# Revisiting the Intelligibility and Nativeness Principles

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Levis (2005) named two conflicting approaches to pronunciation teaching, the Nativeness Principle and the Intelligibility Principle. This paper revisits those two principles to argue for the superiority of the Intelligibility Principle in regard to where pronunciation fits within the wider field of language teaching, in how it effectively addresses teaching goals, in how it best addresses all contexts of L2 pronunciation learning, and in how it recognizes the reality of social consequences of pronunciation differences. In contrast, the Nativeness Principle, despite its long pedigree and many defenders, falls short by advocating native pronunciation for L2 learners, which is both unlikely to be achieved and unnecessary for effective communication in the L2.

**Keywords:** Intelligibility principle, Nativeness principle, Pronunciation teaching, Social factors, World Englishes

#### 1. Introduction

In 2005, I was the guest editor for a special issue of *TESOL Quarterly* titled "Reconceptualizing Pronunciation in TESOL: Intelligibility, Identity, and World Englishes." To help frame the special issue, I described a conflict that had long been simmering within the field of L2 pronunciation (Levis, 2005). I described the conflict in terms of two approaches to pronunciation teaching, which I named the Nativeness Principle and the Intelligibility Principle. This article has been cited over 800 times, and the Nativeness Principle and the Intelligibility Principle have become part of the way we talk about approaches to the teaching and learning of pronunciation.

Because our beliefs about pronunciation (reflected in the two principles) have consequences for how we teach and learn pronunciation, it was my argument that the Intelligibility Principle better matched the reality of learning L2 pronunciation.

Many, however, still treat the Nativeness Principle as a valid alternative view of teaching pronunciation, so it is worth revisiting the two principles to update our understanding. Even though I argued about the state of English pronunciation teaching, it is now clear that issues relevant to English are equally relevant to most other languages as well. As a result, this paper is about intelligibility and nativeness in language teaching, not just in relation to English. In revisiting the 2005 article, I will argue that the Intelligibility Principle is consistent with what we know about L2 pronunciation learning, while the Nativeness Principle is deeply faulty in its approach to L2 pronunciation. It is faulty in how it relates L2 pronunciation to L2 language learning in general, in what it implies for teaching and learning goals, in its inability to address all contexts of pronunciation learning, and in how it addresses social aspects of pronunciation.

#### 2. Terminology in Levis (2005) and Munro and Derwing (1995)

This special issue highlights the centrality of Munro and Derwing (1995) to pronunciation research and teaching, and especially the influence of their constructs of intelligibility, comprehensibility and accentedness. (In this issue of JSLP, the authors reconsider their earlier paper and its findings, providing new analyses that strengthen the centrality of the original research to today's field.) In revisiting the Intelligibility and Nativeness Principles, it is important to connect my two principles to Munro and Derwing's terms (see Table 1). In my 2005 article, I used the word "intelligibility" quite generally, in the sense used by Merriam Webster, "capable of being understood or comprehended." My use of intelligibility thus implies both actual understanding (intelligibility in Munro & Derwing, 1995) and the ease with which understanding occurs (comprehensibility in Munro & Derwing, 1995). In contrast, my Nativeness Principle addressed only the issue of accentedness as used by Munro and Derwing (Table 1). The Nativeness Principle seems to assume that speakers will be both intelligible and comprehensible if they match a native model, but this is only implicit. Explicitly, intelligibility and comprehensibility are extraneous to a view that prioritizes nativeness.

## 3. Nativeness, Intelligibility and Pronunciation Teaching

Ideologies of nativeness and near-nativeness are deeply entrenched within L2 pronunciation, partly because of the influence of Chomsky's (1965) concept of competence, or what hypothetical ideal (native) speaker/listeners know, that is, their knowledge about the language. As a result, nativeness has frequently been used

|                                   |                   | Principles in Levis (2005) |                              |
|-----------------------------------|-------------------|----------------------------|------------------------------|
|                                   |                   | Nativeness<br>Principle    | Intelligibility<br>Principle |
| Munro and Derwing (1995)<br>terms | Accentedness      | Central to<br>Nativeness   | Largely irrelevant           |
|                                   | Intelligibility   | Not explicitly discussed   | Actual<br>Understanding      |
|                                   | Comprehensibility | Not explicitly discussed   | Ease of<br>Understanding     |

Table 1. Relation of Terms Used in Munro and Derwing (1995) and Levis (2005)

to describe how those who are not monolinguals (e.g., bilinguals and L2 learners) differ from monolinguals, with native monolinguals usually setting the standard. The second part of Chomsky's formulation, performance, involved what ideal speaker/listeners actually do when they use language in real time. Although of little interest to Chomsky, L2 teachers and learners live in a world of performance. Research has shown that L2 users and bilinguals may have native-like performance in various aspects of the L2 but that they typically do not have the same language knowledge representations (i.e., competence) as monolingual native speakers (e.g., Coppieters, 1987; Sorace, 1993). These findings show the vast differences between Chomsky's ideal speaker/listener with a monolingual grammar and the reality for L2 learners (e.g., see Sorace, 2003 for a discussion of nearnativeness), especially in regard to pronunciation (e.g., Sakai, 2018), in which performance is central.

