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Elaine J. Francis, *Gradient Acceptability and Linguistic Theory*, OUP, Oxford Surveys in Syntax and Morphology, 2021.

Though acceptability judgments have been the central method of data collection in many different (even opposing) linguistic theories, recently they have also been a matter of dispute. On the one hand, many theorists see them as invaluable in exploring linguistic intuitions and linguistic competence. On the other hand, with the appearance of quantitative and experimental methods, many scholars believe that these new methods are significantly more suitable and reliable than introspective methods. Therefore, *Gradient Acceptability and Linguistic Theory* by Elaine J. Francis is very well-timed and highly relevant for methodological discussions across a variety of linguistic approaches and theoretical traditions.

In the first chapter, Francis discusses the central term of the book, i.e. *gradient acceptability*. The phenomenon refers to the problem in which the same or similar structures tend to receive different judgments that vary in the degree of acceptability. In this chapter, Francis focuses on how acceptability judgments are used in contemporary linguistic theories, but also lays the ground-work for one of the central issues of the book: how different factors, other than grammatical knowledge, might influence acceptability judgments provided by the speakers. The first chapter represents a comprehensive overview of the possible types of explanations for different acceptability scores, that is, syntactic, prosodic, semantic, pragmatic and processing explanations. Using different examples, Francis introduces different restrictions and theories which use these types of explanations in an accessible and straightforward overview.

The second chapter is a must-read for anyone interested in an easily accessible, yet brief, overview on different syntactic theories that are influential today. Even though the book is not primarily an overview of different theories, it does an excellent job in explaining some of the theoretical differences, but crucially also in discussing how acceptability data is interpreted within different theoretical views. Francis reviews different theories: derivational grammars, constraint-based grammars, OT and usage-based grammars. In the centre of this chapter is the issue of how these different theories treat graded judgments. Here Francis is mainly concerned with how certain theories approach isomorphism between syntax and seman-

tics/pragmatics, and with the nature of constraint application, that is, whether a theory allows for application of soft constraints. Interestingly, in this chapter Francis presents an overarching goal of the book, that might be considered ambitious, but worthy: to bring together different, often opposing theories, and to explore how these contrasting theories might view the issue of graded acceptability judgments, which might urge other researchers to do the same.

The next chapter is concerned with aspects of linguistic knowledge other than syntactic constraints. In this chapter, Francis discusses how evidence from experimental syntactic studies supports the idea that sometimes gradient acceptability is a result of factors that are of non-syntactic nature. The first couple of studies presented, that is, Ward et al. (1991) and Ambridge and Goldberg (2008), is concerned with phenomena that have usually been accounted for by syntactic accounts, outbound anaphora and island effects, respectively. Both of these studies proposed that context and discourse information structure, i.e. pragmatic factors, play a decisive role in whether or not a structure is acceptable. The other two studies that are discussed, that is, Šimik and Wierzba (2015) and Keller and Sorace (2003), leave some questions unanswered. Crucially, as Francis emphasises, Šimik and Wierzba's study shows how difficult it is to differentiate between the nature of the different factors that influence acceptability, since, in addition to a prosodic explanation, there seems to be an additional effect, not accounted for by a prosodic explanation. Finally, Keller and Sorace, who looked at semantic factors that affect judgments of German speakers for intransitive verbs with *sein*, *haben* and impersonal passives. This study is interesting since it suggests that a purely semantic account is not appropriate since a syntactic solution might support broader generalisations across languages.

In an interesting chapter on the possibility of explaining some of the gradient acceptability judgments by the effect of processing effort, Francis presents a series of studies and accounts that show how in many cases different studies have demonstrated that the syntactic constraints might not always be the reason for ungrammatical judgments. This is clear where it is possible to change the grammaticality judgment by manipulating the lexical context, or, for instance, in the case of syntactic satiation. This term denotes a phenomenon in which a continuing exposure to ungrammatical structures makes the structure less ungrammatical for speakers. This presents very compelling evidence in favour of the processing accounts. In this chapter, the author also discusses a possible future research direction, i.e. the relation between working memory and acceptability judgments. It is suggested that since the studies on this topic are scarce and their results can be interpreted in different ways, this represents an area that should be addressed in future scholarship. The chapter's final section on cross-linguistic differences might be of special interest to scholars working on languages other than English.

