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Language conversion in the audiovisual media: a growth area with new technical applications and professional qualifications

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INTRODUCTION

The European Institute for the Media is an independent research and development organisation, concerned in the main with media development on the European scale, including satellite television, cable television and new electronic information delivery systems. Methods and mechanisms of language transfer in the mass media are among the topics researched by the Institute. In this paper I want to acquaint you with foreseen developments in the media field over the next five to ten years and their impact on language conversion and language transfer within the mass media.

The Institute has undertaken two major studies which examine these developments. The first, *The future of the European audiovisual industry*[1], is an industry study which tries to establish the likely development of the European film, cinema, and television industries over the next five to ten years. The other related study *Overcoming language barriers in television: dubbing and subtitling for the European audience*[2] is concerned with dubbing and subtitling, voice-over and narration techniques as well as their respective merits, costs, audience appreciation, and new technical and editorial developments. To my knowledge this is the first research and development project ever undertaken to explore the various methods of language conversion within the mass media in a comprehensive manner, and therefore breaks new ground.

I have divided my review into three main parts: first and very briefly, I shall outline the main developments in television in Europe in order to give substance to the assumption that within the media field, particular

demand for language conversion will increase dramatically over the next five to ten years. Secondly, I shall explain the main methods currently used for language conversion in television, with special reference to cost and economics, audience reaction and future developments. Thirdly, I would like to outline the emerging job and professional profile in the translation field which will combine translation and journalism: the journalist/interpreter or translator/media editor.

THE AUDIOVISUAL WORLD

Changes and growth in the audiovisual media

Television is currently going through its first profound transformation since it was established some 30 to 40 years ago: a transformation marked by two main characteristics. Firstly, the growing internationalisation, or in the European context, Europeanisation of television, and the growing commercialisation of television.

If we look at the European television landscape (Table 1) we see that already some 46 television programmes are relayed via satellite, and are receivable in not just one national coverage area, but all over Europe. In 1995, we will have 60 to 80 satellite transponders capable of delivering television programmes, and this might rise in the year 2000 to 140-150 able to carry television programmes across Europe[3]. The common denominator of all these satellite-relayed television programmes is, of course, that they reach some 20 countries in which between seven and ten major languages are spoken, in addition to numerous dialects.

A second development is the growth of the VCR video recorder. Although Europe lags behind the United States in VCR penetration, 40 to 50 per cent of all households in the major European countries are equipped with VCRs and the significance here is that people become their own programme controllers. They no longer rely on what is transmitted from national broadcasting stations, be it RAI in Italy, the BBC in the UK, ARD in the Federal Republic of Germany or any of the other traditional programme providers. People can either buy programmes or go to the shop and rent whatever kind of programmes they want. At the same time, and as part of this development, there is a big increase in the demand for new and more audiovisual programmes.

These developments in television hardware and infrastructure result in a considerable multiplicity of channels, which in turn, has severe consequences for programme production. The crucial question at the end is not how many satellite transponders we will have, but what kind of programmes will be shown on them and where will programmes come from? Again, in the European context that has major linguistic implications.

	1989	1995	2000
Satellite channels available for TV	46	90-100	140-150
Households equipped with video recorders	40%	75%	80%
Hours of TV programme transmission per annum	275,000	350,000	400,000

Table 1. Growth in the audiovisual media in western Europe[3]

The more television channels we have, the more fragmented the audience becomes; the more fragmented the audience, the smaller the revenue base for any given television programme provider to recoup programme costs. At the same time we can already observe a significant increase in programme production costs: home-produced programmes have increased by some 300 per cent over the past 10 years; the rights to broadcast the Olympics, football championships or other major sports events have increased up to 1,000 per cent over the last three years; programme imports, formerly commonly labelled 'cheap American imports' are still cheaper than home productions but have also increased significantly in price over the past few years.

This means that television programme providers can no longer rely on a large income to produce their own programmes, but have to buy in more programmes, or to engage in even more co-productions, co-financing deals, or pooling arrangements with other partners in the increasingly fragmented European television market. These movements are in the first place dictated by the new economics of television, but they also have a distinct linguistic component. A television operator will, in the first instance, search for other partners in their language region: for example, ARD or ZDF of Germany will look for partners in Austria and Switzerland where they can easily produce a programme in a language which reaches the whole German foreign market; the same is true for the French, English, Spanish and Portuguese.

