

## INTRODUCTION

This introductory essay begins with a short discussion of the reasons for studying errors in spontaneous speech, and the advantages and disadvantages of this kind of linguistic evidence. In the following section we consider *Versprechen und Verlesen* in the light of current interests as we have described them, and examine its virtues and shortcomings. The later sections discuss the lives and work of the two authors of *Versprechen und Verlesen*, the historical background against which the book was written, contemporary reactions to it and its place in the history of linguistics and of psychology.

### 1. *The rationale for speech error research*

To begin with, let us attempt to define the concept 'speech error'. Consider a skilled actor reciting his lines with perfect fluency. This is the goal against which we measure any act of spontaneous speech, and any departures from it are properly termed speech errors. Viewed in this way, speech errors include more than the usual 'slips of the tongue' as described, for example, in Fromkin (1973). Spontaneous speech abounds in error phenomena, including unintentional hesitations, stutters, false starts, misarticulations, changes of syntax in mid-sentence, interruptions, repetitions, changes in vocal intensity and rate of speech, and in all likelihood many more disfluencies which are not so apparent.

It is unfortunate that, except for hesitations, none of these other phenomena has been studied in any depth; presumably, each of them

## INTRODUCTION

will eventually contribute some insight into the planning and execution of speech. Instead, interest in speech errors has focussed on the easily observable slips of the tongue, with a view toward constructing a theory of speech production. This theory would describe in an explicit fashion the nature and course of the mental events that begin with the formation of a thought and the decision to express it, and end with the articulation of the appropriate utterance. While we have only an inkling of what these events might be, it seems clear that they will involve several levels of linguistic structure. At a deep level, the speech production device takes a thought (or meaning) to be expressed and uses it to construct a syntactic structure appropriate for conveying that meaning. In fact, there may be several syntactic representations, related by linguistic rule, if the claims of transformational theory have psychological reality. At some point, the syntactic structures must be fleshed out with the insertion of words, and this requires access to the mental lexicon, our repository of knowledge about words. The utterance is then nearly in the form which is to be communicated. However, if the sound sequences of the words are specified abstractly, as many linguists claim (Chomsky & Halle 1968), phonological operations must be carried out to spell out the actual pronunciation. Finally, the articulatory events that will express the utterance must be programmed and executed.

As indicated in this sketch, an utterance is not formed all at once; different structures exist at different stages and the successive stages of construction are related by processes that change one structure into another. There are, then, two fundamental aspects to speech production, structure and process, and we might expect each to be a source of error in the creation of speech. It is well known, for instance, that mental *structures* can become unstable and in doing so, reveal their presence. For example, as our memory for a telephone number deteriorates, the loss of information will be constrained by whatever internal psychological structure the number possesses. Hence, we tend

## INTRODUCTION

to make errors in which structural 'chunks' are misordered or omitted as units. Likewise, it is known that mental *processes* may go wrong - for example, when we err in performing mental arithmetic. What we cannot predict a priori is precisely what sorts of errors will arise in speech production. In order to do that we would have to know a great deal about the structures and processes involved. It is precisely here that the interest of speech errors lies, for any attempt to explain them will perforce include an account of the mental processes and structures underlying the use of language.

The broad outlines of this account have already emerged from recent investigations of speech errors. Several models have been outlined (Fromkin 1971; Garrett 1975), but they will not be reviewed here. Instead, we will discuss the major types of error identified so far in order to indicate the richness of the structures and processes that give rise to them. At the most superficial level of speech construction are found tongue twisters and their attendant misarticulations (Kupin 1976). At a slightly deeper level, that of the sound patterns of an utterance, are located the classic spoonerisms and other misplacements of sound segments (MacKay 1970; Fromkin 1971). One even finds errors at this level implicating distinctive features, the fundamental units of phonological structure (Fromkin 1971). Moreover, there is some evidence for phonological processes in the form of phonological rules which apply to sound segments to give their spoken form (Fromkin 1977).

Several kinds of errors come about in the act of retrieving information from the mental lexicon. These include malapropisms, e.g., *equivocal* for *equivalent* (Fay & Cutler 1977), errors in word form, e.g., *derival* for *derivation* (Fromkin 1977), lexical stress errors, e.g., *syntax* for *syntax* (Fromkin 1977; Cutler 1978), and word meaning errors: substitution of opposites, e.g., *never* for *always*, or of members of the same semantic field, e.g., *toes* for *fingers* (Fromkin 1971). Each of these complex phenomena is rich in information about the internal struc-

## INTRODUCTION

ture of the lexicon and the processes by which we make use of it.

At the level of syntax, we again find errors implicating both structure and process. It has frequently been noted that when words or phrases of an utterance exchange places, the units tend to be of the same syntactic category (Fromkin 1971; Garrett 1975). This indicates that words are grouped into syntactic units when the exchange takes place. There is also some evidence indicating that transformation rules may be applied as part of syntactic processing (Fay 1978).

At the level of sentence construction at which meanings are assigned syntactic structures, we find a surprising absence of error phenomena. No one has yet described a class of errors attributable to this level. Perhaps this should be taken as a sign that our ignorance in this area is so profound that we simply haven't recognized such errors. Or, perhaps, though this seems most unlikely, errors simply do not occur at this level.

The detection and correction of slips is a further aspect of the investigation of speech errors. The major evidence for *internal* monitoring of errors comes from utterances in which an error leads to a cascade of compensatory changes; for example, the indefinite article *a* often changes to *an* when followed by an erroneously placed word beginning with a vowel (Fromkin 1971). This could indicate that an error has been detected and the appropriate changes made in the utterance to minimize any departure from grammaticality. (On the other hand, it might be that the error occurs before the normal grammatical processes take place; on this account, the compensation is quite automatic and no internal detection need be assumed.) Error monitoring is receiving a great deal of attention (Laver 1969; Cole 1973; Baars, Motley & MacKay 1975; Marslen-Wilson & Welsh, 1978) and promises to yield insight into the control processes in speech production.

