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Phonetic and Phonological Research Sharing Methods

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Phonetic and Phonological Research Sharing Methods

Most linguists affirm the observation that human language is innate; the human mind has a capacity for grammar that is inherent from birth. This notion implies that a singular grammar produces all human languages; therefore, to appropriately understand the scope of the human capacity for grammar, a single model must cohesively describe the various processes of all human languages. If no single model can, then the innate language theory fails. Testing all languages against the same model, however, is a daunting task. Because languages are vastly innumerable and are separated by both culture and geography, no single researcher can review all languages. Cross-linguistic research is the task of the larger linguistic community because it requires the compilation and analysis of data from as many languages as possible. This essay will examine the content and purpose of major books, academic journals, and databases for the fields of phonetics and phonology in an attempt to identify the current linguistic community for research and also discuss the relative progress that has been made in compiling cross-linguistic data in these two linguistic subfields.

Review of Books

Thousands of books have been written within the field of linguistics; however, those focused on language typology and phonetic inventories are most beneficial to the purpose of cross-linguistic data compilation. Those reviewed here represent a small selection of well recognized or distinctly detailed cross-linguistic works.

Classification and Index of the World's Languages

Classification and Index of the World's Languages, by C.F. Voeglin and F.M. Voeglin is a language typology reference. It is a description of languages ordered by typological hierarchy, so broad categories separate into various subgroupings, which list individual languages, which

finally list dialects. Groupings and sub-groupings describe their members, and each language entry discusses speaker population and region, and lists various known dialects. The back of the book also includes a comprehensive index of the languages and dialects. It is not a directly phonetic or phonological work, but is a foundational volume for cross-linguistic organization (Voegelin, & Voegelin, 1976).

Patterns of Sound

Patterns of Sound is I. Maddieson's personal analysis of UPSID (discussed below), which is the phoneme inventory database he was largely responsible for creating. It discusses both the frequency and the distribution of phonemes represented in the database's sampling of languages, pointing to various patterns that may be drawn from the data. The work functions as an initial analysis of UPSID as well as foundational cross-linguistic phonological research.

The Sounds of the World's Languages

The Sounds of the World's Languages, by P. Ladefoged and I. Maddieson, is a descriptive work of all attested speech sounds in human language. It is written as a phonetics reference material, using an analysis of nearly 400 languages to explain the anatomical production of all attested speech sounds. It primarily describes all attested consonants, broken by chapters according to manner of articulation, but also provides a one-chapter overview of vowels. The work is meant as a comprehensive introduction to attested phonetics, and therefore does not classify speech sounds by languages. It contributes to cross-linguistic phonetics research by describing all known phones. (Ladefoged, & Maddieson, 2008)

The World's Major Languages

The World's Major Languages, 2nd ed., edited by B. Comrie, is a collection of linguistic descriptions of various languages. The selection that the book includes attempts to represent

“major” world languages according to factors such as number of speakers and expected readership. These selection criteria make the book potentially subjective, containing languages such as English, Latin, Persian, Chinese, Tagalog, and others, for a total of fifty-two language descriptions. The work is divided into major sections by language family, and further divided into chapters by individual language descriptions. Each chapter previews a given language by reviewing its historical background, phonology, morphology, and syntax, respectively. The work, therefore, compiles language research beyond the fields of phonetics and phonology, but is especially useful for referencing detailed phonological analyses of prominent languages (Comrie, 2009).

Review of Journals

None of the academic journals discussed below are solely focused on developing cross-linguistic theory for phonetics and phonology; however, journals in general are forums for discussion of scientific theory. They are the primary modes of sharing linguistic research, making them essential to developing cross-linguistic discussion.

Journal of Phonetics

The Journal of Phonetics is an academic publication of the Elsevier Linguistics Programme. It functions primarily as a forum for experimental and theoretical phonetic research publication. However, a variety of other themes are also accepted, so long as all content relates directly back to the field of phonetics. PDF versions of the articles are available for public viewing online (Taehong, 2016).

Phonetica

Phonetica is a publication forum for the field of phonetics that was founded in 1957. It focuses on speaker production and language perception, and is therefore a collection of

researcher theories and experiment report articles within the field of phonetics. *Phonetica* belongs to the Karger Medical and Scientific Publications collection of periodicals, and its articles can be accessed by either individual purchase or subscription through Karger's database (Best, 2016).

Language and Speech

Language and Speech is a peer reviewed research periodical published by Sage. Its focus extends beyond the immediate fields of phonetics and phonology to include topics such as language psychology or written language; however, all articles maintain a directed focus in researching speech. Much of the journal's content is, therefore, phonetic or phonological in nature. Article PDFs are available by subscription through the journal's website (Polikoff, 2016).

Journal of the IPA

The *Journal of the International Phonetic Association* is a publication for phonetic and phonological research. It accepts both theoretical publications and articles of practical application to topics such as speech therapy or teaching methods. The journal also emphasizes research that applies the use of the International Phonetic Alphabet (which was originally developed by the International Phonetic Association) to phonetic research; thus, the journal publishes many articles that work to develop the theory of the IPA. Articles are accessible online by subscription (Arvaniti, 2016).

