

References

- Contreras, H., 1966. Review of R. Valin: *La méthode comparative en linguistique historique et en psychomécanique du langage*. *Language* 42, 106–8.
- Guillaume, G., 1964. *Langage et science du langage*. Québec and Paris.
- Sommerstein, A.H., 1972. On the so-called definite article in English. *Linguist. Inq.* 3, 197–209.
- Twaddell, W.F., 1935. On defining the phoneme. *Language Monograph* No. 16. Reprinted in: M. Joos (ed.), *Readings in linguistics I*. Chicago: University of Chicago Press (4th ed., 1966), 55–80.
- Valin, R., 1953. *Petite introduction à la psychomécanique du langage*. Québec: Presses Universitaires Laval.

Bertil Malmberg, *Phonétique générale et romane: études en allemand, anglais, espagnol et français*. *Janua Linguarum, Series Maior*, 42. Mouton & Co., The Hague, 1971. 478 pp. Dfl. 115.000

Reviewed by E. Pulgram, *Romance Languages*, Univ. of Michigan, Ann Arbor, U.S.A.

The forty-five essays assembled in this volume were written between 1941 and 1967, a quarter-century that covers most of Malmberg's activity to date. Twenty-seven papers deal with general, and eighteen with Romance linguistics, ranging in length from three to forty-two pages.

Malmberg belongs entirely to the Saussure–Trubetzkoy–Sapir–Bloomfield–Jakobson–Martinet school of linguistics, that is, to classical structural linguistics, both synchronic and diachronic; but it must be remarked (and I shall have occasion to return to this point) that he is European more than American in that he avoids the strong behavioristic and positivistic leanings of the post-Bloomfieldians, though this does not, as indeed it did not need to, detract from the scientific integrity of his work. Post-structural (generative, transformational) directions are completely left out of account, to the point of scarcely being criticized even negatively; there is in this book but one single explicit reference to “les chomskyens – dernière branche sur l'arbre de la linguistique...” (296), in an article of 1966. To be sure, contributions dealing with phonological matters offer less occasion for taking a stand on a theory of syntactic transformations; but if Malmberg appears not to take cognizance of generative phonology either, one cannot but infer a belief on his part that one need not discard or replace structural phonology – a belief amply borne out by the 478 pages of this book, to say nothing of the thousands of pages of writings by many authors. All the more is the pity that all this work is neglected by an entire generation of linguists, too lazy or too indoctrinated to care.

The term *phonétique* in this book refers to both phonetics and phonemics, to what is often called phonology, the study of the sounds of languages; *phonologie* on the other hand, mostly means phonemics. The view that phonetics (in the narrower sense of the term) is not part of linguistics, is laid to a deserved rest in the earliest of the papers, of 1941, and of course pervades all subsequent contributions. That phonetics occupies itself with the analysis of the physical properties does not change the fact that it investigates, not just any odd noise, but noises that serve as

speech sounds. Indeed the phonetic examination must be preceded by the classification of the sound, by its placement into the phonemic system of a specific language. "Por consiguiente, la descripción lingüística – sea fonética u otra – no puede partir de la SUBSTANCIA: debe partir de la FORMA. La DIRECCIÓN que debe seguir el investigador va de la FORMA A LA SUBSTANCIA, NO AL REVÉS" (184). It is therefore brought out again and again in these essays that the linguist cannot turn to experimental (kymographic, palatographic, spectrographic, etc.) evidence in order to find out the 'truth' about speech sounds, though of course experiments may identify the physical properties of the signal which the hearer receives. In other words, phonetics must concern itself with both acoustic reality and auditory perception, with the objective and the subjective, with material and function, with *parole* and *langue*. Now the perceptual parameter verges on the vaguely (and to structuralists often uncomfortably) psychological in that we not only hear but also interpret the perceived signal, classify it, indeed at times are conditioned to mishear it; our brain does not merely record, it computes. (I shall return to this subject later, in a different context.) In a climate of behaviorism and positivism *à outrance*, under which structuralism grew and flourished, such mentalistic directions were prohibited, indeed tabooed. But it is to the credit of some structuralists, Malmberg among them, that they did not entirely succumb to pure mechanism. And they are the ones who subsequently did not feel the terrible urge to go to the other extreme and to denounce empiricism and the facts, and to erect a rationalist theory.