Further, while speech errors are primarily of interest for the insight they may give into the basic processes of speech production, they may also provide indirect information about other aspects of language

## INTRODUCTION

use. For example, the monitoring and correction of *one's own* speech may be closely related to the equivalent function we perform when compensating for errors in the speech of *others*. In fact, the two functions may even be one and the same process. Any theory of comprehension will have to give an account of this ability and the study of monitoring of one's own speech may contribute to this.

Other aspects of comprehension may be revealed in the study of language components that are shared by both production and comprehension. An argument of this type is given in Fay and Cutler (197/). It is proposed there that entries in the mental lexicon are arranged according to their phonological properties, to facilitate word recognition in the presence of noise. The evidence for this hypothesis came not from a study of word recognition itself, but from an examination of malapropisms; it is argued that comprehension and production processes make use of the same mental lexicon and that this is the level at which malapropisms come about. A similar situation exists at the level of production and perception of speech sounds if analysis-by-synthesis models of speech perception are correct (see Cooper 1974 for some recent evidence).

Another area in which speech errors may shed some light is in the study of language development. It is well known that children's speech differs systematically at the various stages of development from adult speech. Part of this difference is due to insufficient knowledge of the language on the part of the child. But it has been argued by Bellugi (1971) that it is also due in part to simplification of the child's utterances. That is, the child produces expressions that he in some sense knows to be incorrect in order to lighten his psychological load.

What is of interest is that these simplifications bear a striking resemblance to adult speech errors (Fay 1974). This is to be expected, to some extent, insofar as the same linguistic system underlies adult and child utterances. But it is also possible that the similarity

## INTRODUCTION

could indicate points of instability within the language or within the processing mechanisms common to this type of simplification and this type of error.

Finally, we may expect work on speech production, and speech errors in particular, to have implications for linguistic theory. The processes involved in language use will, in general, be only indirectly related to grammatical systems. However, once we understand that relation for any given performance system, we can use performance data to decide among competing linguistic hypotheses (Foss & Fay 1975). This follows from the hypothesis that performance systems incorporate, in some form, a grammar of a language. Since the grammar will be in part responsible for determining performance, it must be compatible with performance data.

There is another way in which performance data such as speech errors may contribute to linguistic theory. Ultimately we would like a theory of language to explain why linguistic rules take the form they do. Part of such an account will surely involve constraints imposed on the rules by the fact that they must be employed by psychological mechanisms. Hence we would expect such factors as memory limitation, processing capacity, and the like to enter into our understanding of linguistic form. With a complete performance theory providing descriptions of these factors, it should be possible eventually to subsume linguistic universals under more general psychological and biological universals.

Programmatic views such as those presented here about the role of speech errors in psycholinguistic and linguistic theory should be tempered with certain methodological considerations. Speech errors have one great strength and one severe weakness as a source of data about language use. Their major strength is their claim to validity, in the sense that if errors do not reflect the nature of spontaneous speech processes, nothing does. In this, error data have an advantage over data from laboratory experimentation. Experimental psychologists have recently become increasingly aware that their human subjects can be

## INTRODUCTION

extremely flexible in the strategies they employ in solving an artificial experimental task. This problem of individual strategy in the experimental situation does not arise with naturalistic data such as speech errors. Error data may, for instance, prove particularly useful in the early stages of investigation when the very nature of a phenomenon under study is in question.

On the other hand, speech errors are observational data and, as such, are not under the control of the investigator. They must be noted down as they occur. The problem with this is that the critical error data needed to test particular hypotheses about speech production may be unavailable; investigators will then have to await the fortuitous occurrence of the required error types. This may not be a serious drawback at present, but as hypotheses become more refined we might expect to see an accelerating accumulation of hypotheses waiting to be tested. Fortunately, however, efforts are being made at present to find experimental methods for inducing speech errors (Baars, Motley & MacKay 1975; Baars & Motley 1976) and, if successful, this work may free error data of its observational restraints. In addition, we might expect to see the development of valid and sensitive experimental methods for the direct study of speech production.

Speech errors, in conclusion, provide a great amount of material for psycholinguistic investigation. That such a rich source remained virtually untapped during half a century of rapid development in psychology is presumably to be ascribed to the preoccupation of the behaviorist approach; it is nevertheless a little surprising, since Rudolf Meringer had made error data *very* accessible by collecting and publishing a huge corpus, and cataloguing the major error types. We shall consider in the next section the extent of the lead that he set.

### 2. *Meringer's 'Versprechen und Verlesen'*

Meringer's collection of errors is 'modern', i.e., resembles the collections of current workers in the field, in some very fundamental ways. Firstly, it is thorough - he recorded not only the odd, funny,

or striking examples, but every error he noticed, circumstances permitting. Secondly, he was scrupulous in writing down the error immediately after its occurrence, in recording as much as possible of the context, and in noting whatever other factors he felt to be relevant: the speaker's intuitions about competing forms, for example, or whether recent experience might account for an intrusion. Furthermore, and most importantly, the major types of error he observed figure as the major types of error in any current collection. Anticipations, perseverations, exchanges or substitutions of sounds, syllables or words, with confluations of words, phrases or sentences, form the nucleus of any thorough collection, regardless of language or era.<sup>2</sup>

Again, both the aims of Meringer's research and the conclusions he drew have in large part a very 'modern' flavor. Although he was originally motivated by the possible relevance of speech error evidence to the elucidation of philological problems, Meringer's corpus extended beyond the types of error which could be so analysed, and his aim, as expressed in the foreword to this book, extended correspondingly beyond his original purpose. The *regularities* to be discovered in a large collection of errors seemed to him to be most striking, and the insight they might give into the mechanism of speech production their greatest value: "The cover is lifted from the clockwork, and we can look in on the cogs" (p.VII).<sup>3</sup> *Versprechen und Verlesen*, he stated, was intended as a contribution to research on 'internal language' - a psychological concept which might today be called the mental representation of language. His emphasis in the introductory section on the far greater role played in speech production by *words* than by *sounds* anticipated the importance ascribed by psycholinguists today to the role of the mental lexicon in production.

