L1 PRONUNCIATION AND INTELLIGIBILITY IN ELF:
A Case Study

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1 Introduction

In the teaching and testing of English to speakers of other languages, native speaker pronunciation has traditionally been considered as a suitable model for ELF students.[1] In recent years, this view has been challenged and it has been argued that a core approach is more appropriate given English's status as an international language (Jenkins 1998, 2000. 2002, 2007). Jenkins' concept of LFC (Lingua Franca Core) rests on mutual intelligibility for non-native speakers as opposed to intelligibility for some hypothetical native speaker of so-called standard variety. This assumes a common ground of certain features taken from varieties of ELF but also raises the interesting question of what precise part is played by features of the L1 of each participant in the discourse plays: whether they contribute or 'interfere' with the process, and equally important what ELF speakers' attitudes are to such NNS pronunciations in particular towards that of their own L1.

In this paper,[2] we will conduct a small-scale quantitative analysis based a questionnaire-based survey of 174 learners of English of various L1 (mainly Albanian, German and Italian) and two separate comparison groups made up of English language teachers who are asked to assess different extracts of unidentified subjects both native speaker (NS) and not (NNS) speaking English, as regards level of intelligibility, pronunciation and fluency (accepting that this latter is largely an intuitive concept that defies a simple objective definition.)[3] The data from the control groups was collected as part of another research project (see Christiansen 2011, this volume). The object of the questionnaire is to identify which samples of English, questionnaire respondents find easier to understand and how far familiarity (e.g. pronunciation influenced by shared L1) affects their perceptions.

2 Background to speaker extracts

As input for this analysis, we used six short extracts (ranging from approx. 76 to 128 seconds) of six speakers, five of which NNS, one NS, all aged between 20 and 45. In Table 1, below we briefly summarise those characteristics of the subjects that are relevant to our study:

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[1] See, for example, Gimson (1978) or Jenner (1997).

[2] This paper was originally delivered as a presentation entitled "Intelligibility in ELF pronunciation and the relative importance of distance from LFC and distance from respective L1s: a case study." At the ELF3 conference in Vienna, May 22-25, 2010.

[3] See, for example, Fulcher (1993); Hughes (2002); Lennon (1990); Luoma (2004).

Speaker	Sex	L1	Declared place of origin
Sp1	M	German	Triers (Germany)
Sp2	F	Polish	Rzeszow (Poland)
Sp3	F	Italian	Lecce (Italy)
Sp4	F	German	Graz (Austria)
Sp5	M	English	London (UK)
Sp6	M	Italian	Lecce (Italy)

Table 1
Characteristics of speakers used for questionnaire and analysis

The extracts were taken from longer recorded interviews, at the point in which respondents were asked to speak for one minute on "what kind of person makes the best friend or companion?"

As part of an on-line survey using also computer-generated voices to ascertain how far pronunciation affects perception of grammatical accuracy (see Christiansen 2012, this volume), the extracts were assessed for grammatical accuracy (GA) by a comparison group of 40 language teachers (NS and NNS English) from four different countries (UK, Italy, Albania, Australia) speaking a range of eight different languages other than their L1, all giving their replies anonymously.[4] A second comparison group was made up of a panel of six experts (all trained and experienced oral examiners working for an international examining board in Italy and, by chance, NS British English) which was allotted the task of assessing the speakers for pronunciation (P), fluency (F)[5] and intelligibility (I). For grammatical accuracy, pronunciation, and fluency, the descriptors in the Common European Framework of Reference (2001)[6] were used. For intelligibility, a scale of descriptors was drafted especially for the purpose[7]. The mean scores that these groups gave to the different speakers are shown in Table 2, the scores being weighted to permit direct comparison:[8]

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[4] As regards the typical respondent to the online questionnaire Christiansen (2012, this volume) states: "[...] typically respondents were native speaker English, living in Italy and had over 3 years teaching experience in a couple of countries, and had some teaching qualification. Fifty percent of the respondents had also been trained as oral examiners, mostly for Cambridge ESOL."

[5] Fluency is a thorny issue (Luoma 2004: 88). Hughes (2002: 88) notes that "[…] even in technical terminology, fluency can be used in a range of senses. The narrowest of definitions only include few features, typically pausing, hesitations and speech rate, whereas the broadest uses are virtually synonymous with 'speaking proficiency."

[6] Grammatical accuracy (2001: 114) and Phonological Control (2001: 117). In fact, in the latter there is some explicit bias against ELF e.g. band 3 (B1): "Speaker's pronunciation is clearly intelligible even if a foreign accent is sometimes evident and occasional mispronunciations occur". On the frequency of such attitudes, see Jenkins (2007: 83-87)

[7] This was a six-point scale ranging from "It is possible to recognise all the words uttered by the speaker and every one is unambiguous and clear" at the top to "It is possible to recognise only a few of the words uttered by the speaker and all but a few are ambiguous or unclear." at the bottom (see Christiansen 2012, this volume). On the technicalities of speech intelligibility, see Clark and Yallop (2002: 309-312): "frequency passband" (the range of frequencies or wavelengths that can pass through a filter without being attenuated), duration, interruption etc.

[8] This was necessary because the scales were different (e.g. 5 for P, 8 for GA, 9 for F and 6 for I).The figure 90 thus serves as a convenient common base: the marks for P multiplied by 18, those for F by 10, GA by 11.25, and those for I by 15.

