

THE ROLE OF *AFFINITY* IN ATTITUDES TOWARDS THE ENGLISH OF NATIVE AND NON-NATIVE SPEAKERS

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Abstract – To examine the issue of how far ELF can be endonormative, we report on a matched-guise test experiment (Lambert *et al.* 1960) measuring NNES ELF users’ reactions to ostensibly different speakers, some of whom identified as NES, others as NNES ELF users from the outer circle. Two speakers – one NES, the other a highly proficient NNES (Graddol 2010) – made various short recordings in a studio. Each of these was modified using specialist software to make them sound like different people without affecting intelligibility as regards pronunciation. On a Likert scale, respondents rated how happy they would be to speak like the persona in question. The object was to identify patterns in the way that the features of Nateness, on the one hand, and Affinity on the other, interacted to affect attitudes to different manifestations of English, and whether any affinity effect (our provisional term) can be shown to exist as a possible alternative to the nativeness principle (Jenkins 2007; Seidlhofer 2001, 2011). That is, whether ELF users may use other ELF users that they find attractive as models for language use rather than the idealized NES.

Keywords: Nateness principle; attitudes to ELF; attractiveness effect; emulation.

1. Introduction

In this paper, we discuss the results of an experiment which took the form of a matched-guise test (Lambert *et al.* 1960) constructed through a survey hosted on a dedicated site¹ into the reactions of respondents (all NNES – non-native English Speakers) to recordings of two different speakers using English.

What we will be investigating is how far the concept of attractiveness is important in the attitudes of ELF users to recordings of NES and NNES. As we have said elsewhere (Christiansen 2018a, 2018b), one of the major sources of incompatibility between ELF and traditional approaches EFL (English as a Foreign Language) is the so-called *nativeness principle* (Jenkins 2007; Seidlhofer 2001, 2011): the idea that, in all areas of linguistic performance, non native speakers should endeavour to sound as much as possible as if they were a native speaker of the language in question. With the advent of ELF in particular, this orthodox view has been increasingly challenged not only because it sets the typical language learner an unrealistic goal and in effect discriminates against them (treating their linguistic production as never more than a pale imitation of some inherently superior “original”), but also because, particularly in the case of a global contact language like English, such a criterion for “success”, would, in any case, seem irrelevant (for example, Firth 1996). In such contexts, it is argued, the onus should be put on communicability and intelligibility within the context of a specific speech event, not on copying *per se* (see Section 5).

¹ <https://form.jotformeu.com/80342197007351>.

Learners of English (whether described as a Foreign, Second etc. language) are normally educated to unquestionably adhere to the nativeness *dogma* (Seidlhofer 2011, p. 32) even though, as Christiansen (2017) shows, in practice they may often adopt attitudes and subscribe to opinions that contradict it. However, one may justifiably posit, as we have elsewhere (Christiansen 2014, 2017, 2018a, 2018b), that as, by sheer weight of numbers, NNES ELF users come to dominate where English is used as an international contact language, they will come to identify more readily with each other than with NES and the nativeness principle will gradually lose its hold.

In another study (Christiansen 2018b), we have examined the hypothesis that NNES ELF users may in certain contexts adopt other NNES ELF users as models for their own English output. In particular we looked at how female Italian ELF users reacted to recordings of real and invented female celebrities (NES and NNES) using English. It was shown that although, if the speaker was presented as a NES, it had a consistently positive effect on attitudes to the English that they used, a *celebrity effect* could also be observed but in a consistently stronger form only when the speaker was presented as NES, rather than NNES. In the case of NNES, respondents seemed more influenced by a posited *affinity* effect rather than a celebrity one: that is to say, they were more likely to score highly NNES personas who they could identify with – people from similar backgrounds to themselves (e.g. “ordinary” young women in “ordinary” occupations, such as youth worker, hairdresser or fast food worker) – than the same speakers identified as celebrities. By contrast, when speakers were presented as NES, in all but one case, persona identified as having the same ordinary (i.e. non-celebrity) professional profiles were marked much lower, and thus come lower in the ranking, than the celebrity counterpart (see Figure 1):

Ranking	Sp1	Sp2	Sp3	Sp4	Sp5	Sp6
1	Adele +NES +Celeb	Beyoncé +NES +Celeb	Cheryl Cole +NES +Celeb	Emma W. +NES +Celeb	SeeSee Bray +NES +Celeb	Maggy +NES -Celeb
2	Anna -NES -Celeb	Bettye +NES -Celeb	Caitlin +NES -Celeb	Emily +NES -Celeb	Shelley +NES -Celeb	Q. Rania -NES +Celeb
3	Annie +NES -Celeb	Bebel -NES +Celeb	Michelle -NES -Celeb	Zlata S. -NES +Celeb	Laura -NES -Celeb	P. Alexandra +NES +Celeb
4	Ana Barbu -NES +Celeb	Beatriz -NES -Celeb	Xenia Wurth -NES +Celeb	Kristýna -NES -Celeb	Shakira -NES +Celeb	Ennas -NES -Celeb

Key: Sp1 etc = Speaker 1; Black cell = NES celebrity; Dark Grey = NNES celebrity; Light Grey = NES non-celebrity; White = NNES non celebrity

Figure 1

Rankings of configurations of \pm NES \pm Celeb for each speaker (from Christiansen 2018b – Figure 5).

From these results, there is evidence that *affinity*, as opposed to *celebrity*, is an important factor in NNES ELF users’ attitudes to way that other NNES ELF users use English. It is this point that we will attempt to explore further by means of a dedicated experiment which we will report in this study.

In the next section, we will discuss the concept of affinity, in particular within the wider concept of attractiveness.

2. Affinity

Central to this study is the concept of *affinity* (“A natural liking for and understanding of someone or something”)² because, out of all the features contributing to attraction in general,³ it is perhaps the one that is most objectively observable. This is because, by knowing the relevant background information of the speaker and of the respondent, it is possible to discern how much they have in common and thus make a reasoned estimate of how likely the respondent is to experience a natural liking or understanding of the speaker in question. By contrast, a given speaker may be attractive to a respondent for a variety of factors, among other things: celebrity (see Christiansen 2018b); physical appearance; or myriad diverse nebulous considerations that may lead an observer to want to emulate him or her (i.e. various aspects of the person’s character or lifestyle that are found to be desirable).