However, the available market for this kind of monolingual co-production is becoming too small to generate enough finance to recoup ever rising production costs. Hence, broadcasters as well as programme producers, are looking increasingly to the European market. This has to do with the reasons given before, but also with 1992. Here we are right at the centre of the new importance of the linguistic element in European television. A programme has to do with language, with content, and if producers engage in co-productions with partners from other cultural and linguistic areas, they have to somehow tackle the language problem.

Methods of language conversion in the audiovisual field

There are basically three methods of overcoming language barriers in the audiovisual field, i.e., the cinema, television, video and of course, the growing area of corporate videos: first, dubbing, or more precisely, lip-

synch dubbing; secondly, subtitling; thirdly, voice-over and narration techniques. (See Figure 1)[4]

At present all three techniques are used in the various European countries. There are typical subtitling countries, such as Holland and all of Scandinavia which have been subtitling very successfully for years. And there are the classic dubbing countries, such as Germany, France, Italy and partly Spain where lip-synch dubbing is the common way of transferring a foreign language audiovisual product. The reasons for this division are partly historic, partly economic. Dubbing, which is very expensive, is only cost effective if a minimum of 20 million television households or more can be reached.

In the following, I should like briefly to discuss each of the main language conversion methods: or, the mechanical process of a given method; the inherent economics, that is, how expensive it is and how much manpower is needed to produce it; and lastly, how viewers react?

Dubbing in television always means lip-synchronised revoicing which is the most expensive of the language conversion methods available at the moment. The process of dubbing a foreign audiovisual production requires three main steps. First, a raw translation is prepared, which if I may say so, is usually very sloppy. Often, these raw translations are contracted out at low cost to students, or to people who happen to know another language; professional translators are hardly ever used. The raw translation script is then adapted to lip-synch requirements: if the original voice says 'ah', you have to have an 'ah' or similar open movement in the target language which matches the time and lip movement in the original. This adaptation work is done partly by the dubbing director and partly by the dubbing actors in a dubbing studio. The third step is the final mix of the newly generated voice track which has been created in the dubbing studio, with the original music and effects (M and E) track.

The soundproof, multi-track dubbing theatres needed for this process cost in the region of £100,000. This capital expenditure comprises some 23 per cent of the entire costs involved in the dubbing process. Dubbing actors themselves represent the highest cost factor, some 64 per cent: star dubbing actors are paid very high sums. The technical side of the dubbing process accounts for 13 per cent of the entire cost involved. (See Tables 2 and 3.) One hour of lip-synch dubbing will cost anything from £10,000 to £20,000. In view of the rising programme costs and smaller revenue resources referred to above this kind of expenditure is, especially for some of the smaller broadcasters in Europe, an additional important factor.

How do television audiences react to dubbing? In the main, they love it, because it is in their own language, and therefore easy to understand. However, a dubbed programme only produces an illusion of the original: it never gives the real soundtrack of the original film but only produces the illusion of seeing the real film. Therefore, from a cultural point of

