## INTRODUCTION

The essays in this volume constitute a selection of the papers presented at the International Colloquium on Verbal and Signed Languages held in Rome in October 2004. The purpose of the colloquium was to foster a better comparative understanding of the nature and properties of verbal and signed languages through a direct confrontation between specialists working in these two fields of inquiry, thereby promoting the definition of shared constructs and methodologies. Only on such common grounds the investigation of signed languages can provide new insights for the understanding of verbal languages, and viceversa, and thus lead to substantial advancements in our understanding of the semiotic and structural properties of natural languages.

We conceived the idea of such a comparison at a crucial time in the history of sign linguistics. In the first phase of sign linguistics history, from Stokoe's (1960) seminal work on American Sign Language through the 80's, when many signed languages of the world began to be investigated (see for example Stokoe & Volterra, 1985), these languages were studied with an overall "assimilationist" approach. With few exceptions (e.g. De Matteo 1977, Mandel 1977, Boyes Braem 1981), most work in the field aimed at highlighting the profound similarities between verbal and signed languages, backgrounding the differences (e.g. Klima & Bellugi 1979, Wilbur 1979, Liddell 1980, Padden 1988). This work provided most valuable information, and profoundly changed our views of signed languages, leading to their recognition as full-fledged human language systems. Yet, as noted, important differences between signed and verbal languages remained fairly unexplored, or underestimated.

Since the 90's a shift in perspective has gradually been taking place, and a body of research highlighting the peculiarities of signed languages has began to emerge. From different viewpoints and theoretical perspectives, several researchers have directly or indirectly questioned earlier accounts of the architecture of signed languages, and have proposed more or less substantial revisions of the knowledge previously acquired (see, among others, Wilbur 1990, Brennan 1992, Engberg-Pedersen 1993, Uyechi 1994, Armstrong, Stokoe & Wilcox 1995, Hulst & Mills 1996, Brentari 1998, Cuxac 2000, Pizzuto & Volterra 2000, Meier 2002, Meier, Cormier & Quinto-Pozos 2002, Emmorey 2003, Liddell 2003).

It must further be noted that while sign linguistics has undoubtedly gained wide acceptance, at a global level the findings from the sign language field have had thus far little or no impact on the linguistics of verbal languages. The constructs and methodologies used in general linguistics still remain, for the most, profoundly rooted in the knowledge achieved via explorations of verbal languages. Very little attention has been devoted to ascertain how much of this knowledge needs to be refined or revised taking fully into account what is known on signed languages, and on the extent to which their architecture is, or is not, comparable to that of verbal languages.

In this frame, we aimed at stimulating a debate around topics of general theoretical and methodological interest, such as the linearity and arbitrariness principles, the definition of units and levels of analysis, the expression of grammatical categories and the representation of events, semantic relations and cohesion mechanisms. We tried as much as possible to enrich the debate with different theoretical perspectives, hoping that this could favor the definition of shared analytic categories and methodologies beyond unavoidable constraints stemming from each contributor's theoretical framework. The chapters in this volume are the results of the efforts that each author made towards achieving this end. The book has a strong cross-linguistic component: relevant exemplifications are drawn from a wide variety of signed and verbal languages, highlighting significant similarities and differences within and across language modalities.

The volume is organized in four parts. In the first part, the two related questions of iconicity vs. arbitrariness and linearity vs. simultaneity of the signifiers are addressed.

Christian Cuxac and Marie-Anne Sallandre, drawing on extensive evidence on the crucial role that modality-specific, highly iconic structures play in the lexicon and grammar of signed languages (Cuxac 2000), identify and describe three forms of iconicity detectable in French Sign Language: imagic, diagrammatic and degenerated iconicity. They interestingly show that even the most imagic forms of iconicity are organized in macro-structures articulated themselves in compositional morphemic elements.

Paola Pietrandrea and Tommaso Russo compare the phenomena of iconicity characterizing verbal and signed languages. Their study highlights that while imagic iconicity is pervasive in signed languages, the iconicity detectable in verbal languages is to be ascribed primarily to the category of diagrams. The authors account for this difference by contrasting the simultaneous nature of visuo-gestural modality with the linear nature of phono-acoustic modality.

Both studies of the first part reconsider basic questions concerning the distribution of iconic vs. arbitrary features in human natural languages, and argue that the iconicity of signed languages does not contradict the Saussurean principle of Radical Arbitrariness. This principle can thus be motivated on more solid grounds for both signed and verbal languages.

The four studies of the second part focus on units and levels of analysis.

