciation determined by the general level of thickness of ego boundaries?
- Which type of learner – with thick or thin ego boundaries – shows a higher level of accuracy in FL pronunciation after attending a course in phonetics?
- Are any particular types of boundaries more important than others for learning FL pronunciation? What level of thickness of these types of boundaries is beneficial in the case of FL pronunciation learning?

Hypotheses adjusted to the statistical analyses utilized in the further course of the study can be formulated in the following manner:

H01. There is no significant difference between the attainments in FL pronunciation of thick ego boundary learners and thin ego boundary learners.

HA1a. There is a significant difference between the attainments in FL pronunciation of thick ego boundary learners and thin ego boundary learners.

HA1b. The attainments in FL pronunciation of thick ego boundary learners are higher than those of thin ego boundary learners.

HA1c. The attainments in FL pronunciation of thin ego boundary learners are higher than those of thick ego boundary learners.

H02. There is a no systematic relationship between the attainments in FL pronunciation and thickness of ego boundaries.

HA2a. There is a systematic relationship between the attainments in FL pronunciation and thickness of ego boundaries.

HA2b. There are systematic relationships between the thickness of particular types of ego boundaries and attainments in FL pronunciation.

Participants

The subjects of the study were 45 students of the Institute of English Studies at the University of Wrocław, Poland.[2] The data for the research, that

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[2] I wish to express my gratitude to the students for participating in the research.

is, profiles of the participants in terms of their thickness of ego boundaries and their attainments in English pronunciation, were gathered at the end of their first year of study, when they had completed, among many others, the course in practical phonetics. They belonged to one of three groups – one full-time and two extramural groups, all of whom were taught pronunciation with the use of the same approach, techniques and materials, having attended the course in phonetics run by the same teacher, that is, the author of this paper.

As is usually the case at language institutes in Poland, the majority of the subjects were females (*n* = 32). Although no standardized battery measuring the type and intensity of motivation and attitudes was applied, information about their desire to speak with a native-like accent (either RP or GA) was gathered with a short introductory questionnaire. The testees, among many others, were asked to disagree/agree with the following statement: "I would like my pronunciation of English to be as close to native-like as possible" by circling a digit from 1 (*I very strongly disagree*) to 5 (*I very strongly agree*). Most of the students agreed with the statement strongly or very strongly. Four subjects seemed to show little concern for their pronunciation, having marked a 3. The intensity of the participants' motivation was further verified during an informal interview carried out with each of the students during the first recording session, which always took place at the beginning of the course of phonetics.

Despite the fact that initially there were 56 participants, the eventual number was lower. Some were excluded due to having spent a few years in an English-speaking country; others did not complete the whole questionnaire measuring the extent of ego boundaries.

The Phonetics Course

Before the actual course began, the pronunciation level of each student was diagnosed and aspects requiring improvement were pointed out. In most cases it appeared that the subjects were not aware of their problems in pronunciation, which proves that little attention had been paid to this language aspect during their prior education.

Each student was provided with a syllabus and informed about the purpose and content of the course, the order in which sounds were to be practised, the form and times of oral and written tests, materials that would be used, and criteria according to which they would be evaluated on tests and at the end of each semester.

During the course, segmental phonetics was taught with the use of the analytic-linguistic approach. Each time a new sound was introduced, its place and manner of articulation were provided by means of various techniques

appealing to different modalities and senses of the students. In the theoretical part of the class the inductive approach was used, that is, the learners tried to observe and come up with their own hypotheses about how particular segments in English are pronounced and how they differ from their Polish counterparts. It was only after such a theoretical introduction that practical phonetics began. It took the form of reading and repeating single words, sentences, and dialogues in which a particular segment was of major concern, and thus appeared several times in various contexts. The exercises were conducted individually, in pairs, groups and lockstep. The controlled tasks were supplemented with game-like activities from various sources, songs, and presentations of students. While the students were practising reading dialogues in pairs, the teacher monitored their work, offering help if needed. Any time a particular aspect of pronunciation deviated significantly from the correct version, the instructor modeled the proper form and encouraged repetition. When the learner showed discomfort and reluctance to articulate the segment or word after the teacher, he/she was encouraged to see the instructor after the class, so as to practise the difficult area of pronunciation individually, without the presence of other students. Additionally, about 15 minutes of each lesson was devoted to transcribing difficult vocabulary items, which the learners were required to know for the written tests taken approximately once a month.

It seems worth adding that the students were allowed to choose either RP or GA as their goal. Consequently, the features of the two norms were presented in a detailed manner in the first semester, and consistency in using one of them was required both in articulation and in written transcription tests.