Although deciding whether there is affinity between two subjects is however by no means an exact science, it can reasonably be sustained that a young female Italian respondent, for example, has more in common with a young female Italian ELF speaker than with, say, an older male British NS. One can thus justifiably expect there to be a stronger sense of affinity with the former than with the latter.⁴ Indeed, what is most important for our present research is not predicting how certain types of respondents will react to certain types of speakers but rather being able to reliably identify affinity and measure its effects. If results show that young female Italian respondents show positive attitudes towards the English of young female Italian ELF users then we can classify this attraction as affinity due to the fact that they share so many key elements of their personal background (sex, age, ethnic origin or heritage): “like attracts like,” so to speak. If, on the other hand, they seem well disposed towards the English of the older British male, then obviously, while there is undoubtedly some kind of attraction, we could confidently rule out affinity, even though with the present experiment set up we will be unable to identify precisely which other type of attraction it is and will not attempt to do so.

3. Experiment methodology

The experiment used recordings of two speakers, both of whom were female and under 25 years of age. One was a NES with a contemporary RP accent,⁵ the other a highly proficient (Graddol 2010) NNES (certified at C1 of the CEFR). The difference in terms of linguistic performance between the NES and NNES was relatively small⁶ and indeed, as

² <https://en.oxforddictionaries.com>.

³ “The action or power of evoking interest in or liking for someone or something”.
<https://en.oxforddictionaries.com>.

⁴ However, this expectation, though *justifiable*, is by no means *certain*. In real life, people do not always behave in predictable ways associated with the category to which researchers have assigned them.

⁵ According to a British Library project, (www.bl.uk/learning/langlit/sounds/find-out-more/received-pronunciation/), RP has evolved into three categories: *conservative*; *mainstream*; and *contemporary* – See Christiansen 2018b.

⁶ It is of course difficult to place native speakers on the CEFR as, in its current form (Council of Europe 2001), this scale is not really designed to incorporate them. C2 is the highest recognised level for a non-native speaker but the descriptors do not accurately describe a typical native speaker performance especially in a world where the majority do not speak a standard variety and yet, for their own needs, show mastery (Christiansen 2018b; Seidlhofer 2011).

Christiansen (2014) shows, NNES respondents (of B1 level and above) cannot typically reliably distinguish between NES and NNES speakers when it comes to recordings of highly proficient users.

The speakers were recorded in the recording studio of the *UniSalento WebTV* in Lecce, Italy role-playing six different persons (both female and male) in their normal voices. By means of specialist software (*Amadeus, Albeton, MorphVox* and *Audacity*), the twelve recordings were edited and the voices modified. They were then presented to respondents as twelve different speakers: six NES; six NNES Italian. Each recording was attributed to a different persona reinforced by a dedicated photo and a short description. Some unobtrusive background ambient noise was added to increase authenticity.

Voice changing or “morphing” software modifies the tone or pitch of a voice without altering the pronunciation of individual sounds (phonemes) or intonation. In general, the overall effect is of distinct speakers saying the same thing without any difference in quality of pronunciation and intonation, or in intelligibility. Seeing that the two sets of voices (NES and NNES) are essentially the same, apart from some superficial differences, and that the level of linguistic performance is constant, then any differences in scores for the English produced by the different persona is in effect a measure of the respondent’s attitude to that “speaker”: to their gender, their origin, their occupation and, last but not least, the views that they express.

Considerable time was dedicated to inventing the different persona, the background information, finding an appropriate photo as well as adapting the original speaker’s voices. It was determined that, for the experiment to work, it was paramount that the various persona had to be credible and the respondents had to have no suspicion that some of the voices had been manipulated (in Subsection 4.3 below, we will discuss the evidence regarding how successful we actually were in this endeavour).

Adapting the voices and creating the respective persona was a process of trial and error and involved the cooperation of various volunteers. In the end, we settled on the following persona as presented in Table 1:

<p>Speaker 1: Penelope, a financial consultant from England.</p>		<p>Speaker 2: Raimondo, an unemployed man from Italy</p>	
<p>Speaker 3: Emily, a human rights lawyer from England</p>		<p>Speaker 4: Imperia, a politician from Italy</p>	
<p>Speaker 5: Fabian, an actor from England</p>		<p>Speaker 6: Richard, a university student from England</p>	

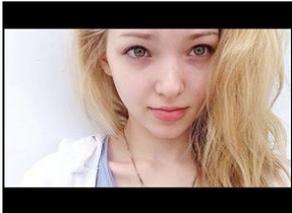
<p>Speaker 7: Jessica, an unemployed woman from England</p>		<p>Speaker 8: Valentina, an actress from Italy</p>	
<p>Speaker 9: Aurelio, a financial consultant from Italy</p>		<p>Speaker 10: Giulia, a university student from Italy</p>	
<p>Speaker 11: Rupert a politician from England</p>		<p>Speaker 12: Paolo, a human rights lawyer from Italy</p>	

Table 1
Different persona and images used with each recording.

The photos were chosen to subtly fit the stereotype of the kind of persona created and to enhance the illusion of the voices belonging to different people. They were not chosen on any physical criteria, other than how well they seemed, in trialling, to match the voices that they were assigned (for example, Speaker 7, Jessica, has a relatively high-pitched voice so the photo used is of a young petite female). It was not part of the experiment design to deliberately make some persona more physically attractive than others, as this is a highly subjective area and would add a rather unpredictable element to our survey that would considerably complicate analysis of results.

Three of the occupations were designated less attractive – unemployed, financial consultant and politician⁷ – both by their assumed popularity among young people in general and by dint of the views expressed by the various persona. These are summarised in Table 2 below, where the cells are shaded where the persona in question expresses controversial views that are likely (in the opinion of a trial focus group) to be rejected by most of the target respondents:

⁷ We did seek out data on more or less aspirational occupations among young people in Italy but could only find largely anecdotal and out-of-date data (for example a 2010 article in a newspaper reporting that professions like cook or beautician are gaining popularity over more traditionally prestigious professions such as doctor or lawyer). In the absence of scientific studies, we used a focus group of about a dozen university students and researchers to find out which occupations would typically prove more or less popular with young people.