Among language learners, many think it possible to sound like a native speaker. Indeed, that is the desire of many, especially among immigrants in inner circle countries. However, in language teaching, privileging nativeness or nearnativeness has been widely criticized, and nativeness has very little currency as an ultimate goal for L2 learning (Agudo, 2017). Indeed, there is consensus among professional language teaching organizations that there is no justification to privilege native speaker identity or demand near-native performance in any context of language teaching (e.g., https://www.tesol.org/docs/pdf/5889.pdf). That we are still talking about the Nativeness Principle in regard to pronunciation teaching shows that pronunciation teaching has often been out of touch with the wider concerns of L2 teaching and learning.

A possible reason that the Nativeness Principle remains alive and well in pronunciation teaching is that pronunciation teaching and learning have been neglected since the advent of the communicative era (Levis & Sonsaat, 2017). As a result, pronunciation has developed separately from other aspects of language

teaching, and the Nativeness Principle continues to be an attractive goal for many teachers and learners. Unfortunately, the Nativeness Principle actually assumes things that are largely unattainable (e.g., that adult learners can become native-like in pronunciation) and unnecessary (e.g., that nativeness is necessary for communicative success). The evidence for why nativeness is usually unattainable and unnecessary is addressed in Section 4.

# 4. Nativeness, Intelligibility and their Implications for Pronunciation Teaching

In 2005, I talked about the Intelligibility Principle and Nativeness Principle as being "contradictory" (p. 370). By this, I meant that the two principles were rooted in fundamentally different approaches to language teaching even though the practices associated with the two principles often overlapped and looked similar. For example, even though both approaches agree on the importance of pronunciation for language teaching, and both are likely to prioritize certain features and use similar techniques, they differ in their evaluation of student success, in decisions about who is a qualified teacher, and in how they talk about success. Like the famous poem by Robert Frost, the principles are two roads that diverge, and following one road precludes traveling on the other (https://www.poetryfoundation.org/poems/44272/the-road-not-taken).

My argument was, and is, that the Intelligibility Principle is a superior way to think about pronunciation teaching and learning. It is more in line with what we know about ultimate attainment in L2 pronunciation, it recognizes that diversity in accentedness is only very indirectly related to impaired communication and that speakers who are perceived as strongly accented can also be highly intelligible (Munro & Derwing, 1995; Derwing & Munro, 2015), it honors the abilities of all qualified language teachers and recognizes the great strengths that nonnative teachers bring to the teaching of pronunciation, and it recognizes that not all pronunciation features are equally important. Far from promoting a "limited degree of phonological competence" (Pennington & Rogerson-Revell, 2019, p.132), the Intelligibility Principle better reflects the reality of accent diversity in English (indeed, in any world language and L2 context). The Nativeness Principle, on the other hand, has always been based on a myth that there are ideal and deficient ways to pronounce a language, and that deficient ways to pronounce should not be tolerated. As a result of these divergent beliefs, the Nativeness and Intelligibility Principles also diverge in how they address pedagogical issues, in who they consider to be an ideal teacher, and in how they accommodate accent diversity.

With reference to pedagogically-oriented issues, the Nativeness Principle is deeply problematic because it assumes that all aspects of pronunciation are, de facto, equally important, and that no matter where a learner starts, there is only one allowable destination: sounding like a native speaker. Any unmastered pronunciation feature demonstrates that the learner has failed. In contrast, the Intelligibility Principle asserts that communicative success, not nativeness, is the goal, and that not all pronunciation features are equally important for being understood. For example, L2 consonant or vowel contrasts are sometimes important based on the functional load of the contrasts (Brown, 1988). Functional load is a measure of the likelihood that two sounds will be confused by listeners. There is compelling evidence that errors in higher functional load segmental features are associated with greater loss of comprehensibility, which in Section 2 above is part of the Intelligibility Principle (Munro & Derwing, 2006; Suzukida & Saito, 2019). In addition, suprasegmental features such as prominence placement lead to worse comprehension for listeners (Hahn, 2004) while some stress and intonational features do not appear to affect understanding in the same way (Cutler, 1986; Levis, 1999).

A second assumption of the Nativeness Principle is that only teachers who are native or native-like can be trusted to teach pronunciation. A focus on nativeness leaves many well-qualified nonnative teachers uncertain of whether they should teach pronunciation or trust their own skills. If they want to teach pronunciation, they may be seen as deficient models of L2 speech by their students, their colleagues or even themselves. Believing that nativeness is a realistic standard for L2 learning can also foster discriminatory practices because nonnative teachers may be considered as deficient native speakers (Mahboob & Golden, 2013; Medgyes, 1992). This is especially true for pronunciation. Well-qualified L2 speakers may be passed over as teachers of oral skills (including pronunciation), and native speakers may be prioritized for teaching opportunities simply because they are native (Buckingham, 2015; Moussu & Llurda, 2008). On the other hand, the Intelligibility Principle recognizes that being a native speaker is neither a necessary nor sufficient qualification to teach L2 pronunciation. Rather than elevating nativeness as the primary qualification, the Intelligibility Principle recognizes that L2 pronunciation is best taught by qualified language teachers, and that nativeness is not a required or even a preferred qualification when it comes to student learning (Levis et al., 2016). It also recognizes that nonnative teachers bring unusually strong skills to the teaching of pronunciation because of their own history of learning the pronunciation of the L2.