Instruments

Introductory questionnaire. To gather basic information about the individuals taking part in the study, a questionnaire was distributed to them at the very beginning of the course. While some items were based on a 5-point Likert scale, others had the form of open questions. The instrument gathered data about the subjects' strength of motivation to achieve native-like pronunciation, about the accent they wished to learn (RP or GA), prior experience in pronunciation learning, and visits to English-speaking countries.

Hartmann Boundary Questionnaire. The extent of thickness of ego boundaries was measured with the use of the Hartmann Boundary Questionnaire (1991). It consists of 145 statements, referring to 12 types of boundaries, which subjects respond to on a 5-point Likert scale, reporting the extent to which the statements are true of them. When distributed by Hartmann among the first 866

people, the instrument showed a high level of internal reliability (Cronbach alpha = .93). As already stated above, each testee receives an overall score (Sumbound), a Personal Total (for Categories 1-8) and World Total (Categories 9-12). The more points the students score, the thinner their ego boundaries.

Although the subjects of this study represented an advanced or upper-intermediate level of English, in case some questions were misunderstood, the instrument was translated into Polish. The Polish version showed an acceptable level of reliability (Cronbach alpha = .89). Before the questionnaire was administered to the subjects, it was filled out by a group of 10 students from a different first-year group, which resulted in rewording a few statements and eliminating one of them from the scoring (the question concerning reactions to marijuana, which the majority had never tried). So as to reduce the danger of the subjects being discouraged, getting tired and/or bored by filling out the questionnaire and, consequently, of not giving true responses, it was divided into two parts (part I – questions 1-71, part II – questions 72-146) and administered on two occasions (during the last two classes of phonetics), before the pronunciation measurement.

Pronunciation Attainment Test. After the whole academic year of studying phonetics (about thirty 90-minute lessons), the subjects' pronunciation was recorded and assessed with the use of three tests.

The first one (Test 1) consisted in reading aloud a text (borrowed from Mortimer, 1989), on the basis of which the pronunciation of various aspects could be assessed. Due to the fact that the text was not known to the learners and that no time was allowed for preparation and rehearsal of the reading, the task can be considered the most difficult of the three and to reveal pronunciation habits with minimum control and monitoring.

When evaluating the pronunciation of the subjects in Test 1 an atomistic approach was used. Each student could attain from 0 to 4 points for the majority of segments that were practised during the course (9 consonants and 10 vowels). The points were distributed depending on how frequently the subjects pronounced particular segments properly. Although the main area of evaluation was pronunciation at sound level, the subjects could lose some points (up to 4 points) for major errors produced in other areas than segments, such as word stress or lack of linking and fluency in reading, which might have been caused by too much focus on accuracy. Finally, consistency in using RP or GA was evaluated. Its absence in particular areas of pronunciation (e.g., articulating [r] in all contexts in RP) resulted in taking away some points. Eventually, each subject had two sets of scores for Test 1 – one for correctness at segmental level (Vs + Cs) and one for consistency in using one of the accents (RP/GA cons).

In Tests 2 and 3 the subjects' pronunciation at word level was evaluated. Test 2 consisted in reading a list of 36 words commonly mispronounced by Poles (List 1). Since it was not the first time the learners were assessed for reading this list (it was read by the students before the course and at the end of the first semester) and since the students were informed about this part of the assessment, this test can be considered the easiest of the three. In Test 3 the participants read another list of 36 words. This time the test consisted of difficult vocabulary items that were practised during the second semester and that appeared on the written transcription test. In the case of both tests the students were credited with 1 point for each word properly pronounced.

Since the tests were the basis for crediting each learner at the end of the academic year for the course of phonetics, the raw scores for each component of the Pronunciation Attainment Test were converted into one of the following 10 grades from 2 to 5 (i.e., 2, 2.5, 2.7, 3, 3.5, 3.7, 4, 4.5, 4.7, 5) where 2 meant *very poor* and 5 *very good*. Finally, the grades were added up, giving each subject a total score (Total), with a maximum of 20 points. These sets of credits and the total outcome were used for further statistical analyses.

Presentation and discussion of results. Table 2 shows the descriptive statistics for the results of the Pronunciation Attainment Test. While the scores for Test 1 (Vs + Cs) and Test 3 do not considerably violate the normal distribution assumption, the total score, scores for consistency in using one of the norms and for Test 2 are negatively skewed, showing that after the course the majority of the learners pronounced the words commonly mispronounced by Poles properly and were highly consistent in using either RP or GA. Consequently, it is the results for segmental accuracy (Test 1; Vs + Cs) and for List 2 (Test 3) that should be taken into account in further statistical analyses.

