

METHODOLOGICAL ISSUES IN THE STUDY OF INTERPRETERS' FLUENCY

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Two o'clock A.M. — The experiment has been tried. With what result, I
am now to describe.
Wilkie Collins, *The Moonstone* (1868)

1. Introduction

This article illustrates a possible methodology for assessing interpreters' fluency. The rationale for such assessment is briefly introduced, after which an ongoing empirical study of consecutive interpreting from English to Italian is outlined and discussed. Methods and results, which usually form two distinct parts of a research report, are in this case presented together to illustrate how the methodology is applied in actual practice. For this purpose, though the ultimate aim of the study is to compare fluency in a sample of consecutive interpretations by students and professional interpreters, only one interpretation is examined here. An account of data for the entire sample is planned for a future article.

Assessment of interpreting is no easy task, even for experienced assessors. A case in point is Flavia Evandri's (1998) study of how seven interpreting teachers at Italian and Austrian universities were asked to assess Italian-to-German interpretations by five students from the University of Bologna, who each recorded a simultaneous and a consecutive interpretation. The teachers did not know the students and assessed them from the recordings of their interpretations. Lack of consistency between the various assessments indicates considerable variability in standards and priorities from one assessor to another. It was emblematic, for example, that there was unanimity about awarding a pass or a fail for only three out of ten interpretations. Another interesting finding was that almost none of the seven assessors could generally be identified as a consistently higher (or lower) marker than others.

This lack of consensus among different assessors can, to a certain extent, be linked to discussion of two important related issues. The first of these is whether interpretation can be judged in isolation from a real communicative setting, with no regard for possible interpreting strategies or how successfully they are used. Taking the communicative setting into account involves a number of important variables, such as delegates' ability to complement what the interpreter says with information conveyed in handouts and slides. A second issue which can be usefully focused on is the recognition that the assessor's judgment may differ

considerably according to whether s/he reads a transcript or (as in Evandri's study) listens to a recording of the interpretation (Gile 1999).

Even in "real" conference settings, however, surveys among delegates in different subject areas highlight a variety of opinions on the relevance of evaluation criteria such as terminological correctness and overall fidelity (Kurz 1993). This suggests that variability in assessment standards probably to a certain extent reflects lack of consensus on *what* to assess.

One possible approach is to give points for qualities such as clarity of expression, though this raises the problem that definitions of what is acceptable, comprehensible or complete are often based on "fuzzy" or subjective criteria. An alternative is to judge by default, counting errors and omissions, as in Henri Barik's (1973, 1975) early experimental work on simultaneous interpreting. The suitability of this approach is debatable, and definitions (e.g. of omissions) can again prove difficult.

Assessment need not be subject to differing opinions of what is right, wrong or missing if parameters amenable to objective measurement are taken into account – for example, duration of pauses or speech rate. Two provisos are necessary in this respect, First, such assessment should be based on instrumental measurement, since identifying features like pauses by ear alone entails the same risk of inconsistency among different assessors as focusing on more obviously subjective criteria. Second, pauses and other objectively measurable parameters may ultimately tell us little about the quality of interpretation unless content too is taken into account. However, a quantitative perspective on different features of interpreting can contribute to overall assessment of quality – for example, at a very simple level, by comparing duration of a consecutive interpretation with that of the original speech.

Provided that quantitative analysis is seen in perspective, as only a part of overall evaluation, it offers the distinct practical advantage that it is on the whole more clear-cut than assessment of content-related parameters like completeness or correctness. Admittedly, it is not always as straightforward as might seem at first sight, and will entail methodological choices – for example, choosing between syllables and words as the unit of measurement for speech rate (Pöchhacker 1993; and see section 3, below), or identifying a minimum duration below which pauses are not counted (see section 2.3.2, below). However, any such problems in quantitative analysis can generally be addressed by clear statement and consistent application of the criteria and/or methods chosen. By contrast, content-related parameters are ultimately more difficult to pin down and their evaluation may differ from one assessor to another.

Fluency lends itself to quantitative assessment through a number of indices, sometimes referred to as "temporal variables". One of these is speech rate, though this does not mean that fluency can be automatically equated with speed

– rapid speech may be formally inaccurate and/or incomprehensible. Other temporal variables make it possible to examine fluency by evidence of its absence, a perspective suggested by Erving Goffman's (1981: 172) statement of the following basic rule in public speaking:

[speech] segments must be patched together without exceeding acceptable limits for pauses, restarts, repetitions, redirections, and other linguistically detectable faults.

Goffman considers that these features of speech reflect the efforts of reasoning and formulation which accompany linguistic production. The skill of professional speakers such as the lecturer or radio announcer is to hide these efforts and any resulting hesitations, so that no "production crisis" or "backstage considerations" (Goffman 1981: 172) will be allowed to betray moments of doubt or distraction.

It is interesting that the various "errors of performance" examined in Andrzej Kopczynski's (1981) study of interpreting quality coincide to all intents and purposes with Goffman's "linguistically detectable faults". This underlines that fluent speech production can be analysed from a similar perspective in both interpreting and public speaking. Just as Goffman argues that the lecturer's fluency will keep the curtain drawn on any production problems backstage, difficulties with any part of the interpreting process need not actually be apparent as such if the interpreter addresses them promptly and discreetly.

Against this background, professional public speaking ability tends understandably to be considered part and parcel of the interpreter's skills (Jones 1998: 40). Ingrid Kurz's (1993) survey of how different user groups and interpreters rate various features of conference interpreting is emblematic in this respect, with fluency placed fifth out of eight items in the overall ranking – ahead of correct grammatical usage, native accent and a pleasant voice. In other words, while fluency ultimately provides no guarantee of the interpreter's reliability, it is an important feature of successful interpretation.

2. Procedures

2.1. Source speech and interpretation

Information in this very brief section is intended only to outline the experimental setting in which the research was carried out, not to present the overall study sample.

The material examined here is a consecutive interpretation by a student working from English "B" into Italian "A", based on a short recorded extract

from the opening of a speech on British attitudes to Europe. The speaker was an English lecturer, addressing a non-specialist audience of Italian students.

According to the definitions of speech presentation modes used by Lehtonen (1982: 40), this was an extemporaneous delivery – planned in advance but presented freely, not read. Use of an extemporaneous speech for the experiment was preferred to manuscript delivery, which would probably have proved very difficult for beginner students like the one whose interpretation is examined here.

A transcription of the source speech, punctuated for ease of reference, is provided in Appendix 1.

The analysis of methodological issues in the following paragraphs does not examine the student's retrospective comments on silences and hesitations in the interpretation, made while listening to it on tape immediately afterwards. This aspect of the study will be touched on only very briefly in the final discussion, since it has already been examined in detail elsewhere (Mead 2002).

