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## Contents

<table>
<thead>
<tr>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>From the President</td>
</tr>
<tr>
<td>Call for Papers</td>
</tr>
<tr>
<td>Articles and Research Notes</td>
</tr>
<tr>
<td>Age-dependent processing of pauses in spontaneous speech</td>
</tr>
<tr>
<td>by Mária Gósy</td>
</tr>
<tr>
<td>Obituary on Petar Guberina (1913-2005)</td>
</tr>
<tr>
<td>by Damir Horga</td>
</tr>
<tr>
<td>Phonetics Institutes Present Themselves</td>
</tr>
<tr>
<td>Department of Phonetics at the University of Turku, Finland</td>
</tr>
<tr>
<td>by Juha-Pertti Laaksonen</td>
</tr>
</tbody>
</table>
Conference Reports

Phonetics and phonology at the 36th Poznań Linguistic Meeting, 22-24 April 2005 in Poznań, Poland

by Jarosław Weckwerth ................................................................. 27

Between Stress and Tone Conference (BeST), 16-18 June 2005, in Leiden, The Netherlands

by Elenmari Pletikos and Jelena Vlašić ........................................ 30

Phonetics and Phonology in Iberia, 20-21 June 2005, in Barcelona, Spain

by Pilar Prieto and Maria-Josep Solé ............................................. 33

NOLISP'05 Conference, 19–22 April 2005, in Barcelona, Spain

by Marcos Faundez-Zanuy ............................................................. 36

From the Review Editor ................................................................ 38

Book Reviews ................................................................................ 39

New Publications .......................................................................... 62

Meetings, Conferences, and Workshops ...................................... 66

Advertising Rates ........................................................................ 79

Membership Application Form ...................................................... 82

News on Dues ............................................................................. 83

ISPhS Adresses ........................................................................... 84
From the President

Today, as I was thinking about the affairs of our Society, I wanted to look at our by-laws. So, of course, the first place that I looked was in my old copies of the Phonetician. This is a great place to look, but I could not seem to find what I was looking for. Then, I went to our website (www.isphs.org) and was reminded how user-friendly it is (and that I should have gone here first). The map on the side of the screen clearly outlines the organization of the site and I readily located our by-laws. I spent a little more time reviewing the other information on the website, so I want to refresh your memory as to what we have online. First, there is a listing of job opportunities. I was pleased at the number of international listings and at the number of positions that have been listed. If you are searching for a job, please take a look and if you have a job offer, please post it. In addition, there are sample copies of the most recent Phoneticians, which have been edited to contain the Table of Contents, Meetings and a list of the Book Reviews available. But in light of our desire to move more towards electronic publishing, you should take a look at the .pdf versions of the Phoneticians – they look really good. Our website represents us well; however, we could always expand the offerings and include some new ideas. So, let me know if you have a suggestion for our website. We want to make it the best because it is a wonderful recruiting tool for us.

The other valuable resource that we have is the Phonetician. I know that we all appreciate the hard work that the Editorial staff puts in to making each issue a great one! Of course, we are always looking for new ideas for the Phonetician and we could also use some help in putting it together. Most of all, we need new volunteers to step up and share their talents with us. If you would like to help, please let me know – we can certainly use you!

My favorite section of the Phonetician is the Article/Research Note. This time we have a wonderful article by Mária Gósy on pausal phenomena. She was interested in describing the strategies that young and old subjects use to process silent pauses in spontaneous speech. Her results indicated that the perception of silent pauses was dependent on duration, placement, speech tempo, and listener age. In particular, she found that older listeners were quite dependent upon pause to facilitate comprehension. The findings from this article have both research and clinical implications, so it should be of interest to a large portion of our membership.

Finally, I wanted to let you know about one of the conferences that ISPhS was able to support. Anna Esposito contacted the Society on behalf of the International Institute for Advanced Scientific Studies (IIASS) and requested support for the 9th International Summer School “Neural Nets E.R. Caianiello” on Nonlinear Speech Processing: Algorithms and Analysis. This conference was held in Vietri sul Mare, Salerno, Italy in September, 2004. Yesterday, I received a copy of the book that resulted from this conference: Nonlinear Speech Modeling and Applications: Advanced Lectures and Revised Selected Papers, edited by Gérard Chollet, Anna Esposito, Marcos Faundez-Zanuy, and Maria Marinaro. The
volume contains papers that are divided into five sections: Dealing with Nonlinearities in Speech Signals, Acoustic-to-Articulatory Modeling of Speech Phenomenon, Data Driven and Speech Processing Algorithms, Algorithms and Models Based on Speech Perception Mechanisms, and Task-Oriented Speech Applications. This volume is certainly an impressive edition to this field and I am proud that ISPhS was able to make a small contribution towards the success of this conference. I look forward to more collaborations of this nature.

I hope that you enjoy this issue of the Phonetician. As always, it is our pleasure to serve you and I look forward to any input that you might have to make our Society even better.

Ruth Huntley Bahr

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**Release of Praat 4.4**

You can now download Praat version 4.4 from www.praat.org. The changes since version 4.3 include:

- **Graphics**: as a phonetic font, Praat now uses SILDoulosIPA93 instead of the 1989 version. For best results with phonetic characters, you should install it. EPS files with phonetic characters now use XIPA (open source) rather than SIL IPA. Fontless EPS files can use either XIPA or SIL IPA.

- **Phonetic analysis**: pitch-corrected LTAS.

- **Synthesis**: you can now use glottal wave forms for more natural-sounding synthesis of voiced sounds.

- **Annotation**: the TextGrid window can now paint intervals green if they match a certain text.

- **Platforms**: the MacOS 7 version is not continued. You now need at least MacOS 8.5. It is likely that within a year, with Apple's transition to Intel processors, the Classic MacOS version will be discontinued completely. Praat would then require at least MacOS 10.2.

- **Listening experiments**: you can now use different button texts for each stimulus, you can use a Replay button, an OK button, and an Oops button, and you can have sounds as responses, for instance for prototype judgments, as when the task is "find the best /i/ token".

- **Statistics**: Principal Component Analysis now supports tables with more variables (columns) than cases (rows). Optimality Theoretic learning: support for bidirectional multi-representation parallel learning (ask), and for computing crucial rankings.

- **Scripting**: regular expressions can now be used in many places.