	CG 1*	CG 2*			Total / 360	Rank
	GA	F	I	P		
Sp1	59.89	66.67	77.5	57	261.06	4
Sp2	60.34	58.33	82.5	69	270.17	3
Sp3	64.85	71.67	85	78	299.52	2
Sp4	56.58	63.33	72.5	66	258.41	5
Sp5	85.23	88.33	87.5	90	351.06	1
Sp6	34.10	40	62.5	48	184.6	6

Key:

    CG1 = 40 language teachers
    CG2 = 6 speaking test experts

Table 2
Mean Scores for Grammatical Accuracy / Fluency / Intelligibility / Pronunciation: Comparison groups (Christiansen 2012).

The final two columns give the total score of all the categories and, on the basis of this, the different speakers can be ranked with Sp5 (NS) coming first, followed by Sp3, Sp2, Sp1, Sp4 and Sp6 in that order. This confirms that for the both comparison groups, which are predominantly NS, the NS subject is regarded as a model for accurate linguistic performance in all areas, especially P, for which the speaking test experts unanimously give him full marks (but see NS bias in descriptors as outlined above).

3 Questionnaire Survey

To explore the specific question of which models of English NNS learners find more intelligible, we drew up a questionnaire to be administered by teachers[9] cooperating in the project to classes of students of B1-B2 level, who listened to recordings of the speakers under controlled conditions (detailed instructions were sent to each supervisor on how to conduct the exercise). In the sections (3.1- 3.3) below, we will examine the results.

3.1 Characteristics of respondents
The questionnaire itself was completed anonymously and required respondents (respondents) to give limited information about themselves (age, sex, L1 and other languages). The characteristics of the respondents are summarised below in Table 3:

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[9] These were: Michele Arnesano (Istituto Magistrale "Pietro Siciliani", Lecce, Italy) Rita Bennett (Università del Salento, Lecce, Italy); Adriana Cattell (Liceo Ginnasio Statale Aristosseno, Taranto Italy) Maurizio Fino (Istituto Magistrale "Ettore Palumbo", Brindisi, Italy); Anna Hemmerling "Albert-Schweitzer-Realschule plus", Mayen, Germany; Alessandra Leaci (Istituto Professionale Paritario, "Mons. Armando Franco", Mesgane, BR, Italy), Philip Rowe (Università del Salento, Italy), Genci Shurdho (International Language Centre, Tirana, Albania); Suzanne Vickery (Università degli Studi di Catania).

Sex		(100%=174)	L1		(100%=174)
Female	118	67.82%	Albanian	35	20.11%
Male	55	31.61%	Arab / German	1	0.57%
Unreported	1	0.57%	Chinese	1	0.57%
			French / German	2	1.15%
			German	48	27.59%
			Italian	84	48.28%
			Serbian	1	0.57%
			Unreported	2	1.15%
			L2 (excluding English)		(100% =254)
Age		(100%=174)	Albanian	1	0.39%
12 years	2	1.15%	Arabic	2	0.79%
13 years	17	9.77%	Dutch	1	0.39%
14 years	30	17.24%	French	95	37.40%
15 years	24	13.79%	German	35	13.78%
16 years	10	5.75%	Italian	23	9.06%
17 years	38	21.84%	Latin	1	0.39%
18 years	22	12.64%	Portuguese	1	0.39%
19 years	9	5.17%	Russian	1	0.39%
20 years	3	1.72%	Spanish	36	14.17%
21 years	8	4.60%	Swedish	1	0.39%
22 years	1	0.57%	Turkish	1	0.39%
31-52 years	7	4.02%	None	55	21.65%
Unreported	1	0.57%	Unreported	1	0.39%

Table 3
Characteristics of respondents

As can be seen on Table 3, the respondents constitute a heterogeneous group including speakers of many different L1s and with knowledge of various other languages in addition to English. However, 48.28% were L1 Italian, 67.82% female, and 82.18% of secondary school age (12-18).

3.2 Questionnaire survey: methodology

		1*	2*	3*	4*	5*
1	"The grammar of this speaker is generally good"					
2	"The vocabulary of this speaker is generally good"					
3	"The pronunciation of this speaker is generally good"					
4	"I can easily follow the general meaning of what this speaker is saying"					
5	"This speaker's accent is easy for me to understand"					
6	What is the speaker's native language? a) I can't say b) English c) French d) German e) Italian f) Polish g) Portuguese h) Spanish i) Swedish j) Turkish					

*Key:1 = I strongly disagree; 2 = I do not agree; 3 = Undecided; 4 = I agree; 5 = I strongly agree

Figure 1
Questionnaire

Figure 1 reproduces the questionnaire, which was organised so that respondents were given the same five statements in English, which they had to rate against a simple five-point Likert scale. In addition, they were asked to identify the speaker's L1 (question 6).

The questions themselves were designed to be unambiguous to a typical non-expert at B1-B2 level, and various wordings were trialled before the above were arrived at.[10] As always with the use of such quantitative tools as Likert scales, any differences in interpretation of the ratings themselves on the part of individual respondents are counterbalanced by having a large sample (174 respondents) from which to extract means. The relatively few answers left blank were discounted from the statistical analysis.[11]

To elicit genuine and sincere answers[12], the questionnaire, while intentionally as brief as possible, seeing that the recorded extracts themselves were short (although supervisors were instructed to let respondents hear each extract twice, or more if requested), includes some largely superfluous detractor questions. The key questions are 3 and 5. Questions 1 and 2, though strictly speaking irrelevant, together with 3, do however allow one to gauge what the respondents' assessment of the speaker's general linguistic level is.