Taxonomy is implied in classical phonology; but it has been much maligned of late. Yet, whether one writes /g/, or in the manner of generative phonology

–	vocalic
+	consonantal
–	strident
+	compact
+	grave
–	continuous
–	nasal
–	tense
–	diffuse
–	flat
+	voiced

either statement refers, not just to a single [g]-event but to all [g]'s which, in a given language, can be placed in a class /g/, which is in opposition to all other such classes in that language. To ask whether or not such classes exist in reality is like asking whether or not 'tree', apart from 'tree₁, tree₂...n' exists: 'tree' is in fact 'tree-ness', just as /g/ is /g/-ness, an abstraction which does not exist as a thing but as a quality abstracted from all members of the class 'tree' or /g/. Hence "le principe de l'analyse phonématique est de reduire le nombre illimité de variants [i.e., events] à un nombre limité d'invariants [i.e., classes of events] – de phonèmes, prosodèmes, etc. – ayant une fonction distinctive" (312). And since classes are determined by the criteria for membership one chooses, intelligently and for a useful purpose, pho-

nemes as classes derive their membership regulations from the system in which they function distinctively. If Trubetzkoy thought that the phoneme is not an abstraction because no criteria are available according to which abstraction and class boundaries could be achieved, Malmberg answers him: "Meines Erachtens ist der Grundsatz [i.e., the criteria] in diesem Falle das System. Der Grad der Abstraktion, der in jedem Falle nötig ist, das heisst die Anzahl der relevanten Charaktere, ist gerade vom Lautsystem abhängig" (13).

Of course, the generative statement provides specific information on the acoustic reality that characterizes, and is shared by, all [g]'s; and indeed it will, if sufficiently refined, omit all redundant properties that are not necessary to establish the distinctiveness of that phoneme from all the other phonemes in a given linguistic system. As a result, in a language where [g] and [k] belong to the same class, the distinctive feature pair voiced:voiceless (and possibly other pairs) forms no part of the generative statement. Nor does it, of course, in the structural statement. This Malmberg said as early as 1941, before the Jakobsonian theory of distinctive features was elaborated in detail: "Das Phonem *d* z.B. ist in einer gegebenen Sprache das Zusammentreffen aller Eigenschaften, die in der betreffenden Sprache für jedes mögliche *d*, das objectiv realisiert wird, gemeinsam sind, ein Typus mit gerade so vielen Eigenschaften, die notwendig sind, um es von allen anderen Phonemen der Sprache zu unterscheiden, aber auch nur so vielen... So für mich ist das Phonem notwendigerweise eine Abstraktion" (13). (This is directed against Trubetzkoy, who does not acknowledge the abstract character of the phoneme.) Thus it may happen that /g/ stands for both [g] and [k], as could indeed /k/, or, for that matter, /*/ or any other symbol – as long as the total number of symbols matches the number of phonemes in the language. (The use of phonetic transcription symbols in phonemics is a matter of convenience and habit, but fundamentally irrelevant.) If generative phonology identifies each class by its acoustic traits (distinctive features), structuralism often uses articulatory criteria – though it may of course employ acoustic ones also. Indeed Malmberg repeatedly stresses a preference for the latter (as will emerge below). In any event, classification and taxonomy are inevitable in linguistic – and in any other scientific – analysis: they are of the essence in speech, and indeed in our view of the world, which is predicated upon the recognition of classes rather than upon a chaotic jumble of unclassified things and events. Else how could a speaker recognize /s/ as the phoneme representing a morpheme that signals plurality in a great many English nouns, or how could he use the term 'cow' for all animals he recognizes as such rather than just for the one he sees here and now? Malmberg says this: "C'est un fait élémentaire de psychologie générale que tout acte de perception et de compréhension suppose nécessairement une faculté d'abstraction, de classement ou de groupement; ce qui implique à son tour la possibilité de choisir, parmi le nombre infini de qualités concrètes, celles qui servent de base à la classification et de faire abstraction des autres. Le fait même de percevoir et de comprendre un chien comme un chien – qu'il soit grand ou petit, blanc ou noir – signifie que celui qui interprète l'objet comme un chien sait faire abstraction de toutes les qualités (couleur, longueur de la queue et des oreilles, etc.) qui ne font pas partie de la définition de cette espèce" (54). Or again: "Une des tâches de toute science est celle d'établir des catégories. La classification n'est pas seulement une question