Paul Boersma Institute of Phonetic Sciences, University of Amsterdam
Herengracht 338, 1016CG Amsterdam, The Netherlands
http://www.fon.hum.uva.nl/paul/ phone +31-20-5252385
The Computerized Speech Lab (CSL), Model 4500, is Kay’s newest, most advanced hardware/software system for speech analysis. The latest generation CSL hardware is integrated with a rich array of speech analysis and biofeedback software packages used by the leading speech/voice professionals internationally. A highly robust input/output recording device for a PC, which complies with the rigorous specifications and features needed for the most exacting speech-processing requirements, Model 4500 is the culmination of many decades of experience that Kay brings to acoustic analysis instrumentation.

CSL boasts numerous citations in professional peer-reviewed journals for its broad range of applications in analyzing speech and voice. Since its introduction a decade ago, CSL has become the instrument of choice for clinicians at leading medical centers and for university researchers. It includes a state-of-the-art PCI hardware interface, using ASIO drivers for low latency between the external module and the host computer, as well as a wealth of features ideal for speech analysis.

CSL has been enhanced throughout ten years of continuous development to yield an impressive set of speech analysis features for research, teaching, voice measurements, real-time visual feedback, acoustic phonetics, second language acquisition, and forensic work. A core software module, along with 19 separate programs and databases targeting specific applications, makes CSL the most sophisticated and versatile platform available for the speech/voice professional.

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Kay Elemetrics Corp.
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E-mail: sales@kayelemetrics.com • Web: www.kayelemetrics.com
Call for Papers

I would like to take this opportunity to extend a warm word of thanks to all those who have been making *The Phonetician* possible in the last couple of years. There is first of all Judith Rosenhouse who has been serving as Review Editor for many years and who has been doing a tremendous job. She has managed to find competent reviewers for most every relevant publication in the field of phonetics and thus contributed greatly to the information platform of *The Phonetician*. Tomáš Duběda has been very successful in acquiring reports from any conferences which may be of interest to ISPhS members. Last, but not least, I would like to express my sincere gratitude to the "Trier team", consisting of Jens-Peter Köster, Hedwig Hinzmann and also several students of Phonetics at Trier who are taking a major part in the various stages of assembling *The Phonetician*.

It would not have been possible for me as an individual to mount *The Phonetician* without this invaluable assistance. This is why I would like to invite all ISPhS members to contribute to the service which we are currently providing through *The Phonetician* by submitting an article (see below) or submitting a conference report or notifying us of upcoming conferences or offering to review a publication or notifying us of interesting websites.

Let me remind you about the Call for Papers. The section “Articles and Research Notes” will be dedicated to the publication of brief research papers. Short papers in all areas of phonetics are welcome, including articulatory phonetics, acoustic phonetics, psychoacoustics, cross language and L2 phonetics, speech synthesis, phonetic modelling, speech signal processing, speech perception and production, etc. Contributions should primarily focus on experimental work, but theoretical and methodological papers will also be considered. Manuscripts should not exceed a maximum of 1500 words (including no more than 2 tables or figures), but exceptions to this rule are possible. Authors should follow the guidelines of the *Journal of Phonetics* for the preparation of their manuscripts. Manuscripts will be reviewed anonymously and authors will receive the reviews speedily.

The title page should include the authors' names and affiliations, address, e-mail, telephone, and fax numbers. Manuscripts should include an abstract of no more than 100 words and up to four keywords. The final version of a manuscript should be sent both as hard copy and in electronic form. It is the authors' responsibility to obtain written permission to reproduce copyright material. Manuscripts should be sent (preferably in electronic form) to:

Prof. Dr. Angelika Braun  
University of Marburg  
FB 09-IGS  
Department of Phonetics  
Wilhelm-Röpke-Strasse 6A  
D-35 039 Marburg  
Germany  
Tel.: ++49.6421.282.4603  
Fax: ++49.6421.282.4558  
e-mail: braun3@staff.uni-marburg.de
Abstract
The goal of the study was to learn about strategies that young and old subjects use to process silent pauses in spontaneous speech. Results showed that (i) perception of silent pauses was dependent on their duration, placement, and the speech tempo of the samples as well as the age of the listeners, (ii) subjects need pauses to comprehend the heard samples, however, older individuals need them significantly more than the young adults.

Introduction
Spontaneous speech is characterized by several phonetic processes like co-articulation or the variability of the phonetic form of words, and by various types of disfluency phenomena including silent pauses. Over the last 40 years, scholarly inquiry into the characteristics of various types of pauses has steadily increased (Goldman-Eisler, 1968; Butterworth, 1980; Hicke et al., 1983; Duez, 1982; 1985; Hartley 2001), however, the phenomenon still seems to be worth investigating in several respects. Goldman-Eisler (1968) suggested that silent pauses occurred roughly every five words when describing a picture and every seven to eight words in everyday communication. Various styles of spontaneous speech may contain differing amounts of pause. Japanese dialogues for example contains pauses 25% of the total speaking time (Misono and Kiritani, 1990), 24.5%-53% of French political speeches are made up by pauses, while in French dialogues pauses appear in 32% of all speaking time (Duez 1982). In Hungarian silent pauses in monologues were found in 37.51% on average when the shortest pause to be considered was set at 80 ms (Gósy, 2003).

Pauses serve many functions in fluent speech. Other than those related to disharmony between speech planning and articulation, there are other well-known factors resulting in silent pauses: (i) breathing, (ii) pauses determined by syntax, emotion, rhetorical and expressive emphasis, stylistic properties, and (iii) time possibility for comprehension. It is quite possible that any one particular pause might serve more than one function. Experimental evidence suggests that some degree of pausing is necessary for successful speech production and speech perception. Fournié’s view from 1887 that “speech (as) the only window through which the physiologist can view the cerebral life” has been cited many times (Fromkin and Bernstein Ratner, 1998, p. 323). Silent pauses provide a useful approach to evaluate the mental processes during speech production (Butterworth, 1980; Levelt, 1983; 1989). Age-related decline in cognitive and perceptual functioning may affect speech decoding in several ways (Klein et al., 1990; Gordon-Salant and Fitzgibbon, 1999; 2001); memory resources and processing speech are the two areas in which the elderly are thought to be vulnerable (Wingfield et al., 1995; Bortfeld et al., 2001). The age-related cognitive changes include also slowing down of perceptual operations (Zabrucky and De Wayne, 1994; Stine-Morrow et. al., 1999).
The temporal aspects of spoken language revolve around the duration of pauses. Early on, articulatory pauses longer than 250 ms were accepted as pauses because Goldman-Eisler (1968) claimed that shorter pauses reflected articulation difficulties rather than planning time. This value was also associated with avoiding the confusion with "pauses" that are parts of a segment (like the silent periods of voiceless stops). Due to the now refined analytical methods, silent pauses of continuous speech can easily be differentiated as to their locations within the acoustic signal. Since they can be well defined as to their being parts of a speech sound or occurring between two meaningful words (independently of their being at a sentence or clause boundary or just between two words), the traditional 250 ms cut-off point has been seriously questioned. The so-called brief pauses with durations of 130 and 150 ms are psychologically functional (Hieke et al., 1983). Others claim that the values of 200 and 300 ms or just longer than 150 ms are the most commonly accepted durations for silent pauses (Laver, 1995; Shapley, 1987).