Table 2 Descriptive statistics for the results of the Pronunciation Attainment Test

| | Test 1 | | | | Total |
	Vs + Cs	RP/GA cons	Test 2	Test 3	(max 20)
Mean	3.97	4.26	4.37	3.21	15.81
SD	0.66	0.67	0.62	0.80	2.16
Median	4.00	4.50	4.50	3.00	16.40
L-H	2.7-5	2-5	2-5	2-5	9.5-19.2

Note: Vs – vowels, Cs – consonants, cons – consistency

The descriptive statistics for outcomes on the Hartmann Boundary Questionnaire are displayed in Table 3. This time the scores are normally distributed. Although not displayed in the table, normal distribution can be

traced also in the case of all 12 categories of ego boundaries that the HBQ measures. The mean of the Sumbound (284.29) is close to that achieved by the 866 subjects involved in Hartmann's research (273.00), though generally the students majoring in English proved to have thinner ego boundaries than the participants of Hartmann's study.

Table 3 Descriptive statistics for results of the HBQ

	Personal Total	Word Total	Sumbound
Mean	191.42	92.87	284.29
SD	35.37	14.73	44.08
Median	193.00	90.00	286.00
L-H	127-282	71-126	198-408

So as to verify hypotheses H01-HA1c, the subjects were classified as thick or thin ego boundary learners, depending on whether they scored below or above the group mean for the Sumbound. As Table 4 shows, in the case of each test the thin ego boundary learners outperformed the thick ego boundary individuals. However, an independent *t* test proved the discrepancies between the pronunciation attainments of thin and thick ego boundary subjects to be nonsignificant.

Table 4 Descriptive statistics for scores on the Pronunciation Attainment Test achieved by thick and thin ego boundary learners

Group	Mean/*SD*	Test 1		Test 2	Test 3	Total
		Vs + Cs	RP/GA cons			
Thin (*N* = 23)	*M*	4.03	4.32	4.47	3.26	16.09
	SD	0.70	0.62	0.39	0.65	1.73
Thick (*N* = 22)	*M*	3.91	4.18	4.26	3.16	15.51
	SD	0.62	0.73	0.78	0.94	2.54

Note: Vs – vowels, Cs – consonants, cons – consistency

To check hypotheses H02-HA2b the Pearson correlation coefficients were computed among all types of ego boundaries and parts of the Pronunciation Attainment Test. The results are gathered in Table 5.

Table 5 Pearson product-moment correlation coefficients between results of the Pronunciation Attainment Test and scores on HBQ

| | Test 1 | | Test 2 | Test 3 | Total |
	Vs + Cs	RP/GA cons			(max 20)
Personal Total	-.007	-.047	.031	.063	.015
World Total	-.069	.022	.105	-.005	.014
Sumbound	-.029	-.031	.060	.049	.017
Category 7	.048	-.074	.204	.274*	.151
Category 8	-.040	-.025	.092	.292*	.114
Category 12	.066	.051	.260*	.041	.125

r_{crit} = 0,2573, *p < 0.10, df = 43
Note: Vs – vowels, Cs – consonants, cons – consistency

The correlation proved nonsignificant not only for the Sumbound, Personal Total and World Total, but also for the majority of specific boundary categories. However, three types of boundaries were positively correlated with accuracy in pronunciation at word level (Test 3), though only weakly and at a low probability level (p < .10). One of them is Category 7, labeled by Hartmann (1991, p. 94) "neat, exact, precise" (r = .27). It refers to the extent to which one keeps his/her direct environment, work and working place organized and tidy. Among the statements in this subscale, which the subjects were to agree/disagree with, were the following ones: "I like to pigeonhole things as much as possible," "I keep my desk and worktable neat and well organized" or "I get my appointments right on time" (Hartmann, 1991, pp. 80-92). Interestingly, the significant positive correlation implies that the less organized the subjects considered themselves to be (the thinner ego boundaries they had in this category), the higher their level of pronunciation was.

The second type of boundary which correlated positively with the pronunciation attainments (r = .29) was Category 8, representing the subjects' attitudes towards accepting objects, concepts and situations that lack clear borders. Though many statements in this subscale refer to visual images, furniture, and clothing, such as "Good solid frames are very important for a picture or a painting," others are more general, for example, "I like clear, precise borders," and "I like fuzzy borders" (Hartmann, 1991, pp. 80-92). Interestingly, the same types of boundaries (Categories 7 and 8 on HBQ) were found to be positively correlated with "communicative language learning success" by Ehrman (1999, p. 74), which can be explained by the thick ego boundary individuals being less effective and feeling less comfortable and confident performing tasks that lack clear structure and contain unexpected elements.