Chapter 5 focuses on an issue which is of great interest to anyone working with grammaticality judgments. Depending on one's theoretical stance, different scholars view the issue of corpus occurrences differently. It is certainly common in linguistics to work on structures that are rare, and therefore, have a low number of occurrences, or even no occurrences, in a corpus. On the one hand, for some scholars, this presents a real issue, since there are no cases that are attested in use. On the other hand, one might claim that in certain languages, with smaller corpora, this will prevent us from exploring structures, that are acceptable to speakers, and yet, rare in use, but also that attested examples are not necessary for exploration of linguistic competence. For further argumentation on why only looking at corpus-attested examples might be problematic for certain structures and languages, see the methodological discussion in Werkmann Horvat (2021). Interestingly, in this chapter, Francis first focuses on how corpus frequencies tend to correlate with grammatical judgments, i.e. that more frequent structures tend to receive higher ratings. In the psycholinguistics literature, the effect of frequency is non-controversial, that is, more frequent items are processed with less effort. This also mirrors onto acceptability judgments, with more frequent items being judged with higher acceptability ratings. Francis notes that this finding has, however, been interpreted differently within different theoretical approaches. An interesting piece of evidence, in support of generative theories, is that rare grammatical forms receive significantly different grammaticality ratings than ungrammatical forms that have been matched for frequency. What is even more, different structures with no or few occurrences in corpus can also receive different (graded) acceptability judgments. Finally, Francis discusses how machine learning might be used in this line of research. Even though some initial studies have been conducted in this field, the results are rather difficult to interpret, and therefore, the author emphasises the need for further studies in this field.

In Chapters 6 and 7 Francis continues with the discussion on the relationship between corpus frequency and acceptability ratings. In both of these chapters, Francis focuses on one specific language phenomenon studied in different ways in different languages, that is, relative clause and preposition phrase extraposition, and resumptive pronouns, respectively. Chapter 6 covers two broad themes. The first theme deals with one of the central terms discussed in the book, form-meaning isomorphism. In one of the principal claims of the book, Francis argues that the way one theorises about form-meaning isomorphism and gradient grammaticality limits the way one can think about grammaticality judgment data. The main point here is that certain theoretical stances naturally lead to certain conclusions, even when the results are ambiguous. The second theme is related to a possible solution to this problem. Francis suggests that additional data sources that supplement grammaticality judgments could help with the interpretation of unclear or ambiguous results. For instance, in the exemplary studies that Francis reviewed in Chapter 6, the initial acceptability data was ambiguous in terms of an appropriate theoretical explanation. However, in all cases

corpus data helped to disambiguate between the possible interpretations. Chapter 7 discusses studies that investigated the use of resumptive pronouns in three languages: Hebrew, Cantonese and English. Through a series of studies presented in this chapter, Francis considers how studies that utilise acceptability judgments data, that might be ambiguous with respect to possible theoretical interpretations, can benefit from using different sources of data to account for their results.

Chapter 8, as the concluding chapter, summarises the findings of the book and emphasises the claims made in the earlier chapters of the book, such as her stance on the issues of form-meaning isomorphism and soft constraints. The main argument Francis puts forward, based on experimental studies, is in favour of grammar gradience, which allows for soft constraints, in addition to hard constraints. She also further emphasises the idea that corpus data and experimental studies can provide valuable evidence in syntactic analyses. The final point concerns methods from neurolinguistics and certain advanced data analytics methods ('big data'). The latter type is fairly controversial since it cannot actually directly show how humans use language. Conversely, methods such as fMRI resemble other behavioural methods that are compatible with current linguistic theories. However, as Francis points out, even complex measures like these are not resistant to some of the previously mentioned issues: the results of these studies are also susceptible to different interpretations if different theoretical stances are assumed. Francis concludes with a discussion about the need to study lesser-known languages.

To conclude, this book is a truly far-reaching, relevant piece of work. In addition to a comprehensive discussion on gradient acceptability judgments, it also presents an overview of current theoretical approaches and possible limitations they might exhibit in interpreting gradient judgments. One of the truly remarkable achievements of this book is the way in which Francis critically discusses the differences between the current theoretical approaches, but at the same time, brings together ideas from different linguistic schools of thought – which is certainly not an easy task to undertake.

## References

- Ambridge, B. & Goldberg, A. 2008. The island status of clausal complements: Evidence in favor of an information structure explanation. *Cognitive Linguistics*, 19(3), 357-389.
- Keller, E., & Sorace, A. 2003. Gradient auxiliary selection and impersonal passivization in German: An experimental investigation. *Journal of Linguistics*, 39(1), 57-108.
- Šimík, R., & Wierzba, M. 2015. The role of givenness, presupposition, and prosody in Czech word order: An experimental study. *Semantics and Pragmatics*, 8, 3-1.
- Ward, G., Sproat, R., & McKoon, G. 1991. A pragmatic analysis of so-called anaphoric islands. *Language*, 67(3), 439-474.
- Werkmann Horvat, A. 2021. *Layers of modality*. Berlin: De Gruyter.