Speaker 1, Penelope, Financial Consultant	<ul style="list-style-type: none"> • Praises Donald Trump • Argues against paying taxes to help poor people • Talks about how accumulating large amounts of money is important
Speaker 2, Raimondo, Unemployed	<ul style="list-style-type: none"> • Shows lack of sympathy towards friends at university • Shows no desire to find job • Talks about how his father found him a job but he kept being late • Says that he is content to live off his parents
Speaker 3, Emily, Human Rights Lawyer	<ul style="list-style-type: none"> • Talks about miscarriages of justice and importance of fair trials • Talks about problems of poor people who do not have money to defend themselves • Emphasises the universality of human rights
Speaker 4, Imperia, Politician	<ul style="list-style-type: none"> • Argues that university fees should be put up • Maintains that most students fail to take studies seriously • Proposes that universities should be privatised and accept only paying students
Speaker 5, Fabian, Actor	<ul style="list-style-type: none"> • Expresses enthusiasm for acting • Talks about his next film project • Talks about how he deals with criticism, especially negative reviews
Speaker 6, Richard, Student	<ul style="list-style-type: none"> • Talks about studies and ambition to record songs • Expresses determination to succeed • Talks about students' problems and the stress that they are subject to
Speaker 7, Jessica, Unemployed	<ul style="list-style-type: none"> • Talks about what she did after leaving school and how she got sacked • Says she is content to live off parents and grandparents • Shows lack of sympathy towards friends at university • Maintains that success is just a matter of luck
Speaker 8, Valentina, Actress	<ul style="list-style-type: none"> • Talks about what makes her a successful actress and her passion for her work • Shows a stoic attitude to the idea of an uncertain future • Talks about how she deals with criticism, especially negative reviews
Speaker 9, Aurelio, Financial Consultant	<ul style="list-style-type: none"> • Talks about how accumulating large amounts of money is important • Argues against paying taxes to help poor people • Praises Donald Trump
Speaker 10, Giulia, Student	<ul style="list-style-type: none"> • Talks about being a student and advantages of living at home • Talks about the different languages that she studies • Says why she loves going to university and meeting new people

Speaker 11, Rupert, Politician	<ul style="list-style-type: none"> • Says that government does too much to help young people and that young people should look after themselves • Argues that voting age should be raised • Says that young people use social media too much and are incapable of understanding complex political issues
Speaker 12, Paolo, Human Rights Lawyer	<ul style="list-style-type: none"> • Talks about universality of human rights • Talks about prejudice and the death penalty • Emphasises importance of fair trials for all people whatever their backgrounds

Table 2

Summary of views expressed by each persona with those expressing “controversial” opinions shaded.

As Table 1 shows, with the first three features (type of speaker, sex and age⁸), there is a fifty-fifty split between persona (six for each category) and there are two persona for each of the six occupations / social statuses alternating between female / male and NES / NNES as summarised on Table 3:

	Female	Male
Non Native Speaker	Actress (Sp8 Valentina)	Financial Consultant (Sp9 Aurelio)
	Politician (Sp4 Imperia)	Human Rights Lawyer (Sp12 Paolo)
	Student (Sp10 Giulia)	Unemployed (Sp2 Raimondo)
Native Speaker	Financial Consultant (Sp1 Penelope)	Actor (Sp5 Fabian)
	Human Rights Lawyer (Sp3 Emily)	Politician (Sp11 Rupert)
	Unemployed (Sp7 Jessica)	Student (Sp6 Richard)

Table 3

Speaker persona configurations for occupations.

Respondents were asked to listen to the twelve different “speakers” – hopefully, they were unaware that they were in reality listening to the same two voices (see 4.3 below) – and answer a simple and straightforward question “How happy would you be if you spoke English like Speaker NO., NAME, a/an OCCUPATION from ENGLAND/ ITALY”⁹ by means of a 7 point Likert scale (see Figure 2).

⁸ This was not indicated explicitly (see Table 1) but the photos, occupations and voice quality taken together were sufficient to unambiguously show which persona were below or above 25 years of age; in essence all those practising some profession (financial consultant, human rights lawyer or politician) were intended to be seen as over 25.

⁹ The same question used in Christiansen (2018b).



10 Giulia Student

Speaker 10:
Giulia / Italy / University Student

0:01 / 1:17

YouTube

How happy would you be if you spoke English like Speaker 10, Giulia, a university student from Italy? *

- 1. Very unhappy
- 2. Unhappy
- 3. Fairly unhappy
- 4. Indifferent / I can't decide
- 5. Fairly happy
- 6. Happy
- 7. Very happy

Figure 2

Example question from survey (<https://form.jotformeu.com/80342197007351>).

The platform used for the survey was JotForm.¹⁰ Its main disadvantage, in the context of this experiment, was that it was not possible to randomise questions as it would have been with more sophisticated quiz platforms, such as Moodle (which we have used in previous studies – Christiansen 2018a, 2018b), so respondents all viewed the questions in the same order, raising concerns about so-called question order bias (Israel, Taylor 1990). However, it had the notable advantage that no registration was required, as is necessary with platforms like Moodle, for example, and the link for direct access to the survey can be shared easily by email, social media or messaging service. Because of this, with relatively little solicitation on our part, we received responses from twice as many subjects as we had in previous Moodle-based surveys (Christiansen 2018a, 2018b).

In the next section, we will discuss the results of the survey.

4. Results

4.1. Respondent profiles

Before starting the survey, respondents were asked to provide details of their nationality, age (year of birth) and sex, which allowed us to investigate affinity between them and the speaker in these specific objective areas. The survey was entirely in English and designed

¹⁰ www.jotform.com.

for respondents of at least B1 level of the CEFR, below which they could not be expected to understand the questions or the content of the various recordings. In Table 4, we summarise the profiles of the various respondents.

Sex		Year of birth		Sex and year of birth		Stated origin	
Female	120	1993 and later	116	1993 and later, F	90	Albanian	1
Male	37	1992 and earlier	35	1993 and later, M	24	French	1
Not stated	2	Not stated	8	1992 and earlier, F	24	Filipino	1
Total	159	Total	159	1992 and earlier, M	11	Italian	155
				One or other factor not stated	10	Italian-Swedish	1
				Total	159	Total	159

Table 4
Profile of respondents.

As can be seen, females made up approximately 76% of the respondents (120 out of 159) and most respondents, 73%, were under 25 years of age (born in 1993 or later). As regards ethnic origin / heritage, 155 out of 159 (97%) declared themselves to be Italian (excluding one who identified as half-Italian). The high proportion of Italians was largely to be expected as we had deliberately targeted students at the Università del Salento in Italy and at some private and state secondary schools in the area to arrive at a homogenous group so as to measure affinity with the different persona in the survey better.