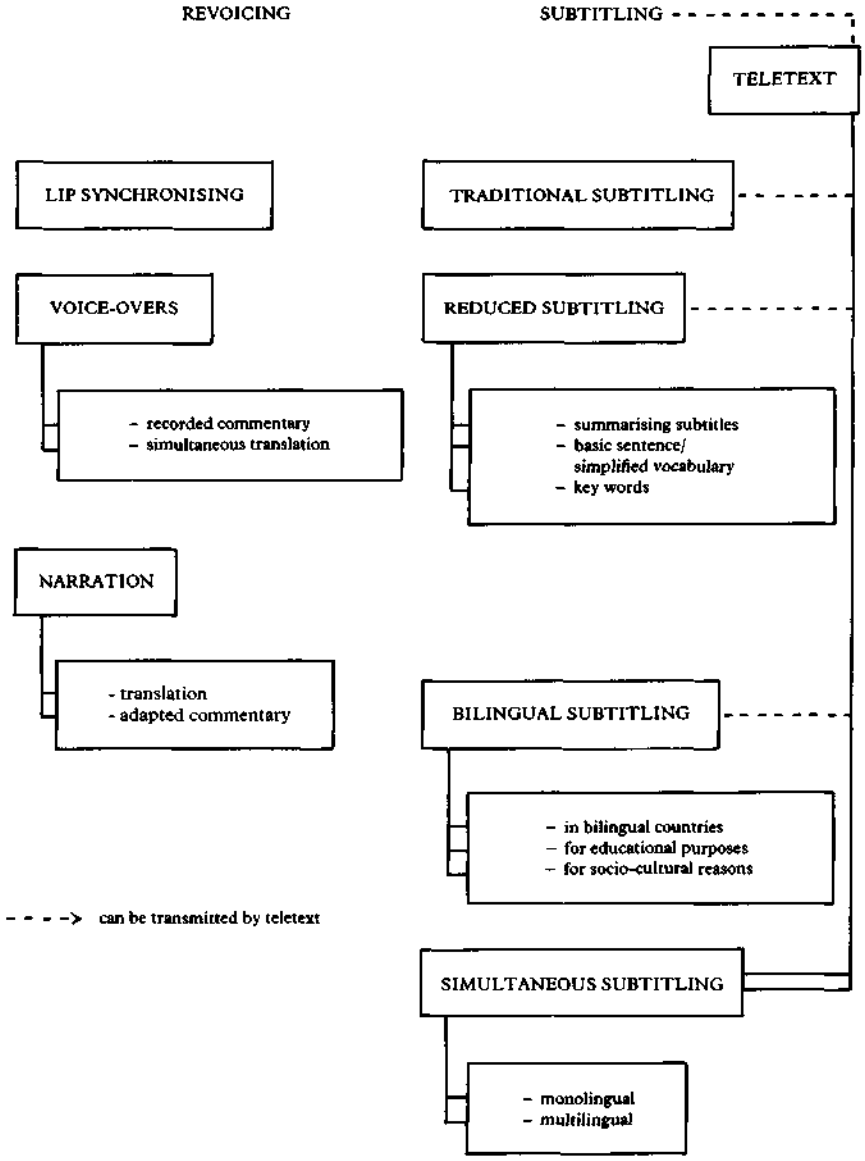

Figure 1 The Two Main Language Conversion Methods and their Subdivisions

view, quite a bit of concern has been expressed about having too many dubbed versions.

Subtitling is a much cheaper method of language conversion than lip-synch dubbing by a factor of about 1:15. The process goes through three main steps. First, the registration and verification of speech in the original voice track, or where necessary, transcription of the dialogue; second, translation and composition of subtitles. The important point here is that subtitles are never an accurate translation of a given dialogue, but a reduction into key sentences or even only key words. Opinions on subtitling vary, and depend on the context and nature of the original. However, a subtitler should have not only excellent translation skills but also the journalistic skills to reduce the often complex dialogue to short sentences which can be printed in not more than 60 or so characters. These must also be easy to read and understand in around four seconds of exposure. The third step in the process of creating subtitles is the time and picture insertion of the subtitle into the appropriate place in the film.

The facilities needed to produce subtitled audiovisual versions are a central studio costing around £80,000, plus as many workstations as are necessary, each equipped with VCR, television set and a personal computer. Each station costs around £8,000 (See Table 2). However, it is becoming increasingly easy for subtitling to be done at home with a personal computer. Software is available and the hardware equipment can be purchased off the shelf in most computer shops. Considerable cost reductions can be made by using new equipment, in particular personal computers and increasingly, remote workstations in the translator's home.

	Dubbing		Subtitling	
Equipment	Sound-proof multi-track dubbing theatre	Sound-proof outfit for voice-over and narration	Full-scale subtitling unit with 1 workstation	Each additional workstation or set of home subtitling equipment
Approx cost in ECU*	135,000	45,000	105,000	10,000

* ECU = European Currency Unit (approx US$)

Table 2. Investment costs for language conversion equipment in ECU*

In the case of subtitling, equipment accounts for about 25 per cent of the total language conversion cost. Interpreting labour accounts for about 60 per cent, lower than for dubbing, where the translation labour accounts for 64 per cent. Technical labour accounts for about 15 per cent of the total cost in both methods.