A third implication of the Nativeness Principle is that only certain native accents (such as General American or Standard Southern British when considering English) are truly acceptable. In other words, many native speakers are likely

to find themselves on the outside of a club that privileges certain ways of speaking and ignores or denigrates others. In contrast, the Intelligibility Principle proposes that a wide variety of accents are acceptable as teaching models and that speakers need not converge only toward prestige accents. Teachers and learners can use or develop their own accents, adjusting them as needed in different contexts to achieve intelligibility. Any language in which pronunciation is taught is enriched by its multiple accents, and a wider familiarity with these accents may also promote the ability to interact and understand other speakers (Major et al., 2002; Ockey & French, 2016). In languages like Spanish, Arabic, French and Hindi, which have many different regional and social accents, there is tremendous mutual intelligibility despite the diversity of accents. Even though there may be powerful social biases toward certain varieties, L2 learners should not be made party to L1 language prejudices if they are intelligible. The ability to understand several accents occurs because of the flexibility of human listeners (Scharenborg, 2007) and because humans are very good at adapting to unfamiliar native (Adank, Evans, Stuart-Smith & Scott, 2009) and nonnative speech patterns (Baese-Berk, Bradlow & Wright, 2013). When pronunciation is intelligible (in the broad sense, that is, including both intelligibility and comprehensibility), then the Intelligibility Principle says that it does not need to be taught.

#### 5. How are the Nativeness and Intelligibility principles related?

The relationship between the Nativeness and Intelligibility principles can be visualized in terms of how they overlap and what they say about the relative importance of pronunciation in communication. If the two principles are seen only as two ways to talk about pronunciation, intelligibility will inevitably be seen as an abridged form of Nativeness (Figure 1) in which not all pronunciation features included in nativeness are included in intelligibility, though all aspects of intelligibility are part of nativeness. This perhaps corresponds to a belief that intelligibility reflects reduced standards.

One reason why this view of intelligibility is faulty because it assumes that speech intelligibility is simply a matter of pronunciation. Research demonstrates that intelligibility includes more than pronunciation (e.g., Jenkins, 2000, in which two-thirds of interactions with lost intelligibility were connected to pronunciation while one-third were related to vocabulary and grammar). Figure 1 is also unsatisfactory because of what it implies about teaching pronunciation. It implies that the Nativeness Principle upholds higher standards of performance and knowledge while the Intelligibility Principle chooses to ignore much of what is known about a language's pronunciation. However, those who advocate intelligibility do so not

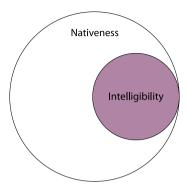


Figure 1. Intelligibility as reduced pronunciation requirements

because they advocate reduced standards but rather because communicative success does not require most of what can be taught about pronunciation. Language learners are not required to become expert phoneticians to communicate.

The relationship between the Nativeness and Intelligibility principles can also be visualized as one of some overlap in which Intelligibility is partially concerned with issues of pronunciation (Figure 2). In this image, intelligibility overlaps with nativeness in pronunciation, but intelligibility also involves other aspects of language (implied by the non-overlapping area) that impact communicative effectiveness such as lexical choice, grammatical accuracy, and sociolinguistic appropriateness (e.g., Jenkins, 2000). In most respects, this is a workable if incomplete image of the relationship between the two principles. It demonstrates that pronunciation is essential to intelligibility; it also shows that for pronunciation teaching and learning, our goals are to identify those areas in which the two circles overlap, and emphasize those features needed by learners. The overlapping of the circles suggest a complementary relationships between intelligibility and nativeness, with different linguistic features corresponding to each (Saito, Trofimovich & Isaacs, 2016, 2017)

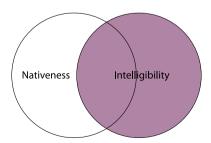


Figure 2. Intelligibility as more than pronunciation

Finally, the two principles can be seen in another light which prioritizes intelligibility as an overall approach to oral language (Figure 3). In this view, intelligibility is the ultimate goal in oral communication (Levis, 2018), and it affects both listening and speaking in every communicative context. The uncolored portions of the circles include aspects of nativeness that do not typically impact intelligibility. In addition, while pronunciation can be crucial to whether speakers and listeners are mutually intelligible, it is not the only factor in intelligibility. Because pronunciation is an unavoidable aspect of oral communication, it is important for L2 learning insofar as it influences intelligibility. The portions of Figure 3 that overlap in multiple ways include grammatical or lexical features that are realized in their pronunciation (e.g., the different pronunciations of the -ed morpheme in English). The section titled "Other Linguistic and Non-Linguistic Aspects of Language" does not overlap with pronunciation, grammar and lexicon only because there is almost no research on how other features of communication (e.g., pragmatic appropriateness, non-verbal backchanneling, gestures, visual cues) interact with the areas that we know affect intelligibility. There is likely to be overlap. In addition, we know that there are other non-language reasons that intelligibility is impaired, such as noise, inattention, and misinterpretation of contextual clues.