4.2. Basic results

Below in Table 5, we show the average scores for each persona for the various categories of respondents, starting with All then moving from the general (e.g. Female, Male 1993+ - born in 1993 or afterwards) to the more specific (e.g. 1993+ F – a female born in 1993 or afterwards). Here as elsewhere, results are given to two decimal figures:

	Sp1	Sp2	Sp3	Sp4	Sp5	Sp6	Sp7	Sp8	Sp9	Sp10	Sp11	Sp12
	NES	NNES	NES	NNES	NES	NES	NES	NNES	NNES	NNES	NES	NNES
	F	M	F	F	M	M	F	F	M	F	M	M
All	4.31	3.92	5.64	4.83	5.09	5.01	5.27	4.79	3.61	4.98	4.40	4.33
Female	4.33	4.01	5.74	4.86	5.11	5.08	5.29	4.94	3.63	4.98	4.44	4.36
Male	4.27	3.59	5.27	4.70	4.97	4.69	5.14	4.30	3.49	4.95	4.16	4.14
1993+	4.25	3.91	5.83	4.81	5.15	5.01	5.37	4.88	3.52	4.94	4.50	4.25
1992-	4.54	3.94	5.11	4.94	5.20	4.89	5.11	4.66	3.89	5.20	4.03	4.43
1993+ F	4.27	4.02	5.93	4.88	5.21	5.00	5.42	5.03	3.53	4.93	4.51	4.24
1993+ M	4.22	3.39	5.35	4.43	4.83	5.05	5.00	4.22	3.35	4.87	4.17	4.09
1992- F	4.58	3.96	5.21	4.92	5.04	5.29	4.88	4.79	4.00	5.25	4.13	4.54
1992- M	4.45	3.91	4.91	5.00	5.55	4.00	5.64	4.36	3.64	5.09	3.82	4.18

Table 5
Average scores for persona according to category of respondent.

In Table 6 we use the data from Table 5, to show the rankings for average scores (highest at top, lowest at bottom) for each speaker according to each category of respondent, again going from general (All) to specific (1993+ F etc.):

	All	Female	Male	1993+	1992-	1993+ F	1993+ M	1992- F	1992- M
1	Sp3, Emily	Sp3, Emily	Sp3, Emily	Sp3, Emily	Sp5, Fabian	Sp3, Emily	Sp3, Emily	Sp6, Rich.	Sp7, Jessica
2	Sp7, Jessica	Sp7, Jessica	Sp7, Jessica	Sp7, Jessica	Sp10, Giulia	Sp7, Jessica	Sp6, Rich.	Sp10, Giulia	Sp5, Fabian
3	Sp5, Fabian	Sp5, Fabian	Sp5, Fabian	Sp5, Fabian	Sp3, Emily	Sp5, Fabian	Sp7, Jessica	Sp3, Emily	Sp10, Giulia
4	Sp6, Rich.	Sp6, Rich.	Sp6, Giulia	Sp6, Rich.	Sp7, Jessica	Sp8, Val.a	Sp10, Giulia	Sp5, Fabian	Sp4, Imp.
5	Sp10, Giulia	Sp10, Giulia	Sp4, Imp.	Sp10, Giulia	Sp4, Imp.	Sp6, Rich.	Sp5, Fabian	Sp4, Imp.	Sp3, Emily
6	Sp4, Imp.	Sp8, Val.a	Sp6, Rich.	Sp8, Val.a	Sp6, Rich.	Sp10, Giulia	Sp4, Imp.	Sp7, Jessica	Sp1, Pene.
7	Sp8, Val.a	Sp4, Imp.	Sp8, Val.a	Sp4, Imp.	Sp8, Val.a	Sp4, Imp.	Sp1, Pene.	Sp8, Val.a	Sp8, Val.a
8	Sp11, Rupert	Sp11, Rupert	Sp1, Pene.	Sp11, Rupert	Sp1, Pene.	Sp11, Rupert	Sp8, Val.a	Sp1, Pene.	Sp12, Paolo
9	Sp12, Paolo	Sp12, Paolo	Sp11, Rupert	Sp1, Pene.	Sp12, Paolo	Sp1, Pene.	Sp11, Rupert	Sp12, Paolo	Sp6, Rich.
10	Sp1, Pene.	Sp1, Pene.	Sp12, Paolo	Sp12, Paolo	Sp11, Rupert	Sp12, Paolo	Sp12, Paolo	Sp11, Rupert	Sp2, R.do
11	Sp2, R.do	Sp9, Aur.o	Sp11, Rupert						
12	Sp9, Aur.o	Sp2, R.do	Sp9, Aur.o						

Key: light cells = NES; dark cells = NNES; white cell = joint position (one NES / one NNES with same score); Aur.o = Aurelio; Imp. = Imperia; Pene. = Penelope; R.do = Raimondo; Rich = Richard; Val.a = Valentina.

Table 6
Relative rankings of persona according to category of respondent.

For all categories from the most general (All) to the most specific, the top ranked persona is a NES except in the notable case of 1992 (those born in 1992 or earlier) where two speakers are ranked in first place, one an NES the other a NNES. The overall preference for NES observable by even a glance at Table 6 would seem to confirm that the nativeness principle is still strong. However it should be noted that, in its purest form, the nativeness principle should guarantee that *any* NESs would be preferred over *any* NNES, especially in the case of a survey such as this where all the NS recordings are of the same speaker using RP pronunciation and thus there being no regional or social variation to be taken into account (as was the case with Christiansen 2018a and 2018b). Were the nativeness principle the most important factor determining respondent's attitudes to the speakers then there would be a stark boundary between the fifth and sixth places on the ranking with all NESs above and all NNES below, or almost so. A NES like Rupert (Sp11) or Penelope (Sp1) would not consistently be found in the bottom half of the table, in a lower position than some NNESs and, by contrast, Giulia (Sp10), a NES, would not always be found in the top half.

A more scientific way at looking at the possible factors, including nativeness, determining scores and thus ranking would be to use a dedicated statistical tool called the *correlation coefficient* (r). This we introduce in the next section, examining whether any relation exists between average scores awarded and whether the voice was authentic or modified. In this way we will be able to establish how successful we appear to have been in the fabrication of adapted voices for the purposes of this experiment.