In a later section (pp.84-89) he pointed out that non-pathological stuttering is an error phenomenon, and that tongue-twisters provide relevant data for its investigation.<sup>4</sup> In this Meringer again anticipated current research (Schourup 1973; Kupin 1976). Another source of



## INTRODUCTION

data suggested by Meringer (pp.159-63) was the search for temporarily forgotten words; now known as the tip-of-the-tongue phenomenon, this, too, is a topic of current research (Brown & McNeill 1966; Yarmey 1973; Koriat & Liebllich 1974; Rubin 1975).

It is interesting to compare the conclusions Meringer drew from his studies with those of latter-day researchers. Fromkin, for example, in a major paper (1971) which became the catalyst for the current reawakening of interest in speech error research, made eleven basic claims about the linguistic relevance of errors. Eight of these points were also noted by Meringer - although he did not make them all explicitly, and, of course, he described them in 19th- rather than 20th-century linguistic terms. The eight points are: (1) the reality of the phonetic segment (see, e.g., p.193); (2) consonant clusters as sequences of segments (e.g., p.91) - Meringer held consonant clusters involving /r/ or /l/ to be more susceptible to error than other clusters, but it is true of German as well as of English that by far the majority of the language's consonant clusters involve /r/ or /l/; (3) the indivisibility of diphthongs - Meringer tacitly assumes this in all his schemata of possible errors (e.g., p.28); (4) the reality of phonetic features (e.g., p.41); (5) the reality of the syllabic unit (e.g., p. 18); (6) the phonological regularity of errors (e.g., p.VII); (7) the reality of the word, its form class, and of compound nouns (e.g., p.14); and (8) the reality of semantic features (e.g., p.53).

There are, on the other hand, some ways in which *Versprechen und Verlesen* does not meet the standards currently imposed on speech error research. Meringer included in the published collection not only carefully noted spontaneous errors, but also, for instance, examples from literature which appeared to him to exemplify correctly the various kinds of error. Thus, several sections contain examples taken from the script of the classic German puppet theatre; others include examples from Shakespeare. Further, he also included anecdotal examples - usually amusing errors, taken from written stories of jokes going the

## INTRODUCTION

rounds - which he felt to fit in with his rules and hence to be *possibly* true. He always noted them to be such, however, and the authenticity of examples so characterised is, at the least, subject to doubt. (The oft-quoted "0, du Saukramer" for "0, du Grausamer" [p.21] is one of these, as are the 'taboo-word' examples "Eischeissweibchen" for "Eiweisscheibchen" [p.21] and "A prapa, Popo" for "Apropos, Papa" [p.19].)

Particularly disappointing is the *Verspreohen und Verlesen* section on reading errors, in which nearly all the non-pathological errors are taken from Meringer's experience as a classroom teacher of German at the Orientalische Akademie in Vienna. His pupils were not native speakers of German, so that it is possible that their errors may have arisen simply from ignorance of the language - although their proficiency seems admittedly to have been quite high. The conclusions which Meringer drew from their errors do not, indeed, appear to reflect idiosyncrasies of the subject population; however, the corpus cannot be reckoned as reliable as his speech error collection. This section also includes a number of aphasic reading errors, which had apparently been the subject of some research at the University of Wurzburg. The opportunity for comparison with normals prompted Meringer to call upon medical researchers to study *speech* errors of aphasics, thus allowing a comparison between those and speech errors in normals. Only recently has such a comparison been made (Talo 1978).

There are, moreover, certain (less common) types of error mentioned in the previous section which do not figure in Meringer's collection. It is probably not surprising, considering the emphasis laid by 19th-century linguists on sounds and words rather than sentences, that Wriinger's corpus contains no examples of what today would be called syntactic errors (Fay 1978). (A few syntactic errors by children appear in the diaries in Meringer's second collection, *Am dem Leben der sprache*.) Syntactic errors might be one of the few areas in which error typology shows language-specific characteristics; since German is a language with a different underlying structure from that of English

(Bach 1962, 1971), German syntactic errors might prove particularly interesting in comparison with similar cases from English. Another type of error which might be expected to show cross-language differences is errors of word formation (Fromkin 1977); in English such substitutions as *specialating* for *specialising* can be attributed to erroneous application of word formation rules. Meringer noted one example in which an inappropriate suffix is applied: *Kanonist* for *Kanonier* (p.168), but no other clearcut examples. He listed no instances in which an inappropriate prefix had been substituted; since German verbs can carry both bound prefixes and prefixed separable particles, an investigation of prefix errors in German might lead to an interesting comparison.<sup>5</sup>

Again, errors which consist only in misapplications of word or higher-level stress (Fromkin 1977; Cutler 1978) were not included by Meringer, although he noted (p.83) some typical cases of syllable omission which sometimes result in stress misplacement. Meringer showed overall little sensitivity to prosodic features, although he mentioned, as have later researchers (Boomer & Laver 1968; Garrett 1975) that word stress is preserved in below-word-level exchanges, stressed vowels and syllables exchanging with each other, unstressed vowels and syllables likewise, but not stressed with unstressed (pp.20, 25). The preservation of sentence stress in whole-word exchanges (Fromkin 1971, 1977; Garrett 1975) was, however, not pointed out by Meringer. And it was left to a contemporary of his (Oertel 1902: 227) to draw to Meringer's attention the possible role of stress in *one* of his errors, namely, the tendency of the verse "0 wie still ist hier zu fühlen . . ." to be recited as "0 wie stiel . . ." (p.41). Meringer explained this as anticipation of the high front vowels in *hier* and *fühlen*; Oertel pointed out that the verse ictus falling on *still* might alone be sufficient to lengthen it.

Other error varieties which Meringer did not note include errors involving negation (he cited only a single *literary* example in *Aus dem Leben der Sprache*), and among the sound errors, those involving velar

## INTRODUCTION

nasals, e.g., "swin and swayg" replacing "swing and sway" (this category has been admirably documented by Fromkin 1971, 1973). Since Meringer's insight extended to the recognition of errors in single features of sounds (p.41; examples in the present work include vowel length [pp.41-2, 51], voicing [p.42]), it is interesting to wonder what he might have made of velar nasal errors had he observed them. He also failed to observe errors involving affricates (Fromkin 1971); German, however, contains fewer affricates than English.