One hour of subtitles produced in the way described above will cost anywhere between £500 and £1,300. Hence, it is considerably cheaper than lip-synch dubbing.

	Lip-synch dubbing	Subtitling
Equipment and facilities	23%	25%
Technical labour	13%	15%
Interpreting	64%	60%

Table 3. Cost structure in percentages of total language conversion costs

What about the audience reaction to and appreciation of subtitled versions? For the audience subtitles are, of course, much more difficult to cope with. A viewer is primarily interested in watching the picture, but at the same time will have to read the subtitles. This requires an additional activity and is rejected by many people, particularly in the traditional dubbing countries. On the other hand, extensive audience research in the subtitling countries – Holland, Sweden and Switzerland – has shown that subtitling is accepted by 80 per cent or more of the audience. Longitudinal surveys which were taken in 1974 and 1984 in the Netherlands show that the appreciation of subtitles has grown particularly among the lower socio-economic groups, from around 50 per cent in 1974 to well over 70 per cent in 1984.[5]

This leads to the conclusion that the common argument 'the people don't like subtitling anyway' is not necessarily true in this crude form. There is a lot of room for experiment and a more flexible approach to the cheaper and more cost-effective methods of language conversion for considerable sectors of the audience.

The reason why we are likely to see more and more subtitling, however, is growing economic pressure. There is reason to suppose that in the dubbing countries especially Great Britain, France, Italy, Germany and Spain, more and more subtitled programmes will be produced in the future. This is, of course, also desirable from a cultural point of view.

	Average	Maximum	Minimum
Subtitling	740[2]	1,957	275[3]
Lip-synch dubbing	11,000[4]	24,000	3,400
Voice-over	1,500	2,500	600
Narration	1,100	-	-

Table 4. Units costs for one hour of conveyed TV programme in ECU[1]

[1] Including equipment costs, depreciated over three years and relative to the time needed to produce one hour of conveyed programme.
[2] On the basis of 36 manhours and 750 subtitles per hour of programme.
[3] For non-electronic equipment.
[4] On the basis of 15 working days by translator(s), sound technician(s), a dubbing director and 10 dubbing actors, part-time as appropriate.

Future developments in audiovisual language conversion

So far it has been shown that a considerable increase in the demand for language conversion can be expected in the audiovisual field as a result of programme exchange among various European broadcasting providers. Dubbing is very likely to remain the main method used, especially for mass appeal programmes such as series and those to be broadcast during prime time. At the same time, we will see more and more demand for subtitling at the fringes of the programme end. This might eventually extend to prime time schedules where an audience of sufficient numbers could be captured with this method.

LANGUAGE CONVERSION MARKETS IN EUROPE

At this point it is useful to look at the main language groups in Europe in order to assess the potential market size in each of these languages.

Language	European Community	Western Europe
English	59	59
French	58	60
German	60	72
Italian	60	62
Spanish	38	38

Source: The European Institute for the Media

Table 5. The main language groups in Europe (native speakers in millions)

Table 5 shows that there is roughly an equal number of 60 million native German, English, French and Italian speakers within the European Community. However, if the Eastern European countries are included, German is the most widely spoken first language, with English the most widely spoken second language. Table 6 also demonstrates that there are considerable number of adults who speak a European foreign language and hence constitute market niche opportunities, aside from the large linguistic blocks, which can be catered for in Europe with multilingual audiovisual products. These are as yet little developed and will, no doubt, have to be further exploited in the years to come. It is hoped that this will also lead to a much more active exchange of audiovisual production in the various European languages.