2.2. Transcription and computer processing of the recorded interpretation

The recording of the interpretation was transcribed without punctuation, including all words or parts of words identified by close listening. Hesitation noises with no phonemic value were simply transcribed as “eh” or “mm”, to indicate their oral or nasal character respectively. No attempt was made to indicate their duration in this initial transcription, which was intended simply as a first step towards more detailed noting of pauses.

The next step was to transfer the recording on to the hard disk of a Macintosh iMac™, using a programme for visualisation and editing of audio files (SndSampler 3.7.1™, © Alan Glenn, Midland Mi, USA). This software makes it possible to convert an acoustic signal into an oscillogram, visualising sounds as a continuous wave pattern on which any segment can be highlighted and matched with the corresponding recording. At a sampling frequency of 44 kHz, duration of different speech features can be measured in hundredths of a second. Similar programmes can be readily found for a Windows environment – for example, Adobe Audition™. Accuracy to a thousandth of a second can be achieved on some programmes, though this is necessary only for detailed phonetic study.

For the present analysis, the interpretation was divided into eleven 20-second segments and one final 6-second segment (totalling 3'46"). Each segment thus created could be visualised as a single oscillogram, so that all pauses could be identified and measured (see section 2.3.3, below). Some programmes of this kind have a zoom facility, which makes it possible to focus

on any part of the speech without first having to segment it into a sequence of smaller files.

The detailed transcription including pause data obtained from the oscillograms is reproduced below. An English gloss is provided immediately below the Italian text. This gloss is basically a word-for-word translation, with only minor adjustments where too literal a translation might prove difficult to understand. For example, in lines 8-9, the literal translation of “penso che siano necessarie le [0,18] le mie scuse” would be “I think that are necessary the the my apologies”; for purposes of clarity, this has been modified to “I think that there is need for my apologies”.

For convenience of reference, lines in the transcription have been numbered on the right. All pauses are indicated in square brackets, those of at least 0.25 sec. (see section 2.3.2, below) being highlighted in bold type. Pause durations are shown in seconds. A simple indication of duration (e.g. [0.43], in l. 1) represents a silent pause. To indicate filled pauses (commonly referred to as “ums and ahs”), the duration is in each case shown alongside the corresponding vocalisation (e.g. [mm 0.51], in l. 2). A “mixed” pause, comprising an uninterrupted sequence of a silent and a filled pause, is indicated by a hyphen before or after a vocalisation (as in the first pause in l. 1). Underlined pairs of words (e.g., della del, in l. 6) are repetitions, in each case counted as two words (see section 2.3.1, below).

Table 1 Transcription of the interpretation, complete with English gloss

buongiorno [- eh 1.89] l'ultima volta che ho partecipato a un convegno è stato [0.43] a <i>hello the last time that I participated in a conference was in</i>	1
[mm 0.51] Bruxelles [0.47] dove gli interpreti mi hanno detto [eh 0.73] che stavo parlando <i>Brussels where the interpreters told me that I was speaking</i>	2
troppo velocemente e stavo dicendo delle stupidaggini [0.87] quindi nel caso ciò <i>too quickly and I was talking nonsense so in the event that</i>	3
succedesse anche questa volta vi prego di dirmelo in modo che possiamo comunicare senza <i>should happen this time too I ask you to tell me so that we can communicate without</i>	4
molti problemi [0.83] innanzitutto [0.25] vorrei iniziare con [eh 0.43] le mie scuse <i>many problems first of all I'd like to start with my apologies</i>	5
[- eh 1.02] vorrei scusarmi per il comportamento <u>della del</u> mio staff per la sua stupidità nei <i>I would like to apologise for the behaviour of my staff for their stupidity in</i>	6
confronti dell'Europa e nei vostri confronti [1.57] la storia che vi racconterò comunque ha <i>regard to Europe and towards you the story that I'll tell you however has</i>	7
<u>una</u> [0.99] <u>un</u> finale positivo [eh - 1.68] comunque penso che siano necessarie <u>le</u> [0.18] <u>le</u> <i>a positive ending nevertheless I think that there is need for</i>	8

mie scuse ancora una volta per quello che [eh 0.40] i miei concittadini hanno fatto nei <i>my apologies once more for what</i> <i>my fellow-citizens have done in</i>	9
vostrì confronti e all'interno della [0.33] politica dell'Unione Europea [- eh 1.93] il mio <i>regard to you and within the politics of the European Union</i> <i>my</i>	10
[0.55] discorso [eh 0.54] è diviso <u>in in</u> due parti principalmente vi vorrei [0.40] parlare un <i>speech</i> <i>is divided into two parts mainly</i> <i>I'd like to talk to you a</i>	11
po' [eh 0.22] delle date più importanti che riguardano la creazione [0.26] dell'Unione <i>little</i> <i>about the most important dates which concern the creation of the</i>	12
Europea e i rapporti della Gran Bretagna nell'Unione [0.15] con l'Unione Europea [0.36] e <i>EU and the relations of Great Britain in the Union</i> <i>with the EU</i> <i>and</i>	13
poi [eh 0.43] darvi alcune spiegazioni per quanto riguarda [0.54] il ruolo che ha svolto <i>then</i> <i>give you some explanations regarding</i> <i>the role played</i>	14
[0.22] il mio stato all'interno dell'Unione Europea [- eh 2.11] il comportamento della <i>by my state within the European Union</i> <i>the behaviour of</i>	15
[eh 0.62] Gran Bretagna può [eh 0.44] sembrare un po' strano [- eh 2.95] forse difficile da <i>Great Britain may</i> <i>seem a little strange</i> <i>maybe difficult to</i>	16
comprendere da parte degli altri membri dell'Unione Europea soprattutto [eh 0.36] prima <i>understand by the other members of the European Union</i> <i>above all</i> <i>before</i>	17
che la Gran Bretagna [eh 0.37] diventasse [mm 0.66] membro dell'Unione Europea <i>Great Britain</i> <i>became</i> <i>member of the European Union</i>	18
[- eh 1.02] la prima data [eh 0.59] importante il primo evento di cui vi voglio parlare è il <i>the first important date the first event of which I want to speak to you is the</i>	19
discorso tenuto da Churchill a Zurigo nel millenovecentoquarantasei [1.64] dove [0.15] <i>speech given by Churchill in Zurich in nineteen forty-six</i> <i>where</i>	20
Churchill ha [- eh 1.13] parlato [eh 0.47] della situazione <u>del della</u> Gran Bretagna <i>Churchill spoke</i> <i>of the situation of of Great Britain</i>	21
affermato che [eh 0.62] la Gran Bretagna non era ancora pronta per entrare a far parte <i>stated that</i> <i>Great Britain was not yet ready to enter and become part</i>	22
dell'Unione Europea [0.55] la seconda data [eh 0.48] fondamentale per la creazione <i>of the European Union</i> <i>the second date</i> <i>fundamental for the creation</i>	23
dell'Unione Europea e per [0.29] il ruolo della Gran Bretagna all'interno dell'Unione è il <i>of the European Union and for</i> <i>the role of Great Britain within the Union is</i>	24
millenovecentocinquantesimo in cui è stato [0.29] firmato il [eh 0.26] Trattato di Bruxelles <i>nineteen forty-eight</i> <i>with the signing</i> <i>of the</i> <i>Treaty of Brussels</i>	25