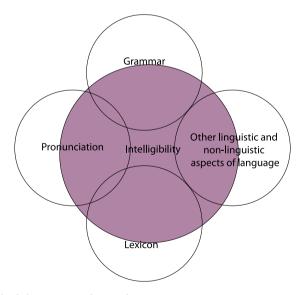


Figure 3. Intelligibility as central to oral communication

#### 6. Research and the nativeness principle

Although nativeness may be a desirable goal for specific L2 learners, the nativeness principle has very little research evidence to support it. For adult L2 learners, the age at which they began learning the L2 has a strong effect on their ultimate success. Nowhere is this effect more evident than the almost inevitable presence of a foreign accent in adult L2 learners (Flege, Munro & MacKay, 1995). Whether accents are due to factors related to age of learning (Piske et al., 2001), inadequate language experience with the L2 compared to the L1 (Bohn & Munro, 2007), the effects of identity (McCrocklin & Link, 2016), or the inability to perceive and produce L2 sounds (Kartushina & Frauenfelder, 2014), adult L2 learners only rarely become nativelike in their L2 accent.

The desire for nativeness in pronunciation often is based on beliefs that native-like speech will ensure that communication is successful (LeVelle & Levis, 2014), that learners will be more confident and respected (Derwing, 2003), that it will provide opportunities for professional advancement (Harrison, 2013), especially for language teachers (Munro, Derwing & Sato, 2006), and that it will minimize discrimination (Derwing & Munro, 2009). While these beliefs are all seem appealing, there is no evidence for the promises implied in the beliefs about developing a native accent. Likewise, the accent reduction industry, which implies similar promises for L2 learners who become more native, will not by itself get rid of discrimination (Thomson, 2014).

I have repeatedly heard researchers and teachers say (including myself) say that they are in favor of aiming for intelligibility, but that if learners want to become native-like, they would encourage their attempts. This is somewhat disingenuous since we know that obtaining native-like pronunciation is highly unlikely, and that attempts to achieve this goal have two possible outcomes: Success (in extremely rare cases) and failure (in almost all cases). As a field, we should simply stop encouraging such unlikely and unnecessary goals and learn to speak of pronunciation improvement in ways that do not include myths about native-like pronunciation attainment.

Are there times that it is best to try for nativeness in pronunciation training? Yes. But the situations in which nativeness is required are few. Nativeness may be especially valued for actors who need to pass to play particular roles, such as American English speakers using a British accent (Tan, 2020) or French speakers trying to pass as English speakers in order to be considered for certain roles in English-medium films (Cerreta & Trofimovich, 2018). Nativeness may also be desired in language revitalization contexts. Bird (2020) discusses this in the context of SENĆOTEN, a West Salish language undergoing revitalization in western Canada. Native speakers of the language are rare, and the L2 speakers both want

to speak the language like the elders who still speak SENĆOTEN but at the same time mark SENĆOTEN as distinct from English, the dominant language. Bird discusses this in terms of the use of ejectives. Elders use weak ejectives, but the L2 learners in the community prefer strong ejectives because of their perceptual salience. Thus, even in this case, nativeness must be negotiated in relation to other factors in the social context.

#### 7. Nativeness, Intelligibility and Contexts for Pronunciation Learning

The use of English around the world offers another example of why the Nativeness Principle is limited, whereas the Intelligibility Principle is not. Kachru's (1992) three circles of World Englishes usefully demonstrates the limitations of the Nativeness Principle by describing possible interactions between listeners and speakers (see also Levis, 2006).

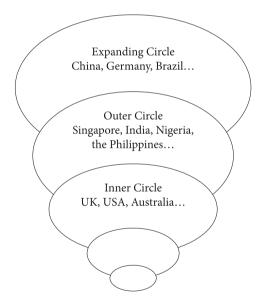


Figure 4. Three Circles of World Englishes (from Deterding, 2012)

The Inner Circle includes those who are traditionally labeled as native speakers, such as English speakers from the USA, Canada, and New Zealand. Many speakers in the Inner Circle are monolingual. The Outer Circle includes speakers from countries where English has an official role and where many people speak English regularly but as an additional language. Such countries include India, Nigeria, and Singapore. The English of speakers in these countries is not native,

but rather nativized, and English is one language regularly used by multilingual speakers. Finally, Expanding Circle speakers (or nonnative speakers) come from countries where English serves as a foreign language. In Expanding Circle contexts, English has no official role and learners typically encounter it in the classroom. English is also used for tourism to most readily communicate with tourists from many countries. This means there are six options for how English speakers around the world use the language to interact (Table 2).

Table 2. Possible Intelligibility Interactions in World Englishes

|           | Inner Circle (IC)   | Outer Circle (OC)          | Expanding Circle (EC)       |
|-----------|---|----------------------------|-----------------------------|
| Inner     | (1)   | (2)                        | (3)                         |
| Circle    | Native speakers talking to                                  | Native and nativized       | Native and nonnative        |
| (IC)      | each other (e.g., Canadian                                  | speakers in interaction    | speakers in interaction     |
|           | and South African   | (e.g., Australian and      | (e.g., New Zealand and      |
|           | speakers; Southern USA<br>and New York English<br>speakers) | Indian English speakers)   | Japanese speakers)          |
| Outer     | ******  | (4)                        | (5)                         |
| Circle    |   | Nativized speakers talking | Nativized and Nonnative     |
| (OC)      |   | to other Nativized         | speakers talking to each    |
|           |   | speakers (e.g., Indian and | other (e.g., Indian and     |
|           |   | Nigerian English           | Chinese speakers            |
|           |   | speakers)                  |                             |
| Expanding | ******  | *******                    | (6)                         |
| Circle    |   |                            | Nonnative speakers          |
| (EC)      |   |                            | talking to each other using |
|           |   |                            | English (e.g., Japanese and |
|           |   |                            | German speakers)            |