pratique, conditionnée par le besoin d'ordre et de clarté. Elle s'impose par la nécessité d'analyse et de définition des notions fondamentales avec lesquelles la science en question a à opérer. Un bon classement est la meilleure preuve d'une bonne analyse... Je fais pourtant observer qu'une classification n'est pas la même chose qu'un système. En classant les articulations ou les phénomènes acoustiques de la parole, je fais l'inventaire des possibilités utilisées par l'homme et les groupes dans des catégories selon des critères pertinents" (70–71).

From everything said so far, the relationship between phonetics and phonemics is clear enough: "La dite phonologie [i.e., phonemics] et la phonétique instrumentale ne s'opposent donc plus. Elles se conditionnent" (209). And again in the same year, 1962: "The fruitless disputes between 'phoneticians' and 'phonemicists' ('phonologists') now belong to history. The echo of a few isolated voices of 'anti-phonemicists' has only museal interest. No serious phonetician argues with them any more" (233). Nor need they be resurrected, under whatever name.

To this I should like to add, however, that not only /g/ but also [g] may represent a class, the latter a sub-class of the former. That is to say, if one finds that /g/ appears in the shape of, say, [g^h], [g̃], and [ĝ], the last three, usually called allophones and occurring predictably under statable circumstances, do not really refer to events but to sub-classes of events. I have therefore suggested (in *General Linguistics* 5, 72–74, 1961) that they are more accurately called allophonemes and belong to *langue* rather than *parole* since they do not transcribe events. The term has recently been used again – re-invented, as it were, by linguists who did not know my earlier article.

I noted in passing that Malmberg stresses his preference for defining phonemes in acoustic rather than articulatory terms, and that a structural analysis does not exclude such a view. (Glossematics appears to be the only type of linguistics that does not operate with acoustic properties of sounds, that is, with distinctive features. Generative phonology, on the other hand, operates with them exclusively, though of course, as was just shown, it has no priority on the method; indeed many recent generative phonologists seem to have forgotten that the terms they use for distinctive features have their source in spectrograms, in particular in the relative position of the spectrographic formants – though this forgetfulness is understandable since the terms 'flat', 'grave', 'diffuse', etc. are largely metaphorical or impressionistic rather than drawn from the domain of experimental acoustics.) In this book, Malmberg's belief in the superiority of acoustic over articulatory definition emerges especially in the two polemic essays against Forchhammer (67–108, and 109–114), who at one time attempted to set up a *Weltlautsystem*, that is, a phonological system embracing all languages. (This notion, Malmberg says, is a *contradictio in adiecto* since it does not satisfy the definition of a system as "un ensemble cohérent d'unités solidaires, regardées sous l'aspect de leur rapports mutuels" (67).) An all-embracing diasystem of such dimensions is thinkable, I should say, but it is of no practical value or even theoretical interest, and teaches nothing about language or languages; it is a typical example of a class which, like any class based upon a set of criteria, may be constructed, but which, since its criteria are chosen without any very sensible purpose and without a defensible reason, is useless or silly, though of course it cannot be 'wrong'. Now Forchhammer builds his phono-