One kind of error of which Meringer had a number of examples, but to which he did not appear to ascribe the significance they might be accorded today, is semantically unrelated word substitutions, or malapropisms. Meringer's discussion of substitution explicitly states that similarity of form as well as similarity of content can produce a substitution error; furthermore, he correctly observed that similarity of initial portion and of the stressed vowel were the greatest points of correspondence between target and error in such sound-related substitutions. However, the section (pp.71-81) does not separate the error types from each other, and some errors which would appear to be malapropisms appear in other sections (e.g., p.25 - explained as an exchange which turned into a substitution). In explaining substitutions Meringer introduced the concept of 'hovering words' (*vagierende Sprachbilder*), words which because of the general context of discussion, or the environment in which it takes place, or preoccupations of the speaker might be expected to cause interference. In *Aus dem Leben der Sprache* he laid increased emphasis on this concept, to which he claimed not to have done adequate justice in the earlier work. By implication, then, malapropisms would usually be the result of such context-related intrusions; but this categorisation fails to recognise their implications for the structure of the mental lexicon (Fay & Cutler 1977).

Finally, the 'modern' speech error collector might cavil that *Ver-sprechen und Verlesen* includes no discussion of the problem of error detection and correction. Meringer noted several times that exchanges

## INTRODUCTION

are often detected and corrected before the complete error has been committed; this did not, however, lead him to investigate which errors are detected and which not, at what point detection occurs, or what effect awareness of an error has on the subsequent speech.

Despite this long list of quibbles, it will be obvious to the reader that the many ways in which Meringer anticipated and paved the way for subsequent research far outnumber the points which have been noticed by later collectors but which Meringer neglected. It should also be pointed out that Meringer noticed a few kinds of error which do not figure largely in current research - notably those which reflect his German data as opposed to the mainly English data on which current research is based. Errors involving noun gender (pp.43, 51) are one such; errors involving compound nouns, a phenomenon of much higher frequency in German than in English, another (p.14). Errors of case marking (p.26 - e.g., "mich ihm" for "mir inn") do not appear to have an English equivalent.

The next section deals in greater detail with the man responsible for this 'modern' work, and with his collaborator.

### 3. *The authors*

Both of the authors grew up in the Vienna of the latter half of the 19th century, in a city, that is, in which cultural and intellectual life were in full flower. Rudolf Meringer was born in Vienna in 1859, the sixth child of a 'simple tradesman<sup>1</sup>' (Gontert 1932). He studied at the University of Vienna, and taught there until in 1899 he became professor of Indo-European linguistics at the University of Graz, in which position he remained for the rest of his working life. He died in 1931, after an illness.

Meringer's most lasting contribution to linguistics, it would seem today, is his work on speech errors. His reputation among his contemporaries, however, rested far less on this than on his mainstream philological work. With others (e.g., Hans Sperber, Hermann Guntert) he was responsible for founding the linguistic school later to be called cul-

## INTRODUCTION

tural morphology, in reaction against what Meringer and his associates saw as the over-formalistic emphasis on the form of language (of words) practised by the Neo-grammarians. The slogan of the cultural morphology movement was: "The history of language is the history of culture".<sup>6</sup> At the time, it was a movement which provoked a great deal of linguistic controversy - with Meringer in the thick of it (see e.g., Schuchardt 1911).

Although Meringer published as early as 1891 on 'the farmhouse', the movement began in earnest during the first decade of this century; in 1909 the journal "Wörter und Sachen" ("Words and Things") was founded, with Meringer as founding editor and guiding light. In a programmatic article (1909), he argued the position that the history of words, with their change in sound and particularly in meaning, cannot be understood separately from the history of their referents; that the history of language must go hand in hand with cultural history on all levels, from the history of philosophy to the history of domestic husbandry. Meringer marked out for himself in particular the study of domestic architecture, and wrote more than thirty articles on the subject. (His expressed views extended sufficiently far from the purely philological to bring him into a controversy with members of the Vienna architectural community-<sup>7</sup>)

Another of Meringer's major contributions was a basic textbook of Indo-European linguistics, which, first published in 1897, went into several editions.

His obituary, published in 1932 in the journal he founded, lauded him as a pioneer who freed philology from sterile formalism and led it to fruitful interdisciplinary collaboration. It did not mention his work in speech errors.<sup>8</sup>

Nevertheless the work which brought Meringer more contemporary recognition and that which has brought him more lasting acknowledgement did not represent independent or inconsistent facets of his interests. The strong connecting link is the notion of observation, and of collec-

## INTRODUCTION

ting data where data can be found. In his 1909 article on words and things, Meringer urged linguists to couple their researches into historical documents with observation among the ordinary people in their everyday environment, and stated flatly: "a researcher who cannot observe is nothing more than a bookworm."<sup>9</sup> Similar defences of the observational method can be found in the present work (pp.V-VI) and in the conclusion to *Aus dem Leben der Sprache*. Both in his speech error work and in his unorthodox approach to the study of words via the study of referents, then, Meringer attempted to broaden the scope of his field with his emphasis on careful observation and data collection.

His openness to ideas from unconventional sources and from other disciplines was also reflected in his collaboration in *Versprechen und Verlesen* with a neurologist and neuropsychiatrist. Carl Mayer<sup>10</sup> (1862-1936) was, like Meringer, a native of Vienna, and studied and obtained his first teaching post at the University of Vienna. In 1895 he became director of the psychiatric-neurological clinic at the University of Innsbruck, where he stayed till his retirement (rejecting, in 1905, an invitation to a chair at Graz; we can only wonder whether, once more in contact with Meringer, he might have returned to the study of errors in speech). Apart from the collaboration with Meringer, Mayer did not publish on language topics. His primary research interest was the neurology of reflexes, and his major contribution the isolation of the basal joint reflex in the hand, known since his discovery of it as the Mayer reflex. (For a full bibliography of his work, see Schmuttermayer 1938.)