4.3. Correlation Coefficient between authenticity and average scores

To see how far the average scores can be attributed to certain aspects of the personas' profiles (e.g. nativeness, gender, age, occupation – see Table 1 – or how controversial the views they express are – Table 2) one can use a statistical tool called the correlation coefficient (r),¹¹ which is a value between -1 and +1 that measures the strength of any relationship between two variables. If both sets of values rise or fall together then the relationship is described as positive; if not (i.e. one rises while the other falls), then the relationship is called negative. A score of ± 1 indicates a *perfect* correlation; ± 0.70 to ± 0.99 , a *strong* correlation; ± 0.50 to ± 0.69 , a *moderate* correlation; and ± 0.30 to ± 0.49 , a *weak* correlation. Nought to ± 0.29 indicates no correlation at all, i.e. that there is absolutely no relationship between the two variables.

Before looking at the correlation coefficient and certain aspects of the personas' profile (Subsection 4.4), we can firstly use this instrument to measure a specific aspect of our survey which is not related to affinity but is of interest as it provides a means to validate results. By looking at correlation between marks given and authenticity of voices (i.e. whether or not they had been manipulated by the software), we can gauge how much of a connection there is between authenticity and marks awarded. If the correlation is excessive, then it could be argued that the experiment is flawed and the results invalid.

Sp1	Sp2	Sp3	Sp4	Sp5	Sp6	Sp7	Sp8	Sp9	Sp10	Sp11	Sp12	
4.31	3.92	5.64	4.83	5.09	5.01	5.27	4.79	3.61	4.98	4.40	4.33	r
0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.50

Table 7
Correlation Coefficient (r) for authenticity of voice and average scores (all respondents).

We cannot directly calculate the relationship between whether the voices are original or not and average scores using the figures on Table 6. What we can do is ascribe an arbitrary score¹² to the voices according to whether the voice has been modified or not (bottom row). The two authentic voices of our speakers are Sp3 Emily¹³ for the NES, and Sp10 Giulia for the NNES. We give the authentic voices one point and the others all zero (light grey cells on the bottom row of Table 8). Calculated in this way, the correlation coefficient between average score and authenticity is 0.50, a moderate correlation (just above the borderline with weak correlation), and this is a pattern which is common to all groups of respondents except the specific one of 1992 –M (males born in 1992 or before: men over 25). Indeed, in four of the eight categories, it is only a weak relation (Table 8):

	Female	Male	1993+	1992-	1993+ F	1993+ M	1992- F	1992- M
r	0.50	0.51	0.49	0.47	0.48	0.51	0.50	0.31

Key: white cells = moderate relation; light grey cells (weak relation).

Table 8
Correlation Coefficient (r) for authenticity of voice and average scores (specific categories of respondents).

¹¹ The calculations behind this instrument are complex but the operation can be done automatically using a special tool in Excel (which uses the classic Pearson formula).

¹² It does not actually matter what this figure is; correlation coefficient (r) will work out the same. For the sake of simplicity, here we use 1.

¹³ The speaker in question was 17 years old but her voice was relatively deep and in trialling it turned out that it suited Emily (an over 25 old) better. Jessica (Sp7), the persona closest to her in age terms was actually her voice with the pitch raised.

It could be argued that part of the reason that the two authentic voices score relatively high is also due to the fact that they are both female, a category which, as we shall see in 4.3, gets higher average marks than male and thus that the authenticity effect is exaggerated because of this. This could be seen as a flaw in our experiment design and we might have foreseen this and chosen one female, one male for our original voices to cancel out any effects of gender preference.¹⁴

Nonetheless, the identified authenticity effect shows that we have not been entirely successful in our attempt to disguise the possibility that some respondents have, consciously or not, been put off by some of the voices which may not have sounded entirely natural. However, to put things in perspective, when we look at the other correlation coefficients for various speaker profiles (4.3) we see that r for authenticity comes in third place, that is to say, authenticity does regrettably have a bearing on results but it is not the most important factor. Furthermore, by comparing the scores for the group of respondents where the correlation coefficient for authenticity is lowest: 1992- M (Males born in or before 1992 i.e. those over 25 years of age), with that of the rest of the respondents, we can get an idea of which persona's scores have been most affected by the authenticity effect. For the 1992-M group, the correlation is, as shown on Table 8, only 0.31, which is only one point above the lower limit of the boundary for a weak correlation (i.e. ± 0.30 , see 4.3) and is as close as we can get to see what results would be like for a group of respondents for whom there was no authenticity effect.

In Table 9, we show the average scores for 1992- M and for the rest of the respondents (anyone not a male born in 1992 or earlier)¹⁵ and also show the difference between the two.

	Sp1	Sp2	Sp3	Sp4	Sp5	Sp6	Sp7	Sp8	Sp9	Sp10	Sp11	Sp12
1992- M	4.45	3.91	4.91	5.00	5.55	4.00	5.64	4.36	3.64	5.09	3.82	4.18
Rest	4.30	3.92	5.69	4.82	5.06	5.08	5.24	4.82	3.61	4.97	4.45	4.34
Difference	0.16	0.01	0.78	0.18	0.48	1.08	0.39	0.46	0.03	0.12	0.63	0.16
Mean difference between 1992- M and rest						0.37						

Table 9
Average scores for persona comparing 1992- M and rest of respondents.

As can be seen the mean difference between the average scores of the 1992- M group and the rest of the respondents is only 0.37. Given that the maximum score was 7.00 (see Figure 2), this represents a variation of only 5.29%. However, there is a fairly high standard deviation of 4.9 between the differences between average score given by Male respondents born before 1992 to each speaker and to those given by the rest of respondents in this survey. Indeed, while the average scores given by “1992- M” and “Rest” to Sp2 (Raimondo) are almost identical (differing by only 0.01), with- Speaker 6 (Richard) the marks given by these two categories of respondent are 1.08 marks apart (i.e. over 100 times larger than the difference in scores given by 1992 –M and rest for Sp2). In Figure 3, we show the rankings in differences between average scores given by the 1992- M group and the rest of the respondents. A positive score means that the average score given by the 1992- M respondents was higher than that of the rest, a negative one the opposite.

¹⁴ In fact, there were practical reasons why we did not do so. We trialled male speakers but, using the methods and software at our disposal, it turned out to be much easier to make a female voice sound like a male than *vice versa*.

¹⁵ The former group consists of 11 respondents (see Table 4), the latter of 148.