The desire to disambiguate the two general meanings of *intelligibility* accounts for the presence of question 4; *intelligible* may refer either to content of what is said – how it, the contribution, as a discourse, is organised (i.e. how complex or accessible the ideas it expresses are) or to the phonological form of the contribution, which is the focus of our research here. Questions 4 and 5 separate the two senses allowing us to be sure that, in answering Question 5, the respondent concentrates on the latter sense, expressing the concept of intelligibility of pronunciation by reference to the ability to understand the speaker's accent.

As an extra precaution, respondents were given seven extracts to respond to. Results for the first were however ignored. This we had designed, without telling the respondents, as a dummy run to get them used to the procedure and to allow supervisors to deal with any technical issues (e.g. volume levels).

3.3 General results

In Sections 3.3.1 – 3.3.2 below we discuss the results of the questionnaire survey, making comparisons not only between the various aspects of performance assessed but also between the responses of the respondents and CGs and also between the different categories of respondents according to L1.

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[10] We rejected the idea of giving respondents a questionnaire in their own L1, as differences in translations might have affected results.

[11] Out of a total of 6264 possible replies (i.e. 174×36), only 95 were left blank corresponding to a mere 1.52% (approx.).

[12] For example see (Skehan 1982: 62) on the approval motive "the respondent works out what the 'good' or "right" answer is, and gives it."

3.3.1 Pronunciation and intelligibility

In Table 4, we present the mean for the various responses for questions 3 (pronunciation) and 5 (intelligibility) – see Figure 1. Comparison is made with the equivalent scores given by speaking testers as described in Section 2.0.[13]

	Pronunciation			Intelligibility		
	QR*	CG2*	Diff*	QR*	CG2*	Diff*
Sp1	62.84	57	+5.84	59.72	77.5	-17.78
Sp2	70.01	78	-7.99	68.68	85	-16.32
Sp3	58.86	69	-10.14	60.28	82.5	-22.22
Sp4	60.87	66	-5.13	62.63	72.5	-9.87
Sp5	48.41	90	-41.59	48.49	87.5	-39.01
Sp6	41.79	48	-6.21	55.78	62.5	-6.72
MEAN			-10.87			-18.65

*Key :
QR = questionnaire respondents (174 language learners)
CG2 = Control Group 2: 6 speaking test experts
Diff = Difference between respondents and speaking test testing experts (i.e. respondent figure – CG2 figure)

Table 4
Summary of mean scores of questionnaire

As is immediately apparent by looking at the bottom row, the respective means of the differences between respondent and language testers, for all three criteria, respondents rate the extracts lower than did speaking testers. This could be put down to their comparative lack of expertise compared to speaking testers, and perhaps a lower tolerance of performance which they, as learners, consider, correctly or incorrectly, to be outside the norm. The difference in intelligibility is particularly striking but may in part be explicable by the fact that, as learners at B1-B2 level, they would generally find discourse in English harder to follow than would professional testers.

These observations apart, looking in detail at the results reveals some interesting points especially as regards differences in the marks for individual speakers. Of these, the most striking are those for Sp5 (NS). Respondents disagree markedly with speaking testers, awarding this speaker considerably lower marks in all three categories. Conversely in both pronunciation and intelligibility, respondents rate Sp2 most highly.

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[13] Also as in manner similar to that described in Section 2.0, the scores from the questionnaire were multiplied by 18 to align them with 90, the common base for the other marking scales used for the various assessment criteria.

3.3.2 Results according to respondent L1 language group

Looking at the results for respondents from each of the main L1 groups (Albanian, German, Italian) shows that the trend to rate speakers lower than speaking testers is not L1-specific (Table 5):

	L1 Albanian		L1 German		L1 Italian	
	P	I	P	I	P	I
Sp1	60.35	61.41	63.88	63.35	63	55.29
Sp2	70.94	72	72.35	67.96	68.75	67.61
Sp3	65.31	65.25	58.59	61.20	56.14	57.47
Sp4	56.06	57.94	66.71	71.64	59.36	58.93
Sp5	56.57	57.94	41.65	42.48	49.29	48.43
Sp6	47.45	50.73	43.76	46.94	38.82	63

Table 5
Summary mean scores respondents L1 Albanian, L1 German and L1 Italian

As Table 5 shows, while there are notable differences between respondents and speaking testers, there is also notable difference between the different L1 groups. This is most apparent when comparing the order in which they each rank the various speakers (Figure 2):

		CG2	L1 Alb	L1 Ger	L1 It
P	+	Sp5	Sp2	Sp2	Sp2
		Sp2	Sp3	**Sp4**	Sp1
	↕	Sp3	Sp1	**Sp1**	Sp4
		Sp4	Sp5	Sp3	**Sp3**
	−	Sp1	Sp4	Sp5	Sp5
		Sp6	Sp6	Sp6	**Sp6**
I	+	Sp5	Sp2	**Sp4**	Sp2
		Sp2	Sp3	Sp2	**Sp6**
	↕	Sp3	Sp1	**Sp1**	Sp4
		Sp1	Sp5	Sp3	**Sp3**
	−	Sp4	Sp4	Sp6	Sp1
		Sp6	Sp6	Sp5	Sp5

Figure 2
Rankings of speakers according to L1 group.

On Figure 2, the rankings are ordered from top (first place) to bottom. For ease of reference, the cell containing the NS (5) is lightly shaded light; and when the speaker in question is of the same L1 as the respondent then that cell is darkly shaded. In this way, in the column for L1 Ger (German) Sp1 and Sp4 (both German speakers) are found in dark cells and for L1 It (Italian), Sp3 and Sp6 are. In the case of L1 Alb (Albanian), no cells are darkly shaded.

