

Methods of Translating Used in Bilingual Films

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International TV broadcasting revolves around language translation. Methods of translating employed are dependent upon the degree of language conversion desired, subject to economic considerations. Methods described in this paper are: superimposed dialogue titles; off-screen narration; lip synchronization. The conversion of the dialogue is accomplished by the matching of the lip movements. This matching, or synchronization, begins with the foreign language writer, who is both translator and adaptor of the original dialogue. Basic speech sounds are the tools which make possible the flexibility of adaptation, which is limited by the number of syllables in a given phrase and the rhythm and emotional or dramatic delivery of that phrase.

THE CONCEPT of broadcasting film on television, from one country to another and from one continent to another, takes in the engineering problems involved, including electronic and other technical aspects of communication systems, as well as the problems of programming. Telecasting a film from one nation to another, in which a different language is spoken, involves the nontechnical subject of language translation. Language is the vehicle of comprehension and appreciation of the original show, upon which the audience reaction will hinge.

The particular method of translation employed in a given instance will depend upon the degree of language conversion desired, which will be influenced to a great extent by economic consideration. That is, the budget allotted by the sponsoring agency will determine, pretty much, what type of foreign version will be produced. There is, of course, another factor to contend with in the selection of the type of foreign version, and that is the laws of the country with regard to the acceptability of a particular type of translation for exhibition there.

Methods of Translation

The methods of translation are: superimposing dialogue titles on the original film, either by optical or mechanical means; off-screen narration; and lip synchronization. Both superimposed titles and off-screen narration are relatively inexpensive means of conveying an understanding of a film, from one language to another. Superimposed titles, however, at best can convey only a small percentage of the actual dialogue spoken in the film. Furthermore, the reading of such titles on the television screen has presented a visual problem, due to the size of the screen in relation to the title, and the blocking of the title on both

sides of the screen and at the bottom of the frame. This shortcoming, of course, can be eliminated by a realignment of the title. One laboratory, at least, is actually starting to do just that.

Off-screen narration, of course, is no problem for the commentary type of film. It becomes merely a question of the substitution of the soundtrack from one language to another. In dialogue films, the use of "intercalated," or inserted off-screen narration, has been limited mostly to Oriental audiences, who have long been accustomed to the commentator standing on the side of the screen, giving his interpretation of the story as it unfolds. This is what has been known in Japan as "benshi." In re-recording the track for the benshi version, selected sequences of the track are faded out and the commentator faded in with his narrative interpretation. Adapting this technique to motion pictures as a universal method has not as yet made great progress.

The technique of the actual recording of lip synchronization of dialogue from one language to another has been presented before this Society on various occasions.* The preparation of synchronizing loops, in the technique of foreign language recording, is also well known.

Definition of Lip Synchronization

The author defines foreign language lip synchronization as a device to communicate the dialogue of the original sound motion picture in the language to which the picture has been adapted by creating an illusion, simultaneously auditory and visual, that a previously photographed and recorded actor is speaking in the adapted language. To create the maximum illusion and to sustain it in the mind of the viewer, it is imperative not only that the synchronism of the spoken phrase be maintained, but also that the

dramatic re-creation of the sequence be achieved.

Preparation of Script

It is not within the purview of this short presentation to take up, in any detail, the artistic aspects of rescoring, with possibly one or two exceptions. Confining the discussion to the translation of the script itself, lip synchronization can be prepared in two principal ways: The simplest and least costly, because of the relatively shorter time involved in its preparation, is the translation of a phrase or sequence to begin and end precisely at the same instant as the original voice so that the character on the screen will seem to be speaking the part, if not observed too closely. There is no attempt here to match every lip movement of the original dialogue. Only the length, or duration, of the phrase or sequence is matched.

True or complete conversion of dialogue is accomplished by translation employing phraseology and terminology that match exactly the lip movements, not of the words of the original dialogue, but the phrases and sequences of phrases, made up of the syllables in those words. This is the gist of the technique. The translator constructs his new dialogue to match visually, in the lip movement, the original spoken groups of words. Actually, he is thinking of syllables or groups of syllables, rather than the words themselves.

Employment of Speech Characteristics

The grammatical structure of languages varies so widely that any attempt to translate on the basis merely of similar words or similar juxtaposition of sentences or phrases, would make lip synchronization translation an impossibility.

The translator of dialogue, who might better be known as an adaptor, follows the science of speech sounds, called phonetics. He guides himself by certain known basic speech characteristics, under the general heading of *Pronunciation*. He knows that in the articulation of speech sounds, for example, certain sounds occur, known as explosive consonants, produced by puffs or impulses of breath.

Such sounds would be formed in uttering the letters p, b, t, d, k and g. A second group of sounds, called continuants, can be prolonged for a whole breath, without changing the position of the speech organs. These are: s, z, th, f, v, sh, zh, l, r, m, n and ng. All but l, m, n, ng and the trilled r, are known as frica-

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* Max G. Kosarin, "Preparation of foreign-language versions of U.S. Army films," *Jour. SMPTE*, 62: 419-422, June 1954; and Mauro Zambuto, "Foreign language dubbing," *ibid.*, 63: 222-224, Dec. 1954.

tives, characterized by a rustling made by a friction of the breath, by narrowing the aperture of the mouth. Vowels, except for slight variations, in many languages visually match in the articulation of the sound and the formation of the lips. It is the similarity, visually, of explosive sounds, such as b, p, t and d, and the similarity of certain fricatives, such as f and v, and the many possible combinations of explosive and fricative consonants, used in conjunction with the vowels, that give the translator a choice or flexibility in the composition of words and enable him to construct his dialogue in the correct grammatical phraseology of his language, yet at the same time match lip movement for lip movement, from one language to another.