logical system, together with a *Weltalphabet*, upon purely articulatory criteria, and in fact declares the acoustic basis of the classification of sounds to be scientifically impossible (in *Zeitschrift für Phonetik* 2, 65–82, 1948). Malmberg concludes at the end of his long dissenting essay: “Je crois pourtant que les ‘sons’ du langage se laissent grouper au moins en types articulatoires et en types acoustiques dont ceux-ci sont, à mon avis, les plus nettement différenciés et les plus stables” (108). Similarly he says, ten years later: “...me parece claro que la identidad de un elemento fonético está en su estructuración acústica, no en la manera de producirlo” (191). And again in 1966, in the most recent article in the general phonetics part of the book: “Le langage est un système de communication auditif. Les signaux produits par l’émetteur et reçus par le récepteur sont des sons et non pas des articulations. Les caractères acoustiques se prêtent par conséquent mieux que les mouvements articulatoires à une description adéquate des voyelles et des consonnes. L’identité d’un son est à chercher dans sa propre structure physique, non pas dans la façon dont on le produit” (291).

But at the same time, a strong caveat concerning the rash equating of physical and perceptual facts is in order. One cannot simply see in the acoustic components measured and perhaps graphically registered by a machine, the exact equivalences of what is perceived by the human neuro-cerebral apparatus; put plainly, the hearer may not actually hear what he thinks he hears, or not hear what is physically conveyed to his ears. In a way, then, the ear does not transmit the whole truth, nor nothing but the truth, acoustically speaking; or rather, the brain interprets the truth linguistically – though we do not know how this is accomplished. Yet one cannot say that the ear, or the brain, errs; separately or jointly they somehow arrange to perceive noises, not acoustically, but linguistically – and we do not know how that is done, either.

Hence in 1966 Malmberg restates his earlier view with a slight, yet significant, difference: “Si j’avais préféré l’acoustique à l’articulation, c’était à cause du caractère auditif de la communication linguistique. Mais ma conclusion était fondée sur une fausse idée des rapports entre son et impression auditive. Je crois avoir découvert, en travaillant par exemple sur différents problèmes de la prosodie, que ces rapports sont bien plus compliqués que je ne l’avais pensé au début” (293). Therein lies a degree of disillusionment with the linguistic (as opposed to acoustic) relevance of the graphic registration of speech sounds. “Si la première classification phonétique de l’école classique était fondée sur une simplification arbitraire de faits physiologiques insuffisamment connus, il en était en partie de même de la première description acoustique présentée par les auteurs [R.K. Potter, A.G. Kopp, H.C. Green] du *Visible Speech* [New York, 1947]” (291). Indeed instrumental phonetics in all its guises “avait été basée sur l’idée – en principe fausse – que le témoignage de l’oreille ne suffit pas pour nous renseigner sur les caractéristiques des sons du langage. L’idée est fausse du point de vue linguistique parce que les phénomènes physiologiques ou acoustiques qui n’entraînent pas de modifications audibles de l’onde sonore et qui n’aboutissent à aucun stimulus auditif sont sans intérêt pour le linguiste” (295). Indeed, “il n’y a aucune raison de dire que c’est l’oreille qui se trompe. Le problème devient celui de savoir pourquoi tel stimulus acoustique est identifié sous telles conditions (dans tel contexte par exemple) ou par tel auditeur

comme un /i/, sous telles autres conditions et par tel autre auditeur comme un /e/” (295). (I believe it would have been better to write [i] and [e] – if but one linguistic system is involved: [i] and [e] can be allophones of one phoneme; if /i/ and /e/ are different phonemes of the same language, they can by definition not be confused with one another, or misheard; but if they are phonemes of two different languages they are incommensurable to start with because, again by definition, no two languages share any phoneme. Italian /a/ and Spanish /a/ are transcribed in the same way accidentally, though conveniently, since the [a]’s realizing both of them have a great deal in common phonetically.)