[0.80] ed è stato creato il [eh 0.26] Consiglio Europeo [0.69] che secondo l'Unione doveva <i>and the creation of the European Council which according to the Union had to</i>	26
svolgere un [eh 0.47] un ruolo [eh 0.26] sovranazionale quindi di controllo <i>play a a supranational role thus of control</i>	27
sovranazionale [- eh 1.31] la Gran Bretagna [0.22] si è opposta alla decisione del <i>[at] supranational [level] Great Britain opposed the decision of the</i>	28
consiglio e ha [0.32] affermato che [eh 0.51] il Consiglio Europeo dovrebbe [0.32] più che <i>council and stated that the European Council should more than</i>	29
altro avere un ruolo internazionale [1.53] il [mm 0.48] l'atteggiamento della Gran Bretagna <i>anything have an international role the the attitude of Great Britain</i>	30
[- eh 1.79] è [0.69] sembrato arrogante [- eh - 2.15] visto che [ehmm 1.31] i cittadini <i>seemed arrogant seeing that the English citizens</i>	31
inglesi e il governo [eh 0.40] inglese [eh 1.31] pensava [0.22] che l'Unione Europea aveva <i>and the English government thought that the European Union</i>	32
bisogno della [- eh 1.02] Gran Bretagna [0.18] per [eh 0.22] aiuti economici [eh - 2.01] per <i>needed Great Britain for economic help to</i>	33
[eh 0.66] risollevarla la situazione [0.36] così negativa del [eh 0.44] dell'Europa <i>boost the situation [which was] so negative of of Europe</i>	34
[- eh - 2.62] infatti in tutto l'arco [eh 0.33] degli anni cinquanta l'economia [0.37] europea <i>indeed in the whole period of the fifties the European economy</i>	35
[eh 0.41] non aveva [mm 0.74] mostrato grandi miglioramenti e la situazione era piuttosto <i>hadn't shown great improvements and the situation was rather</i>	36
negativa <i>negative</i>	37

2.3. Analysis of temporal variables

As explained above, information which reports of empirical research usually separate into distinct “methodology” and “results” sections is presented here as a single illustrative example for each stage of the study.

The following temporal variables will be examined in this way: speech rate (number of words or syllables spoken per minute), duration of pauses, phonation/time ratio (the percentage of speech time used for actual speech production, as opposed to pauses), articulation rate (number of words or syllables spoken per minute, but not counting pauses as part of speech production time) and mean length of run (the mean number of words or syllables between pauses).

Of Goffman's "linguistically detectable faults", only pauses are included in the above list. Other disfluencies such as false starts and repetitions, referred to by Goffman (1981: 172) as "restarts [...] redirections", are related as much to content as to rhythm and will thus not be examined in this initial exploration of interpreters' fluency. Drawls (drawn-out vowels, often in final position, as when /i:/ becomes /i::/ in the phrase "for me") are also excluded, mainly because their identification is to a certain extent subjective.

Several problems of content in the interpretation examined here can be readily identified from even a rapid examination of the transcribed target text – e.g., anachronistic references to the European Union, confusion between the Council of Europe and the European Council. However, these are not relevant to the type of analysis proposed.

For illustrative purposes, data on the different variables considered here will be briefly compared with those provided in studies using similar methodology for assessment of fluency in unprepared speech (see below, sections 2.3.1, 2.3.3 and 2.3.5). Speech production mode is obviously an important factor to be considered when comparing temporal variables in different speech samples – distinguishing, for example, between reading aloud, impromptu speech and consecutive or simultaneous interpretation. Even within a given production mode, a number of other factors should be borne in mind – language, register and topic being obvious examples. While isolated research efforts on temporal variables in relation to these features of speech production date back even decades (e.g. Goldman-Eisler 1967), the topic remains relatively little explored and available data are limited.

2.3.1. First temporal variable: speech rate

The expression "speech rate" is that used by Manfred Raupach (1980), whereas Richard Towell, Roger Hawkins and Nives Bazergui (1996) use "speaking rate" in their comparison of unprepared English and French oral production by twelve English students studying French at university. Luca Onnis (1999) also uses "speaking rate" in his study of English and Italian production by eight late English-Italian bilinguals (i.e. native speakers of English who have lived their adult life in Italy and acquired an excellent command of Italian).

All that is needed to calculate speech rate is a recorded speech sample and a measurement of its duration. A programme like SndSampler 3.7.1™ makes it possible to measure duration with great precision, but even a stopwatch is enough for reasonably accurate measurement of a speech sample's overall duration in minutes and seconds.

Dividing the total number of words or syllables in the speech sample by its duration in minutes or seconds gives the speech rate. Both words and syllables

were counted in the present study. The choice between the two units of measurement, together with problems of definition and method raised by use of the syllable, will be commented on below (see section 3).

The word count includes all complete words, even if these are part of a false start or repetition (as in the six cases underlined, in lines 6, 8, 11, 21 and 27 of the transcription). Incomplete words are not counted (though they would be included in a *syllable* count). It is far more convenient to use the word counter of a word processing programme than to do a visual count, though a subsequent check is necessary to identify any incomplete words which the programme will have included in the count. For the present study, this check was also used to ensure that all apostrophised forms except the definite article *l'* were counted as separate words. For example, “dell'Unione” (in l. 12 of the transcription) and “nell'Unione” (l. 13) were each treated as two words, though the automatic word count considered them as one.

The total count thus obtained for the interpretation was 394 words. To calculate speech rate in words per minute (w.p.m.), this total was divided by the interpretation's overall duration in seconds (226) and multiplied by 60. The resulting speech rate is 104.60 w.p.m. The syllable count is 880, giving a speech rate of 233.63 syllables per minute.