The primary interest within the perceptual approach to pauses focuses on the interrelations of pause perception and segmentation of speech as well as the criteria for pause perception (Henderson, 1980; Nooteboom, 1999). Pauses are cues to prosodic boundaries, generally used to demarcate major or minor phrases, and can help maintain the intelligibility of speech. During the silent periods of speech listeners are supposed to access words, identify grammar, recognize interrelations of the heard text and/or recall pre-stored knowledge. Theoretically, there are two alternatives the listeners are supposed to do. (i) They should learn either (a) not to take into consideration the irrelevant breaks of the speech signal (as it is in the case of the silent periods of stop consonants) and/or, (b) to use the extra time the breaks provide for perception and comprehension processes as it is confirmed by various experiments (Fox Tree, 2001; Hartley, 2001). However, this latter function of pauses in the decoding process might depend both on the listeners' perceptual abilities and their age. Since the speech input is generally the same for young and old people in everyday communication the question arises whether older individuals perceive and use silent pauses differently from younger people? The goal of this study was to learn if young and old listeners have different strategies for processing pauses in order to assist in speech perception and comprehension.

Method

Subjects

Five subject groups (200 listeners altogether) participated in the listening experiments comprised of young and old listeners (university students with a mean age of 22, and retired people, with a mean age of 71). No articulation or hearing deficits were reported by the subjects. The elderly people’s hearing threshold met their age requirements according to their clinical hearing threshold tests. Half of the subjects were females and the other half males in each age group. Most of the elderly individuals had a university/college degree.

Speech material

Three young Hungarian-speaking adults of 30 years of age, with no known speech or hearing deficits, served as speakers. Two males and a female were selected based on their speech tempo. Their speech tempo fell into the categories of slow, normal and fast according to results of Hungarian speech tempo investigations (Gósy, 1991). After a short period of casual conversation, the subjects were asked to talk about their work, and so they
produced monologues about what was interesting in their work and what their hobbies were. None of them were aware of the aim of the requested task; however, they all knew that their speech was being recorded. Three different samples of the three monologues were selected for further experimental purposes. The content of the samples was simple to remember, no prior knowledge was required for their comprehension. Eight main ideas were defined according to the semantic facts in each speech sample (Zabrucky and De Wayne, 1994). The mean ratio of the content words of the samples is 67.3% (std. dev.: 6.7); 68.9%, 71.8% and 64.5% of all words of the three samples.

Acoustic data of the selected three samples

The total length of the samples was: 61.5 s, 59.8 s and 71.95 s with total pause durations of 13.92 s, 9.05 s and 11.95 s, respectively. The articulation tempi of the texts were 13.29 sounds/s, 15.58 sounds/s and 9.56 sounds/s while the speech tempi were 125.7 words/minute, 168.1 words/minute and 112 words/minute. The duration of all silent pauses in all speech samples was defined from the onset of the silent interval up to the onset of the first sound of the following word using the Kay Elemetrics CSL 4300B digital system. The shortest duration of a silent period (which was definitely not the part of a consonant) that was considered a pause was set at 80 ms (see Table 1). Measurements also considered the acoustic environments of the silent pause (fundamental frequency, intensity, and temporal patterns of the preceding and following words) but there were no systematic or robust prosodic changes around the silent pauses in any speaker.

<table>
<thead>
<tr>
<th>Speech tempi of samples</th>
<th>Mean pause duration (ms)</th>
<th>Mean at syntactic boundaries</th>
<th>Mean between words</th>
</tr>
</thead>
<tbody>
<tr>
<td>moderate</td>
<td>556.08</td>
<td>424.43</td>
<td>769.0</td>
</tr>
<tr>
<td>fast</td>
<td>433.47</td>
<td>315.44</td>
<td>604.44</td>
</tr>
<tr>
<td>slow</td>
<td>413.04</td>
<td>251.07</td>
<td>495.55</td>
</tr>
</tbody>
</table>

Table 1: Mean and standard deviation of the pause durations in the three text samples

There was no significant difference in the duration of pauses across speakers, however, pause durations showed significant differences according to the boundary placement across all speakers (t 23 = 3.930, p=<0.001). The ratio of pause occurrence was similar in the three texts (around 18%). Each sample was characterized by pauses occurring at about every sixth word.

The manipulated speech samples

For the second series of experiments the silent pauses were carefully eliminated from the texts producing four different speech samples: (i) original samples, (ii) all pauses were cut, (iii) all pauses at syntactic boundaries were cut and the others remained, and (iv) all
pauses were cut that did not occur at syntactic boundaries while those at syntactic boundaries remained. No perceptually identifiable acoustic marker or editing signal remained in either speech samples to signal any missing part of the utterances. To be sure, both the manipulated and the originally selected speech samples were tested as to their naturalness by 18 university students. They listened to the speech samples randomly (through headphones) and had to judge their ‘naturalness’ using a 5-point scale. The mark 5 on the scale referred to ‘very natural’, the mark 4 meant ‘natural’, the mark 3 meant ‘not very natural’, the mark 2 meant ‘rather unnatural’ and the mark 1 meant ‘totally unnatural’. The results showed that the subjects judged the samples as ‘very natural’ or ‘natural’ (in 63% in case of the original and 72.2% in case of the manipulated samples). According to Wilcoxon Signed Ranks Test there were no significant differences in the listeners’ judgments between the original and the manipulated speech samples (Z(54) = 0.359, n. s.).

Procedure

Two out of 5 groups (20 young and 20 old subjects) were asked to detect pauses in the samples. Participants were given orthographic transcriptions of the samples (without commas and periods in order not to indicate structural boundaries). They heard each text two times through headphones (in a silent chamber), and were asked to draw a vertical line where they thought they heard a pause. The testing procedure was conducted individually after a short training procedure. During the 3-minute training procedure they heard very short samples from the original speakers’ monologues (different from those of the test samples). The subjects were not allowed to stop the tape or rewind it. They were allowed, however, to draw vertical lines at any time during the test.

