LOOKING AT COMPREHENSIBILITY AS A DYNAMIC CONSTRUCT: AN INTERVIEW WITH DR. MARY GRANTHAM O'BRIEN

Olhando para compreensibilidade como uma dimensão dinâmica: entrevista com a Dra. Mary Grantham O'Brien

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In 1995, Munro and Derwing changed the way second language (L2) speech is understood and researched. From that point on, applied linguists have adopted intelligibility (actual comprehension), comprehensibility (ease of understanding), and accentedness (degree of foreign accent), as global dimensions of L2 speech. Since the publication of Munro and Derwing's seminal work, a host of studies have investigated L2 speech learning from psycholinguistic and sociolinguistic perspectives in perception, production, longitudinal, and classroom-based designs. However, after more than two decades of carrying out research on global dimensions of L2 speech, changes in L2 pronunciation research methods began to arise (LEVIS, 2020; MUNRO; DERWING, 2020), and some researchers now conceive comprehensibility as dynamic rather than static. This means that listeners' perceptions of how easy it is to understand a speaker may vary on the basis of several variables. Dr. O'Brien, at the University of Calgary, together with colleagues across North America, is conducting trailblazing research on the malleability of comprehensibility. Their findings bring forward a new understanding of L2 speech; one that extrapolates traditional views of L2 pronunciation and expands the horizons of the field.

In addition to investigating global dimensions of L2 speech as dynamic constructs, Dr. O'Brien has extensively looked into two other areas: The perception and production of prosodic cues (such as word stress, sentence stress, and intonation) to meaning, and

listener reactions to non-native speech. Her research has focused primarily on L2 learners of German, and it has always been intimately related to real-world issues, including those of the classroom. Currently, Dr. O'Brien is a Professor of German in the School of Languages, Linguistics, Literatures and Cultures at the University of Calgary. In the past, she held the position of Director of the Language Research Centre at the same institution for six years. In 2020, Dr. O'Brien received the Honorary Lifetime Member Award from the Canadian Association of Second Language Teachers in recognition of her significant service and leadership in the advancement of second language education.

This interview intends to bring recent findings and paradigms in L2 speech research to light. Therefore, questions tapping the nature of comprehensibility as a dynamic construct, methods used to investigate the malleability of comprehensibility, findings obtained by Dr. O'Brien and her research group, implications, as well as future directions and advices were answered by the researcher. This interview results from several conversations we had in Calgary, and the answers to the questions formulated by the interviewer were written by the interviewee herself in May 2021.

Interviewer:

What does it mean to conceive of comprehensibility as a dynamic construct?

Dr. O'Brien:

The premise of our current research program is the expectation that an individual's speech varies over time on the basis of their comfort level with their interlocutor, the task being performed, and affective factors like anxiety. We similarly expect that a speaker's judgment of their performance and that of their conversation partner will vary as a conversation unfolds. This research relies on a number of central concepts in L2 speech research, the most important of which is comprehensibility (i.e., a listener's perception of understanding, DERWING; MUNRO, 2015).

Building upon recent work in field (e.g., NAGLE; TROFIMOVICH; BERGERON, 2019), we conceived of "dynamic" to mean "varying over time" in our recent studies (NAGLE *et al.*, 2021; TROFIMOVICH *et al.*, 2020). Unlike other dynamic studies that investigate how ratings provided by someone external to a speech event change over time, we were interested in the extent to which both speakers in a dyadic interaction rate comprehensibility as well as their own and their partners' anxiety and collaborativeness in real time.

Interviewer:

How does a study that investigates comprehensibility dynamically differ from one that investigates it more statically?

Dr. O'Brien:

Before we start to consider how we investigated comprehensibility dynamically, it's probably a good idea to think about how the research community has conceived of comprehensibility up to this point. Traditional research on L2 pronunciation has required listeners to rate short recordings of monologic speech. Such studies tell us a great deal about how listeners perceive speech (e.g., listeners often understand accented speech (MUNRO; DERWING, 1995); certain speech features affect comprehensibility more than others (TROFIMOVICH; ISAACS, 2012; O'BRIEN, 2014)). Nonetheless, this research does not tell us about the perceptions of conversation partners over the course of an interaction.