The interactions in Table 2, simplified as they are, show the limitations of the Nativeness Principle. Only (1), (2) and (3) can possibly be addressed by the Nativeness Principle, but it has nothing to say about (4)–(6), despite these types of interactions in English likely being more numerous than (1)–(3) throughout the world. In (1)–(3), the Nativeness Principle assumes that a native accent is the correct way to speak and that any loss of understanding is due to the person who is not native. As a result, the Nativeness Principle applies quite poorly to the reality of English use. At best, it can only say that everyone has to pronounce like particular native speakers, but it cannot justify such a goal beyond its implicit prejudice in favor of certain accents.

In contrast, the Intelligibility Principle is relevant for all contexts in (1)–(6). It makes no requirement that speakers with different ways of speaking have to use particular accents. It makes no claim that only certain accents will make communication possible. And finally, it recognizes that these types of interactions already take place quite successfully, and that when speakers and listeners run into trouble and certain pronunciation features are the problem, that these features should be addressed, by instruction if necessary.

There are a number of other implications from Table 2. First, intelligibility is not a matter of one person being intelligible and the other not intelligible. Instead, each speaker must be intelligible to the other. Even for native speakers talking to other native speakers (1), there is no guarantee of intelligibility. Second, both production and perception work are important for an intelligibility-based approach to teaching pronunciation. Listeners must learn to understand, and speakers must speak in a way that makes them understandable. Third, preference is not automatically given to native speakers in an intelligibility-based approach. For communication to succeed, speakers must be intelligible to their listeners, whether they are other native speakers, nativized speakers, or nonnative speakers. Fourth, because there is evidence that pronunciation is important in all types of interactions in Table 2 (e.g., Jenkins, 2000; Kang, Thomson & Moran, 2018; McCullough, Clopper & Wagner, 2019; Smith & Rafiqzad, 1979), each of the contexts likely differs in how pronunciation instruction is addressed. As a result, there is no one-size-fits-all approach to teaching pronunciation.

Finally, it is important to point out that Kachru's model and the interactions between various circles relative to intelligibility and nativeness are extraordinarily simplistic in the context of expanding global mobility and digital communication. This is true not only for English but for many world languages. In fact, the interactions within each box (or between adjacent boxes) are unlikely to be limited only to those boxes. For example, this week I was in a weekly digital meeting (in English) with speakers from India, Montenegro, California, Spain, China, Thailand, and Russia. In other words, everyone now talks with everyone, via technology or through travel, so the Nativeness principle is untenable in light of this diversity of communication.

#### 8. Intelligibility, Nativeness and Social Ramifications of Accent

The last respect in which the two principles provide different ways of understanding the importance of pronunciation is in relation to social consequences of pronunciation. The ability to distinguish accent develops early, and children under five already associate similarity or difference of accent with similarity or difference of cultural expectations (Weatherhead, White & Friedman, 2016). A wealth of previous research has shown that listeners evaluate non-standard native accents more negatively than standard native accents (e.g., Dragojevic, Mastro, Giles, & Sink, 2016; Giles, Wilson & Conway, 1981; Lippi-Green, 2012). Similarly, non-native accents are subject to the same kinds of negative evaluations (Gluszek & Dovidio, 2010; Harrison, 2014). Even the expectation of a non-native accent may evoke socially-disadvantaged evaluations of how understandable a speaker is (Rubin, 1992).

In regard to L2 pronunciation, Pennington and Rogerson-Revell (2019) rightly recognize that "pronunciation is a social and expressive resource that can be used in conjunction with other linguistic resources to convey many different kinds of meaning" (p.8). As a result, our beliefs about accents have social consequences for how we hear others and judge them as authentic speakers of the language. The Nativeness Principle is tightly connected to prescriptive beliefs about the social value of different accents. Choosing certain spoken varieties as pronunciation models entails a prescriptive choice by some authoritative source (even if the authority is a textbook or materials publisher). The result of the prescriptive choice ensures that the voices heard in the language classroom are limited.

The Intelligibility Principle, on the other hand, takes a descriptive view of accent variation; native and nonnative accents are in principle equal. Accent is part of the normal communicative equation, whether the interlocutors use a standard L1 accent, a nonstandard L1 accent, or an L2 accent. A descriptive view of accentedness recognizes that, by and large, native speakers adjust quickly and well to foreign-accented speakers. Clarke and Garrett (2004) found that L1-English listeners initially processed native English speech more quickly than foreignaccented speech, but that as little as minute of exposure resulted in listeners processing foreign-accented speech more quickly. Similarly, Bradlow and Bent (2008) found that listeners were able to adjust to Chinese-accented English during the course of a presentation, and that training listeners with Chinese-accented speech helped them more successfully understand an unfamiliar Chinese-accented voice. The Intelligibility Principle is also consistent with World Englishes and English as a Lingua Franca perspectives, in which accents such as Standard Southern British and General American are simply two accents within the wider world of English accents.