The participants in the second two groups (20 young and 20 old subjects) listened to the same texts two times and then had to write down the contents. Prior to listening to the samples, they were instructed to remember the monologues in as much detail as they could because they would be asked to reproduce it. The next two groups of the subjects (another 20 young and 20 old subjects) had the same writing task as the previous ones had but they heard the manipulated speech samples without any pauses. The fourth groups (another 20 young and 20 old subjects) heard the manipulated speech samples containing pauses at syntactic boundaries while the fifth groups (another 20 young and 20 old subjects) heard the manipulated speech samples containing pauses that did not occur at syntactic boundaries. All experiments were conducted individually using headphones.

Recall accuracy was analyzed in the subjects’ written narratives where the number of words and the main idea-units were taken into consideration. The number of words were counted with each participant and the main idea-units were compared to those that were defined previously for each sample. The recalled words and the correctly written main idea-units of a heard narrative predict the performance level of correct comprehension quite well (Wingfield et al. 1995).

Both the young and old subjects’ performances in all tasks were analyzed and compared. To test for statistical significance, various methods were used, including match-paired t-tests, analyses of variance (ANOVA), and Pearson correlations. In cases where the statistical assumptions required for the procedures were not met, the equivalent nonparametric tests (Wilcoxon Signed Ranks Tests, Friedman tests and Spearman rank-order correlations) were used.
Results

Experiment I: Perception of pauses

The presence of silent pauses in fluent speech is rarely noted consciously. Perceptual experiments confirmed how much better subjects seemed to identify pauses according to their predictions rather than their perception (Duez, 1982; Lickley and Bard, 1998; Fox Tree, 1995). In our experiments young subjects were able to detect silent pauses in 59.14% of all occurrences; however, old subjects perceived pauses correctly only in 33.2% of all possibilities. The difference proved to be significant (Z(60) = 6.525, p=0.0001 by Wilcoxon Signed Ranks Test). The identification of silent pauses was not independent of the actual speech tempi of the text samples in either of the age groups. The faster the speech the less correct the perception of pauses in all listeners. The articulation tempo affected the older people’s perception much more, independently of the presence or absence of pauses (see Table 2). A Friedman test revealed significant differences depending on the three different test samples (in the case of young subjects: $\chi^2 = 19.9$, 2 df, p=0.0001 and in the case of old subjects: $\chi^2 = 16.3$, 2 df, p=0.0001).

<table>
<thead>
<tr>
<th>Tempo of speech samples</th>
<th>Correctly identified pauses</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>young subjects</td>
<td>old subjects</td>
<td></td>
</tr>
<tr>
<td>mean (%)</td>
<td>std. dev.</td>
<td>mean (%)</td>
<td>std. dev.</td>
</tr>
<tr>
<td>moderate</td>
<td>52.29</td>
<td>26.43</td>
<td>23.95</td>
</tr>
<tr>
<td>fast</td>
<td>43.61</td>
<td>12.26</td>
<td>18.88</td>
</tr>
<tr>
<td>slow</td>
<td>63.0</td>
<td>15.40</td>
<td>36.60</td>
</tr>
</tbody>
</table>

Table 2: The ratio of correctly identified pauses

As expected, there was a strong correlation between the duration of pauses and their correct identification ($r_p = 0.714$, p<0.0001) in the young subjects’ and the same applied to the older subjects as well ($r_p = 0.781$, p<0.01). The longer the pause, the more correct its identification. The shortest, 80 ms-silent pause was perceived 15% of the time by young adults, but no one in the older group could detect it. All other pauses with a duration of less than 100 ms were perceived less than 20% of the time by young adults while older participants did not detect them at all. There were 9 pauses with a duration between 100 ms and 150 ms and they were perceived an average of 36.66% of the time by the young people as compared to 8.33% by older subjects. Another 10 pauses occurred with a duration of 170 ms to 240 ms, their identification rate averaged 33.5% in the young adults while the older group averaged a 12.5% identification rate. Eight pauses with a duration of 250 ms to 500 ms had a mean identification rate of 71.87% by young and 31.25% by older subjects. Nine
pauses with a duration greater than 500 ms but less than 700 ms were perceived in 81.11% by the young and in 56.11% by the older group. Ten pauses occurred with a duration between 700 ms and 1000 ms, and their mean identification was 81% by young and 62% by older subjects. Pauses with a duration greater than 1000 ms were correctly identified by all listeners 100% of the time (Figure 1).

![Figure 1](image)

Interrelationship of pause duration and their identification by the two groups
(a = shorter durations, b = longer durations)

All listeners were able to identify pauses that appeared at a syntactic boundary significantly better – 75% correct identification – than those that appeared elsewhere (36.8% correct identification) in the case of young subjects while a 63% correct response rate vs. 15% correct response rate was noted with the older subjects. Better perception of pauses occurring at syntactic boundaries is related to their longer duration.

The false markings then were analyzed across the two age groups. Two kinds of false markings were found, ‘false alarms’ when the subjects perceived pauses where there were no silent intervals and ‘misses’ when the subjects did not perceive the actual pauses. ‘Misses’ were found in 87.3% of all cases and ‘false alarms’ in 12.7%. No significant differences were found between the two age groups for either category of false marking. ‘False alarms’ appeared mostly at syntactic boundaries (92.3% and 87.9% of all occurrences in both groups). The number of false markings, however, were significantly different between moderate vs. fast and fast vs. slow samples and between the scores of females and males in the young adult group (F(1, 54 = 10.205, p=0.002). There was no such difference noted with the older subjects.

Statistical analyses revealed that the difference in correct speech perception between females and males turned out to be significant only for older listeners (Z(30) = 2.087, p = 0.037), but not for the younger ones. Older female subjects could detect pauses more correctly than older males could (mean value is 32.55%, std. dev. = 10.19 for old females, 24.27%, std. dev. = 7.9 for old males).
Experiment II: Comprehension of the samples

The analysis of words shows a significant difference depending on the presence vs. absence of pauses in the samples both with young and old subjects (based on Wilcoxon Signed Ranks Test: Z(20) = 3.921, p = 0.000 vs. Z(20) = 3.753, p = 0.000). Pauses occurring at syntactic boundaries or elsewhere had a great effect on the listeners in both age groups. The recall of words was significantly better when pauses occurred at syntactic boundaries in both age groups (in the case of young subjects: F(1, 118) = 11, 744; p = 0.0001, Mann-Whitney U test: Z = 4,996, p=0.0001; in the case of old subjects: F(1, 118) = 38, 476; p=0.0001; Mann-Whitney U test: Z = 5,566, p=0.0001).