Now everything that Malmberg says in this matter is true. But I believe that the non-equivalence of physical description and human perception has been known for a longer time than Malmberg suggests: I learned in graduate school – alas, nearly thirty years ago – that the measure of pitch is frequency, but that perceived pitch is not necessarily what measured frequency would lead one to expect. Also, the mere recognition of speech sounds on, say, a spectrogram is not necessarily rendered impossible by this non-equivalence: the possibility of ‘reading’ spectrograms attests to this; that the hearer does not perceive the entire acoustic truth, or misinterprets the physical signal (like hearing stress for what is actually greater frequency), is another matter. But it is possible not only that the hearer does not perceive the signal accurately, but also that, conversely, the machine is not calibrated for, or not sufficiently sensitive to, the parameters received by the brain. All this means that the human sense of hearing is more than a recording machine in that it includes what one may call, though somewhat vaguely at present, a psychological factor. Malmberg therefore quite rightly says, also in 1966: “... je persiste à croire que les faits acoustiques se prêtent mieux que les faits articulatoires à un classement général de ces unités, et par là naturellement aussi à une telle description de celles-ci” (294), but then adds: “Je suis pourtant... enclin à voir la possibilité de la réalisation de l’idée pour l’expression plus grande, et aussi plus conforme au langage lui-même, si les éléments acoustiques du système actuel des traits distinctifs (les spectrogrammes) pouvaient être remplacés par des FIGURES AUDITIVES, plus directement assimilables à la perception” (295). The *figures auditives*, however, cannot be recognized and isolated by linguistic means alone; psychology and neurology must play an important role. A beginning in this direction has been made, but only a beginning. In fact, that is where lies the next frontier of linguistics.

The most recent views of Malmberg’s are naturally contained in the latest of his articles on general linguistics included in this anthology, of 1966. (This brings up the question why it was necessary to reprint earlier views which the author no longer holds. Whatever the wisdom of such anthologizing in other cases, Malmberg has not really changed his opinions radically over the years; he has modified them, let them mature – and that process is of interest to the reader. Besides, the essays in this book represent a great variety of problems and approaches.) And since this article entitled “Changements de perspectives en linguistique”, terminated with an illuminating historical retrospective, I shall quote in full the concluding paragraph.

“Nous voyons donc encore une fois, comme si souvent au cours de l’histoire comment les choses se répètent. Même si l’évolution ne décrit pas à proprement parler un cercle, elle se produit plus ou moins sous forme de spirale où, après un

certain temps, on croit reconnaître une situation connue antérieurement. La phonétique auditive (en principe structurelle) des classiques cède la place à une phonétique articulatoire qui, surtout aux mains de non-linguistes, se perd dans des détails physiologiques où le linguiste ne se reconnaît plus. La phonologie et les mouvements apparentés (une tendance déjà chez Jones) cherchent à retrouver les bases linguistiques et un classement fonctionnel. Devant la richesse et la multiplicité des faits articulatoires, l'acoustique sera préférée, comme base de description grâce à l'invention de moyens techniques adéquats, et l'on verra surgir le système de Jakobson–Fant–Halle comme un résultat de la fusion des points de vue du théoréticien-phonologue avec ceux de l'ingénieur de la transmission sonore. On tâchera enfin... de transformer les traits distinctifs, physiquement décrits (sous forme de spectre), en unités perceptuelles. Par suite des découvertes acoustiques, de plus en plus difficiles à coordonner avec les catégories linguistiques, on voit naître une nouvelle école qui – ignorant les expériences négatives des prédécesseurs – lancent [*sic*] de nouveau une théorie motrice qui, au fond, n'est guère autre chose qu'une répétition de la fameuse thèse de Sweet.... Et quand, enfin, les chomskyens – dernière branche sur l'arbre de la linguistique – essayent de rendre compte du mécanisme communicatif de l'homme en transformant telle séquence syntagmatique en telle autre en cherchant des règles permettant de générer de nouvelles séquences 'grammaticales' (sans nous dire si la dite grammaticalité se réfère à la forme ou à la substance), ils oublient cette distinction qui a été – et qui ne cessera pas d'être – fondamentale en linguistique structurale, en phonétique et ailleurs: l'héritage saussurien et hjelmslévien de la forme comme différente de la substance, héritage que, en réalité, nous devons à la philosophie grecque" (296–297).