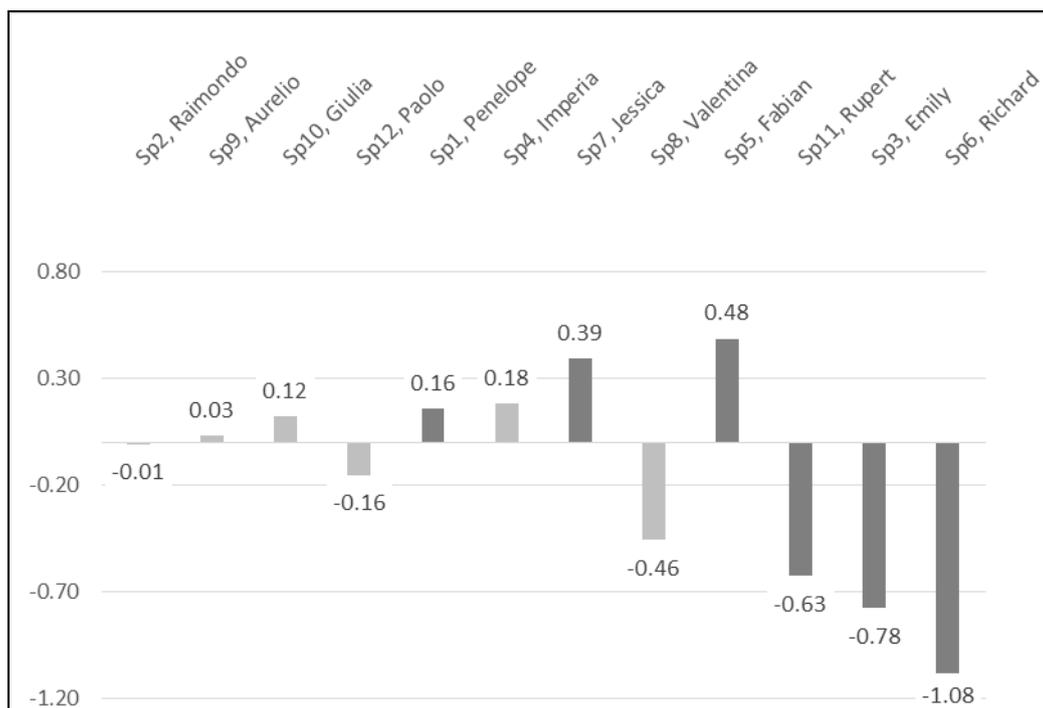


Figure 3

Ranking of speakers according to size of difference in average scores given by 1992- M and rest of respondents.

For only three of the personas is the difference in average scores given by the 1992- M group and the rest of the respondents over ± 0.50 points (i.e. Sp11 Rupert; Sp3, Emily; and Sp6, Richard). Emily is of course one of the two authentic (unmodified) voices. Giulia, by contrast, the other original voice, shows only a low difference in average scores (0.12). In fact, treating the differences as absolute values and discarding the distinction between negative and positive figures, the difference for all the NNES persona amounts to 0.96 (shaded in light grey on Figure 3) and that for the NES 3.53 (dark grey). It would seem then that, for whatever reason, issues of authenticity apply, by a wide margin, to only one of our two sets of persona, the NESs. In short, while we can observe that an authenticity effect has contaminated our results, we can indirectly measure its effects and see that it is relatively small and mainly restricted to one and not both the speakers used in the experiment.

4.4. Correlation Coefficient for various speaker profiles

In Figure 4, we show the various coefficient relations for various speaker profiles for the average scored awarded by all respondents.

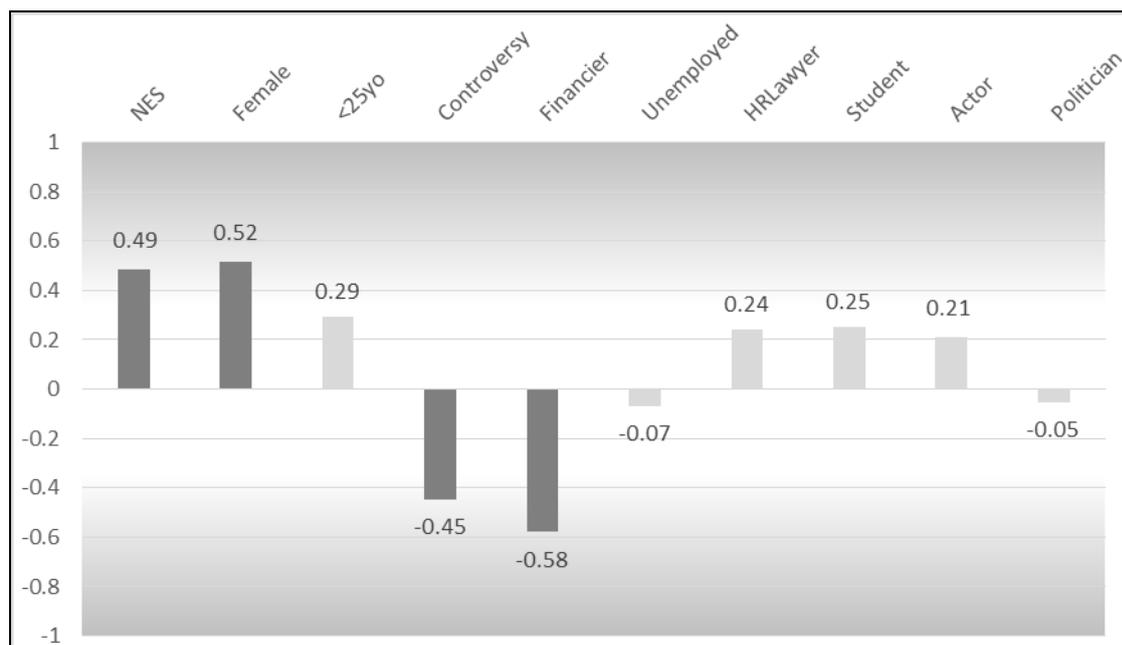


Figure 4
Correlation coefficients for various categories of speaker (all respondents).

As Figure 4 makes clear, although nativeness (NES) does have a bearing on scores, there being a weak coefficient $+0.49$ (albeit one at the upper limit of this category), it is neither the *only* factor nor the *most important* one as proponents of the nativeness principle sustain.