Diane Brentari asks to what extent iconicity influences the organization of signed languages in levels of structures, most notably whether it does, or does not compromise the existence of an autonomous phonological level, and to what extent verbal and signed languages show the same levels of structures and dimensions of variations. Drawing on cross-linguistic data on American, Israeli, Hong Kong and Swiss-German signed languages, the results of her work highlight that the organizational principles of phonological structure are ruled by arbitrariness, and that it is possible to detect in sign an autonomous level of prosodic structure comparable to that of verbal languages.

Claire Blanche-Benveniste's chapter also focuses on structural similarities between verbal and signed languages, but with a shift in perspective. Blanche-Benveniste articulates the proposal that the units of analysis identifiable in the description of signed languages could be more appropriately compared to those elaborated in the study of spontaneous spoken languages, rather than to units that are proper of languages in their written form. In this perspective, the nature of signed languages as radically face-to-face languages is highlighted and used to explain many of their structural properties.

Sherman Wilcox's paper examines how the gestural nature of signed languages comes to be organized, and undergoes grammaticalization processes that appear to be unique of the modality. Presenting data from American, Catalan, French and Italian signed languages, Wilcox notes that gesture may enter the signed linguistic system via two routes. Manual gestures may develop into lexical signs and further into grammatical morphemes. Expressive gestures evolve into prosodic phenomena (such as intensification and weakening, acceleration and slackening of the movement) and, in some cases, grammatical morphemes. This latter unusual process of grammaticalization suggests that the traditional view regarding levels of analysis as being rigidly, hierarchically organized does not hold for signed languages. In these languages in fact, prosody cannot be regarded as a level rigidly distinct from the lexicon and morphology, being a source of grammatical morphology.

Annarita Puglielli and Mara Frascarelli examine linguistic phenomena that in spoken languages involve the interface between syntax, on the one hand, and phonology, semantics and pragmatics on the other. Moving from a generative framework, they analyze the conditions that

regulate Topic and Focus operators and their intonational marking in spoken languages, and ask whether comparable structural features can be identified in signed languages. Drawing primarily on data from ASL, they find that this is indeed the case: specific facial expressions act as formal correlates of intonation and signal different discourse categories encoded in a syntactic hierarchy. They stress the value of comparative analysis of this kind for clarifying the relation between structure and output.

The three chapters of the third part deal with questions of grammatical and lexical semantics. Both Terry Janzen's and Raffaele Simone's chapters address issues related to the universality vs. modality- dependency of grammatical categories. Phyllis Wilcox's paper examines the dynamics of metaphors in signed vs. verbal languages.

Terry Janzen discusses a full range of grammatical categories whose expression is often complicated, and somehow obscured, by the higher degree of fusion and by the simultaneous articulation of multiple morphemic structures engendered by the visuo-gestural modality of signed languages. Janzen also illustrates the peculiar grammatical complexity of signed languages by studying in detail two grammatical categories in American Signed Language: topic marking (and its grammaticalization), and perspective marking.

Raffele Simone singles out and discusses a set of grammatical features which can be considered crucial to language as such, irrespective of the modality of expression, within the theoretical framework of a "Construction and Categories Grammar" (Simone 2006). He deals in particular with the possibility of creating constructional entities (like nouns) and with the tools for separating voices in the utterance. A comparison of the signed languages and the verbal languages data leads the author to conclude that several crucial grammatical features of each type of code drastically depend on the expression it uses, and that, in particular, verbal languages appear to have a more restricted set of TAM features.

Phyllis Wilcox examines how metaphors in the domains of 'thought' and 'communication' are expressed in signed as compared to verbal languages. Her crosslinguistic data on American, British, Catalan, French, Italian and Japanese signed languages highlight that some metaphoric mappings found across these languages, such as IDEAS ARE OBJECTS, or MIND IS A CONTAINER, are very similar to those identified in verbal languages, suggesting modality-independent semantic regularities and related conceptual processes. However, other metaphors such as IDEAS ARE LIQUIDS appear to be language-specific and uniquely cultural-driven. Relevant differences are also noted between metaphoric mappings more widely spread across signed languages but not found in a verbal language such as English, suggesting that modality-specific factors may be at work.

The two chapters of the fourth part examine mechanisms of cohesion in signed and verbal languages.