The content vs. function word analysis revealed no significant differences either between the speech samples or between the age groups. The mean value of the ratio of content words was 79.84% (std. dev.: 8.33) which was higher than the content word ratio of the spoken samples (cf. 67.3%). This is easily explained when the differences in the processes of speaking and writing are considered, in the latter case the subjects did not repeat or insert extra function words in their narratives.

The ratio of the main-idea units of the written narratives was also significantly dependent on the presence or absence of pauses (based on Wilcoxon Signed Ranks Test, Z(20) = 3.506, p = 0.000 in the case of young subjects while Z(20) = 3.811, p = 0.000 in the case of older subjects), as well as on the place of pauses in relationship to the syntactic boundary (young subjects: F(1,118) = 41,997, p=0.0001, Mann-Whitney U test: Z = 5,863, p=0.0001; in the case of older subjects: F(1,118) = 38,599, p=0.0001, Mann-Whitney U test: Z = 5,161, p=0.0001).

To sum up, the factor “pause” and its placement have a great effect on comprehension in both groups (in the case of young subjects for words: F(3,236) = 36,046, p<0.001 and for ideas: F(3,236) = 37,538, p=0.0001; and in the case of older subjects for words: F(3,236) = 28,940, p=0.0001 and ideas: F(3,236) = 31,982; p=0.0001). The post hoc tests revealed in all cases that there was no significant difference between the original samples (with all pauses) and with samples having pauses at syntactic boundaries. However, both of them showed a significant difference from those samples when there were no pauses and when there were no pauses at syntactic boundaries but elsewhere. The factor of sex turned out not to be significant in either group.

The analysis of false statements revealed that young subjects made three times more mistakes if there were no pauses in the heard texts or when pauses occurred at no syntactic boundaries. The reason for that seems to be the working of associative processes; the listeners tried to fill in the improperly heard parts of the samples, which was not the case with the older subjects.

It was hypothesized that the ratio of correctly recalled main idea-units is correlated with the number of written words. Statistical analysis did not support this hypothesis with each of the text samples in the case of young listeners; however, it turned out to be significant if all samples were considered (based on Spearman’s Rank order correlations for the samples with pauses: ρ = 0.607, p < 0.0001 and for the samples without pauses: ρ = 0.58, p < 0.0001). On the contrary, older subjects’ data showed a significantly strong correlation between the number of words and the correctly recalled main idea-units (based on Spearman’s Rank
**Figure 2.** The number of recalled words depending on silent pauses

**Figure 3.** The ratio of recalled ideas depending on silent pauses
order correlations for the samples with pauses, sample 1: $\rho = 0.801$, sample 2: $\rho = 0.931$, sample 3: $\rho = 0.727$ for those without pauses, sample 1: $\rho = 0.785$, sample 2: $\rho = 0.693$, sample 3: $\rho = 0.468$), and for the total test material: $\rho = 0.921$ (at $p = 0.0001$ significance level in all cases). This means that the more words the subjects recalled the better they comprehended the samples.

Conclusions

Butterworth (1980) argued that a so-called cognitive cycle corresponds to an idea which might provide an explanation as to why listeners need pauses to recognize ideas in a heard text. The present experimental data support the idea that older people could not trace silent pauses as successfully as younger ones, and they perceived shorter pauses more poorly than the young subjects did. However, both young and older subjects also used syntactic decoding strategies during pause perception. Sex differences were significant in this respect only for the elderly people. The perception of speech timing was poorer with older males, while no significant differences were noted between young females and males. There were no significant differences between ‘misses’ and ‘false alarms’ in older subjects’ markings since they were supposed to try to avoid predictions during their markings.

Theoretically, inadequate comprehension can be caused by an inability of processing different types of words (including their perception), syntactic structures, pragmatics or by working memory problems. The majority of these problems can be diminished by providing opportunity for slower processing. Pauses offer such an opportunity by providing more time for cognitive operations and for correction processes. If the context did not enable the listeners to “fill in” the gaps created during the comprehension process, pauses can be used for that function. This does not mean that speech is incomprehensible without pauses, but it does mean that successful comprehension is significantly restricted in their absence, particularly with elderly listeners. The fact that both young and old people could recall words and ideas better when pauses remained at syntactic boundaries demonstrated the crucial importance of silent intervals that support the segmentation for comprehension. In the case of their presence, pauses occurring at other places did not disturb the subjects’ decoding process. However, if there were no pauses or if they occurred in the “wrong” places (i.e. violating the grammatical boundaries), successful comprehension decreased, particularly again with old subjects. Gordon-Salant and Fitzgibbon’s (2001) results confirmed that removing linguistic redundancy in the message resulted in age-related deficits in understanding. Pauses are needed, particularly in the case of the sample of fast speech tempo. Rapid speech is known to be difficult for older listeners to perceive and comprehend based on various experimental data (Gordon-Salant and Fitzgibbon, 1999).

It seems to be a paradox that two contradictory facts support the same explanation, i.e. pauses are not always identified during speech perception, however, they are needed for correct decoding operations. If they are needed, why are they not perceived with complete accuracy? The answer might be that pauses can be ignored during comprehension when they are not necessary, but they are assumed to be used in people’s decoding strategies even if they are not consciously noticed. Our results seem to confirm this assumption. The age differences point to an enormous amount of dissimilarity between the young and old groups’ performances, however, the main tendencies of the two groups’ speech decoding processes were similar. The answer to the initial question is that although young and older people used similar strategies to deal with pauses, younger people were much more
successful both in speech perception and comprehension, most likely due to their faster temporal processing.

References


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**The International Speech Communication Association (ISCA) constitutes a new Special Interest Group (SIG)**

"Associazione Italiana di Scienze della Voce" (Italian Association for Speech Sciences) was constituted as a new ISCA SIG associated Regional Branch for ITALY. The purpose of AISV as a new ISCA Regional Branch for ITALY will be to promote interest in Speech Communication in that particular region; to provide members of ISCA in ITALY with a means of exchanging news of recent research developments and other matters of interest in Speech Communication; to sponsor meetings and workshops in Speech Communication that appear to be timely and worthwhile, operating within the framework of ISCA's by-laws for SIGs; and to provide and make available resources relevant to Speech Communication, including text and speech corpora, analysis tools, analysis and generation software, research papers and generated data. Moreover, the purpose of the Association is to promote, in the scientific, technical, normative, industrial, social, professional and didactic fields, the study of Speech Sciences in Italy. In particular, the Association is turned to all the subjects differently involved in the study of Phonetics (Acoustic/Articulatory), of the Speech Signal Processing and of the Automatic Treatment of the Language (Trattamento Automatico del Linguaggio - TAL) in which are grouped all those disciplines that take care of voice man-machine interaction and of human language understanding.
Petar Guberina died in Zagreb (Croatia) on January 22, 2005; he lived to be 91. He was a philologist of romance languages, a scientist in the field of speech and hearing rehabilitation, the creator of a new methodology of foreign language teaching and most of all he was a phonetician and a promoter of phonetics as a science in Croatia. He initiated and established many scientific and educational institutions in Croatia and abroad.