In order, the factors (shaded in dark grey) are: whether the speaker is a financier (financial consultant),¹⁶ a moderate negative correlation of -0.58 ; whether the speaker is female, a strong positive correlation of 0.52 ; nativeness, a weak positive correlation of 0.49 ; and finally whether the speaker voices controversial opinions, a weak negative correlation of -0.45 .

With none of the remaining six categories (shaded in light grey) does a correlation seem to exist, although whether the speaker is under 25 years of age (<25 yo), just misses out, being only 0.01 under the lower limit to count as a weak correlation.

The relations identified on Figure 4 are taken from the average scores of all those surveyed and thus do not allow us to examine affinity, except in the case of NES. As it happens, with regards to the NES persona, affinity does not seem to play a part, in that respondents (all NNES) tend to give higher scores not to their NNES peers but to the NES. The attraction here is clearly not based on affinity but on some other criteria, which as we state in 2.0, cannot be established by this experiment here. In Subsection 4.4, we will continue our examination of the correlation coefficient for various categories of

¹⁶ It should be pointed out that the first four categories (NES, Female, <25 and Controversy) represent binary choices: in the context of this survey a speaker is either NES *or* NNES; female *or* male; under *or* over 25, or finally expresses controversial views *or* something more mundane or worthy (see Table 2). By contrast, the last six, the occupations / social statuses, are not: being a financial consultant for example is just one out of six possibilities: it is not a case of being a financial consultant *or not* but of being a financial consultant *or* unemployed *or* a human rights lawyer (HR Lawyer) *or* a student etc.

respondent, and in this way will be able to identify those areas where affinity comes into play.

4.5. Effect of affinity between respondent and speaker

Using the same method as described in Subsection 4.3, we can ascribe a value to the specific affinities that we can identify between respondents and specific speakers. Of course affinity, a natural liking and understanding of someone (see Section 2), is a very vague concept and can be based on many different factors, not all of which predictable. Even if we limit the idea to affinity based on sharing certain defined features (i.e. gender, age), in reality, people may share, or feel they share, numerous other things (e.g. eye colour, taste in clothes, political opinions, family background, social class, and myriad personality traits) that cannot all be accommodated in an experiment such as this.

That said, by limiting ourselves to clearly identifiable objective characteristics (i.e. gender¹⁷ and age), we can study at least part of the phenomenon of affinity and how it affects ELF users' attitudes to spoken English and contrast it to other forms of attraction that do not involve affinity, for example, the desire to obtain something which one does not have or to become something that one is not, which would explain the factor's behind the lingering attraction of the nativeness principle to NNES ELF users.

In Table 10, we show the various calculations necessary to arrive at the correlation coefficient for what we could dub the affinity effect for each category of respondent on two levels, the general (e.g. F = female, or 1993+ = born in 1993 or later) and the specific (e.g. 1993+ F = female born in 1993 or later).

As in Table 7, we ascribe a score of one point to any speaker with whom the respondent shares one of the identified features (e.g. F, M, 1993+). For example, in the first category (see left-hand column), the respondents are F (Female). When the speaker in question is female (Sp1, Sp3, Sp4, Sp7, Sp8 and Sp10) then one point is assigned in the Affinity (+AFF) row.

In the right-most column are the correlation coefficient scores. When this figure is positive there is a positive correlation between average scores and affinity (i.e. a positive affinity effect) and if it is negative, there is a negative correlation (i.e. a positive non-affinity effect, that is to say, a positive effect of another kind of attraction not based on affinity according to the specific criteria used in this survey: sex, age).

In Figure 5, we summarise the data from Table 9, concentrating on the correlation coefficients for the different categories of respondents.

¹⁷ Some may have it that, rather than being biological, gender is relative and largely a social construct. In our survey, gender is assigned to a respondent exclusively on how they identified themselves (indeed, the option "not specified" was added to the question about the respondent's gender to accommodate those who might take issue with the concept).

		Sp1	Sp2	Sp3	Sp4	Sp5	Sp6	Sp7	Sp8	Sp9	Sp10	Sp11	Sp12		
		F	M	F	F	M	M	F	F	M	F	M	M		
		1992-	1993+	1992-	1992-	1993+	1993+	1993+	1993+	1992-	1993+	1992-	1992-		
F	Mean	4.33	4.01	5.74	4.86	5.11	5.08	5.29	4.94	3.63	4.98	4.44	4.36	<i>r</i>	
	+AFF	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.52	
M	Mean	4.27	3.59	5.27	4.70	4.97	4.69	5.14	4.30	3.49	4.95	4.16	4.14	<i>r</i>	
	+AFF	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	-0.54	
1993+	Mean	4.25	3.91	5.83	4.81	5.15	5.01	5.37	4.88	3.52	4.94	4.50	4.25	<i>r</i>	
	+AFF	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.28	
1992-	Mean	4.54	3.94	5.11	4.94	5.20	4.89	5.11	4.66	3.89	5.20	4.03	4.43	<i>r</i>	
	+AFF	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	-0.36	
1993+ F	Mean	4.27	4.02	5.93	4.88	5.21	5.00	5.42	5.03	3.53	4.93	4.51	4.24	<i>r</i>	
	+AFF	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	0.35	
1993+ M	Mean	3.35	4.83	4.43	5.35	3.39	4.09	4.17	4.87	4.22	4.22	5.00	5.05	<i>r</i>	
	+AFF	0.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.01	
1992- F	Mean	4.58	3.96	5.21	4.92	5.04	5.29	4.88	4.79	4.00	5.25	4.13	4.54	<i>r</i>	
	+AFF	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	
1992- M	Mean	4.45	3.91	4.91	5.00	5.55	4.00	5.64	4.36	3.64	5.09	3.82	4.18	<i>r</i>	
	+AFF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	-0.59	

Table 10
Correlation Coefficient (*r*) for Affinity between respondent and speaker and average scores (specific categories of respondents).