Because pronunciation is always situated within a society or across social systems, those who adhere to the Intelligibility and Nativeness Principles recognize the social ramifications of accent. Both principles recognize that accent is connected to speaker identity (e.g., Gatbonton, Trofimovich & Magid, 2005), that accent may be associated with social discrimination (Lippi-Green, 2012), and that accent can overlap with issues of race and social class (Mugglestone,

1995; Subtirelu, 2015). The two principles differ, however, because of the core assumptions about language and especially about pronunciation. By providing a privileged status to particular L1 varieties, the Nativeness Principle is inherently discriminatory, even if those who adhere to it never intend to discriminate. By recognizing the validity and equivalence of different varieties, the Intelligibility Principle emphasizes successful communication across diverse accents, even if those who adhere to it sometimes treat others unequally because of the way they pronounce the language.

#### 9. Conclusion

The Nativeness Principle and the Intelligibility Principle both continue to have defenders in the teaching and learning of L2 pronunciation. Only the Intelligibility Principle, however, accurately reflects what we know about L2 pronunciation learning and adult L2 learners. It is consistent with how the field of second language teaching understands nativeness, that is, that L2 users are not defective native speakers but multicompetent speakers in their own right (Cook, 1999). Their multicompetence includes use of grammar, lexicon, pragmatics, phonetics and phonology, as well as various types of non-linguistic, visual information such as gestures. In all respects, L2 learners do not need to be native speakers, as the Nativeness Principle assumes. The Intelligibility Principle also is consistent with realistic goals for pronunciation teaching. Whereas the Nativeness Principle asserts that L2 perfection in a particular language variety is both possible and necessary, the Intelligibility Principle recognizes that variations in accent are normal and not necessarily a barrier to communication (Derwing & Munro, 2015). The Intelligibility Principle also is relevant to all contexts of communication whereas the Nativeness Principle is not. In a world in which a massive number of interactions in varied languages take place each day without native speakers being involved, only the Intelligibility Principle recognizes the validity of contexts without native speakers. Finally, the Intelligibility Principle treats social variation in accent not as a problem to overcome but as variation to embrace. For all these reasons, it is time to embrace the Intelligibility Principle and consign the Nativeness Principle to the past.

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#### References

- Adank, P., Evans, B.G., Stuart-Smith, J., & Scott, S.K. (2009). Comprehension of familiar and unfamiliar native accents under adverse listening conditions. *Journal of Experimental Psychology: Human Perception and Performance*, 35(2), 520–529.
- Agudo, J.D.D.M. (Ed.). (2017). *Native and non-native teachers in English language classrooms: Professional challenges and teacher education*. Walter de Gruyter. https://doi.org/10.1515/9781501504143
- Baese-Berk, M. M., Bradlow, A. R., & Wright, B.A. (2013). Accent-independent adaptation to foreign accented speech. *The Journal of the Acoustical Society of America*, 133(3), EL174–EL180. https://doi.org/10.1121/1.4789864
- Bird, S. (2020). Pronunciation among adult Indigenous language learners: The case of SENĆOTEN /t'/. *Journal of Second Language Pronunciation*. https://doi.org/10.1075/jslp.17042.bir
- Bradlow, A.R., & Bent, T. (2008). Perceptual adaptation to non-native speech. *Cognition*, 106(2), 707–729. https://doi.org/10.1016/j.cognition.2007.04.005
- Brown, A. (1988). Functional load and the teaching of pronunciation. *TESOL Quarterly*, 22(4), 593–606. https://doi.org/10.2307/3587258
- Bohn, O., & Munro, M. (2007). Language experience in second language speech learning. In honor of James Emil Flege. John Benjamins. https://doi.org/10.1075/lllt.17
- Buckingham, L. (2015). Shades of cosmopolitanism: EFL teachers' perspectives on English accents and pronunciation teaching in the Gulf. *Journal of Multilingual and Multicultural Development*, 36(6), 638–653. https://doi.org/10.1080/01434632.2014.994638
- Cerreta, S., & Trofimovich, P. (2018). Engaging the senses: A sensory-based approach to L2 pronunciation instruction for actors. *Journal of Second Language Pronunciation*, 4(1), 46–72. https://doi.org/10.1075/jslp.00003.cer
- Chomsky, N. (1965). Aspects of the theory of syntax. MIT Press.
- Clarke, C. M., & Garrett, M. F. (2004). Rapid adaptation to foreign-accented English. *The Journal of the Acoustical Society of America*, 116(6), 3647–3658. https://doi.org/10.1121/1.1815131
- Cook, V. (1999). Going beyond the native speaker in language teaching. *TESOL Quarterly*, 33(2), 185–209. https://doi.org/10.2307/3587717
- Coppieters, R. (1987). Competence differences between native and near-native speakers. *Language*, 63(3), 544–573. https://doi.org/10.2307/415005
- Cutler, A. (1986). Forbear is a homophone: Lexical prosody does not constrain lexical access. *Language and Speech*, 29(3), 201–220. https://doi.org/10.1177/002383098602900302
- Derwing, T.M. (2003). What do ESL students say about their accents? *Canadian Modern Language Review*, 59(4), 547–567. https://doi.org/10.3138/cmlr.59.4.547
- Derwing, T.M. & Munro, M.J. (2009). Putting accent in its place: Rethinking obstacles to communication. *Language Teaching and Research*, 42 (4), 476–490. https://doi.org/10.1017/S026144480800551X