Guberina was born in Šibenik in 1913 where he attended the local classical grammar school. He then studied romance languages at the University of Zagreb and became a teaching assistant in 1935. After three years of specialization in Paris, he completed his doctoral thesis Valeur logique et stylistique des propositions complexes at the Sorbonne in 1939. During the Second World War, he supported the antifascist movement and after the War, he was engaged in the Yugoslav diplomacy. In 1951, he became the Head of the Department of Romance Languages and Literature at the Faculty of Philosophy at the University of Zagreb. From 1968 until his retirement in 1983, he was the Head of the Department of Phonetics.

Guberina’s achievements as a founder of academic institutions is also admirable. In 1953, he established the Experimental Section of Philology at the Yugoslav Academy of Arts and Sciences (which is now known as the Croatian Academy). In 1954 the Laboratory of Phonetics at the Faculty of Philosophy (the first in this part of Europe and well equipped) and the School for Foreign Language Teaching were established. In 1961, the Center for Rehabilitation of Speech and Hearing opened and then he established the Postgraduate Study of Phonetics at the University of Zagreb. In 1963, the Section of Phonetics came into being, which later became the Department of Phonetics of the Faculty of Philosophy in 1968.

Speech was always the center of his interest: in its artistic form (stylistics) in pathology (rehabilitation of speech and hearing) or in foreign language teaching (new methods). Influenced by Bally’s linguistic analysis of speech, he investigated the differences between spoken and written language and acknowledged values of spoken language (intonation, intensity, rate of speech, pause, gesture, situational context) as important carriers of speech information, supporting or sometimes rejecting the information expressed by lexical content. In the 1950s, he reorganized the study of languages at the Department of Romance Languages and Literature at the University of Zagreb emphasizing the role of spoken language. In collaboration with P. Rivenc of Ecole Normale Superieure des Saint Cloud in Paris, he created the audio-visual global and structural method of language teaching based on the communicative, structural and global characteristics of speech as a starting point in language teaching. At that time in the field of rehabilitation of speech and hearing, Guberina developed so called verbotonal method (SUVAG – System Universel Verbotonal d’Audition - Guberina) based on the idea that the speech signal must be spectrally manipulated in order
to obtain a form which will be in harmony with the patient's residual hearing. He invented a special system of acoustic filters for eliminating frequencies from the speech signal that represented noise to the hard of hearing person and for amplifying certain frequencies so that patients could hear. The so called optimal auditory field was created, transmitting speech through a limited, but optimal frequency zone. His vision was that hard of hearing individuals could develop speech and hearing using the remnants of his or her auditory channel and the whole body as hearing support so that the individual could be integrated into the world of normal hearing. Nowadays the verbotonal method is applied in more than 500 institutions all over the world.

Guberina published several books (Valeur logique et stylistique des propositions complexes, Sound and movement in Language, The Connections of the Language Elements, Case studies in the use of restricted bands of frequencies in auditory rehabilitation of deaf and Stylistics) and more than 200 extensive articles. But the Professor's mightiest tool in explaining his ideas and theories were lectures, courses, conversations and personal contacts. He was a citizen of the world, constantly traveling from one continent to another spreading his ideas. But at the same time, he was a patriot, bringing the scientists of the world to Croatia. In his scientific mission he crossed every existing barrier: spatial, linguistic, cultural, ideological or political.

Guberina was a member of Croatian Academy of Arts and Sciences since 1963 and many other national as well as international scientific associations, including the Editorial Board of JIPA.

He was twice awarded the Chevalier de la Legion d'Honneur (France) and received some of the highest honors in other countries (Belgium, Portugal, Senegal, Denmark etc.), as well as in Croatia.

Professor Guberina was a person of enormous energy radiating it to everybody he met and especially to his collaborators. He was very active in his retirement, traveling a lot and working mostly in Polyclinic SUVAG until his late eighties. During the last several years, he was at home, but members of the Polyclinic, the Faculty and numerous other institutions visited him daily, keeping him informed and asking for his opinions and advice.

Damir Horga
University of Zagreb
e-mail: dhorga@mudrac.ffzg.hr

New release of prosogram

The prosogram provides a pitch contour stylisation simulating tonal perception of speech. A new release is available, adding the following features:
- Automatic segmentation of the speech signal into loudness peaks. A phonetic alignment is no longer necessary.
- Output in Windows EMF format for insertion in Word documents and Powerpoint presentations (requires Praat 4.3.29 or higher).

http://bach.arts.kuleuven.be/pmertens/prosogram/
Phonetics Institutes Present Themselves

This section of *The Phonetician* is devoted to the presentation of phonetics institutes from all over the world. The purpose of this section is to give our readers an idea about what other phonetics institutes look like, what sort of equipment they have, what their main research areas are, and last, but not least, who their staff are. Ideally, this will help to increase the scientific exchange between phoneticians and their institutes.

If you would like to present your phonetics institute in *The Phonetician*, send a short description of it to the editors. In this issue, we publish a description of the Department of Phonetics at the University of Turku, Finland.

Department of Phonetics at the University of Turku, Finland

**History and Studies**

The Department of Phonetics is part of the School of Finnish and General Linguistics in the Faculty of Humanities at the University of Turku. The teaching of phonetics began here in the late 1950s, and the first professorship of phonetics was awarded in 1968.

The Department of Phonetics provides academic graduate and post-graduate level education as well as facilities for research. One of our main goals in teaching is to provide high quality education for students who are interested in research. At present we have 16 graduate students and 7 post-graduate students - as well as tens of students from other departments attending the courses and working on their MA theses within the Department of Phonetics.

A new development in phonetics relates to the establishment of a National network for language technology education (KIT-Network). This network began in 2001 and currently includes 10 Finnish universities (among them the University of Turku). Presently, students of the KIT-network can complete their basic studies in language technology by freely attending web-based courses and traditional local courses at any of the participating universities.

