Preface

Even forty years after the publication of *A Dictionary of American Sign Language* by William Stokoe and colleagues, years that have produced a vast literature on the grammatical structure, sociolinguistics, acquisition, and neuropsychological processing of the natural languages of the deaf, it still seems hard for many people, linguists and nonlinguists alike, to wrap their heads around the notion that, yes, sign languages are indeed real languages, just as worthy of study, admiration, and preservation as Southern Min, Hakka, Amis, Thao, or any other spoken language. Phonology and syntax students do not get sign language problem sets as homework. Linguists argue over language universals without considering that phonology can involve the hands and syntax can involve iconic predicates. In fact, sign language research has little or no impact on spoken language research at all, as if it were stuck in its own private ghetto, fit for brief mentions in intro classes and nowhere else. Even in linguistics journals, virtually every sign language paper is obliged to start out with disclaimers like "Sign languages are not all alike; they are not equivalent to mime; they are not parasitic on spoken languages; they have grammars just as complex and expressive as those of spoken languages; they show the same acquisition patterns and are processed in the same parts of the brain as spoken languages," and so on, the authors sadly aware that a certain proportion of their readership will not know any more about sign languages than Leonard Bloomfield did in 1933 (see p.39f. of his book for some misunderstandings that have yet to die). Yet the fact remains that humans are built to sign as much as speak, and as scientists of language we are obliged to find out how this can be and what it means about humanness.

Ignorance about sign language outside of the ivory tower is even worse, of course, though it varies by country. In the United States, American Sign Language (ASL) seems to be accepted as a real language by the general public: its status is portrayed positively in the media (e.g., the movies *Children of a Lesser God* and *Mr. Holland's Opus*), and many universities allow ASL classes to fulfill foreign language requirements. Also generally understood in the U.S. (though not always fully respected) is the notion that with language comes culture, and Deaf culture (the capitalization indicating membership in the signing community) is seen by many as a natural part of American multiculturalism. Other places are even more enlightened, where educators have discovered that when you teach deaf kids in a language they actually know, rather than insisting on teaching them in a language they cannot hear well or in some artificial signed pidgin based on spoken language, they pick up math, learn history, and even read the dominant (spoken) language a lot better.

The situation of the language of the Deaf in Taiwan seems to be both worse than some other countries and yet much better than it used to be. The native sign language here is Taiwan Sign Language (TSL; *Zìrán Shǒuyǔ* 自然手語 'natural sign language' in Mandarin, less often called *Taiwanese Sign Language*).[1] It is not related to Chinese, nor is it even closely related to Chinese Sign Language, its primary sources being two varieties of Japanese Sign Language. Naturally, TSL has its own independent grammar, unlike the cringingly misnamed "grammatical sign language" (*Wénfǎ Shǒuyǔ* 文法手語), more properly called Signed Chinese, which is the artificial gestural system promulgated by well-meaning people unfamiliar with the long history of failure associated with such systems.[2] Respect for TSL and Deafness in Taiwan seems to be growing steadily. True, sign language interpreters only began appearing on TV here a couple decades after they first appeared in the US, but at least they are here now. There is still no local equivalent of Stokoe's 40-year-old ASL dictionary, but there are proliferating smaller compilations of signs (though some of these confuse TSL with Signed Chinese, and may be stocked in the "Hobby" section of bookstores rather than in "Language"). Parents of deaf children still put pressure on deaf schools not to teach in TSL, but at least local cognitive scientists and some educators are waking up to the fact that this may not be the wisest policy in the long run. Most importantly, the Deaf themselves are teaching classes, publishing books, and participating in international forums on sign language and Deafness. There are thus a lot of positive signs, and we intend the publication of this special issue of *Language and Linguistics* to be another one.

This issue collects papers from the world's first International Symposium on Taiwan Sign Language Linguistics, held at National Chung Cheng University on March 1-2, 2003. This symposium, co-hosted by the Graduate Institute of Linguistics, the College of Humanities, and the Center for Research in Cognitive Science at National Chung Cheng University, and sponsored by the National Science Council and Ministry of Education, was held to fulfill a promise made in an NSC research project administered by James Tai (with co-directors Jane Tsay and Oscal Chen, and collaborators Jung-hsing Chang and James Myers). *A Study of Taiwan Sign Language: Phonology, Morphology, Syntax and Digital Graphic Dictionary* (NSC 90-2411-H-194-025, NSC 91-2411-H-194-030, NSC 92-2411-H-194-007, NSC 93-2411-H-194-001) is a four-year

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[1] For some reason, *Taiwan* is replacing *Taiwanese* as a modifier in English (e.g., *Taiwan politics*), while this hasn't happened with *Japanese* or *Chinese*; we leave this puzzle to the interested reader.

[2] See, for example, Sam Supalla & Cecile McKee (2002), The role of Manual Coded English in language development of deaf children, in: Meier, Cormier, & Quinto-Pozos, eds., *Modality and Structure in Signed and Spoken Languages*, pp.143-165, Cambridge University Press.

project that began in 2001 with the ambitious goal of providing the most thorough description of TSL to date, in the form of a reference grammar (still in preparation), an on-line Web dictionary (to be launched summer of 2005), and linguistic and psycholinguistic research comparing TSL with Signed Chinese.