The collaboration of the two began, it seems, with personal acquaintance (both were members of the luncheon group mentioned on pp.11-12). Meringer sought Mayer's aid in determining whether the speech errors made by brain-damaged patients showed similarities with the errors of normals. Mayer introduced Meringer to the clinical literature, provided him with data from patients in the Vienna Clinic, and arranged for him to visit the clinic and talk with aphasic patients; furthermore,

he was sufficiently enthused by the study to collect errors among his friends and family and add them to Meringer's corpus. He read Meringer's discussion of the genesis of speech errors and gave it his seal of approval by attesting that it did not conflict with the known neurological facts. However, it is made quite clear in *Versprechen und Verlesen* that he did not write any of the text. Although he intended to contribute a chapter on speech errors in aphasia, he did not complete it in time for the publication deadline, being at the time far too busy with his move to Innsbruck. The introduction to *Versprechen und Verlesen* promised that the chapter would later be published separately, but apparently it never was.

Although the responsibility for this work - and correspondingly the credit - must remain primarily with Meringer, the association between the two is important. Linguists, at the time, were interested in psychological factors as explanatory tools (e.g., Paul 1880), and psychologists were studying language, including traditional philological topics (Wundt 1900; Thumbe & Marbe 1901) - the next section looks at this background in a little more detail - but the collaboration in print of a philologist and a neurologist was nevertheless sufficiently out of the ordinary that, looking back, one can call it adventurous.

#### 4. *The background*

Although Meringer was the first to publish an extensive collection of speech errors, he was not by any means the first to pay attention to them. Nor was he in 1895, despite his repeated criticisms of his contemporaries' methodological conservatism (i.e., concentration on documentary historical sources), in any sense a lonely pioneer battling on outside the current linguistic framework. Hermann Paul (1880) had pointed to the similarity between the kind of errors made by individuals and the forms taken by sound change in language; Meringer, who had published a review of the second revised edition of Paul's influential work (Meringer 1887), explicitly referred to Paul in describing the origin of his interest in the topic. Similar remarks had been



## INTRODUCTION

made by Georg von der Gabelentz (1891) and Otto Jespersen (1894). Furthermore, several studies had been published in the medical literature describing the speech errors made by brain-damaged individuals (including an article by DelbrOck [1887] which apparently anticipated some of Meringer's conclusions; Meringer regretted, in the postscript to the present work, not having read it before completing the text). And at the time Meringer was already at work, others were doing similar research - Meringer referred (p.VII) to an article by Michels in which speech errors were ineptly called to aid in explaining a metathesis in Indo-European, and shortly after the publication of *Versprechen und Verlesen* a major work on dissimilation in Indo-European languages, by Grammont (1895), appeared in which once again philologists were urged to turn their attention to errors in spontaneous speech.

What motivated the philologists' interest in speech errors was the possibility that large numbers of similar errors by individual speakers over a period of time might actually *cause* language change. This was not a long-lived notion, and Meringer's researches, in particular, turned him firmly against it. His conclusion, made quite explicit in the foreword to *Versprechen und Verlesen*, was: "Speech errors and certain kinds of sound change are not inter-dependent, but have in common a higher cause which is to be found in the characteristics of the psychological language mechanism" (p.VII). Meringer's particular interest in starting his six years of observation of speech errors was dissimilation - a kind of sound change in which one of two identical or very similar sounds in a word is lost or becomes differentiated from the other (e.g., Middle English *marbel* from French *marbre*, in which the second /r/ has dissimilated to /l/, or Latin *anima* becoming Spanish *alma*, in which the change of /n/ to /l/ has differentiated it from the similar nasal /m/ following it).<sup>11</sup> Only a few speech errors are of this form, and the great majority of regularities to be observed in any error collection do not correspond to particular forms of language change. Speech errors do, of course, demonstrate the basic point that

## INTRODUCTION

Meringer and other philologists made: that isolated sounds can exert an influence on other, adjacent or, more often, non-adjacent sounds; the manifestations of this influence, however, differ from similar phenomena in language change. Meringer accordingly redirected his interest to speech errors per se. Traces of his original motivation remain in *Versprechen und Verlesen*, but they are few: a dozen or so examples of omission of repeated sounds listed as cases of dissimilation (pp.88-89) separately from cases of sound omission which Meringer claimed (p.82) to be rare; and Chapter VII, which contains a summary account of the ways in which change in language exhibits influence of non-adjacent sounds upon each other. Meringer admitted in the foreword that this chapter did not pretend to offer an original philological contribution (an admission with which reviewers of *Versprechen und Verlesen* - see the next section - wholeheartedly agreed).

Besides the interest shown in speech errors by philologists, there was also a good deal of attention paid to the topic by psychologists. German psychologists, such as Wilhelm Wundt (1900) or Karl Marbe (Thumb & Marbe 1901), were well acquainted with the philological literature, and experimental investigations of such topics as linguistic analogy (Thumb & Marbe 1901) or contaminations of words (Menzerath 1909) were not uncommon. There was also, however, around the same period a brief flowering of interest in speech errors on the part of American psychologists. Three studies published within a few years of each other were those of Bawden (1900), Wells (1906) and Jastrow (1906). The first is a part experimental, part observational investigation of errors in writing (chiefly) and speech; Meringer and Mayer are not mentioned. The second consists principally of a study of the perceptual confusability of sounds, with a discussion of the role this might play in hearing and other lapses; Wells acknowledged the prior work of Meringer and of Bawden. Jastrow's paper is a popularised and superficial account of basic speech error phenomena, drawing heavily on Meringer's corpus; it formed a companion piece to an earlier article (Jastrow 1905) on lapses

## INTRODUCTION

of consciousness.

### 5. *Reactions to Verspreaen und Verlesen*

There is no doubt that Meringer's work made a rapid impression on German linguistics, although reviews at the time of its publication were mixed. Most of Meringer's philological contemporaries received it warmly; the review by R. M. Meyer (1897) in one of the leading philological journals of the time was extremely favorable. Meyer admitted that he himself had collected errors; a number of reading errors gathered by him and passed on to Meringer appeared in Meringer's second collection *Aus den Leben der Sprache*. (It was this review which, apparently, drew to Meringer's attention the fact that on the list of his predecessors in the field of speculation about error phenomena was to be found the illustrious name of Goethe.<sup>12</sup>) W. Streitberg (1896) also reviewed *Verspreaen und Verlesen* favorably, although he felt that a description of *how* speakers *err* should have been accompanied by an account of *when* errors occur, and accordingly suggested experimental investigations of the effects of tiredness and other factors in eliciting errors (one feels that he rather missed the point).