The results for pronunciation (P) demonstrate that all L1 groups rate Sp2 (Polish) highest (ranked second by speaking testers). Similarly all three groups rate Sp6 (Italian) lowest, as do speaking testers. The rating of the German Speakers (Sp1 and Sp4) fluctuates according to L1 group; the L1 Germans rates them both highly as do the L1 Italian, while the L1 Albanians rate them in third and fifth place, putting an L1 Italian (Sp3) in second place. The L1 Italian group shows no preference for L1 Italian speakers

and its ranking for pronunciation is identical to that of the L1 German group except for an inversion of the positions of Sp1 and Sp4.

As regards intelligibility (I), Figure 2 shows that L1 Group does have a discernible effect on the way the different speakers are ranked as regards intelligibility: the L1 German respondents find the L1 German speakers' accents easier to understand than L1 Italians, but put Sp2 (Polish) in second place. Similarly but to a lesser degree, L1 Italian respondents prefer one of the L1 Italian speakers, Sp6 (the one who, according to speaking testers and respondents, had the weaker pronunciation over the other L1 Italian speaker, who proved stronger: Sp3) to one of the German speakers: Sp4 (the same one whose accent was identified as easiest to understand by the L1 Germans). For L1 Albanian group, the order is completely different and most similar to speaking testers except for the ranking of Sp 5 (NS). Sp3 (Italian) was easier for them to understand than L1 Germans (as she is with speaking testers) and Sp1 comes before Sp4 with Sp6 last. All L1 groups mark Sp2 high (either in first or second place).

The L1 Albanian group can be regarded as neutral as regards preference or not to a speaker with whom they share a L1. Their results mirror closely those for speaking testers: the only difference being perception of the NS, and there may be some bias on the part of L1 British English speaking testers here (see Jenkins 2007: 95-100). For the other speakers, the L1 Albanian groups' order is almost exactly the same as that of the speaking testers (with inversion of two L1 German speakers for pronunciation). Like speaking testers, the L1 Albanian group adopts the same ranking for pronunciation and intelligibility, thus linking the former directly to the latter.

Although Figure 2 takes into account whether the speaker in question had a strong or weak L1 accent, reflected partly in the rating given by speaking testers for pronunciation, it does not consider whether the respondents detect any such accent and whether they can correctly identify the speaker's origin, in particular whether the speaker shares their same L1 or not, or whether the speaker is NS English. In both cases, bias, positive or negative, may come into play.

It is thus instructive to compare which speakers were identified as NS (L1 English[14]) by respondents in reply to question 6 of the questionnaire (see Figure 1) and which speakers, respondents declare themselves unable to identify ("I can't say").[15] We do this on Table 6, the figure in each showing the percentage of respondents who identified that speaker as that L1.Cells containing the highest figure for that speaker are shaded with figures in bold. The cells with heavy borders show which L1 that speaker in reality was. Where the shaded cells and bordered cells correspond (Sp3, 4 and 6), the highest number of respondents were able to identify that speaker's L1 correctly.[16]

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[14]   From instructions to supervisors: "Question 6 asks students to try to identify what the speakers' native language may be; obviously this should not be confused with nationality (someone who has English as a native language does not actually have to be from Britain; they could be American, Irish, Australian, etc.)."

[15]   We were careful to edit out of the recordings any information in the speaker's contribution that might have allowed respondents to understand where that person was from. This led to the deletion (using audio editing software) of a short phrase in one of the speaker extracts (Sp3), where mention was made of a local town.

[16]   On the questionnaire the selection of languages to choose from was selected to include, other than the correct answers, a variety of European languages whose names in English would at least be familiar to respondents.

	Sp1	Sp2	Sp3	Sp4	Sp5	Sp6
Unidentified	**27.98**	17.86	31.36	21.82	16.87	13.86
English	14.88	**26.79**	3.55	7.27	5.42	1.81
French	5.95	12.50	7.69	1.82	9.64	4.22
German	26.19	5.95	2.96	**26.67**	7.83	3.61
Italian	0.60	2.38	**21.30**	3.03	6.63	**51.20**
Polish	9.52	8.33	13.02	7.88	15.66	3.61
Portuguese	4.76	3.57	4.14	3.64	6.63	6.02
Spanish	2.38	5.95	5.92	11.52	6.63	6.02
Swedish	7.14	13.69	7.10	7.27	5.42	3.01
Turkish	0.60	2.98	2.96	9.09	**19.28**	6.63

Table 6
Comparisons of respondents' assessments of Speaker's L1s.

Table 6 is illuminating in several ways. Firstly it shows which speakers are most readily recognisable as belonging to a specific L1: Sp3, Sp4 and Sp6 – indicating that the latter displays enough features of a typical L1 Italian speaker to make him easily recognisable as such to just over half of respondents, which is a high figure, around twice that of the other correctly identified L1s (Sp4 26.67% and Sp3 21.30%). Table 6 also shows which speaker's L1 is most difficult to place: Sp2. This is possibly because none of the respondents are familiar with Polish.

Furthermore, if a given speaker is identified as NS, it may serve as an indication of both of respondents' level of expertise in English and how high they regard the speaker's linguistic performance. It is interesting therefore that the NS (Sp5) is correctly identified only by 5.42% of respondents. Indeed, the most popular choice (19.28%) is L1 Turkish and the percentage who declare that they cannot identify him is also high (21.82%). Sp2 by contrast, ranked highly for both pronunciation and intelligibility by respondents (see Table 5 and Figure 2), is identified by 26.79% of respondents as NS.