Like all the results presented below, this information means little out of context. One possibility is to look at it in relation to data for other individuals – either within the same sample or in other studies. For example, the mean speech rate of Onnis' (1999) eight bilinguals in Italian (99.50 w.p.m.) is fairly close to that of the student whose interpretation is examined here, while it is much lower in the study by Towell, Hawkins and Bazergui (1996) (186.92 syllables per minute in English). Comparability of speech rates in the three studies is to a certain extent limited by differences in units of measurement – Onnis counts in words, while Towell, Hawkins and Bazergui use syllables. The languages examined in the three studies also differ, as do at least two other important variables: (i) presumed level of competence (Italian is the interpreting student's native language in the present study, but the weaker of the late bilinguals' languages in Onnis' sample); (ii) experience in oral presentation (the interpretation analysed here is by a beginner student, while Onnis' subjects are teachers).

While caution is needed in comparing speech rate data across different samples, a potentially interesting alternative for future research is to look at speech rate in relation to other variables in interpretations by the same individual or group – for example, examining whether the interpreter's linguistic control is tighter or slacker at different speeds.

2.3.2. Second temporal variable: duration of pauses

The oscillograms created on the SndSampler 3.7.1™ programme (see 2.2, above) made it possible to isolate both filled pauses and silent pauses. While filled pauses are often thought of as disfluencies (e.g. Duez 1982), silent pauses can either go unnoticed or actually help the listener – for example, by holding back new information long enough for what has just been said to sink in. Silent pauses at natural syntactic breaks thus favour efficient segmentation of the incoming message by the listener – while at the same time affording the speaker an opportunity for discreet planning of what comes next (Butterworth 1980: 157; Deese 1980: 84).

Overall times for silent and filled pauses were calculated separately, while mixed sequences of silent and filled pauses (e.g. “[Jeh[]”) were considered as filled pauses. Thus, an initial silent pause of 0.50 sec. merging into a filled pause of 0.20 sec. and another silent pause of 0.50 sec. would be counted as a single filled pause of 1.20 sec. The reason is that there is little likelihood of each silent or filled part within the sequence being perceived as a pause in its own right. How these “mixed” pauses are transcribed has already been explained in the introductory remarks to Table 1.

There is some debate about the most appropriate minimum cut-off point for pause measurement. Towell, Hawkins and Bazergui (1996) set the threshold at 0.28 seconds, while Onnis (1999) uses 0.10 seconds. The minimum cut-off point used in the present illustration is 0.25 sec., as in a number of earlier studies (e.g. Goldman-Eisler 1958). This means that shorter pauses, though shown in the transcription, are not included in the calculation of pause duration. The upper cut-off point is less debated in the literature; 3 sec., the limit agreed on by a number of authors (Towell, Hawkins and Bazergui 1996; Onnis 1999), has been applied here – though all pauses in the interpretation analysed are well below this limit.

Once each pause had been identified and measured, total duration of silent and filled pauses for the interpretation as a whole was obtained by adding up all the individual pauses of at least 0.25 sec. (marked in the transcription, in bold type: see Table 1, above). In all, there were 68 (25 silent pauses, 43 filled pauses). Their total duration was 15.70 sec. and 40.12 sec., for silent and filled pauses respectively – in other words, almost a minute (55.82 sec.) of overall pause time.

Comparison with pause duration in other speech samples or interpretations should be based on a common denominator. In other words, total pause time (55.82 sec. in this case, 57.98 sec. in another student’s interpretation of the same speech) should be examined in relation to the overall duration of each interpretation (3’46” and 3’17”, respectively). Given this information, one way

of comparing pause time in the two interpretations is to calculate it in each case as a percentage of the total speech times: 24.70% and 29.43% respectively. This shows that pause time, quite similar in the two cases if simply quantified in seconds, in fact differs as a proportion of overall speaking time. Another possibility is to calculate pause duration per minute – in this case, 14.82 secs. vs. 17.66 secs. These pause times may at first sight seem high if there is no yardstick to measure them by, but they will now be considered in relation to data from other studies.

One problem in comparing pause data from different studies is that some authors consider filled pauses as non-phonemic syllables and do not include them in the calculation of pause time. If this methodology is adopted, the pause times in the two interpretations compared above are thus 15.70 sec. and 15.77 sec. Silent pause duration in the two cases thus differs very little, as reflected in the corresponding percentages: 6.95% vs. 8.00%.

Among those who include only silent pauses in calculation of pause time are Towell, Hawkins and Bazergui (1996), while Onnis (1999) takes both silent and filled pauses into account.

In both these studies, pause duration is just one parameter of fluency and does not necessarily give much information if considered in isolation from other variables such as speech rate and average length of pauses. There is also the problem that, ultimately, the researcher has no sure way of distinguishing between hesitation pauses (to allow speech planning) and functional pauses (to help the listener or create rhetorical effect).

Detailed examination of such debate, which remains at best speculative, is beyond the scope of the present study. Pause duration can nevertheless provide an interesting point of comparison as an important determinant of speech rhythm in different samples. In the next section (2.3.3), pause duration and phonation/time ratio in the present study are tentatively compared with data from the studies by Towell *et al.* and Onnis.

First, however, phonation/time ratio should be briefly explained. Since it simply gives the same information as pause time from a different perspective, how these data relate to those reported by other authors can then be discussed for the two variables together.

2.3.3. Third temporal variable: phonation/time ratio

Phonation/time ratio (PTR) is the percentage of speaking time used for phonation, or actual speech production, as opposed to pauses. It adds no real information to that provided by the calculation of pause time as a percentage of speaking time, since it is simply the calculation of the balance left when pause time is subtracted.

In the above example, pause times for the two subjects are 6.95% and 8.00% if only silent pauses are included in the calculation, or 24.70% and 29.43% if all pauses are taken into account. PTR is thus 93.05% (100 - 6.95) and 92% (100 - 8) in the first case, 75.30% (100 - 24.70) and 70.57% (100 - 29.43) in the second.

Towell, Hawkins and Bazergui (1996) identify a mean PTR of about 66% in impromptu production of English as a native language by their 12 subjects, the calculation being based on *silent* pauses of at least 0.28 sec. Though PTR in French increases (from 57% to 62%) after the students have spent several months in France, it remains slightly lower than in English. Mean PTR in the impromptu English and Italian speech of the eight late bilinguals studied by Onnis (1999) is about 65% in both languages, the calculation being based on *silent and filled* pauses of at least 0.10 sec. The PTR calculated in the present study can be tentatively compared with that in Towell, Hawkins and Bazergui (1996), the minimum cut-off point being fairly close in the two cases. If PTR in the present study is based on silent pauses alone, it is greater than 90%. This means that it is considerably higher than in the impromptu production analysed by Towell, Hawkins and Bazergui. Such a comparison can be at best tentative, for two reasons: (i) only two interpretations have been considered here, as opposed to 12 subjects in the Towell, Hawkins and Bazergui study; (ii) different languages are involved (English and French in one case, Italian in the other). It is nevertheless possible to formulate a provisional hypothesis that unprepared monolingual production, unlike consecutive interpretation, requires “on line” planning of speech content and thus involves more pausing.