Other reviews were less favorable. One reviewer accused Meringer of bad taste, claiming that he had really had to force himself to read the book right through to the end, and termed it 'hair-splitting' of no scientific value (Polle 1895). Another, generally more serious, review also cast doubt on the value of the work to linguistics and regretted the omission of more extensive theoretical linguistic considerations - had they been provided, the review concluded, "the book would probably have been less entertaining for the more general public, but all the more valuable to linguistics"<sup>13</sup> (G. Meyer 1896). This last review stung Meringer to a reply (1896), in which it appears that the main source of irritation was the suggestion that he *may* have wanted to write an entertaining work!

*Verspreaen und Verlesen* soon became a standard citation in philological works both in the German-speaking area and in other countries

(see, e.g., Oertel 1902). Its philological value was still being acknowledged in the 1940's (Sturtevant 1947; Jespersen 1941), although today its readership is made up chiefly of psychologists.

A comparatively profound contemporary influence was exercised by the work, however, in Viennese psychological circles, as the next section relates.

#### 6. *Meringer and Freud*

In *Psychopathologie des Alltagslebens* (*The Psychopathology of Everyday Life*), first published in 1901, Sigmund Freud drew heavily on the *Versprechen und Verlesen* corpus for material to illustrate his thesis that slips of the tongue express emotions which have been repressed. He recognised that the aim of Meringer's research differed fundamentally from his own,<sup>14</sup> and accepted, at first, that it was not necessarily the case that each and every error occurred as a result of disturbance from subconscious thoughts or emotions;<sup>15</sup> however, not surprisingly, he ignored the vast majority of Meringer's explanations and examples and concentrated only on those which could be of use to his own argument. Meringer's explanation of substitution and contamination as arising in certain cases from contextual association with another word (see Sections E and F of Part I) struck Freud as an anticipation of his own position, and he cited *Versprechen und Verlesen* extensively on this point;<sup>16</sup> indeed, he felt that any simpler explanation could hold only for sound errors such as anticipation and perseveration.<sup>17</sup> Further, he claimed that many slips were probably determined by multiple causes, so that no one explanation contained the complete story (in support of this claim he quoted from Wundt's [1900] discussion of slips of the tongue<sup>18</sup>).

Freud specifically disagreed with Meringer on the facts of the tip-of-the-tongue phenomenon;<sup>19</sup> on this point subsequent research (e.g., Brown & McNeill 1966) has supported Meringer. Further, he suggested a specific psychoanalytic interpretation for eight errors (of the thousands!) in *Versprechen und Verlesen*, properly adding the caveat that his

## INTRODUCTION

explanation was of less value in these cases in which he could adduce no supporting evidence than in cases from his own experience. Finally, he referred briefly in his chapter on errors of action to Meringer's treatment of that topic, calling *Versprechen und Verlesen* a 'commendable' work; it could be seen, added Freud, that he himself had not been the first to detect a purpose behind the small disturbances of everyday functioning.

Meringer was less than flattered by the use to which Freud had put his work. In *Aus dem Leben der Sprache* (1908) he included a two-page digression in which he attacked Freud in the sharpest terms. Understandably, Meringer seems to have been particularly annoyed that Freud had regarded *Versprechen und Verlesen* as a 'Vorarbeit' (ambiguous in the context between a 'preceding' and a 'preliminary' work) to Freud's own research. However, he did not criticise Freud's work in detail ("because his explanations have hardly made any impression except on the gentlemen of the press"<sup>20</sup>), but merely expressed his contempt for Freud's scientific standards, and his apprehension that Freud's claim that most speech errors reflect true underlying feelings could cause havoc in people's lives. Unfortunately, Meringer concluded this passage by citing as evidence against Freud's position the fact that many speakers are extremely shocked when they inadvertently say the opposite of what they intended - thus demonstrating to Freud that he had not yet appreciated the full extent of the theory of repression.

Freud was not slow to react to Meringer's attack. Shortly after the publication of *Aus dem Leben der Sprache* he complained in a letter to Jung about Meringer's "scurrilous polemics".<sup>21</sup> And in the third edition of *Psychopathologie des Alltagslebens*, published in 1910, the brief reference to Meringer at the beginning of the chapter on errors of action was rewritten, with the adjective 'commendable' removed and a footnote appended: "A second publication of Meringer's has since shown me how wrong I was to credit this author with any such understanding".<sup>22</sup> All subsequent editions of the work contain the text emended in this

way.

Meringer again responded with acrimony. In an article of 1912 he included a brief response: "I assure Freud that he need not count me among his 'many scientific opponents' - I am not his opponent, I am simply the opponent of anyone who might believe him".<sup>23</sup> Meringer also promised a detailed criticism of Freud's work - if he could bring himself to waste his time on it. In fact he did publish, but not until 1923, an article in which he analysed in detail the examples from *Psychopathologie des Alltagslebens*. In the intervening years several publications (Sperber 1914; Schrijnen 1921) had favorably compared Freud's explanation of speech errors with Meringer's, and Meringer perhaps tired of answering such criticisms individually (see, e.g., Meringer 1921a, 1927). Furthermore, Freud's work had gone into several editions (nine, by the time Meringer's article appeared in 1923). And in the *Vorlesungen zur Einführung in die Psychoanalyse* (*Introductory Lectures on Psychoanalysis*), delivered in Vienna in 1915-16, Freud repeated his earlier analysis of speech errors and termed Meringer's explanations 'inadequate';<sup>24</sup> furthermore, he departed from his earlier position in voicing the suspicion that in truth *all* speech errors could admit of a psychoanalytic explanation.