The International Symposium on Taiwan Sign Language Linguistics brought together our own project members and some of the world's foremost experts on sign languages and TSL, including Scott Liddell of Gallaudet University (the 140-year-old Deaf university where all subjects are taught in ASL); his student Wayne Smith, author of the first dissertation on TSL; Jean Ann, author of the second dissertation on TSL; Susan Duncan, who has conducted research all across the world on the role of gesture in sign languages; and Gladys Tang, an expert on Hong Kong Sign Language, who participated in the general discussion. Ovid Tzeng, who has long had an interest in sign language from both neurological and pedagogical points of view, gave the opening remarks.

The keynote speech was given by Scott Liddell. His talk described the radical new view of sign language grammar presented in his 2003 book *Grammar, Gesture, and Meaning in American Sign Language* (Cambridge University Press), but unfortunately his paper could not be included in this special issue.

All of the other talks from the symposium do appear in this volume. Wayne Smith's paper provides a brief but very thorough overview of the history of both TSL and research on it. As his paper makes clear, he himself has played a major role in this history over the past few decades. Without his tireless devotion to TSL and Deaf society in Taiwan, our own project would have been inconceivable.

Jean Ann's paper continues her research into the effects of the physics of signing on TSL phonology (i.e., the mental machinery handling what is sometimes called the sensorimotor system of language). As she emphasizes, her work fits in with the ever-growing interest of "mainstream phonologists" in phonetically-motivated explanations. Readers unfamiliar with the long struggle to convince linguists that sign languages are "real languages" may not recognize how revolutionary Ann's approach really is: she simply assumes, based on decades of research, that sign phonology is fundamentally a formal system, and then goes on from there to explore where some of its formal structure comes from.

The paper by Jung-hsing Chang, Shiou-fen Su, and James Tai has a similarly revolutionary character. Like Liddell, they demonstrate that sign language syntax, though genuinely grammar and not mere "mime," is nevertheless highly iconic. This iconicity, however, is rather abstract and may take unexpected forms, providing new

insights not only into sign language, but human cognition more generally: signing takes the often obscure cognitive machinery underlying human language and makes it visible in space.

Susan Duncan also takes a novel approach to the nature of grammar in sign language. Building on the work of David McNeill, who has challenged basic assumptions in linguistics with evidence that manual and facial gestures are a fundamental part of the human language system and not "paralinguistic," she then proceeds to challenge basic assumptions in sign language research as well: even signers may use gestures, serially or in parallel with their words and sentences. In a sense, Liddell's book, the paper by Chang et al., and the paper by Duncan present three different approaches to the same problem: the relation between grammar and "nongrammar" in sign language (with Ann's paper exploring a similar problem in the domain of phonology).

Duncan considers her work more psychological than linguistic, and the two other papers in this issue continue in this vein. The paper by James Myers, Hsin-hsien Lee, and Jane Tsay describes an experiment on TSL phonology, with their goals being not only to contribute sign language data to a literature devoted almost exclusively to spoken language, but also to show that only sign language data can answer certain key questions. In fact, a case can be made that all phonologists should try their hand at sign language, not only because much more is known about hands and eyes than about tongues and ears, but also because the only way to prove that such-and-such a phonological principle is truly mental and not merely physical is to vary the "physical" variable while holding the "mental" constant.

Finally, Yi-Hsuan Chiu, Jen-Chuen Hsieh, Wen-Jui Kuo, Daisy Hung, and Ovid Tzeng describe part of the work they have been carrying out on the neurological underpinnings of TSL. In addition to confirming that signed and spoken languages are processed in the same parts of the brain, their most dramatic discovery is evidence for deep effects of iconicity on language processing: the location in the brain where names for concrete objects are processed seems to depend partly on the nature of the iconic motivation for these names. If this conclusion holds up in future work, it would imply that iconicity plays an active role in language use, meshing with the work by Liddell, Chang et al., and Duncan.

Like the symposium itself, the collection in this special issue cannot hope to cover the full range of research topics that TSL offers to linguists. Smith lists some of the open questions, and regular readers of *Language and Linguistics* will also notice the absence here of topics that often appear in this journal, including formal syntax, formal phonology, and historical reconstruction. Interested readers will find some work of this

sort listed in Smith's bibliography, but most of it has yet to be written. Consider this an invitation.

Before signing off, we would like to thank Scott Liddell for his support of the symposium and our project, which included giving advice on our research and joining us in visits to deaf schools; the anonymous and non-anonymous reviewers, both in Taiwan and abroad; *Language and Linguistics* editor-in-Chief Dah-an Ho for offering these papers such a wonderful forum, and for handling the reviews for the first guest editor's own submission; and the many TSL signers who have contributed their time and insights to our project, especially Ku Yu-shan, who, in addition to being an important figure in recent TSL history (as Smith's paper reveals), led our rousing symposium-ending TSL sign-along and stars in our TSL Web dictionary in the illustrations for the papers by Chang et al. and Myers et al.

James Myers
James Tai
January 3, 2005