- Derwing, T.M., & Munro, M.J. (2015). Pronunciation fundamentals. *Evidence-based* perspectives for L2 teaching and research. John Benjamins. https://doi.org/10.1075/lllt.42
- Deterding, D. (2012). Pronunciation in World Englishes. *The Encyclopedia of Applied Linguistics*. Retrieved from. https://doi.org/10.1002/9781405198431.wbealo967
- Dragojevic, M., Mastro, D., Giles, H., & Sink, A. (2016). Silencing nonstandard speakers: A content analysis of accent portrayals on American primetime television. *Language in Society*, 45(1), 59–85. https://doi.org/10.1017/S0047404515000743
- Flege, J. E., Munro, M. J., & MacKay, I. R. (1995). Factors affecting strength of perceived foreign accent in a second language. *The Journal of the Acoustical Society of America*, *97*(5), 3125–3134. https://doi.org/10.1121/1.413041
- Gatbonton, E., Trofimovich, P., & Magid, M. (2005). Learners' ethnic group affiliation and L2 pronunciation accuracy: A sociolinguistic investigation. *TESOL Quarterly*, 39(3), 489–511. https://doi.org/10.2307/3588491
- Giles, H., Wilson, P., & Conway, A. (1981). Accent and lexical diversity as determinants of impression formation and perceived employment suitability. *Language Sciences*, *3*(1), 91–103. https://doi.org/10.1016/S0388-0001(81)80015-0
- Gluszek, A., & Dovidio, J. F. (2010). Speaking with a nonnative accent: Perceptions of bias, communication difficulties, and belonging in the United States. *Journal of Language and Social Psychology*, 29(2), 224–234. https://doi.org/10.1177/0261927X09359590
- Hahn, L. D. (2004). Primary stress and intelligibility: Research to motivate the teaching of suprasegmentals. *TESOL Quarterly*, 38(2), 201–223. https://doi.org/10.2307/3588378
- Harrison, G. (2013). "Oh, you've got such a strong accent": Language identity intersecting with professional identity in the human services in Australia. *International Migration*, *51*(5), 192–204. https://doi.org/10.1111/imig.12005
- Harrison, G. (2014). 12 Accent and 'Othering' in the workplace. In J. Levis & A. Moyer (Eds.), *Social dynamics in second language accent* (pp. 255–272). DeGruyter Mouton. https://doi.org/10.1515/9781614511762.255
- Jenkins, J. (2000). *The phonology of English as an international language*. Oxford University Press.
- Kachru, B.B. (Ed.). (1992). *The other tongue: English across cultures.* University of Illinois Press.
- Kang, O., Thomson, R.I., & Moran, M. (2018). Empirical approaches to measuring the intelligibility of different varieties of English in predicting listener comprehension. *Language Learning*, 68(1), 115–146. https://doi.org/10.1111/lang.12270
- Kartushina, N., & Frauenfelder, U. H. (2014). On the effects of L2 perception and of individual differences in L1 production on L2 pronunciation. *Frontiers in Psychology*, 5, 1246–1262. https://doi.org/10.3389/fpsyg.2014.01246
- LeVelle, K., & Levis, J. (2014). Understanding the impact of social factors on L2 pronunciation: Insights from learners. In J. Levis & A. Moyer (Eds.), *Social dynamics in second language accent* (pp. 97–118). DeGruyter Mouton. https://doi.org/10.1515/9781614511762.97
- Levis, J.M. (1999). The intonation and meaning of normal yes/no questions. *World Englishes*, 18(3), 373–380. https://doi.org/10.1111/1467-971X.00150
- Levis, J.M. (2005). Changing contexts and shifting paradigms in pronunciation teaching. *TESOL Quarterly*, 39(3), 369–377. https://doi.org/10.2307/3588485
- Levis, J. M. (2006). Pronunciation and the assessment of spoken language. In R. Hughes (Ed.), *Spoken English, TESOL and applied linguistics* (pp. 245–270). Palgrave Macmillan. https://doi.org/10.1057/9780230584587\_11