In the 1923 paper Meringer discussed every example in *The Psychopathology of Everyday Life*. In some cases his discussion consisted only in contemptuous remarks of the 'who could believe that?' variety, in others simply in the observation that a particular error conformed to the patterns he had noted and was hence explicable in non-psychoanalytic terms. In the course of the article, however, he made a number of commonsense criticisms of Freud's position. Why, he asked, should the unconscious work so deviously to issue warnings or express emotions when countless more direct routes of expression were possible?<sup>25</sup> Why should the repression of words similar to a word with unpleasant associations be so arbitrary in its effect, with only marginally associated words being sometimes more strongly repressed than more closely associated

words, or the repression being effective at some times but not at others?<sup>26</sup> And on what basis did Freud claim that the conscious associations that his patients produced to, for instance, forgotten material were necessarily the same as their unconscious associations to the same material?<sup>27</sup>

The psychoanalytic explanations offered by Freud for eight of the *Versprechen und Verlesen* errors were also explicitly rejected by Meringer. It should not be surprising, he declared, that the mechanisms of exchange, anticipation, etc., occasionally produce results which incorporate taboo words. In the vast majority of cases the same mechanisms produce unexceptionable words or non-words. And he pointed out that the sex of the speaker who perpetrated the anticipation, "Es war mir auf der Schwest-Brust so schwer" (p.36) had not been given in *Versprechen und Verlesen*, so that Freud's explanation (involving thoughts of sister's breasts) was in this case particularly far-fetched.

As mentioned above, Freud had warned readers of the lesser worth of his interpretations of examples taken from Meringer's publication as opposed to his own experience; unfortunately, Meringer misunderstood this warning, taking it to be a judgement passed on his own work.<sup>28</sup> Little wonder, perhaps, that he reacted to Freud's work with such fury.

Freud did not reply again to Meringer's criticisms.

#### 7. *Meringer's subsequent speech error work*

In his reply to an adverse review of *Versprechen und Verlesen* (1896), Meringer referred to "a continuation of my work soon to be published". In fact it was not until 1908 that *Aus dem Leben der Spraehe* appeared. In this second major work on speech errors Meringer added substantially to the corpus of errors but not greatly to the body of theory accompanying it. He included a large number of children's errors (having married, and fathered three children, in the years since the *Versprechen und Verlesen* collection was put together) as well as more detailed long-term observations of language development in five children, and some remarks on child language. Apart from this book,

## INTRODUCTION

however, Meringer devoted nearly all the remainder of his professional life to his word-and-thing research. A complete bibliography of his philological work<sup>29</sup> lists 62 publications subsequent to *Versprechen und Verlesen*, of which besides *Aus dem Leben der Sprache* only half a dozen deal in any way at all with speech errors. Most have been referred to in the previous section. In one later article (1921b) Meringer gathered a number of literary examples of speech errors - "the comic muse", he remarked, "is very fond of attaining her purpose by means of speech - or hearing - errors".<sup>30</sup> (Another who was very fond, of collecting literary illustrations of his observations from life was Sigmund Freud.<sup>31</sup>)

One publication of Meringer's on speech errors which does not appear in his bibliography was a short article he wrote for the Vienna daily paper *Neue Freie Presse* in August 1900. In that article Meringer referred to a speech error made by the president of the Austrian parliament, opening a session with the words "I declare this session closed". The session in question, wrote Meringer, was obviously going to be a tough one, so that the proper explanation for this error presumably lay in the president's secret wish that the session were already over. (Meringer's remarks on this error were not lost on Freud.<sup>32</sup>) He then discussed another contemporary news story, the collision of two ships of the French navy. The man at the helm of the ship at fault had been commanded by his captain to turn 20 degrees left, had however turned his vessel 20 degrees to the right instead, thus bringing about the collision. Was that indeed an error on the part of the helmsman, asked Meringer - or had perhaps the captain perpetrated a *speech* error and ordered the man to turn "right" when he intended to say "left"?

It is perhaps fortunate for Meringer that his remarks did not come to the attention of libel lawyers! His article closed with the offer of professional advice to anyone who wished to devise precautionary measures to deal with the effect of speech errors in such situations. There is no evidence that Meringer was taken up on this offer.



8. *Conclusion*

*Versprechen und Verlesen* is distinguished more by observational accuracy than by theoretical sophistication; but it is exactly this characteristic which has proved its lasting value. It is a scrupulously collected, usefully organised, and very large corpus of errors, providing material on which hypotheses can be tested and generalisations made. Freud in 1901 and Jastrow in 1906 used Meringer's data base, and three-quarters of a century later it is still being used (see, e.g., MacKay 1969, 1970; Celce-Murcia 1973, 1978).

Meringer's outstanding achievement was not the zeal with which he collected errors, nor the care with which he classified them - it was the fact that he was the first to show that speech errors are worth collecting and classifying. Others before him had speculated about what speech errors might demonstrate; Meringer was the first to attempt to find out. In this he made a worthy and lasting contribution to linguistic and psychological study, for which he has received due recognition.

There is one point, nevertheless, on which a word may be said in Meringer's defence. Despite the tributes paid to his groundbreaking work, a tradition seems to have developed that his thoroughness in data collection may have offended some of his involuntary 'subjects'. E. H. Sturtevant (1947) wrote: "I was not surprised to learn that Meringer was unpopular among his colleagues", and went on to suggest that linguists can afford to let some errors pass unrecorded so as not to "lose friends".<sup>33</sup> His remark has been inflated, to 'very unpopular' (MacKay 1970, 1978), and "the most unpopular man at the University of Vienna" (Fromkin 1971). Sturtevant cited no reference, and one can only imagine his opinion to have been formed by personal communication with Meringer's contemporaries. Other evidence would lead us to suspect, however, that if Meringer was indeed unpopular, it was for reasons unconnected with his thoroughness in collecting error data. He stated himself (p. 12; *Aus dem Leben der Sprache* p. 122) that he often let errors