This would be consistent with Daniel Gile’s (1995: 89) argument that:

L’interprète [en consécutive] connaît l’ensemble du segment de discours qu’il va interpréter avant d’en commencer la reformulation: Sur ce plan, il est parfois en meilleure situation que l’orateur, à qui il arrive de devoir improviser. (my emphasis)

It is also in line with the speech rate data discussed above (section 2.3.1), higher in consecutive interpretation than in the Towell, Hawkins and Bazergui study. Onnis’ speech rate data, however, are also much higher than those reported by Towell, Hawkins and Bazergui. This underlines the need to weigh up even the most tentative conclusions against a variety of data, and also to assess how far the comparison is subject to other variables – for example, as mentioned at the end of section 2.3.1, Onnis’ subjects are teachers and can thus be presumed to have greater experience of monological speech than a novice interpreting student.

2.3.4. Fourth temporal variable: articulation rate

The concept of phonation time – i.e. the time actually dedicated to speech production, calculated by removing pause time from the total duration of the speech – has already been illustrated. The question of whether pause time includes all pauses or only silent pauses has also been explained. In the interpretation analysed for the present study, what must be subtracted from the total duration of 226.00 sec. (i.e. 3'46'') is either 15.70 sec. (duration of silent pauses) or 55.82 sec. (duration of silent and filled pauses combined). Phonation time will thus be 210.30 or 170.18 sec. respectively. The total word count, divided by phonation time, gives articulation rate: 108.70 w.p.m. if pause time includes only silent pauses; 134.33 w.p.m. if it includes all pauses.

Compared with pause duration and PTR (discussed in sections 2.3.2 and 2.3.3), data on articulation rate afford a different perspective on fluency. Essentially, however, the information provided is the same. Speech rate is obviously lower than articulation rate, which involves dividing the word or syllable count by only a part of the total duration, but it is interesting to see how much the two rates differ. In this example, speech rate is conspicuously lower than articulation rate only when filled pauses are included in pause time: a speech rate of 101.15 w.p.m. does not differ greatly from an articulation rate of 108.70 w.p.m. (subtracting only silent pauses from total speech production time), but is almost a third lower than an articulation rate of 134.33 w.p.m. (with filled pauses also included in pause time). This indicates that the interpreter's *filled* pauses make up an appreciably greater proportion of production time than *silent* pauses – in other words, “ums” and “ahs” are very noticeable.

The same information is, of course, given by the pause times and PTR, the only difference being that the articulation rate highlights a possible target level to measure actual speech rate against. Whether this target level can actually be taken as a realistic goal is debatable, since a possible side effect of striving to accelerate speech rate by avoiding pauses might be a clipped – and, in some languages, particularly unnatural – delivery. Limiting *filled* pauses, however, can be a relevant goal for interpreters (indeed, for all speakers) as they become more experienced and confident.

Articulation rate data will not be compared with those from other studies. This is because Onnis' methodology specifies a particularly low cut-off in pause duration (≥ 0.10 sec.) for the calculation of phonation time, while Towell, Hawkins and Bazergui calculate articulation rate in syllables per second.

2.3.5. Fifth temporal variable: mean length of run

A *run* is a segment of speech uninterrupted by pauses. Mean length of run (MLR) is sometimes included in the temporal variables through which fluency is assessed, just as mean length of utterance is used as an index of grammatical proficiency in investigation of language development. However, a major methodological issue associated with the MLR is the problem of how to define a run – in other words, is it delimited only by silent pauses (the view taken by Towell, Hawkins and Bazergui 1996), or also by filled pauses (as in Onnis 1999)? Another methodological issue, which will be discussed in the following section, is the unit of measurement (words or syllables). Both these questions have obvious repercussions on comparability of data from different samples, though the issue of definition is the more important of the two.

In the present study, both silent and filled pauses are taken as the possible start or finish of a run. The number of runs identified in this way is 69. Dividing the word count of 394 by 69 gives a MLR of 5.71 words; if syllables are used, the MLR is $880/69 = 12.75$. A problem in comparing this with data in Towell, Hawkins and Bazergui (1996) is the different definition of a run in the two studies. If only segments between silent pauses are considered as runs, the MLR in the present study is $394/26 = 15.15$ words (or $880/26 = 33.85$ syllables). The 12 individuals studied by Towell, Hawkins and Bazergui have a far lower MLR, averaging only 7.25 syllables. It is difficult to understand why this result differs so much in the two studies, as the difference in the languages involved would hardly account for such an enormous gap. The hypothesis that consecutive interpretation is in a sense less demanding than unprepared monolingual production, because the interpreter does not have to plan speech content “on line”, has already been tentatively advanced in section 2.3.3. Even this hypothesis, however, offers no satisfactory explanation of why MLR in the present study is so much higher than in the sample studied by Towell, Hawkins and Bazergui.

Comparison with the study by Onnis (1999) does not involve the problem of definition, since he considers that runs can start and end with either silent or filled pauses. The problem in this case is that Onnis calculates MLR on all segments between pauses of at least 0.10 sec. It is thus hardly surprising that the MLR in the present study (5.71 words) proves appreciably higher than in Onnis’ sample (4.8 words in English, 3.6 words in Italian). As the pause criterion is so different in the two studies, it makes little sense to compare data in relation to such variables as production mode (consecutive interpreting in one case, extemporaneous speech in the other) or language proficiency in Italian (native command in one case, late acquisition in the other).

3. Discussion

3.1. Words or syllables as the unit of measurement

Franz Pöchhacker (1993) points out that, if some interpreting researchers measure speech length in syllables and others use words, there can be little basis for comparing data from different research groups. Since the average syllable count per word can differ considerably in different languages (and also in relation to other variables – e.g., sector, register, read texts vs. off-the-cuff speech), Pöchhacker suggests that the syllable is probably a better standard international unit of measurement than the word. He also reports examples of research, including his own work, in which both syllable and word counts have been obtained so that the ratio of syllables to words can be calculated. This approach has been maintained in the present study. If this practice became widespread, it would provide a good basis for more systematic study of how the conversion factor between the two units of measurement varies in different samples.