**Research**

The major areas of research at our faculties are speech perception, speech production, speech acoustics, speech synthesis and language acquisition. At the moment there are six different projects running. These research projects are carried out in collaboration with the Centre for Cognitive Neuroscience, the Department of Oral and Maxillofacial Surgery, the Department of Oral Diseases, the Department of Statistics, and the Department of Information Technology. The ongoing research projects are as follows:

**Language, Brain and Learning – LBL** (Principal investigator: Maija S. Peltola):

The first aim of this project is to study the acquisition of first language words and prosodic elements. The second aim is to investigate the manner in which the conscious knowledge of language interacts with the input based formation of memory traces, and how the age of exposure affects this interaction. The third theme concentrates on how speech
sounds in two languages are represented in the brains of bilinguals. The fourth theme deals with the speakers’ abilities to relearn new articulatory patterns after modification of oral structures and reduced control mechanisms. Our research project combines theories deriving from studies of speech perception and production, mother tongue acquisition and foreign language learning. The methodology used is also a combination of various traditions, since the aim is to perform acoustic analyses, behavioural listening tests including the head turn method, and psychophysiological measurements. The project is funded by the Academy of Finland (project number 8206352).

Effects of Oral and Maxillofacial Surgery on Speech (Principal investigator: Juha-Pertti Laaksonen):

By studying the acoustic and articulatory effects of distorted control mechanisms (e.g., nerve impairments) and altered vocal-tract configurations (e.g., modifications of oral structures) on speech quality and dynamics, the project aims to provide information on the general control mechanisms of speech production. The study of individuals with modified vocal-tract or reduced control mechanisms provides the research with an opportunity to examine situations where some components of speech production mechanisms operate in an atypical or deviant manner. If the nature of the dysfunctions can be assessed, then there is an opportunity to deepen our knowledge of how this component might function in the overall speech production process. Furthermore, this study provides insight into the focal phenomena concerning the normal speech production (e.g., feedback mechanisms) and helps to delineate aspects of the control processes involved in performing articulatory movements.

Speech Perception and Spoken Word Recognition (Principal investigator: Jyrki Tuomainen):

This project has four different themes which deal with 1) the effects of attention on speech perception, 2) speech-specific versus general auditory processing, 3) audio-visual speech perception, and 4) perception of word boundaries in fluent speech. These issues are addressed by using diverse methodology such as different types of behavioral and brain imaging techniques.

Turku Vowel Test – TURVOTES (Principal investigator: Janne Savela):

The Turku Vowel Test (designed and produced at the Phonetics Laboratory at the University of Turku) is a web-based research project available online. The primary idea is to develop a reliable method for easily reaching the widest possible audience in order to collect data for scientific research. One of the primary goals of the test is to produce a test that is as user-friendly as possible. The test can be done on the Internet at http://fon.utu.fi/ with a normal PC (more information about the stimuli is available at http://fon.utu.fi/en/info.php). This multilingual project is set out to observe how speakers from different linguistic backgrounds react to the same set of synthetic vowels. All information is used for scientific purposes only and the data are not available on the Internet. At present the test can be completed in 28 different languages and the number is increasing.

The Handshapes of Finnish Sign Language (Principal investigator: Stina Ojala):

This project investigates the phonetics of the Finnish Sign Language (FinSL) by focusing on how production and perception of speech compares to sign languages. The
project also explores the basic units of production and perception of sign language. The aim is to develop a phonetic description of FinSL, which has been verified both from a production and perception point of view with native signers. Methods of optical/visual phonetics are used.

**Speech Technology** (Principal investigators: Markus Mattila and Jussi Hakokari):

Our speech technology crew is currently working on a Finnish language-speech synthesizer. The aim is to develop a rule-based text-to-speech system (TTS) for use in mobile communications, in special aids for the speech and vision impaired and in everyday computer applications. Unlike all commercially available products in Finland today, the speech synthesizer under development does not rely on recorded speech and concatenative methods. The task is to model natural speech by a number of rules that produce appropriate acoustic cues and generate a fully synthetic speech signal. This project makes use of phonetic (acoustic analysis), linguistic (phonological considerations, sentence structure analysis for natural-like prosody), and technical (sound generation, programming) expertise and is truly a multidisciplinary effort. The project is a part of a larger, national venture called “New Methods and Applications in Speech Processing” (dubbed PUMS, short for the Finnish name Puheenkäsittelyn Uudet Menetelmät ja Sovellukset) with both corporate and government funding.

**Equipment**

For teaching, research and speech analysis and synthesis, the following equipment and facilities are available:

- PCs: Osborne Work AE7K-800-D8 (three units), Osborne Power, Osborne EDU S810, Osborne Power CT6K-2333-U2, Osborne Pro, Osborne Power 40891511, Fujitsu Siemens LifeBook S, Toshiba Satellite 5200, and Mac Perfoma 6320 (Windows 95/98/2K/XP, MacOS 7.5, and Linux (Debian) as operating systems).
- Speech analysis: Kay Elemetrics Sona-Graph DSP5500, LUCIA spectrum indicator, Kay Elemetrics Computerized Speech Laboratory CSL 4300B, and Kay Elemetrics Visi-Pitch 6097
- Speech synthesis: HLsyn, OVE IIIb, Praat, and Klatt80
- Recording: Sharp MD-SR50H MD recorder, Tascam PS-D1 DAT recorder, and Aiwa DAT recorder
- Microphones and decibel meters: AKG C1000S, AT-9500, Shure SM48, Shure Prologue 14H, Hama, and Brüel & Kjaer 2209.
- Programs: IPA Tutorial, CoolEdit 2000, Autosyn, and Presentation (v. 0.81) for conducting behavioral experiments.

We also have a state-of-the-art recording studio at the Centre for Cognitive Neuroscience and access to the CCN lab facilities (including EEG recording booths and data analysis programs).
ISCA GRANTS

are available for students and young scientists attending meetings. Even if no information on the grants is advertised on the conference announcement, they may apply.

For more information:

http://www.isca-speech.org/grants
New modules for medical, research and forensic labs

LingWAVES

Aligner: The Aligner module will automate word and phonem segmentation on the base of a high technology HMM speech recognition system (Ling50K) and speech signal analysis software. Languages: UK and US English, German, French, Italian, Spanish. Single and batch file mode. Works with large audio files.