Finally, the third boundary type that correlated positively with pronunciation accuracy (r = .26) was Category 12, concerning opinions about truth and beauty,

which seem to be related with Categories 7 and 8. Among the statements in this subscale were the following: "There is a place for everything, and everything should be in its place," "Either you are telling the truth or you are lying: that's all there is to it" or "There are definite rules and standards, which one can learn, about what is and is not beautiful" (Hartmann, 1991, pp. 80-92). The outcomes imply that the more prone the subjects were to see truth and beauty in shades of grey rather than as black or white categories, the better their pronunciation after the course of phonetics was. However, caution is needed when interpreting the results on Test 1, since the normal distribution assumption has been violated.

All three types of boundaries that showed a systematic relationship with pronunciation attainments are connected with the concept of ambiguity tolerance, that is, with the easiness to perceive, accept, take in and retain ambiguities, and with the tendency to organize one's learning, and structuralize one's knowledge. The outcomes might suggest that thin ego boundary learners, that is, those who are frequently too tolerant of ambiguity and have difficulties with imposing structure on the new information and with organizing their learning benefitted from the course of phonetics being form-focused, clearly structured and helping in perceiving and accepting ambiguities (e.g., by referring to references, such as dictionaries) more than the thick ego boundary students. There is a possibility that the level of pronunciation of the thin ego boundary subjects, who are said to prefer content-based curricula and to favor learning through exposure and experience, was influenced more significantly by other practical courses of English (e.g., conversation classes) or any other content-based course in which they were exposed to English and in which there was no focus on the phonetic form, than by the course of phonetics. However, if this was the case, then a systematic relationship should appear in the case of Task 1 and 2, where pronunciation of general features of the English phonetic system and of the frequently used words were assessed, rather than in Task 3, strictly connected with the content of the course, that is, pronunciation of lexical items whose probability of appearing during other classes was much smaller.

What is the justification for the lack of significant correlation between pronunciation attainments and boundaries connected to identity? One of the possible explanations for this phenomenon may lie in the fact that many learners reporting thick identity and group boundaries, who were assumed to show less accurate pronunciation in this study, might have learnt to thin down their boundaries during the course of phonetics or for the sake of the testing tasks. This may have enabled them to catch up with the level of thin ego boundary individuals and resulted in leveling the differences.

Why has no negative relationship been found between pronunciation accuracy and the thickness of ego boundaries in thoughts and feelings or the

boundaries related to the use of defense mechanisms? The outcomes might have been affected by external factors, such as the friendly atmosphere during the course, good classroom dynamics and rapport with the instructor, the students being provided with a lot of positive feedback, being given the right to pass when being reluctant to repeat new words individually, by offering students with a low level of pronunciation guidance and corrective feedback on an individual basis. Moreover, it is again possible that with time the thin boundary students could have developed several strategies allowing them to cope successfully during the course of phonetics and to feel more comfortable, such as several anxiety-lowering strategies.

Consequently, we may conclude that many students who reach an advanced or upper intermediate level, particularly those majoring in FLs, learn to adopt coping strategies and, therefore, may not behave typically for the reported thick or thin ego boundary style. However, some learners, especially those revealing a very high level of thickness or thinness of ego boundaries will act according to their style, and reveal difficulties with overcoming their limitations. This would explain why, as Ehrman (1999) claims, there are many thick ego boundary learners who are very good at FLs, and several thin boundary individuals for whom both learning and testing are difficult.

Profiles of interesting students. What sheds more light on the relationship between ego boundaries and FL pronunciation learning is a careful look at profiles of a few subjects, based on a deeper analysis of their responses on the HBQ, information gathered with the introductory questionnaire, observations of their behavior during the phonetics course, and opinions of other university teachers having classes with them. Characteristics of two students are presented below.

Subject A is a male learner, highly motivated to speak with a good accent, who is now (two years after the data have been gathered) majoring in American literature, writing his MA thesis in this area. His supervisor considers him a very good, creative and imaginative student. At the same time, he is said to be very sensitive, open and likeable. He is known to have his own music band, in which he sings and plays the guitar.