## INTRODUCTION

pass because the occasion was not appropriate for recording them. Far from recording "in true Teutonic style . . . the birthdate of the speaker, the educational background, the time of day, the state of health and tiredness, the rate of speech, etc." (Fromkin 1971) it is clear from the text that he only noted any such factor as excessive tiredness if it was relevant (p.10), and that he paid attention to age of speaker and to rate of speech for short periods only, during which he was testing specific hypotheses about the effect of such factors on error frequency (*Aus dem Leben der Sprache*, p.122). The list of error perpetrators given at the beginning of *Aus dem Leben der Sprache* contains only information obvious to the casual acquaintance (e.g., "Dr. v.F. de Saussure, Professor Univ. Genf, ein Vierziger"; *Aus dem Leben der Sprache*, p.XII). Further, he stated that by far the majority of examples in his collection stemmed from the conversations of a regular lunchtime group (a claim which is supported both by the recorded names of the speakers and the subject matter of the utterances). Not only was this group not annoyed by Meringer's attention to its linguistic lapses, but it was so supportive of the project that conversation was constrained by the following rules: only one person was to speak at once; when an error occurred, all conversation ceased until it had been properly recorded [*Aus dem Leben der Sprache*, p.5].

Meringer (1900) did, on the other hand, admit to having been criticised in connection with his error research; not, however, for intrusiveness of his collection methods, but for having published the names of his speakers in *Versprechen und Verlesen*. He defended having done so with the argument that the speakers in question were all highly educated and known to be verbally fluent, so that readers would be forced to admit the generality of error phenomena and not laugh them off as mistakes due to ignorance or other factors sufficient to justify scientific disregard. Perhaps it was this criticism which eventually prompted Sturtevant's judgement, perhaps not. Today, in any case, Meringer's popularity is established.

## NOTES

- 1)The present work will be referred to as 'Meringer's', since it was in fact written entirely by Meringer, Mayer's co-authorship reflecting only his support of Meringer's attempt to treat errors within a psychological-neurological framework (pp.3-4; see also Meringer 1927).
- 2)See Appendix I for a fuller account of Meringer's classification.
- 3)All translations are by the first editor. The original German will be given in a footnote only for quotations from other than the present work. A page reference without further specification refers to the present work.
- 4)This had also been suggested by Paul (1880).
- 5)*Aus dem Leben der Sprache*, pp.12-13, lists a number of errors involving words beginning with *be-* or *ge-*, some of which may in fact be prefix errors.
- 6)"Sprachgeschichte ist Kulturgeschichte" (Sperber 1929).
- 7)*Aus dem Leben der Sprache*, p.144.
- 8)Guntert 1932. Another obituary, in a Graz daily paper (Reichelt 1931) described Meringer's speech error writings and his word-and-thing research as complementary facets of his life's work.
- 9)"Wer nicht beobachten kann, ist kein Forscher, sondern ein Bucherwurm" (Meringer 1909: 597).
- 10)Mayer's publications bear the spelling 'Carl' with the exception of the present work. See also below pp.68, 156.
- 11)Examples from Hartmann & Stork 1972.
- 12)Mayer referred to a short article of 1820 in which Goethe complained of errors which crept into the printed form of an originally dictated work, and attempted to divide them into hearing errors and writing/printing errors (*Werke*, XXIX, 255-59); also to a conversation with Eckermann of 5.5.1824 in which Goethe referred to the comic effects produced by actors performing in front of an audience whose native dialect demanded different length for certain vowels or amount of voicing for certain stop consonants than the actors' dialect (*Gesprache*, V, 76-80). Meringer seized this opportunity; *Aus dem Leben der Sprache* opens with a reference to these sources.
- 13)"So wurde das Buch wahrscheinlich für ein weiteres Publikum weniger unterhaltend, dafür aber für die Sprachforschung nutzbarer geworden sein" (G. Meyer 1896: 53).
- 14)Freud, *Gesammelte Werke* IV, p.60.
- 15)*ibid.*, 63, 68, 91.
- 16)*ibid.*, 65-66.
- 17)*ibid.*, 64.
- 18)*ibid.*, 68-69.
- 19)*ibid.*, 62.
- 20)". . . denn seine Deutungen haben schwerlich einen Eindruck gemacht, ausser etwa bei den Herren, welche den publizistischen Weiterverschleiss dieser Phantasien in den Blättern unter dem Titel 'Unfrei-

## INTRODUCTION

- willige Gestandnisse' besorgten" (pp.129-30).
- 21) "Der Professor Meringer in Graz (vom 'Versprechen') leistet an ungewaschener Polemik das Ausserordentlichste" - 8.11.1908; *Briefwechsel*, pp. 194-95.
- 22) "Eine zweite Publikation Meringers hat mir später gezeigt, wie sehr ich diesem Autor unrecht tat, als ich ihm solches Verstandnis zumutete" (*Gesammelte Werke IV*, p.179).
- 23) "Ich versichere S. Freud, dass er mich nicht zu seinen 'zahlreichen wissenschaftlichen Gegnern' zu zahlen braucht, ich bin nicht sein Gegner, sondern nur der Gegner derer, die ihm glauben" (Meringer 1912: 55).
- 24) "Der Erklärungsversuch, den die beiden Autoren auf ihre Sammlung von Beispielen gründen, ist ganz besonders unzulänglich." (Freud, *Gesammelte Werke XI*, p.26.)
- 25) Meringer 1923, p.138.
- 26) *ibid.*, 128.
- 27) *ibid.*, 125.
- 28) *ibid.*, 133; cf. Freud, *Gesammelte Werke IV*, p.93.
- 29) *Wörter und Sachen*, 1932, 14, V-VIII.
- 30) "In der Dichtkunst bedient sich die heitere Muse mit Vorliebe des Versprechens (und Verhörens) zur Erreichung ihrer Zwecke" (Meringer 1921b: 57).
- 31) See e.g., "Der Wahn und die Traume in Jensens 'Gradiva'" (*Gesammelte Werke VII*); "Das Motiv der Kastchenwahl" (*Gesammelte Werke X*); "Dostojewski und die Vätertötung" (*Gesammelte Werke XIV*).
- %2) *Gesammelte Werke IV*, p.67; XI, pp.27-28, 33-34.
- 33) Sturtevant 1947, pp.38-39.

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INTRODUCTION

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