The articles on Romance phonology are partly an application of Malmberg's views to specific problems, and partly they give the author an opportunity for dealing with historical linguistics. As one would expect, Malmberg bases himself on the structural tenets of diachronic phonology: all change must be viewed and described as pertaining to the linguistic system as a whole, as being caused by it and affecting its alteration. The influence of Martinet, in particular, is visible throughout, and it is handsomely acknowledged; e.g.: "[À Martinet] je dois du reste moi-même l'orientation structuraliste qui n'a cessé d'influencer la façon dont je préfère envisager tous les différents phénomènes et problèmes du langage humain" (464). But here, too, Malmberg shies away from mechanistic extremes. He clearly rejects the view that all linguistic change is due to internal causes, notably to imbalances in the system which forever seek, but of course never attain, a balance. Just as synchronically the neuro-psychological factor must be taken into account, so also in diachronic studies language must not be seen as removed, or detachable, from the speaker and his society. "On n'isole pas impunément une langue de son contexte social" (311). And "l'aspect social de la langue doit occuper une place prépondérante, qu'on fasse de la linguistique synchronique ou de la linguistique diachronique" (375). In other words, linguistics includes, or ought to include, what is often referred to as somehow separate sciences like psycholinguistics and sociolinguistics. (And, by the same token, there is no separate field of applied linguistics, but only linguistics applied.)

Malmberg is a master of diachronic no less than of synchronic phonology. One hopes that the publication of a comprehensive history of Spanish (Castilian) consonantism, announced in these pages (459), will not be long delayed.

It is of course inevitable that in an anthology of this kind, spanning so many years of activity and dealing with related subjects, repetitions should occur; yet many things surely bear repeating – and besides, many readers, unlike the reviewer, will not read through the book from cover to cover. And it is also inevitable that a reviewer might find points of disagreement with the author; yet these are remarkably few, and not of fundamental importance. (I have, I believe, gone beyond Malmberg in the description, definition, and synchronic and diachronic application of the syllable in a recent book of mine; but I suspect that Malmberg will agree with my basic theses, especially since they are not innocent of Malmbergian influence.)

Malmberg has been (and, one hopes, will long continue to be) an extremely industrious and fruitful author. Whoever does not know his works, ought to. This book offers an excellent opportunity to become acquainted.

Lars Johanson, *Aspekt im Türkischen: Vorstudien zu einer Beschreibung des türkeitürkischen Aspektsystems*. *Studia Turcica Upsaliensia*, 1. Acta Universitatis Upsaliensis, Uppsala, 1971. 334 pp.

Reviewed by A.A. Barentsen, Slavic Seminar, Univ. of Amsterdam, The Netherlands.

The semantic analysis of some of the verbal suffixes in modern Turkish presented in this book is an interesting contribution to aspectological literature. The author is familiar with many works on questions of 'Tense' and 'Aspect' in Indo-European languages which enables him to show various parallels between the distinctions that operate in the Turkish verb system and the distinctions in the verb system of e.g. Germanic, Romance, and Slavonic languages. In this respect the book sometimes seems to play the rôle of a 'reader in aspectology' and can be recommended to anyone who is engaged in the study of similar categories in other languages as well, the more so as only an elementary knowledge of Turkish is required to follow the argument (the author has given a translation to almost all examples).

The book contains 8 chapters, of which the first one (13–46) is devoted to the theoretical framework. The author states here that a proper description of the invariant meaning of the various units demands taking into account the structural properties of the aspecto-temporal system. The contradictions and omissions in previous descriptions are due to the disregard of these properties (13) and to the so-called 'temporalism', the attempt to define the units of the system using exclusively temporal criteria (49). Thus, semantic analysis can be successful only if the units are not regarded "*in se*" but in their interrelation within linguistic oppositions (28). One certainly can agree with this, but less easily with the *a priori* assumption that all these oppositions are necessarily of the 'privative' type in the sense of Jakobson (1932). The main point is here the status of the unmarked member of the opposition. In Jakobson's conception the members of a morphological category are