- Levis, J. M. (2018). *Intelligibility, oral communication, and the teaching of pronunciation*. Cambridge University Press. https://doi.org/10.1017/9781108241564
- Levis, J. M., & Sonsaat, S. (2017). Pronunciation teaching in the early CLT era. In O. Kang, R. Thomson & J. Murphy (Eds.), *The Routledge handbook of English pronunciation*, (pp. 267–283). Routledge.
- Levis, J. M., Sonsaat, S., Link, S., & Barriuso, T.A. (2016). Native and nonnative teachers of L2 pronunciation: Effects on learner performance. *TESOL Quarterly*, 50(4), 894–931. https://doi.org/10.1002/tesq.272
- Lippi-Green, R. (2012). English with an accent: Language, ideology and discrimination in the United States. Psychology Press. https://doi.org/10.4324/9780203348802
- Mahboob, A., & Golden, R. (2013). Looking for native speakers of English: Discrimination in English language teaching job advertisements. *Age*, *3*(18), 21.
- Major, R.C., Fitzmaurice, S.F., Bunta, F., & Balasubramanian, C. (2002). The effects of nonnative accents on listening comprehension: Implications for ESL assessment. *TESOL Quarterly*, 36(2), 173–190. https://doi.org/10.2307/3588329
- McCrocklin, S., & Link, S. (2016). Accent, identity, and a fear of loss? ESL students' perspectives. *Canadian Modern Language Review*, 72(1), 122–148. https://doi.org/10.3138/cmlr.2582
- McCullough, E.A., Clopper, C.G., & Wagner, L. (2019). Regional dialect perception across the lifespan: Identification and discrimination. *Language and Speech*, 62(1), 115–136. https://doi.org/10.1177/0023830917743277
- Medgyes, P. (1992). Native or non-native: who's worth more? *ELT Journal*, 46(4), 340-349. https://doi.org/10.1093/elt/46.4.340
- Moussu, L., & Llurda, E. (2008). Non-native English-speaking English language teachers: History and research. *Language Teaching*, 41(3), 315–348. https://doi.org/10.1017/S0261444808005028
- Moyer, A. (2014). Exceptional outcomes in L2 phonology: The critical factors of learner engagement and self-regulation. *Applied Linguistics*, 35(4), 418–440. https://doi.org/10.1093/applin/amuo12
- Mugglestone, L. (1995). *Talking proper: The rise of accent as social symbol*. Oxford University Press.
- Munro, M. J., & Derwing, T. M. (1995). Foreign accent, comprehensibility, and intelligibility in the speech of second language learners. *Language Learning*, 45(1), 73–97. https://doi.org/10.1111/j.1467-1770.1995.tb00963.x
- Munro, M. J., & Derwing, T. M. (2006). The functional load principle in ESL pronunciation instruction: An exploratory study. *System*, *34*(4), 520–531. https://doi.org/10.1016/j.system.2006.09.004
- Munro, M. J., Derwing, T. M., & Sato, K. (2006). Salient accents, covert attitudes: Consciousness-raising for pre-service second language teachers. *Prospect*, *21*, 67–79.
- Ockey, G. J., & French, R. (2016). From one to multiple accents on a test of L2 listening comprehension. *Applied Linguistics*, *37*(5), 693–715. https://doi.org/10.1093/applin/amu060
- Pennington, M. C., & Rogerson-Revell, P. (2019). *English pronunciation teaching and research*. London: Palgrave Macmillan. https://doi.org/10.1057/978-1-137-47677-7
- Piske, T., MacKay, I. R., & Flege, J. E. (2001). Factors affecting degree of foreign accent in an L2: A review. *Journal of Phonetics*, 29(2), 191–215. https://doi.org/10.1006/jpho.2001.0134

- Rubin, D. L. (1992). Nonlanguage factors affecting undergraduates' judgments of nonnative English-speaking teaching assistants. *Research in Higher Education*, 33(4), 511–531. https://doi.org/10.1007/BF00973770
- Saito, K., Trofimovich, P., & Isaacs, T. (2016). Second language speech production: Investigating linguistic correlates of comprehensibility and accentedness for learners at different ability levels. *Applied Psycholinguistics*, 37(2), 217–240. https://doi.org/10.1017/S0142716414000502
- Saito, K., Trofimovich, P., & Isaacs, T. (2017). Using listener judgments to investigate linguistic influences on L2 comprehensibility and accentedness: A validation and generalization study. *Applied Linguistics*, 38(4), 439–462.
- Sakai, M. (2018). Moving towards a bilingual baseline in second language phonetic research. *Journal of Second Language Pronunciation*, 4(1), 11–45. https://doi.org/10.1075/jslp.00002.sak
- Scharenborg, O. (2007). Reaching over the gap: A review of efforts to link human and automatic speech recognition research. *Speech Communication*, 49(5), 336–347. https://doi.org/10.1016/j.specom.2007.01.009
- Smith, L.E., & Rafiqzad, K. (1979). English for cross-cultural communication: The question of intelligibility. *TESOL Quarterly*, 371–380. https://doi.org/10.2307/3585884
- Sorace, A. (1993). Incomplete vs. divergent representations of unaccusativity in non-native grammars of Italian. *Second Language Research*, *9*(1), 22–47. https://doi.org/10.1177/026765839300900102
- Sorace, A. (2003). Near-nativeness. In C. Doughty & M. Long (Eds.), *The handbook of second language acquisition* (pp. 130–151). Wiley Blackwell. https://doi.org/10.1002/9780470756492.ch6
- Subtirelu, N.C. (2015). "She does have an accent but...": Race and language ideology in students' evaluations of mathematics instructors on RateMyProfessors.com. *Language in Society*, 44(1), 35–62. https://doi.org/10.1017/S0047404514000736
- Suzukida, Y., & Saito, K. (2019). Which segmental features matter for successful L2 comprehensibility? Revisiting and generalizing the pedagogical value of the functional load principle. *Language Teaching Research*, 1362168819858246. https://doi.org/10.1177/1362168819858246
- Tan, A. (2020). Transfer of suprasegmental improvements to novel sentences and segmental accuracy using real time audiovisual pitch training. Master's thesis, Iowa State University. https://doi.org/10.31274/etd-20200624-143
- Thomson, R. (2014). Accent reduction and pronunciation instruction are the same thing. In L. Grant (Ed.), *Pronunciation myths: Applying second language research to classroom teaching* (pp. 160–187). Ann Arbor: University of Michigan Press.
- Weatherhead, D., White, K.S., & Friedman, O. (2016). Where are you from? Preschoolers infer background from accent. *Journal of Experimental Child Psychology*, 143, 171–178.

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