Unlike studies that consider comprehensibility statically, our studies investigating comprehensibility as a dynamic construct invited participants—non-native speakers of English living in Canada—to evaluate their partner's comprehensibility as they carried out three speaking tasks. These include tasks that call on them to a) get to know one another; b) create a story on the basis of scrambled images; and c) discuss challenges and solve a problem. At regular intervals, they were required to stop their conversation and perform the ratings.

Interviewer:

Can you mention some of your findings and discuss how they uphold this conception of comprehensibility?

Dr. O'Brien:

Not surprisingly, participants in our studies provided comprehensibility ratings indicating that they could generally understand the speech of their conversation partners. In Trofimovich *et al.* (2020), we found that the comprehensibility ratings were U-shaped over time. That is, listeners demonstrated high levels of understanding at the outset of the conversational tasks (i.e., after the first task) and again at the end of the third task. Participants provided somewhat more variable ratings after the second task. These results support those of Nagle *et al.* (2019), which showed fluctuations both over time and across

participants. The results of our study demonstrate further that partners' ratings tended to fluctuate along somewhat parallel paths.

In Nagle *et al*. (2021), we looked at how participants rated their partners' comprehensibility along with their own and their partners' collaborativeness and anxiety while they carried out the three tasks described above. Anxiety and collaborativeness changed over time and as a result of the tasks that the participants carried out. Whereas participants rated their anxiety high and collaborativeness low when they co-created the story out of scrambled images, they indicated that their anxiety was low and collaborativeness high when they discussed challenges and solutions. Participants' ratings of comprehensibility followed a similar trajectory of anxiety and collaborativeness, with those partners who were rated as being less anxious and more collaborative also being rated as the easiest to understand. This study extends what we know about comprehensibility in that it demonstrates that ease of understanding may be related to non-linguistic factors.

Interviewer:

How do the findings you mentioned relate to, support, and/or challenge what we know about L2 speech production and perception?

Dr. O'Brien:

Our findings demonstrate the importance of understanding how comprehensibility unfolds in extended discourse. Whereas many of the studies investigating how listeners understand L2 speech—both through comprehensibility ratings and intelligibility tasks—tend to make use of speech samples of 30 seconds or less (e.g., DERWING; MUNRO; THOMSON, 2008; O'BRIEN, 2014), we have shown the effects of task, time, and growing experience with an interlocutor.

Interviewer:

What are some of the real-world implications of researching comprehensibility as a dynamic construct? What are the implications to research on L2 speech that uses comprehensibility measures generally? And what does it mean for classroom language learning?

Dr. O'Brien:

Until now, we've tended to think that listeners make snap judgments on the basis of short snippets of language. While the results of many previous studies tend to support this, our

current line of research provides nuance to our understanding. Engaging in interaction requires collaboration from both conversation partners. Sometimes the collaboration is relatively smooth: both partners are at ease, and it takes little effort to understand one another. There are times, though, when collaboration is more difficult: the task is challenging, anxiety levels are high, and understanding might suffer.

While researchers may continue to use more traditional research methods to expand what we understand about accentedness and comprehensibility (for example, by investigating new groups of speakers or listeners), I think that our current line of research holds real promise for understanding how comprehensibility unfolds over time and how we come to understand our interlocutors over the course of interaction.

One concern that I've frequently expressed with classroom language learning is that learners—especially those at beginner and intermediate proficiency levels—have relatively few opportunities for sustained interaction with their classmates. Classroom interactions often involve quick exchanges between individual students and teachers, and much of the group work is focused on the manipulation or use of specific grammatical forms. I think that our current studies provide evidence of the importance of encouraging classroom learners to complete a range of collaborative target language tasks and to engage with their classmates over longer periods of time. This will push them to co-construct meaning and understanding throughout the course of their interaction and will prepare them for more real-world language use.

Interviewer:

What are some of the methods that you and your research group have implemented to investigate the malleability of comprehensibility ratings? Do you expect the realm of instruments to expand in the future? If so, how?