Elena Pizzuto overviews deictic-anaphoric reference devices in signed languages, highlighting modality-specific features. Focusing on person reference operations she addresses a question that is still hotly debated in the sign language literature, namely to what extent the contiguity between the linguistic and the non-linguistic space influences the linguistic vs. non-linguistic (or 'gestural', as often labeled) properties of pronominal reference in sign. The author proposes that a clear distinction between non-linguistic and linguistic deixis and anaphora can be drawn on the grounds of receptive features proper of signed discourse, most notably the receiver's gaze patterns. Pizzuto's perspective highlights that signed languages' structural features cannot be adequately described without considering face-to-face interaction as an "unavoidable, constant condition for any kind of signed communication to take place".

Edoardo Lombardi Vallauri's chapter focuses on the relation between deixis and anaphora in verbal languages, questioning the legitimacy of a sharp differentiation between these two basic

referential and text cohesion devices. A thorough analysis of several linguistic parameters that have been proposed to draw the boundary between deixis and anaphora leads the author to conclude that a clear-cut distinction cannot be drawn, and that it would be more appropriate to consider anaphora as a special kind of deixis. Lombardi Vallauri also suggests that in the analysis of text cohesion devices in verbal languages it would be more fruitful to draw a distinction between gestural and symbolic mechanisms of reference. However, the data on signed languages highlight that this distinction also needs to be refined if we wish to apply it across signed and verbal languages.

One indication stemming from these two chapters is that a more comprehensive, modality-independent understanding of deixis and anaphora demands a broad semiotic perspective, and a thorough consideration of the common indexical features of such text cohesion devices.

On the whole, all chapters highlight the role that modality and the speech / sign situation play in linguistic structure, and provide different indications towards defining shared constructs and methodologies that can lead to a more articulate understanding of modality-specific vs. modality-independent features of human natural languages.

It is unquestionable that both signed and verbal languages possess complex structures, and that many crucial structural features identified in signed languages can be described resorting to constructs that are grounded in verbal languages research. Yet it is also evident that in many cases the structural categories elaborated on the basis of the analysis of verbal languages do not perfectly fit signed languages. To cite just one example, this appears to be true for the highly iconic structures and the multilinear structuring of linguistic information described, from different perspectives, by several contributors to the present volume. We cannot disregard the possibility that the limitations of verbal language-based categories may be due to the direct or indirect influence that theories of grammar elaborated primarily on written (rather than oral) language have had on much past and current research (see Givon 2003: 74 & ff., among others).

In any event, it is clear in our view that, in order to account not only for languages that are organized primarily (albeit not exclusively) in a linear fashion, but also for languages that exhibit a substantial amount of simultaneously specified, multilinear structural features, and which are only employed in face-to-face situations, we need to rethink and refine our analytic and descriptive categories. Towards this end, it may be profitable for both signed and verbal languages specialists to resort more systematically than it is usually done to the knowledge acquired, over the last thirty-forty years, in the study and modeling of oral (as distinguished from written) language (e.g. Pontecorvo & Blanche-Benveniste 1993, Biber et al 1999). As noted by some authors (e.g. Pizzuto, Rossini & Russo 2006: 3) it is surprising to find that appropriate comparisons between corpora of signed language and corpora of oral language still need to be developed. It is also likely that future research will need to refer more systematically to the findings arising from modern studies on coverbal gestures in spoken language (e.g., Kendon 2004, McNeill 2005), a line of work already suggested or actively undertaken by some sign language researchers (see for example Brennan 1992, Liddell, 2003).

From a broader standpoint, the following can be noted. The simultaneous or multilinear nature of signed languages signifiers, and the relevant iconic features they exhibit, endow these languages with the power of conveying more fine-grained lexical and grammatical meanings. This sheds a new light on the semantic studies of verbal languages, raising the question of how these can by-pass the constraints imposed by a primarily linear organization of information, and yet succeed in expressing comparable meanings.

In agreement with what observed by Cuxac (2001 -- see also Cuxac and Sallandre in this volume), this question, and the answers it demands, may well open novel, fascinating

perspectives for a more appropriate modeling of human linguistic abilities. Fully reversing the "assimilationist" view mentioned earlier, it would not be implausible to hypothesize that signed languages mirror more closely than verbal languages the prototypical features and properties of face-to-face linguistic communication. Due precisely to their fully articulated gestural substance, signed languages could thus be employed as "analyzers of human language faculty".

However, in order to develop viable research lines on the grounds of these observations, much research is still needed to reach a broader consensus on what are the units and levels of analysis in signed languages, and on the extent to which comparable units and levels can, or cannot, be identified across signed and verbal languages.

We hope that the different perspectives provided in this volume can promote a fruitful debate over crucial issues that still remain to be fully addressed in current research, leading to a cross-fertilization of ideas which, in our view, can enrich both the signed and the verbal language fields. Our volume is intended as a first step in this direction.

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