Another indication of the absence of a clearly identifiable accent (see descriptors for phonological control) is the fact that respondents profess the inability to say where the speaker in question is from; bearing in mind however, that some respondents may feel an aversion to admitting that "I can't say" and prefer to guess. However, the high number of respondents using this option indicates that most show no such reluctance.

Sp1 is rated by highest percentage of respondents as unidentified and in this case, the speaker is generally rated highly for both pronunciation and intelligibility (see Table 5 and Figure 2). That the respondent is unable to identify this speaker's L1 must be because he does have a noticeable L1 accent (for the respondent at least) but does not quite fit the respondent's mental model of what a NS would sound like. In support of this hypothesis, a fairly high percentage of respondents (14.88%) do identify this speaker, erroneously, as NS. Further confirmation comes from the figures for Sp2; a high proportion of respondents identify this speaker as NS, as we have noted, however only a comparatively slightly lower percentage (17.86%) declare that they cannot identify her L1.

Such observations are enlightening but we cannot be sure from Table 6 how far they are general or specific to the separate L1 groups of respondents in our survey. This can be ascertained by reproducing Table 6 for each of the three main L1 groups: L1 Albanians (Table 7); L1 Germans (Table 8) and L1 Italians (Table 9):

		Sp1	Sp2	Sp3	Sp4	Sp5	Sp6
L1 ALBANIAN	**Unidentified**	27.59%	**31.03%**	**32.26%**	23.33%	13.33%	**33.33%**
	English	10.34%	6.90%	12.90%	3.33%	**26.67%**	4.76%
	French	6.90%	0%	16.13%	0%	10%	4.76%
	German	13.79%	13.79%	3.23%	0%	6.67%	4.76%
	Italian	0%	0%	3.23%	10%	6.67%	28.57%
	Polish	**31.03%**	13.79%	25.81%	13.33%	10%	0%
	Portuguese	3.45%	10.34%	0%	0%	3.33%	14.29%
	Spanish	0%	3.45%	0%	6.67%	6.67%	4.76%
	Swedish	6.90%	20.69%	6.45%	13.33%	3.33%	4.76%
	Turkish	0%	0%	0%	**30%**	13.33%	0%

Table 7
Comparisons of L1 Albanian respondents' assessments of Speakers' L1s.

Of the three L1 groups, Albanian-speakers prove best at identifying the NS (26.67%). However they fail to identify any of the other speakers' L1s correctly, although they almost do with Sp6, L1 Italian coming in a close second (28.57%) to unidentified (33.33%). It is interesting that so many of this group (30%) identify Sp4 as L1 Turkish, and that none identify her correctly as L1 German and rate her performance in pronunciation and intelligibility much lower than do either the L1 Germans or L1 Italians. A similar thing can be said about Sp1 (also L1 German), who the largest percentage of this group identify as L1 Polish. Sp3 (L1 Italian) is also considered by many (25.81%) as L1 Polish. This group's reaction to Sp2 differs from that of the other two L1 groups; although they rate her highly (see Table 5, Figure 2) a very low percentage (only 6.90%) identifies her as NS. They class her instead as unidentified or a north European language (Swedish, first; German and Polish in joint second). This indicates that they have a fairly good, albeit imprecise, idea of her L1. Overall, unidentified is the largest percentage in three of the six cases (Sp2, Sp3, and Sp6).

		Sp1	Sp2	Sp3	Sp4	Sp5	Sp6
L1 GERMAN	**Unidentified**	**29.41%**	15.69%	**34%**	9.62%	11.76%	**21.15%**
	English	13.73%	**37.25%**	2%	5.77%	0%	0%
	French	5.88%	11.76%	4%	1.92%	5.88%	11.54%
	German	23.53%	3.92%	0%	**59.62%**	0%	1.92%
	Italian	0%	1.96%	14%	9.62%	15.69%	13.46%
	Polish	3.92%	3.92%	12%	1.92%	**23.53%**	9.62%
	Portuguese	5.88%	5.88%	10%	5.77%	13.73%	13.46%
	Spanish	5.88%	9.80%	10%	0%	11.76%	15.38%
	Swedish	11.76%	9.80%	10%	5.77%	1.96%	3.85%
	Turkish	0%	0%	4%	0%	15.69%	9.62%

Table 8
Comparisons of L1 German respondents' assessments of Speakers' L1s.

The largest percentage of L1 German respondents only identify one speaker correctly (Sp4), who is also L1 German. Sp1, the other L1 German, is unidentifiable for the largest percentage (29.41%)) but is identified correctly by the second largest – and only marginally smaller – percentage (23.53%). On the whole then, this group can be said to be reasonably proficient at identifying speakers of their same L1 speaking English. With

speaker of languages other than German, they are not particularly accurate; only a small percentage (3.92%) correctly identify Sp2 – although by far the biggest percentage (37.25%), like respondents of other categories, assume that she is NS.