Pöchhacker (1993: 57) rightly acknowledges that syllables are not in themselves “an ‘objective’ yardstick of speed, let alone a measure of ‘information’ per time unit”. An objection to measurements in syllables for comparisons across languages is raised by Onnis (1999: 87), who suggests that focusing on syllables alone can give a misleading idea of information content and that syllable counts should therefore be accompanied by ratios for converting them into words. To illustrate this point, Onnis hypothesises an extreme case of an English speech sample possibly having fewer syllables but more words than a sample of Italian.

However, argument on the respective merits of words and syllables is ultimately inconclusive – starting from the same basic observation that word/syllable ratios vary from language to language, Pöchhacker supports the syllable while Onnis prefers the word. There thus seems to be a strong case for systematically using both, as in Pöchhacker’s (1993) article and in the present study. The considerable work this entails will surely be justified if it brings to light much-needed data on the conversion ratio between words and syllables.

The practice of counting syllables raises two important practical issues – whether to count the syllables indicated in dictionaries or those actually pronounced, and *how* to count them. On the first issue, it seems prudent to use a notional syllable count. Identification of how many syllables are actually pronounced depends either on the individual researcher’s perception (with “top-down” processing making it difficult to distinguish between what s/he actually hears and what s/he expects to hear) or on very detailed instrumental testing of sound samples. Neither option is satisfactory – the first being unreliable, the second too demanding of time and resources. However, the approximation of a

syllable count based on the “presumed” number of syllables in a given word at least offers the practical advantage of a readily accessible, standardised methodology.

The other practical issue is whether syllables, like words, can be counted automatically on the computer. For the present study, the first step was to create a text file of the transcription and divide words manually into syllables, which the programme was then able to count as if they were words. A practical limitation of this method is that dividing words into syllables with a cursor on a computer screen would obviously prove too laborious and eye-straining for longer speech samples.

The syllable counts for the consecutive interpretation examined above have already been indicated in the sections on speech rate and mean length of run. The syllable/word ratio for the interpretation as a whole is 2.23 and, as the study progresses, it will be interesting to compare this with the ratio in interpretations by other subjects.

3.2. Which parameters?

Five temporal variables have been examined in this study (speech rate, duration of pauses, phonation/time ratio, articulation rate, mean length of run).

For practical purposes, three of these (speech rate, duration of pauses and MLR) are probably enough. The reason is that, as explained above, PTR and articulation rate add no new information to that on pause duration – they simply offer different perspectives on the same data. In other words, pause duration indicates what proportion of speaking time the interpreter spends pausing, while PTR is the remaining proportion of speaking time. This is seen most clearly if both are expressed as percentages of total speaking time, in which case they add up to 100 (24.70% pause duration and 75.30% PTR, in the interpretation examined above). On the other hand, if pause duration were expressed in seconds per minute (in this case, 14.82 s.p.m.), no immediate relationship with a PTR of 75.30% would be apparent. Articulation rate is more complicated to calculate, but simply means how fast the interpreter speaks during phonation (in other words, when not pausing). As explained above, the potential interest of this parameter from the trainee interpreter’s perspective is that it can very tentatively be taken as a theoretical speech rate to aim for by limiting pause time (see 2.3.4). It is useful for the trainee to appreciate to what extent “ums” and “ahs” can detract from fluency, though over-zealous outlawing of all pauses should not be encouraged.

Speech rate, pause duration and length of run can thus be highlighted as the most relevant of the parameters suggested above. At the same time, they can be complemented by other information not examined in this study.

3.2.1. Further analysis of pause duration

One option is to examine pause duration in greater detail. For example, Towell *et al.* (1996) and Onnis (1999) calculate the average length of pause (ALP) as a complement to overall pause duration. Examining the two parameters together makes it possible to see whether differences in pause duration from one speech sample to another are more related to the frequency of pauses or to ALP (Towell, Hawkins and Bazergui 1996). In the present study, ALP based on pauses of at least 0.25 sec. was 0.63 sec. for the 25 silent pauses and 0.93 sec. for the 43 filled pauses. While it is difficult to comment on these data in isolation, without other interpretations to provide a basis for comparison, they again underline the preponderance of filled pauses – in terms of both frequency and duration.

Another option is to examine the range of individual pause durations. For example, more than half the silent pauses identified in this study were less than half a second in duration, while only three (i.e. 12%) lasted more than a second. Of the 43 filled pauses, as many as 16 (i.e. almost 40%) lasted more than a second (including 5 – i.e. over 10% – which lasted more than 2 seconds). This information complements the message which has already emerged from the data on pause duration and frequency – i.e., that the student concerned should keep a tighter rein on filled pauses.

Detailed analysis of pause duration also suggests that a run may in practice be a very disfluent speech segment if the only landmarks used to identify it are initial and final silent pauses (as in Towell, Hawkins and Bazergui 1996). For example, the first 29 words in lines 1-3 of the transcription in Table 1 read as follows:

buongiorno [- eh 1,89] l'ultima volta che ho partecipato a un convegno è stato [0,43] a [mm 0.51] Bruxelles [0,47] dove gli interpreti mi hanno detto [eh 0,73] che stavo parlando troppo velocemente e stavo dicendo delle stupidaggini [0,87]

Here, there are four silent pauses and two filled pauses. If runs are defined as segments between silent pauses, three can be identified here:

1. buongiorno [- eh 1,89] l'ultima volta che ho partecipato a un convegno è stato [0,43] (11 words)
2. a [mm 0.51] Bruxelles [0,47] (2 words)
3. dove gli interpreti mi hanno detto [eh 0,73] che stavo parlando troppo velocemente e stavo dicendo delle stupidaggini [0,87] (16 words).

However, if runs are considered to start and finish with either silent or filled pauses, their number doubles:

1. buongiorno [- eh 1,89] (1 word)
2. l'ultima volta che ho partecipato a un convegno è stato [0,43] (10 words)
3. a [mm 0.51] (1 word)
4. Bruxelles [0,47] (1 word)
5. dove gli interpreti mi hanno detto [eh 0,73] (6 words)
6. che stavo parlando troppo velocemente e stavo dicendo delle stupidaggini [0,87] (10 words).

The choice between the two definitions thus makes a considerable difference to both the number of runs (3 vs. 6) and the MLR (9.7 vs. 4.8 words). For the interpretation as a whole, the number of runs can be counted as 26 or 69 according to which definition is used, while the corresponding MLR is. 15.15 or 5.71 words. Given that long filled pauses such as those in the above example can on the whole be readily identified as disfluencies by the listener, there is a strong argument for considering them as cut-off points for segmentation into runs, not as non-phonemic syllables within runs.