Review of Databases

Databases are the primary method of compiling language data; they are the attempts at uniformly and methodically describing the content of languages. By compiling data into a single location, linguists have a tool to analyze patterns and cross-check theories. Below are some of the most prominent and comprehensive databases useful to phonetic and phonological research.

Ethnologue

Ethnologue.com is an actively updated database for language typology. It is an extensive compilation of brief language entries which give basic typological information, such as estimated speaker populations, language regions, number of dialects, and more. The database also includes over two hundred language maps. Print versions of Ethnologue, currently 19th ed., are also published in a multiple volume format, separated by language geography. Ethnologue is not distinctly useful as a phonetics or phonological database, but serves for quick-reference language typology, including general phonological information (Ethnologue: Languages of the World, 2016).

UPSID

The UCLA Phonological Segment Inventory Database is a software database of the phonemic inventories of 451 languages. It was developed by I. Maddieson in 1984 and has ceased to be updated since, but is still available for download from UCLA. It serves as a sampling of language phonemes to be used both for reference and for cross-linguistic language analysis and generalizations. It is potentially obsolescent, yet it marks some of the earliest compiled phonological research. This essay references UCLA's download webpage for UPSID, but various other online analysis tools exist for the software as well (UCLA phonetics lab software, (n.d.).

UCLA Phonetics Lab Archive

Created as an extension to the university's UPSID software, the UCLA Phonetics Lab Archive is a database of language conversation recordings. The database is an ongoing research project that contains an extensive selection of recording files, with corresponding translations. It

offers one of the most comprehensive samplings of various world language recordings, making it an excellent tool for language reference (Sundara, 2016).

UCLA Phonetics Lab Data. The Lab includes a sub-database of the compiled data of teaching materials used by two researchers, Peter and Jenny Ladefoged, including sample recordings for all attested speech sounds. The recordings may be browsed according to either language or manner of articulation, and all recordings include corresponding transcriptions in the IPA. The sub-database is intended as both a teaching tool and a reference for researchers to observe samples or compare language sounds (Ladefoged, & Ladefoged, n.d.).

(LAPSyD)

The Lyon-Albuquerque Phonological Systems Database is the online, successor database to the earlier UPSID software. It offers public access to entries of over four hundred languages. Each entry contains charts for the full phonemic inventory of a given language's consonants and vowels. The entries also provide notes for unique vowel and consonant features and phonology, as well as the languages allowable syllable structures. The information provided by LAPSyD contains perhaps the most detailed entries of any collection of phonological language data available, making it an excellent reference tool (Maddieson, Flavier, Marsico, & Pellegrino, 2014-2016).

PHOIBLE

PHOIBLE is a collection of phonetic inventories for over 1500 languages. Each inventory gives a full listing of consonants and vowels for a given language, which can be viewed in either list or table format. All sound inventories are consistently transcribed in IPA. The database is a compilation of material gathered from multiple research communities such as the UCLA data discussed above, other projects not referenced in this essay, and PHOIBLE's

own researchers; each inventory entry includes the label for its respective provider. PHOIBLE is perhaps the most comprehensive collection of language inventories, making it a significant contribution to cross-linguistic phonological data (Moran, McCloy, & Wright, 2014).

Analysis and Implications

The material available for examination in databases is exceptional, but is limited by a few challenges. In the first place, the databases have extensive room for growth. For example, PHOIBLE's collection of 1500 language inventories is certainly an exceptional sampling of the roughly 7000 total languages, but the other 5500 are still a staggering remainder. The challenge of continuing the development of database material is that previous data becomes outdated. Languages are living, and many of the phonetic inventories already collected are based on decades-old data. Upkeep for database material will only grow more difficult as the collections expand. In a more positive light, however, samplings as large as PHOIBLE's 1500 do represent the overwhelming majority of speakers, with very low populations for those languages not represented. Furthermore, the collection is a large enough percentage of the total for statistical average calculations. The number also provides sufficient data to analyze characteristics of language families. It must also be noted that outdated inventories remain useful. Even if a given language evolves, as long as the old data was accurate, it still represents a once-living language, making it acceptable data for cross-linguistic study. Current phonetic and phonological databases do provide ample material for drawing reliable cross-linguistic inferences.

If sufficient data exists for cross-linguistic analysis, then it is the purpose of books and academic journals to promote analysis of the data. This essay has not attempted to describe whether linguists have been successful at analyzing the data, rather it has simply discussed the medium for sharing analyses. No single journal is currently focused solely on cross-linguistic

analyses; however, there is an abundant community for the publication and discussion of research. Even considering the community for the linguistic branches of phonetics and phonology in isolation, three of the four academic journals discussed in this essay are publications devoted to these subfields. The various focused academic publications demonstrate that linguistic research has branched enough to make directed research possible. There is certainly an excellent medium for productive cross-linguistic discussion.

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