Dr. O'Brien:

The research community generally holds human ratings of speech up as the gold standard for research into accentedness and comprehensibility, and listeners tend to show high levels of agreement in their ratings (DERWING; MUNRO, 2015). In much of the recent research that Pavel Trofimovich and I have carried out with Kym Taylor Reid, we have demonstrated that simply sharing an anecdote about an encounter with non-native speakers can have an impact on listeners' ratings of speech. In these studies, some participants hear a positive anecdote (positive prime) and others hear a negative anecdote (negative prime) before they begin the rating task. For example, in Taylor Reid, Trofimovich and

O'Brien (2019), we examined the impact of the positive and negative primes on older and younger Montrealers. We showed that older Montrealers' ratings were affected as expected: these listeners upgraded their ratings after hearing the positive prime and downgraded them after hearing the negative prime. Young Montrealers, however, reacted similarly to both the positive and negative prime, upgrading their ratings in response to both. We carried this research a bit further by examining whether German language teachers might also be affected by the priming conditions (TAYLOR REID *et al.*, 2020). Importantly, the impact of the negative priming condition affected native and non-native teachers differently. Whereas native speakers of German went along with the negative prime, downgrading their evaluations, teachers—like the younger Montrealers—who were non-native speakers of German upgraded their ratings in response to the negative prime. We explain these somewhat surprising ratings in the negative prime condition as resulting from enhanced solidarity between speakers and listeners.

In some of our latest studies, we have asked listeners before they begin their evaluations to complete the same speech production task that they will rate. We refer to this as "task practice". For example, in Taylor Reid *et al.* (2021), half of the participants completed the task in their native language (English), and half completed it in their L2, French. Participants in the study were also exposed to the positive and negative priming conditions described above. We have shown that English—but not French—task practice mitigated the effects of the negative priming.

With the onset of the pandemic, the field has necessarily had to open up to new ways of conducting research. Many studies that would normally have been carried out in a lab are taking place in participants' own homes. These online studies include some of the more traditional rating tasks as well as more complex tasks that require recording. Although it is possible to carry out collaborative tasks online, these continue to be a bit more cumbersome. That said, I imagine that our research methods will continue to adapt over time and will enable us to collect data from a wider range of speakers and listeners without requiring us to travel great distances to meet with research participants.

Interviewer:

What projects are you currently working on? What other topics would you appreciate seeing researchers undertake?

Dr. O'Brien:

Pavel Trofimovich and I just received funding from the Social Sciences and Humanities Research Council of Canada for a project that investigates the role of linguistic bias in Human Resource (HR) settings in English- and French-speaking Canada. We've begun the work by interviewing students and instructors in HR training programs to determine the extent to which linguistic bias is a topic of discussion in these programs. As a next step, we will interview HR professionals to determine whether and how they rate potential employees on the basis of their speech. Ultimately, we plan to develop and test the effectiveness of a training program to mitigate bias among HR professionals. We hope to make this available to HR training programs more broadly.

I'm especially interested in research that focuses on the real-world implications of speaking with an accent. I hope that more researchers will consider making use of tasks that more closely approximate situations in which learners might find themselves.

Interviewer:

What advice would you give to researchers who are interested in investigating comprehensibility as a dynamic construct?

Dr. O'Brien:

Beyond the general advice that I give to any researcher to start with robust pilot testing to ensure that the tasks are meaningful and that participants are able to complete them as expected, I'd recommend starting with replication studies with different types of participants (e.g., L2 learners of languages other than English, learners outside of the university setting). Materials from our studies as well as a range of L2 speech studies are available for download in IRIS (https://www.iris-database.org/iris/app/home/index).

Once we can determine whether and how results extend beyond the types of participants we've tested, it will be possible to take small steps in terms of tasks (e.g., other types of discourse completion or spot the difference tasks) and ratings (e.g., asking participants to rate additional speech measures like fluency and additional affective factors). I think that small steps forward tend to advance the field in the most meaningful ways.

KEY-WORDS: Comprehensibility; Dynamic; Pronunciation; Second Language.

PALAVRAS-CHAVE: Compreensibilidade; Dinamismo; Pronúncia; Língua Estrangeira.

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