grammatischen Faktoren ungünstiger als die der Wortbildung, ebenso die der Wortfindung. (Depeschenstil, amnestische Aphasie als Restitutionsdefekte.) Die *musischen Faktoren* mit ihrer automatischen und affektiven Verankerung werden im Durchschnitt leichter restituiert als die phatischen (vokalisch-konsonantischen) Strukturanteile von Satz und Wort. Trotzdem sind nicht selten lange Zeit die stimmlichen und musischen Anteile (Klangfarbenbewegung, Dynamik, Rhythmus usw.) bei motorisch Aphasischen erheblich verändert.

Aktiv-*heilpädagogische Massnahmen* bewirken starke Förderung der sprachlichen Restitution von Aphasien. Bei vielen Fällen leiten sie erst den Beginn der Restitution ein. Der Erfolg bleibt zumeist nur dann auf der Höhe des unterrichtlich Erreichten, wenn nach Beendigung des Unterrichtes sprachliche Anregung aufrechterhalten wird. Bei vielen Kranken tritt jedoch wieder Entübung und Verschlechterung ein.

Für *Amusie* gelten im ganzen die gleichen allgemein formalen Bedingungen wie bei der Aphasie. Dies lässt sich an dem eingehend studierten Fall der Pianistin LYDIA HIR nachweisen. Bei der im 26. Lebensjahr total (motorisch-sensorisch) amusisch gewordenen Kranken beginnt die Restitution des sensorischen Anteils bereits zu Beginn der 2. Woche, die des motorischen Anteils in der 6. Woche nach der Hirnschädigung. Es bestehen schwere Störungen des Gedächtnisses für akustische Inhalte, des Notenlesens und -schreibens, besonders schwer ist die Produktion und auch das Erfassen des Rhythmus getroffen. Nach etwa einem Jahr beginnt H. unsystematisch mit grossen Schwierigkeiten auf dem Klavier zu spielen, nach 1½ Jahren steigert sie ihr Können allmählich durch Spiel von klassischen Werken auf zwei Klavieren. Nach 2½ Jahren Beginn systematischen Unterrichtes. Es wird ersichtlich, dass das melodische und harmonische Prinzip leichter erfasst und produziert wird als das rhythmische, der Rhythmus wird mit optischen und akustischen Hilfen erfasst und gestärkt. In Hauskonzerten können mit steigender Schwierigkeit Werke der Klassik und Romantik vom Blatt vorgespielt werden (MOZART, SCHUMANN, BRAHMS). Erst nach 4 Jahren kann mit dem Auswendigspielen begonnen werden, wobei ihr besonders gut CHOPIN's Klavierwerke liegen. Nichtsdestoweniger misslingen auch heute (7 Jahre nach der Schädigung) isolierte rhythmische Leistungen (Klopfrhythmen).

Das Studium der Restitution bei Aphasie und Amusie hat praktischen, diagnostisch-therapeutischen und auch theoretischen, sprachkundlichen Wert. Methodische Klärung und Sicherung wird der Problemgegenstand erfahren durch Anschluss an die modernen Methoden der exakten Erforschung des objektiven Sprach- und Musikbestandes, insbesondere der Phonologie und Musikologie.

19. Dr A. H. SMITH (London): *Typographical problems in phonetics.*

There is perhaps no field of enquiry where active researchers are more seriously handicapped by the limitations of typographical practice than in Phonetics. On the one hand there is the phonetician

who may require an infinite number of symbols to represent an unlimited number of sounds, and on the other hand there is the printer who is not always able, even with the assurance of financial cover, to meet these demands in a satisfactory manner. A glance through any of the more recent books and periodicals will show what has been achieved. I think, however, that we are reaching the stage when further developments will not be possible and I think we are past the stage when the production of a phonetic work might be an economic proposition. The problems, then, which the phonetician must consider are those of cost of production and the aesthetic and practical limitations of type design.

The cost of production is a serious matter in all works of a scientific character, and some learned bodies have made use of various systems of reproduction in small editions, such as anastatic reprints, lithographic offsets, and even cyclostyled copies of the author's typescript. These methods may result in some small saving, but it is so small as to be negligible, whilst often the finished work is, to say the least, ugly to look upon, unpleasant to handle, and lacking in that authority which a well printed page carries. In phonetics such methods would presume the availability of typewriters with an unlimited supply of peculiar characters. We need consider these no more.

In the production of printed works the chief cost is in the composition or setting up of the type. Works which can be produced on the monotype machine will be considerably cheaper than those set up by hand. But the normal monotype machine is limited to 256 characters in all faces and sizes of types, and whilst I believe it would be possible to use this method for the broad transcription, it would probably be inadequate or barely adequate for the narrow transcription. For example, in a recent number of *Le Maître Phonétique* (Avril–Juin 1935) there are in the body of the work—excluding notes, titles of articles, titles of works cited, names of authors—approximately 160 signs, and these by no means represent all possible needs. For instance, I have noted only I Y R from the small capitals fount, and only 23 characters from the bold face fount; normally it would be necessary to have these founts complete as well as the ordinary range of large capitals and numerals. These, along with, or even excluding, the ordinary italic fount, would carry the total number of characters required far beyond the usual range of the monotype machine. Further, in the narrow transcription the number of peculiar characters is so large that a machine with a special keyboard would in all probability have to be reserved for this class of work. In the current number of *Le Maître Phonétique* there are, as I have said, approximately 160 characters, which are made up in these proportions:

(1)	Characters in standard English founts (including small capitals)	68
(2)	Characters in standard English founts which are adaptable by inversion (including the common ə)	8
(3)	Peculiar characters easily obtainable	2
(4)	Characters which would have to be specially cut	80

These proportions are very striking and show very clearly that it is no longer possible to follow the praiseworthy idea which the originators of the International Phonetic System had of adapting as far as possible the resources of a commercial printer's office. The adaptations were for the most part the inversion of the lower-case letters e, c, etc. as ə, ɔ, and the use of small capitals. Actually in hand-setting these adapted forms offer a ready means of distinguishing various sounds, as a, ɐ, ᴀ or i, ɪ, etc., but in machine-composition these particular forms must be inverted by hand as in proof-correction or separate inverted matrices must be used in the casting machine; either method would add to the cost. But the system is a good one, for it does ensure that the forms of the letters fit agreeably with the ordinary roman face.