L1 German respondents are equally unsuccessful at identifying L1 Italian speakers. The highest percentage of them (34%) are unsure about Sp3, and there is a fairly equal division (10-14%) between those who class her as Italian, Polish, Portuguese, Spanish or Swedish (a revealingly disparate group of Romance, Slavic and Scandinavian languages), indicating that although few regard her pronunciation to be good enough to be NS, her pronunciation is not, in this group's eyes, noticeably influenced by her L1 (Italian). It is conceivable, however, that they are unfamiliar with an Italian accent, an hypothesis supported by the result for Sp6 (the weakest of the six speakers as regards pronunciation and intelligibility – see Table 5, Figure 2). No one regards him as NS but the percentages are divided more or less equally between the four Romance languages: French, Italian, Portuguese and Spanish (the most popular choice of the four), indicating that respondents have an adequate general idea of his L1. Like the L1 Albanian group, unidentified is the most popular choice for Sp3 and Sp6, as well as Sp1

		Sp1	Sp2	Sp3	Sp4	Sp5	Sp6
	Unidentified	27.38%	14.29%	30.12%	**27.38%**	19.51%	4.82%
	English	16.67%	**27.38%**	1.20%	9.52%	1.22%	2.41%
	French	5.95%	17.86%	7.23%	2.38%	12.20%	0%
L1 ITALIAN	**German**	**33.33%**	3.57%	4.82%	14.29%	13.41%	4.82%
	Italian	1.19%	0%	**32.53%**	1.19%	0%	**83.13%**
	Polish	4.76%	8.33%	7.23%	8.33%	13.41%	1.20%
	Portuguese	3.57%	0%	2.41%	3.57%	3.66%	0%
	Spanish	1.19%	4.76%	6.02%	20.24%	3.66%	1.20%
	Swedish	4.76%	14.29%	4.82%	5.95%	8.54%	2.41%
	Turkish	1.19%	9.52%	3.61%	7.14%	**24.39%**	0%

Table 9
Comparisons of L1 Italian respondents' assessments of Speakers' L1s.

Of the three L1 groups, the L1 Italians prove best at identifying the correct L1 for the speakers, which the highest percentage do correctly for Sp1, Sp3 and Sp6. The latter two are L1 Italian. They are particularly accurate with Sp6 (83.13%).

L1 Italian respondents also prove proficient at identifying one of the L1 German speakers (Sp1), more so indeed than do the L1 German group. Like the L1 Germans however, the highest percentage of this group incorrectly identify Sp2 as NS. Sp4 also causes problems, which she does not for the L1 German group; the highest percentage are unsure how to identify her (27.38%) while the next highest percentage (20.24%) identify her as L1 Spanish,: an impression that none of the L1 Germans have and only 6.67% of the L1 Albanians share. Similarly, a paltry 1.22% of the L1 Italians identify the NS correctly, the largest part identifying him as Turkish (24.39%) – something also entertained by the L1 Albanians and L1 Germans but to a lesser degree (respectively 13.33% and 15.69%). Overall, the L1 Italian group use the unidentified option less than either L1 Albanian or L1 German; culture may come into play here (respondents conceivably being more reluctant to admit ignorance, as mentioned above). This option accounts for the highest percentage of L1 Italian respondents only with Sp4 (the preferred category for this speaker also with L1 Albanians but not L1 Germans).

While Tables 7-9 allow one to gauge how successful respondents were at identifying the NS (with the exception of the L1 Albanians, not very) it also shows their

skill in identifying speakers of their shared L1 speaking English. L1 Italians proved more successful at this than L1 Germans, but the speaker's level of pronunciation is a factor: speakers with less phonological control (e.g. Sp6) are probably easier for speakers of that same L1 to identify. It would however be premature on this basis alone to conclude that this implies that the stronger the speaker's L1 accent, the lower is their perceived level of phonological control.

As noted in Section 2.0, this concept is embodied in the descriptors in the CEFR (2001) as used by speaking testers, and precisely because of this, their scores as reported in Table 2 cannot be used as confirmation that this indeed the case. The respondents' replies to question 3 of the questionnaire (see Figure 1) may however be so used, as the opinion expressed is not based on any descriptors, just a general judgement. However, all L1 groups, like speaking testers, did give this speaker the lowest scores of the six for pronunciation (Figure 2) so it is clear that the general principle is sustained.

Significantly, as regards intelligibility, Sp6 comes bottom (or second to bottom) for non-L1 Italian speakers, but second highest for the L1 Italian group: indicating that L1 Italian respondents find it easier to understand someone speaking English with an evidently Italian accent than with other non-NS English accents. The high score that the L1 Italian group nonetheless give to Sp2 (L1 Polish) shows however that they still find NNS speakers with a high level of phonological control (according to speaking testers) or a "generally good" pronunciation (see questionnaire – Figure 1) more intelligible than English with an evidently Italian accent.

Of course, such discrepancies may be accountable in terms of attitudes of respondents connected to what they believe the speaker's L1 is. For example, in the case of the L1 Italian group, believing that the speaker who they think is NS (in this case Sp2 – see Table 8) ought to be more intelligible to them and, by saying that he or she is, they may be subconsciously seeking the researcher's approval (see note in Section 2.0).

One way to ascertain how far this is true is to compare the scores given to speakers by those respondents of the different L1 groups who identified those speakers as either NS or of their same L1. Looking at these figures, we will be able to detect whether there is indeed a bias towards NS and/or towards shared L1 speakers.

In Table 10, we compare the marks for pronunciation and intelligibility given by those respondents who identified that speaker as NS (English) and those who identified them as something else (including unidentified):

	Pronunciation			Intelligibility		
	NS*	NNS*	Diff*	NS*	NNS*	Diff*
Sp1	73.44	61.05	+12.39	67.68	58.38	+9.30
Sp2	78	67.18	+10.82	70.4	68.05	+2.35
Sp3	75	58.29	+16.71	72	59.93	+12.07
Sp4	72	60.04	+11.96	75	61.68	+13.32
Sp5	56	48	+8	54	48.19	+5.81
Sp6	60	41.46	+18.54	54	55.81	-1.81
	MEAN		+13.07	MEAN		+6.84

*Key
NS = respondents identifying speaker as NS
NNS = respondents identifying speaker as NS
Diff = Difference between NS and NNS (i.e. NS figure – NNS figure)

Table 10
Comparison of mean scores of respondents identifying speaker as NS or NNS

As shown clearly by comparing the mean for the difference between the scores of those identifying the speaker as NS or NNS, the respondents who identify the speaker as NS tend to give discernibly higher scores for pronunciation (13.07) and marginally higher for intelligibility (6.84).