3.2.2. Pause position

A final point of interest is the question of where pauses occur. Towell, Hawkins and Bazergui (1996) do not address this issue, while Onnis (1999) catalogues pause distribution in relation to syntactic position (e.g., between clauses or phrases, within phrases) but does not discuss the question in much detail.

In the present study, position of pauses was classed very simply as: (i) at sentence boundaries; (ii) at clause or phrase boundaries; (iii) just after the initial conjunction of a clause; (iv) within a clause; (v) within a phrase. The syntactic units referred to might lend themselves to criticism as having been borrowed from conventional grammatical analysis (of the written language), but they are intended only to provide a crude framework for a cursory analysis of pause distribution.

Distribution of the five classes of pause in the interpretation, shown in Appendix 2, breaks down as follows:

- (i) at sentence boundaries: 13 pauses (e.g., [- eh 1,89] l'ultima volta che ho partecipato a un convegno, in l. 1);
- (ii) at clause or phrase boundaries: 11 pauses (e.g., innanzitutto [0,25] vorrei iniziare, in l. 12);
- (iii) just after the initial conjunction of a clause: 7 pauses (e.g., per quello che [eh 0.40] i miei concittadini hanno fatto, in l. 9);

- (iv) within a clause: 11 pauses (e.g., prima che la Gran Bretagna [eh 0.37] diventasse, in l. 17-18);
- (v) within a phrase: 26 pauses (e.g., iniziare con [eh 0.43] le mie scuse, in l. 5).

Consistent with Goffman's advice that the public speaker should make any disfluencies as unobtrusive as possible (see above, Introduction), pauses at major syntactic boundaries (classes i and ii) make up about a third of the total. If pauses just after the first word of a clause (class iii) are also included in this category, it accounts for almost half the overall count. However, most of the pauses in the interpretation belong to classes (iv) and (v). Those in class (v), the most obtrusive, are the most frequent of all.

The breakdown for silent and filled pauses is shown below:

- (i) at sentence boundaries: 5 silent pauses, 8 filled pauses;
- (ii) at clause or phrase boundaries: 6 silent pauses, 5 filled pauses;
- (iii) just after the initial conjunction of a clause: 1 silent pause, 6 filled pauses;
- (iv) within a clause: 2 silent pauses, 9 filled pauses;
- (v) within a phrase: 11 silent pauses, 15 filled pauses.

The only classes for which silent pauses compete on more or less equal terms with filled pauses are the first two, which suggests that pauses at major syntactic boundaries are in many cases "physiological" and well controlled. The severe imbalance in favour of filled pauses for the remaining three classes indicates that the interpreter often fails to follow Goffman's advice about keeping difficulties backstage when there is no convenient syntactic break to take advantage of (if only as a breathing space). In such cases, pauses tend increasingly to be voiced as "ums" or "ahs" and betray what Goffman calls a "production crisis" (see above, Introduction).

3.2.3. Taking the interpreter's retrospective comments into account

As explained in the initial presentation of the experimental procedure (section 2.1), the present study does not include a description of the methodology for collection of interpreters' retrospective comments.

It is, however, interesting to look briefly at how information collected in this way can complement the data on pause duration and distribution. One obvious consideration is that the interpreter's perception of problems with aspects such as reading notes and coping with difficulties of reformulation can help identify possible causes of any "production crises" which mar the quality of the interpretation. Analysing the interpreter's comments side by side with the evidence of disfluencies in the interpretation can also afford insight into the interpreter's understanding of these difficulties and ability to address them. In addition, it can offer a basis for hypotheses about difficulties which, though

successfully managed, might create a “knock-on” effect in other speech segments.

One way of using the interpreter’s comments is to focus on whether they indicate types of difficulty which coincide with frequent and/or prolonged pausing. To give a simple example, about a third of the interpreter’s comments in this case focus on language difficulties (as opposed to problems in managing notes and/or in following the speaker’s logic). These difficulties are mentioned when the interpreter focuses on phrases such as “è stato [0.43] a [mm 0.51] Bruxelles” (for “was in Brussels”), “vorrei iniziare con [eh 0,43] le mie scuse [-eh 1,02] vorrei scusarmi” (for “I have to give you a very apologetic lecture; I’ve got to apologize”), “ha una [0.99] un finale positivo” (for “has a happy ending”) and “svolgere un [eh 0,47] un ruolo [eh 0,26] sovranazionale quindi di controllo sovranazionale” (for “to be in some degree supranational”). The comments indicate various types of language difficulty (doubts about whether Brussels is “Bruxelles”; problems in finding an equivalent for “apologetic” and “apologise”, perceived as more grandiloquent than “scuse” and “scusarmi”; hesitation as to whether the English form “happy end[ing]”, often used in Italian, is suitable here; the problem of finding an Italian equivalent for “supranational”, specific to the discourse field of international relations). In this respect, having the student focus on which difficulties have been associated with comparatively long pauses can help ensure that the language points concerned are appropriately addressed.

Students should understand the importance of recognising potential problems during a consecutive interpretation well before they have to reformulate the speech segments concerned. Though it is counterproductive to focus exclusively on these at the expense of listening, note-taking and reformulation, it is better to think about possible solutions beforehand than simply to stumble across unforeseen surprises when glancing down at the notepad during reformulation. If the interpreter can avoid last-moment hesitation in assessing the possible need for strategic choices such as paraphrases or omissions, s/he can achieve an acceptable trade-off between completeness and a fluent, agreeable presentation.

4. Conclusion

The methodology described in the previous sections is intended to provide a practical approach to fluency assessment in interpreting. While the methodology should also lend itself to research on fluency in simultaneous interpreting, the interpreter is obviously subject to different constraints in the two modes. Fluency in simultaneous is more subject to the quality of source speech delivery; in consecutive, the interpreter must achieve a good balance of careful

listening and judicious use of notes, with ability to read notes at a glance and speaking skills coming to the fore during reformulation.

This kind of study takes time, and envisaging its use for (self-)assessment during training is probably unrealistic. On the other hand, the kind of software required for research of this kind is readily available and relatively inexpensive. Studies of fluency could thus be undertaken in many different settings. This would make it possible to pool data in relation to a range of variables, offering an interesting point of contact and exchange with mainstream linguistics research. An important proviso in this respect is the need to recognise any limitations in terms of comparability because of methodological differences. This has been clearly seen, for parameters like PTR and MLR, in a number of examples analysed above.

Research on fluency in interpretation, though still in its infancy, is an exciting area of study. It offers considerable interest, not only for purposes of academic debate but also for what should surely be the ultimate goal of interpreting studies – increasingly informed insight into how trainee interpreters can be helped to negotiate the many difficulties of the learning process.