Adults who speak	Belgium	Denmark	France	W Germany	Ireland	Italy	Netherlands	Norway	Spain	Switzerland	UK
English (%)	26	51	26	30	99	13	50	80		26	100
French (%)	71	5	100	12	12	27	16	10		55	16
German (%)	22	48	11	100	2	6	61	20		81	9
Italian (%)	4	1	8	2	1	100	2	4		17	2
Spanish (%)	3	1	13	2	1	5	2	2	100	3	3
Dutch (%)	68	1	1	3	–	–	100	–		–	1

Table 6. Adults who speak a European foreign language as a percentage of the total population

THE LANGUAGE CONVERSION INDUSTRY

How is the language conversion industry organised at present? In some countries there are special subtitling or dubbing units within each broadcasting station, which are usually accounted for as a service department within the post-production process. In Germany the dubbing industry is highly oligopolistic, whereas in other countries, the industry is monopolistic with very strong vested interests. These industries tend to have close working relationships with the established public service broadcasting stations and little space for development.

The future, however, might see many more independent companies in this field. This is, of course, only speculation, but is based on the general trend towards deregulation in broadcasting and a move towards smaller, specialised companies or enterprises, which can provide high quality support services in subtitling, dubbing, voice-over or narration production. It might be just a matter of time – maybe five to ten years – before we see these developments mature and take off as an audiovisual support industry in its own right.

For example, the European Television Task Force under the presidency of Valery Giscard d'Estaing, included in its report, *Europe 2000: what kind of television?*[6] two recommendations:

6.1 Multilingual European television services working in the public interest should be established. These services should be primarily concerned with high quality programmes, drawing on the production resources of several countries as well as with a European news service.

6.2 the improvement of the technical, cultural and economic conditions applying to language transfer should be given high priority.

This shows that there is pressure both from within the television industry as well as in the political arena for supporting and strengthening the audiovisual language conversion industry in Europe.

Conversely, there is a danger that if nothing is done to promote the European audiovisual industries, many of the new television channels will fill their programmes mainly with American imports. These will keep translators busy, but only from English into Danish, French, Greek and so on: clearly, a one-way flow of programme exchanges and linguistic spread. What is needed is a more balanced exchange of culture between the various European regions and a more flexible approach to the various methods of language conversion in the audiovisual field.

TECHNOLOGICAL DEVELOPMENTS

Of course, computers and personal computers are already widely used in audiovisual language transfer. Improved techniques for simultaneous subtitling, similar to the Dutch Velotype keyboard and character-generation system, will have to be developed. However, this technique is unlikely to be fully and satisfactorily operational for some time.

One way to produce multilingual audiovisual products is to shoot the production in various language versions. While this might only add some three to five per cent to the total cost of major productions, it is still very expensive, and not an option for existing programmes nor for most new productions.

A recent Screen Digest Forum on these matters agreed that the ideal technical development

> would be a system based on technology whereby the writing of the translated dialogue to match the lip movements would be rendered simpler for the translator by being made more automatic. It was envisaged that with voice recognition technology to detect and analyse the dialogue, a computer holding a multilingual thesaurus would recognise voice patterns and try to find appropriate foreign language equivalents which the translator would just edit and tidy up …. Another potentially interesting technology is to stretch the film or to compress the image (stretch-and-compression printing) in order to achieve smoother dubbing.

While these and other techniques are currently being researched in Europe and Japan, such development will take some 10 to 15 years to mature, and will only be of limited application to the media, where vocabulary varies widely, a vast array of fields are being covered, and language is often colloquial, sometimes even slang.

A NEW JOB PROFILE: THE MEDIA TRANSLATOR/ INTERPRETER

More immediately, the above developments are likely to create a demand for a new professional job profile, the interpreter/journalist or translator/ editor who performs both journalistic, editorial and linguistic tasks. Hitherto media translators have been:

- freelance translators
- programme-makers with language skills
- cinema translators.

Previous experience, for example the Eurikon experiments of the EBU (European Broadcasting Union), has shown that these professional backgrounds are essential but not sufficient for high quality performance in future multilingual television. Therefore training for new media translators and further vocational training for existing media translators deserves high priority.[7]

So far language conversion, and those who carry out the tasks involved, have contributed greatly to maintaining linguistic and hence cultural diversity in Europe. It is hoped that this will continue to be the case in the emerging European television landscape.

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