Interestingly, for pronunciation, the difference is lowest with Sp5 (the real NS). However the figure (8) is still well above the mean for I. There is thus some evidence for positive bias towards speakers that respondents judge to be NS, but paradoxically this bias is less pronounced when the speaker really is NS. This indicates that all respondents were biased in favour of NS pronunciation, but this tendency is marginally less pronounced in those respondents who are more successful at identifying NSs.

The figures for intelligibility are even more interesting as the positive bias is lower, showing that respondents do not necessarily find those who they consider NS much easier to understand. Sp6 presents an interesting case because, contrary to the trend seen with every other speaker also in pronunciation and also for that same speaker in this category, those respondents who considered him NS actually found him more difficult to understand than those who thought him NNS. This small group of three respondents consisted of two L1 Italians and one L1 Albanian. It is conceivable that, aware that NSs are typically difficult to understand, they classed him as NS on that basis alone, although this does not explain why these particular L1 Italians, unlike the majority, did not recognise him as L1 Italian. The fact that these two respondents come from the same group raises the suspicion that there may have been some complicity in their reply.

Identifying someone as NS or not involves, as we say above, not just identification but also an assessment of the speaker in question's performance, in that to say that someone speaks a language as an L1 means, while not exactly that they speak it "perfectly" (whatever that could mean), at least that the way that they express themselves in that language however idiosyncratic or "non-standard", is the best that they could do in any language and thus represents the pinnacle of their particular verbal repertoire.[17] This raises the question of how far considerations of the excellence of the speaker's performance coincide with the identification of them as NS: whether respondents consider a speaker as NS because of their high pronunciation and intelligibility or whether they rate their pronunciation and intelligibility high, because they assume that the speaker is NS.

The marks for Sp2 intelligibility are interesting in this respect. With this speaker, by all measures the most proficient of the NNS as regards pronunciation, and grammatical accuracy (see Table 5, Figure 2), the difference in scores (2.35) between those who regard her as NS and NNS is relatively very small when compared to the mean (6.84), suggesting strongly that, with higher level speakers, the issue of being NS is less important in respondents' assessment of their performance.

This question can be further investigated examining bias in different but complementary conditions, that is by looking at how respondents assess speakers who they estimate to be of their own L1 and to analyse whether there is any bias equivalent to that found with supposed and real NSs. In particular, if NSs are treated as models for 'good' pronunciation, as embodied in the CEFR descriptors for phonological control (see 2.0), then one would expect a negative bias towards NNSs, including those that respondents believe that they share an L1 with.

This latter hypothesis, which might also run against feelings of pride in one's own L1, would suggest that respondents do treat NS features of pronunciation as models. In Tables 11 and 12, we compare the marks given by L1 German or L1 Italian who identify speakers sharing their same L1 with the score for L1 Germans or L1 Italians who identify

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[17]   See Fishman (1997).

the same speakers as other than L1 German or L1 Italian, as the case may be (including unidentified). Cells are left empty when the speaker in question (Sp3 and Sp5) was identified by no one as German or Italian, respectively:

	Pronunciation			Intelligibility		
	L1G*	Other*	Diff*	L1G*	Other*	Diff*
Sp1	67.09	63	+4.09	75.27	63.90	+11.37
Sp2	81	72	+9.00	81	67.40	+13.6
Sp3						
Sp4	67.94	64.80	+3.14	76.20	64.80	+11.4
Sp5						
Sp6	54.	54	0	54	46.80	+7.2
MEAN			+4.06	MEAN		+10.89

*Key
L1G = L1 German respondents identifying speaker as L1 German
Other = respondents identifying speaker as other than L1 German
Diff = Difference between L1G and Other (i.e. L1G figure − Other figure)

Table 11
Comparison of mean scores of L1 German respondents identifying speaker as L1 German or Other

	Pronunciation			Intelligibility		
	L1 It*	Other*	Diff*	L1 It*	Other*	Diff*
Sp1	90	62.78	+27.22	72	55	+17
Sp2	66	68.85	-2.85	72	67.44	+4.56
Sp3	56	56.21	-0.21	62	55.29	+6.71
Sp4	54	59.71	-5.71	54	59.05	-5.05
Sp5						
Sp6	39.18	37.20	+1.98	64.96	54	+10.96
MEAN			+4.09	MEAN		+6.84

*Key
L1 It = L1 Italian respondents identifying speaker as L1 Italian
Other = respondents identifying speaker as other than L1 Italian
Diff = Difference between L1 It and Other (i.e. L1 It figure − Other figure)

Table 12
Comparison of mean scores of L1 Italian respondents identifying speaker as L1 Italian or Other.

If there is a bias apparent on both Tables 12 and 13, it is positive overall like that found with respondents identifying the speaker as NS. This means that those L1 German or L1 Italian respondents who identify speakers as sharing their same L1 tend to award higher marks for both pronunciation and intelligibility.