Appendix 1: Source text for the consecutive interpretation

The last time that I was in a simultaneous translation situation, it was in Brussels, at a committee of the European Union, and I heard the translator saying, 'This man is talking too fast and I think he's talking nonsense'. So if I talk too fast or if I use obscure words, please do, as suggested, interrupt in any way and we can have questions afterwards.

I have to give you a very apologetic lecture; I've got to apologize for my country for its diplomatic stupidity, I think, as I shall show, over the last 50 years in relation to Europe.

I think that the story I'm going to tell you has a happy ending, or there's a chance of it having a happy ending, but meanwhile I just have to apologize, in a sense, for what my country and its leaders have done, people of all parties, in relation to European politics over the last 50 years. Now what I'm going to do is to go very fast through the list of dates on the handout I have given you and then I'm going to try and seek explanations for what has happened in Europe. Britain has been an awkward partner in relation to Europe, before and since we became members of the European Economic Community and now the European Union.

The first date I put on my list was 1946, Winston Churchill's speech in Zurich, where he called for a United States of Europe. And then he said, but he meant that just for the Europeans, and Britain of course doesn't really quite know whether it's in Europe or not; Europe begins at the English Channel, in a large amount of English discourse about politics. We didn't think that we

wanted, or we were not prepared to involve ourselves fully in Europe. In 1948, there was the Brussels Treaty, a defensive treaty, with the Benelux countries and France, and the Council of Europe was set up. The French wanted the Council of Europe to be in some degree supranational, but the British insisted on it being purely international. And so we were reluctant when people were trying to get on with things then.

The British at that stage, I think, had the arrogance to believe that they were still the richest country in Europe, less damaged by the war than any other Western European country, and that the wretched Europeans were trying to import our strength to compensate for their weakness. Now, of course, the tables were fairly rapidly turned. And the rate of economic growth in Western Europe in the course of the 1950's turned Britain from the top nation in Europe, in terms of economic measurements, economic success, into a relatively middle of the road nation, in terms of economic success. We were dropping down the growth league all the time. But we didn't recognize that at the beginning, when we were being difficult.

Appendix 2: Distribution of pauses in the interpretation

Pauses of at least 0.25 sec. are indicated in bold type. Five classes have been identified, according to where they occur:

- (i) *pauses between sentences are shown against the left margin, with no accompanying symbol;*
- (ii) *pauses between clauses are indicated with one asterisk (*);*
- (iii) *pauses just after the initial conjunction of a clause are indicated with two asterisks (**);*
- (iv) *pauses within a clause are indicated with three asterisks (***);*
- (v) *pauses within a phrase are indicated with four asterisks (****).*

buongiorno

[- eh 1,89] l'ultima volta che ho partecipato a un convegno è stato
****[0,43] a ****[mm 0.51] Bruxelles *[0,47] dove gli interpreti mi
hanno detto *[eh 0,73] che stavo parlando troppo velocemente e
stavo dicendo delle stupidaggini

[0,87] quindi nel caso ciò succedesse anche questa volta vi prego di
dirmelo in modo che possiamo comunicare senza molti problemi

[0,83] innanzitutto *[0,25] vorrei iniziare con ****[eh 0,43] le mie scuse

[- eh 1,02] vorrei scusarmi per il comportamento della del mio staff per la
sua stupidità nei confronti dell'Europa e nei vostri confronti

[1,57] la storia che vi racconterò comunque ha una ****[0,99] un finale
positivo

- [eh - 1,68] comunque penso che siano necessarie le [0,18] le mie scuse ancora una volta per quello che **[eh 0,40] i miei concittadini hanno fatto nei vostri confronti e all'interno della ****[0,33] politica dell'Unione Europea
- [- eh 1,93] il mio ****[0,55] discorso ***[eh 0,54] è diviso in in due parti principalmente vi vorrei ***[0,40] parlare un po' [eh 0,22] delle date più importanti che riguardano la creazione ****[0,26] dell'Unione Europea e i rapporti della Gran Bretagna nell'Unione [0,15] con l'Unione Europea *[0,36] e poi **[eh 0,43] darvi alcune spiegazioni per quanto riguarda **[0,54] il ruolo che ha svolto [0,22] il mio stato all'interno dell'Unione Europea
- [- eh 2,11] il comportamento della ****[eh 0,62] Gran Bretagna può ***[eh 0,44] sembrare un po' strano *[- eh 2,95] forse difficile da comprendere da parte degli altri membri dell'Unione Europea soprattutto *[eh 0,36] prima che la Gran Bretagna ***[eh 0,37] diventasse ***[mm 0,66] membro dell'Unione Europea
- [- eh 1,02] la prima data ****[eh 0,59] importante il primo evento di cui vi voglio parlare è il discorso tenuto da Churchill a Zurigo nel millenovecentoquarantasei *[1,64] dove [0,15] Churchill ha ****[- eh 1,13] parlato ***[eh 0,47] della situazione della Gran Bretagna affermato che **[eh 0,62] la Gran Bretagna non era ancora pronta per entrare a far parte dell'Unione Europea
- [0,55] la seconda data ****[eh 0,48] fondamentale per la creazione dell'Unione Europea e per ****[0,29] il ruolo della Gran Bretagna all'interno dell'Unione è il millenovecentocinquantotto in cui è stato ****[0,29] firmato il ****[eh 0,26] Trattato di Bruxelles *[0,80] ed è stato creato il ****[eh 0,26] Consiglio Europeo *[0,69] che secondo l'Unione doveva svolgere un ****[eh 0,47] un ruolo ****[eh 0,26] sovranazionale quindi di controllo sovranazionale
- [- eh 1,31] la Gran Bretagna [0,22] si è opposta alla decisione del consiglio e ha ****[0,32] affermato che **[eh 0,51] il Consiglio Europeo dovrebbe ***[0,32] più che altro avere un ruolo internazionale
- [1,53] il ****[mm 0,48] l'atteggiamento della Gran Bretagna ***[- eh 1,79] è ****[0,69] sembrato arrogante *[- eh - 2,15] visto che **[ehmm 1,31] i cittadini inglesi e il governo ****[eh 0,40] inglese ***[eh 1,31] pensava [0,22] che l'Unione Europea aveva bisogno della ****[- eh 1,02] Gran Bretagna [0,18] per [eh 0,22] aiuti economici *[eh - 2,01] per **[eh 0,66] risollevare la situazione ****[0,36] così negativa del ****[eh 0,44] dell'Europa
- [- eh - 2,62] infatti in tutto l'arco ***[eh 0,33] degli anni cinquanta l'economia ****[0,37] europea ***[eh 0,41] non aveva ****[mm 0,74] mostrato grandi miglioramenti e la situazione era piuttosto negativa

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