Looking at all the information above, we may risk stating that student A has strong thin ego boundaries. Indeed, with his highest score among all the participants of the research (over three *SD*s above the group mean on the Sumbound) he is reported to have extremely thin ego boundaries. In the case of most types of boundaries he achieves a score of 2, 2.5 or 3 *SD*s above the mean. When his level of pronunciation after the course of phonetics is concerned, it has not changed much when compared with the level before the course, despite him gaining phonetic competence (good written test grades) and his high motivation. During class, when

doing pronunciation exercises he seemed more tense than others and sometimes distracted by his thoughts. What could have helped him progress in pronunciation are his very thin interpersonal boundaries, which should have allowed him to accept a new FL identity easily. However, he scored very high on Categories 7 and 8, demonstrating problems with deciding what to consider irrelevant, what to take in from the input, and how to organize and structure his knowledge. The difficulties in this area are further supported by his high level of ambiguity tolerance, measured in the course of an earlier study (i.e., Baran-Łucarz, 2010). The problems, however, could be expected to have been reduced by the clearly structured format of the phonetics class. What seems to impede the student's progress in pronunciation are his very thin boundaries between thoughts and feelings, and high sensitivity revealed by poor defensive mechanisms. In other words, we may risk stating that he has not developed coping strategies that would allow him to protect his ego.

Student B is a female, majoring in translation, declaring a very high motivation to achieve native-like pronunciation. As is the case of subject A, she can be considered musically talented, having attended primary- and secondary-level music schools. Her scores on the Pronunciation Attainment Test were among the highest. At the same time she was found to have moderately thick ego boundaries (the Sumbound being 1.5 *SD*s below the group average), but she could have learnt to thin down. Interestingly, her identity boundaries were thick (2 *SD*s below the mean). Reporting only a moderate (0.5 *SD* below the mean) preference for organized and clearly structuralized learning, and high tolerance of ambiguity, she might have found the course helpful in organizing her knowledge, just as student A did. What clearly differentiates her from the previous learner and might have facilitated her progress in pronunciation are her much higher abilities to delineate thoughts from feelings (1.5 *SD*s below the group mean) and her lower level of sensitivity (1.5 *SD*s below the mean in Category 6).

Conclusions

On the basis of the quantitative data gathered in the research reported in this paper, we can conclude that there is no systematic relationship between the general level of thickness of ego boundaries measured by HBQ and attainments in FL pronunciation after a course in phonetics. Although a tendency for thin ego boundary learners to outperform the thick ego boundary individuals in pronunciation accuracy was observed, the differences proved nonsignificant when verified with a *t* test. Unlike in the case of acquisition taking place in natural contexts, the extent of thickness of ego boundaries connected with identity (interpersonal and group boundaries) did not determine the level of pronunciation.

However, a more detailed analysis of data consisting in observing whether particular types of ego boundaries are important for FL pronunciation learning showed that Categories 7, 8 and 12 of HBQ are positively correlated with the level of pronunciation, though at a low level ($r = .27$, $r = .29$ and $r = .26$, respectively). More specifically, the less organization, precision and tidiness the subjects reported in their direct environment (among others in the work place), the more correct their pronunciation was. The attainments in the subskills were also systematically higher in the case of those individuals who revealed a tendency to perceive borders as blurred and fuzzy, and to consider concepts related to truth and beauty in shades of grey rather than as clearly delineated black and white categories.

All in all, what most probably affected the positive relationship between pronunciation attainments and the thickness (more precisely, thinness) of ego boundaries in Categories 7, 8 and 12 is the fact that the course of phonetics was highly structured and form-focused, helping to disembed the relevant phonetic information from the input, accept the ambiguities and reorganize one's previous knowledge of the phonetic system of English.

It is imperative that the results of the quantitative analysis be viewed with caution, due to several limitations of the study, such as the scarce number of learners involved in the research, the absence of randomization in participant selection, and the absence of reliability and validity data on the Pronunciation Attainment Test.

The outcomes of statistical tests are complemented with a more thorough examination of the profiles of two subjects. They seem to imply that an individual reporting highly thin ego boundaries in Categories 7, 8 and 12 will not benefit from a clearly organized course of phonetics if he/she reveals high ego boundaries between thoughts and feelings, high sensitivity and poor defensive mechanisms. It is only when one learns to adopt coping strategies allowing him/her to thicken boundaries in these areas that pronunciation learning can be more successful. New behaviors have to be acquired also by thick ego boundary learners. Their pronunciation can be facilitated if they learn to thin down their ego boundaries connected with personal and group identity, in particular. There is, however, no doubt that learning to behave and think in a way different from our natural preference is an ability that only some people can master.

The relationship between pronunciation accuracy and the extent of thickness of ego boundaries can be expected to be different if the learners are not provided with a course of phonetics, or if the course lacks clear organization and form-focused formal instruction. Additionally, discrepancies in outcomes may appear at lower proficiency levels and among people who are average FL learners, rather than students majoring in a particular FL.

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