      With L1 Italian respondents, however, the picture is more complicated due to the fact that only one of the speakers, Sp1, receives a notably high mark for pronunciation, from the single respondent who identified him as L1 Italian, which distorts figures considerably. Indeed, for the other four (Sp2, Sp3, Sp4 and Sp6), the differences are comparatively low but negative, the mean difference being -1.70. This means that there is a negative bias and thus evidence for the hypothesis discussed above that L1 Italian respondents regard NS pronunciation as a model, even though their L1 German counterparts seem to give positive bias to speakers that they identify as L1 German.

      The fact that respondents would also seem to show positive bias towards NS (see Table 10) does not run counter to this, as both tendencies may co-exist with respondents showing bias also to those who they think that they share their L1 with, albeit to a slightly

lesser degree (bias for NS pronunciation, 13.07; L1 German respondents bias for L1 German pronunciation, 4.06; L1 Italian respondents for L1 Italian pronunciation: 3.41). This would indicate that they accept NS pronunciation as a model but are also favourable towards English with features of their own L1 pronunciation.

As regards intelligibility, the L1 German respondents show a clear positive bias towards those speakers that they identify as L1 German. Again the L1 Italian score is distorted by the high figure for Sp1 (which only one respondent identified as L1 Italian). In one case indeed (Sp4), respondents who identify the speaker as L1 Italian show negative bias towards her. That said, they also show strong positive bias towards Sp6, those recognising him as L1 Italian awarding him higher marks for intelligibility than those who do not. Comparing the figures for mean difference for intelligibility in Tables 11 to 13, it can be seen that it is L1 German respondents who show highest positive bias towards those who they identify as L1 German (10.89 as opposed to 6.84 towards those identified as NS or 6.84 towards those identified by L1 Italian respondents as L1 Italian). This would indicate that respondents find it easy both to understand people who they think that they share a L1 with as well as NS.

One explanation for this may be that more proficient speakers of whatever L1 are generally easier to understand and that, similarly to what happens with pronunciation, perceived familiarity, on the part of the respondent, with the speaker's L1 assists intelligibility. This is of course may be only an impression, as it must be in cases where respondents wrongly identify a speaker as sharing a L1 with them, but nonetheless it is perfectly possible that psychological factors such as this can influence respondents' attitudes to the extract that they hear and their judgement of its intelligibility (at least in part a subjective concept), although it is a point that in itself merits further research.

4.0 Conclusions

The general tendency of respondents to award higher makers for the pronunciation and intelligibility of NS speakers, perceived rather than real (see Table 10), is not just interesting because of the questions it raises about the basis on which NNSs recognise NSs (alluded to above in our question in 3.3.2 about whether this is a cause or a result of how they assess their performances). It hints at a deeper issue: that of why respondents assume certain speakers are NS and others not. Obviously, in by far the majority of cases (94.58% -see Table 6), the respondent's prototype of a NS's pronunciation did not fit the NS used in this experiment, even though it represents a high profile variety (the English of London and the South East)[18]. This leads one to enquire how far such a prototype really is modelled on NS and to ask whether respondents, perhaps subconsciously, have acquired another model which has little directly to do with the way that L1 speakers of English speak but is rather based on the more universal and practical criteria of intelligibility.

The positive bias by L1 German respondents to those that they perceived as L1 German, as well as towards those that they assumed to be NS, indicates that for the L1 German respondents in our survey at least, ELF as spoken by an L1 German speaker represents an acceptable form of pronunciation. This represents a step towards the appropriation of English by this group, perhaps leading to a situation where an L1 German pronunciation might even be seen by L1 German speakers as an acceptable model rivalling that of a NS. Whether or not the process goes that far, the situation described, where a NNS pronunciation is viewed not as a negative, underlies English's growing status as a

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[18]   On the Intelligibility of non-standard varieties, see Mufwene (1997 / 2001). On so-called Estuary English and its rising status see Altendorf, U. (2003), Rosewarne 1994.

lingua franca: a convenient medium for communication, belonging to everyone using it, rather than an idiom associated with any one speech community or culture, which by birth has proprietorial rights over it.

Such an interpretation of the situation is in line with Jenkins (1998, 2000. 2002, 2007) who posits the existence of a so-called Lingua Franca Core (LFC) whereby intelligibility becomes the standard for ELF pronunciation not an ill-defined concept of a "native speaker" (a particularly difficult question with in the case of English or *Englishes*)[19]

In this study, strength of speaker's L1 accent when speaking English would seem to aid intelligibility in an EFDL context only with respondents who share the same L1 and when that speaker otherwise scores low on the general indicators of phonological control. This would indicate that perhaps respondents will use proximity to L1 as a resource in cases where normal Lingua Franca Core features are lacking. This may strengthen the tendency towards regional varieties of ELF with distinct pronunciations or accents, especially in those contexts where the level of proficiency in English of participants is low.

Data on respondents' ability to identify the origin of speaker and their assessment of individual speakers show that not only are these unable in many cases to identify NS or agree among themselves on the origin of certain speakers, and not only with those speakers scoring higher for pronunciation (cf. Sp 1 and Sp3), but also that, even when they identify a speaker as NS or not, this does not automatically mean that they mark that person's pronunciation higher or lower as a result. One can conclude from this that, in practice, "standard" NS English does not serve as a model for NNS pronunciation and delivery in English.[20] It is thus evidence that the advent of ELF as a separate variety (or rather subset of varieties)[21] is well underway. It also argues for consideration of some elements of delivery alongside Jenkins' original LFC as features that should be taught or encouraged in contexts of ELF spoken communication.

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[19] See for example McArthur (1998, 2002)
[20] See Jenkins (2007: 187) on the favourable attitude on the part of learners to some non standard NS and NNS accents.
[21] See Guido (2008: 21-27)

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