In other words, in synchronization, by substitution, or interchange of words or phrases selected on the basis of the characteristics of speech sounds, the desired illusion is created. Coupled with the articulation of these basic speech sounds, in the construction of the translated dialogue there is the very important element of accent, or rhythm of language. This may be defined as the prominence given to a syllable or a word, which makes it stand out above adjacent syllables or words. It is this accenting, or rhythm, in the utterance of syllables, that makes up groups of words constituting the units of lip movements, which require faithful matching in the conversion from one language to another. These units are marked by pauses of speech utterance which the translator matches, utilizing the basic speech characteristics which have been described.

Matching of Script to Film

The translator actually begins his work by screening the film for general comprehension and appreciation of the story and its dramatic interpretation. He then receives the cued script of the original language with the synchronizing loop sequences marked off, as well as the pauses, or, as described before, the units of lip movements. He then does his first draft, employing the principles of phonetics but primarily writing for proper language and style. The final or adaptation phase is then done by viewing the film again, loop sequence by loop sequence. In this preparation for recording of the translated dialogue script, the translator, perhaps together with the director, reviews his work against the synchronizing loop, first by listening to the original soundtrack and then shutting off this original sound, and speaking the translated line against the sequence on the screen, which is now silent. He can

now visualize and hear how the translated line will sound and what it will look like when combined.

Saying what a spoken line "looks like" is done deliberately. It is on this occasion that the translator will make his adjustments, by addition, deletion and substitution of words and phrases, to achieve better synchronization and naturalness of the line.

One reference should be made to the artistic aspect of lip synchronization and that is in connection with the casting of the actors. The careful casting of the dubbers, or voice actors, is very important as a factor in achieving perfection in lip synchronization. The voice actor should be cast as closely as possible to the original actor on the screen, with respect to voice quality, tempo of speech and perhaps even characteristics of facial expression which do affect the articulation of speech sounds. This care, or the lack of it, in the choice of the voice actor, to match the screen image in these respects, can spell the success or failure of the lip synchronization effort, regardless of a well-translated and well-matched dialogue. It is the interpretation and faithful following of the rhythm, emphasis and dramatic delivery of the line by the voice actor, in accordance with the synchronizing loop which he views and hears that will give the desired illusion, both auditory and visual, of the actor on the screen seemingly speaking in the new language.

It is obvious that the work of the translator, or adaptor, is a tedious, painstaking, detailed process, involving continued searching of memory and reference to experience for the appropriate phrase, idiom, or expression of language. Any modern aid, mechanical or electronic, that would assist the translator in accomplishing his research, might drastically cut the time required to prepare a lip synchronization recording script.

Mechanical Translation

There are repeated reports of machines that produce translations in many languages in a matter of minutes, such as the translating typewriter, many variations of the electronic data or digital computer, and others. It is the author's opinion, however, that we have not as yet reached that stage in our technological progress, where the machine can substitute for the human mind to the extent that it can produce the foreign language script for our lip-synchronized film version.

But, to indulge in a little projective thinking, it is conceivable that the electronic computer, for example, could be

employed to store and provide an exhaustive amount of speech sounds, words and phrases, all predetermined in accordance with syllable structure and the other basic principles and characteristics of speech, across the board in a multitude of languages. This would be a combination thesaurus, dictionary, glossary, idiom and phrase reference source, which would place at the fingertips of the translator a wealth of material, instantly available, so as to permit him to devote most of his time to the actual creative and artistic task at hand.

At the close of the presentation of the above paper, the author presented several sequences of a film lip-synchronized from English to Spanish. This was done in collaboration with George Lewin, utilizing the recently developed technique involving the infrared transparency of magnetic tracks. An English language composite print, with optical track had been magnastriped full width and the Spanish soundtrack had been transferred to this magnastripe. First, the print was run with the magnetic Spanish track, demonstrating the lip synchronization. Then, the same sequence was re-run, picking up the original optical English track through the magnetic, full-width stripe.

Discussion

J. Kenneth Lewis (Dept. of Defense, College Park, Md.): Having in mind the description of Eurovision's six-language telecast and Mr. Kosarin's demonstration of converting from one language to another, we wonder if there would be enough time, say, in a six-hour delayed television program, to be able to do some sort of a reasonable job in making a language conversion for the audio?

Mr. Kosarin: It is hardly practical to compare translating with off-screen commentators who are just giving their running commentary in their particular language of a certain show.

Mr. Lewis: I was even thinking of cases where lip sync would be desirable.

Mr. Kosarin: You'd never be able to do that in a matter of a few hours, but you could do your running commentary in several hours.

Mr. Lewis: Would you be able to synchronize it to the point at least where you could get the phrases lined up, with the simpler (?) system which you described?

Mr. Kosarin: For a film like this that ran four or five reels the actual translation took about a week or so, and the actual recording took about four or five days of continued recording on the loops; and of course there was the time necessary to edit the picture. A good lip-sync effort of, let's say, a half hour to an hour, would certainly have to take several weeks.

Mr. Lewis: We could say when we arrive at the fully electronic translator that you were envisioning, this could be done very quickly.

Mr. Kosarin: Well, we could cut it down very appreciably; perhaps all around from, say, a four- or five-week job to a week or so.

George L. Beers (Session Chairman): I think some people have in mind a device which may do this sort of thing in a matter of minutes. Perhaps that's expecting too much.