The latter point is worth emphasis, for scarcely enough attention has been paid to the appearance of new characters. Excessively curled Greek letters which have been adopted do not fit in with roman face: thus upsilon ʊ, a pleasant enough character in Greek, is an obvious misfit in roman and might well have been replaced, as it is in America, by a small capital ᴜ; Greek theta θ might well be replaced by the runic þ which is more adaptable by its shape to the roman face; similarly the well-attested ę (a mediaeval form of æ) is preferable to Greek epsilon ɛ. Furthermore, in forms which have been invented enough attention has not been paid to appropriateness; curls instead of serifs do not accord with roman face and I think that the symbols ɲ and ɳ might well have had a plain serif at the foot. Archaic English ſ for s or an elongated form ʃ (that is, capital J inverted) would be preferable to ʃ, which is an italic form made vertical. A further objection to curls and similar excrescences is that they frequently stand out so much on one side that there is an uneven spacing of letters. In the ordinary roman fount such letters are kerned and overlap the adjacent letter as in "oft" or are ligatured as in ff fi fl, etc., but in phonetic transcription many ligatures would be needed to cover all possible cases. It is clear that some revision of the existing system is desirable on aesthetic grounds.[1]

At the same time I suggest that the only way to reduce the cost of production of phonetic works is to aim at collaboration and uniformity. A printer who specializes in one class of work, and who

[1] I would suggest that a very light-faced sanserif type (even lighter than that used below) is a better basis for a phonetic alphabet than the current roman (in a light or bold face), where the serifs might be misleading; serifs on one side or another of a vertical stroke have apparently been used to distinguish signs, but a serif is not easily isolated as a feature of distinction in the common sizes of type. The following is an example of the face suggested:

ɪt ɪz dɪfɪklt tu ɪksplein wai sʌm men dount laik sju:ts meid əv hærɪs twi:d wailst sʌm prɪfə:r ən i:vn kɔ:sə mətɪərɪəl | ai səpouz ɪt ɪz bɪkɔz sju:ts meid əv hevɪ stʌf gɪv ə greitə sens əv kʌntrɪ kʌmfət ənd rɪkwaiə les ju:s əv ə pres | bʌt sɪtɪ gouəz ni:d ə sə:tn rɪfainmənt in sju:ts ənd sou si:k ə laitə mɔ:r elɪgənt jet mɔ: kɔstlɪ mətɪərɪəl | evrɪ mæn tu hɪz teist |

is enabled to specialize by regular support, can offer a good and economical service. But much more can be done by phoneticians themselves.

In the first place a single size of type should suffice for both titles, text and notes.

Secondly, a single face of type should be sufficient, and items which are now printed in italics or bold face might well be printed in roman old face and enclosed in angle or square brackets without any loss to the significance, or in the light sanserif already mentioned.

Thirdly, in the broad transcription we have reached a stage when experimenting in letter forms is no longer necessary and uniformity is attainable. For example, I do not think there is any justification for Mr LAWRENSON's suggestion (*Le Maître Phonétique* (*ut sup.*), p. 22) that the vowel in bæd should be represented by ɛ; "there is", he says, "no reason to use æ unless we wish to reserve ɛ for the representation of some other sound." This, of course, gets to the root of the matter, for, if Mr LAWRENSON's intention is clear, it is a recession from the basic principle of "one sound, one symbol".

Lastly, in the narrow transcription which is the form that most exercises the ingenuity of the typographer, we may have to consider whether some simplification might not be necessary. Thus one may ask whether ligatures such as ʧ ʤ and the very unpleasing ʦ are really necessary and whether it is essential to link the elements of diphthongs by bind-marks, for in each case a new matrix may have to be struck. The distinction between ʧ and tʃ could well be indicated by the symbols tʃ and t-ʃ. Most of the symbols in the narrow transcription are, of course, used in accepted connotations, but the expert finds it necessary in giving fine shades to deviate slightly from the standard representations; yet it is doubtful whether he will ever be in a position to eliminate altogether this precise definition of his symbols. A system of symbols which would cover every possible variety of sound is hardly practicable and it would certainly be extravagant.

20. Dr MARIA SCHUBIGER (Basle): *English intonation and syntax.*

Syntax investigates the function of the grammatical forms: of declension, word position and so on. Although intonation is not a grammatical form in the narrow sense of the word, but rather a necessary accompaniment of all articulated speech, it has its function too. Therefore no syntax of a living language is complete which does not take into account the musical elements. The function of English intonation is, roughly speaking, twofold:

I. The distribution of stressed and unstressed syllables, especially *the place of the nucleus*, which has the intonation turn, determines the relative importance of the elements of the sentence.

II. *The direction of the tune on the nucleus* (fall, rise, fall-rise) characterizes the utterance as a whole.

The new aspects which the investigation of this double function of intonation can give to syntax are manifold. My examples will be chosen chiefly from Part I, which is, syntactically, the more interesting.