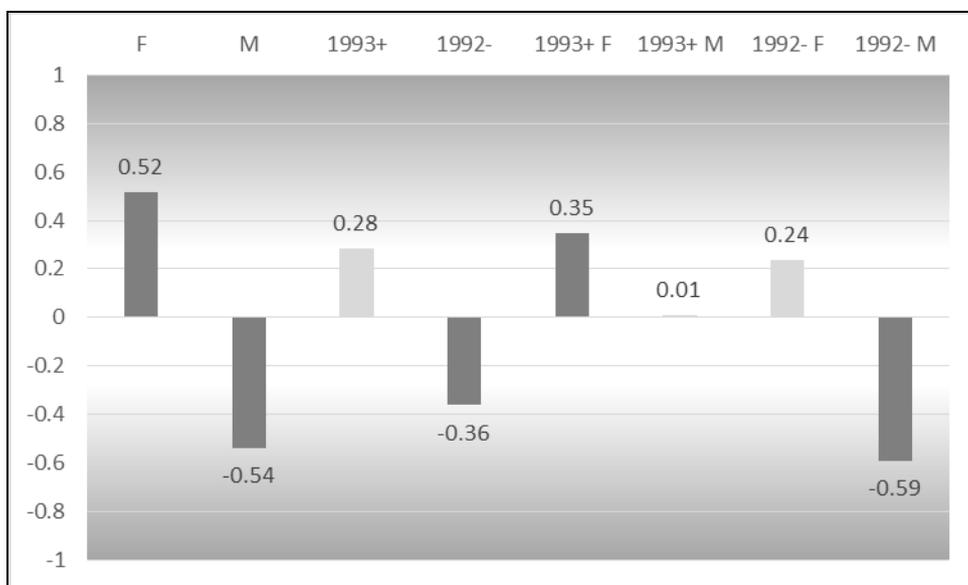


Figure 5
Correlation coefficients for affinity (sex and gender) between respondent and speaker and average scores.

First of all, it emerges that, for three out of the eight categories of respondent (bars in light grey), there is no correlation, the coefficient falling below the lower limit of ± 0.30 (see 4.3). This means that for respondents born in 1993 or after, there is no sign of affinity towards persona who are under 25 years of age. Similarly, for male respondents born in 1993 or after, there no affinity in scores with male persona of 25 or under. Finally, female respondents born in 1992 or before, show no affinity towards female persona of over 25.

By contrast, there is a moderate correlation between gender of respondent and speaker. Both females and males give higher scores to female persona. In the case of female respondents (+52), this constitutes affinity, in the case of males (a coefficient of -0.54 as regards scores for male persona indicating a negative correlation) it is another form of attraction which we cannot define here. An affinity correlation (moderate) is found only once more, in the case of female persona of 25 or under and the scores of female respondents of 25 years old or younger.

An obvious tendency that can be observed, which becomes even more marked if we take into consideration the scores below the threshold for even a weak correlation (in light grey on Figure 5), is the fact that the affinity effect is associated only with those categories of respondent that contain females. By contrast, for the male-associated categories of respondents other kinds of attraction seem to come into play.

Judging, by these results, the affinity effect is stronger with female respondents but diminishes with age (compare the coefficients fro 1993+ F and 1992- F). With males, the affinity effect is lower and also diminishes with age. The various effects of other kinds of attractions, undefinable in the context of this specific experiment, increase with both females and males (thus accounting for the gradually lowering of the affinity coefficient for females).

5. Conclusions

As we note in 4.3, despite our best efforts, our methodology in this experiment has its faults because it transpires that authenticity of voices did have an observable effect, albeit minor, on some respondent's scores, mainly in the case of the NES persona. However, our method has proved good enough to show that the nativeness principle is neither the only nor necessarily the most important factor determining the kind of English that respondents in this survey would be happy to speak.

The facts that women and young people in general (compare coefficients for 1993+ and 1992- on Figure 5) seem more prone to be subject to an affinity effect and that men and older respondents are more prone to other forms of attraction show that no single principle, not least nativeness, can accurately describe ELF users' attitudes to how English should be spoken. Attraction based on affinity is associated with social / group bonding while other forms of attraction do not. The younger female respondents seem to be focussed on identification with their young female peers, whether NES or NNES. Older female and male respondents in general seem less concerned with what they share with a given speaker and seem attracted by diverse other factors that we shall not attempt to identify here. In particular, male respondents in this survey appear to be attracted by the way that females speak English regardless of whether they are NES or NNES, indicating that there is something in the way that English is produced by a female voice that pleases them which is based neither on the nativeness principle nor the affinity effect, and this is certainly worthy of further investigation.

Affinity within the context of ELF is important because, as speakers from the outer and expanding circles (Kackru 1985) outnumber those in the inner circle, and use English

to communicate primarily with each other, giving rise to ELF in the first place, there is a real possibility that a growing sense of affinity within and between these two groups will lead to weakened adherence to the nativeness principle.

The fact that in this survey, it was the younger respondents who seemed to be guided most by affinity and the older less so may be interpreted in two ways. On the one hand, it could be taken as a sign of a fundamental change in attitudes to English on the part of millennials, representing a radical split from the attitudes of their elders. On the other, rather less dramatically, it could be concluded that affinity is more important to the young and, over time, it is replaced by other forms of attraction. The reasoning here may be that for younger members of society, especially females, identifying oneself with a certain group and bonding with it takes precedence over other forms of attraction when it comes to language, while for older ones, especially males, affinity generally takes second place to other kinds of attraction. Dedicated longitudinal studies would no doubt clarify this point. Attraction, whether based on affinity or not, although a very general concept and only sketchily described in this paper, can also be posited to be of crucial importance within the context of language use in general and ELF in particular. This is because it is typically translated into a desire to copy – a factor which can be seen to be one of the main driving forces behind the nativeness principle: in effect, the way NESs speak English is attractive to NNEs who thus model their own linguistic output upon it (or at least it is attractive to the education establishment and mainstream educators who oblige L2 learners of English to model themselves on NESs). In the context of language acquisition and use, copying can however take one of two forms: imitation or emulation. It is the latter that is more relevant in the context of ELF. *Imitation* involves the impulse to replicate something without attempting to understand it or taking into consideration the final goal of the action copied; *emulation* (Tomasello 1996) is the desire to achieve some goal based on the realization that copying the actions of another is an effective way of learning how to do something for oneself. This implies in practice, not merely the simple unquestioning duplication of what has been observed, but reflection, adaptation and improvisation. The emulation inherent in language acquisition (both first and second) is not naturally focused on slavish replication but rather on learning how to use language as an instrument to achieve desired outcomes. From this perspective, other than the social approbation of adhering to the dogma of the nativeness principle, ELF users have little to gain from blindly imitating NES but everything to gain from emulating them while developing their own norms more appropriate to the specific needs of discourse in an ELF context.

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