Phonetogram pro:
The professional version adds more analysis for the everyday phoniatric work. With the DSI (Dysphonia Severity Index) you can measure the vocal quality of a patient which is correlated to the perceived vocal quality. More features: measurement of the reading voice in different modes (soft, normal, loud), compare different phonetograms in one window, 3th formant display.

GHD: The Göttinger hoarseness diagram is a automatic program that analyzes the voice sound and maps the voice quality. The results of irregularity and noise are shown in a two-dimensional diagram. The GHD is especially valuable for monitoring and documenting courses of voice therapies.
The Phonetician aims to spread information about recent congresses on different aspects of phonetics among its readers. This is why the editors would like to invite conference organizers to assist them by submitting conference reports whenever you would like to make the results more widely accessible.

The person to contact about the publication of conference reports is Dr. Tomáš Duběda, e-mail: dubeda@ff.cuni.cz

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**Phonetics and phonology at the 36th Poznań Linguistic Meeting, 22-24 April 2005, in Poznań, Poland**

The 36th Poznań Linguistic Meeting (PLM2005) was held on 22-24 April 2005 in Poznań, Poland. Its leitmotif was ‘Language across disciplines: In search of bridge theories’. The Meeting was organized by the School of English, Adam Mickiewicz University (AMU), in collaboration with the Poznań College of Modern Languages.

The Poznań Linguistic Meetings are a series of annual general linguistics meetings which continue in the tradition of the contrastive linguistics conferences initiated by Jacek Fisiak in 1970. Like the previous year, PLM2005 was attended by about 150 linguists from around the world. The program was very rich, with more than 80 papers, and four parallel sessions on both the second and third day.

The Meeting was held in conjunction with the 2nd Language and Technology (L&T) conference (‘Human language technologies as a challenge for computer science and linguistics’ – In memory of Maurice Gross and Antonio Zampolli), organised by the Faculty of Mathematics and Computer Science, Adam Mickiewicz University, in association with the Infosystem Forum 2005.

Two sessions from PLM2005 may be of direct interest to the readers of *The Phonetician*: an ‘Exotic Phonetics’ session and a phonology session.

The ‘Exotic Phonetics’ session was organized by Jarosław Weckwerth, Grzegorz Michalski and Dawid Pietrala of the School of English at AMU. The session aimed to discuss the phonetic and phonological properties and behaviours of ‘exotic’ sounds, where ‘exotic’ was a shorthand for ‘marked, rare, complex and relatively unknown’. The contributions covered the issues from both a phonetic and phonological point of view.

A plenary talk by our special guest, Ian Maddieson (University of California, Berkeley), on “Exoticness in phonetics: Definitions and distributions”, opened the session on the first day of the meeting. Maddieson drew attention to a distinction between ‘exotic’ in the sense of ‘rare’ and ‘complex’, focusing on the problem of circularity in using rarity to define difficulty, and then ‘explaining’ rarity on the basis of difficulty.

The second day started with a paper by Dafydd Gibbon (Bielefeld University), who demonstrated how certain ‘exotic’ prosodic characteristics (final lengthening used for
grammatical functions, tone used for morphosyntactic functions, etc.) of the West African languages Ega and Ibibio, can be modelled using Finite State grammars. Justus Roux (Stellenbosch University) discussed the phonetics and phonology of clicks in Xhosa and Zulu. John Remnison and Friedrich Neubarth (Vienna University) provided an overview of the rich consonant inventories in the Southern Bantu language Venda, noting that both the consonants themselves and their ‘mutations’ can be shown to have ‘quite normal’ representations within a Government Phonology approach. Zita McRobbie-Utasi (Simon Fraser University) showed how the Hungarian rounded low back vowel /θ/, considered rare among the languages of the world, drifts towards less marked realizations in Hungarian emigrants in Vancouver, Canada, and how the behaviour of the vowel depends on various social factors. Irena Sawicka (Nicolaus Copernicus University, Toruń) argued that the behaviour of NT clusters in Balkan languages – especially the fact that they can be treated as monosegmental – can be seen as yet another piece of evidence in support of the idea of the ‘Balkan Sprachbund’. Małgorzata Haladewicz-Grzelak (Opole University) expressed some ‘methodological scepticism’ concerning the treatment of prenasalised stops in some phonological theories.

On the third day, Ian Maddieson examined the phonetic and phonological patterns in two ‘East Papuan’ languages, Yélî Dnye and Rotokas, to show how ‘being exotic’ can mean very different things. The former language uses a very elaborate segmental system, including types not known in any other language, while the latter is unusual in having an extremely small segmental inventory; yet both show generally similar phonotactic patterns which disallow coda consonants and consonant clusters. The final paper in the session was delivered by Hans-Christian Luschützky (Vienna University), who focused on the question of ‘how exotic non-exotic phonetics is’. He showed that sounds that could be considered ‘exotic’ on the phonological level are actually quite common across a variety of languages on the phonetic level. He challenged the legitimacy of using the informal term ‘exotic’ in a phonetic/phonological setting, which turned out to be a perfect introduction for the open discussion at the end of the session.

The phonology session, chaired by Geoff Schwartz (AMU Poznań) and held on the last day of the meeting, and it contained seven papers. The first four explored various syllable structure issues. Oliver Rizzolo (CNRS, Université de Nice) discussed evidence for the existence of final empty nuclei on the basis of the Serbo-Croatian game of šatrovački. Justyna Frankiewicz (Maria Curie-Skłodowska University, Lublin) and Heike Jacobs (Radboud University, Nijmegen) presented an Optimality Theoretic perspective on opacity as caused by vowel deletion and insertion in English. In turn, Bartłomiej Czaplicki (Warsaw University) offered an OT analysis of syllable structure in Ukrainian.


Other sessions at PLM2005 included morphology, syntax and morphosyntax, approaches to meaning, and sociolinguistics and gender studies. The sociolinguistics session
featured three papers that may be of interest here. Ewa Waniek-Klimczak (Łódź University) talked about sociolinguistic conditioning of the realization of some phonetic categories (such as VOT, closure duration and vowel duration) in non-native speech. Kevin Watson (Lancaster University) discussed lenition in Liverpool English on the basis of an acoustic analysis of plosives. He provided evidence that there is much more variability than has been reported so far, and that this variability is socially conditioned. Eivind T. Torgersen (Lancaster University) presented results of research into phonological change in London English, and demonstrated that viewing London as the epicentre of accent innovation may be an oversimplification.

The meeting also included a Colorado Literacy Tutor/Polish Literacy Tutor report session, chaired by Katarzyna Dziubalska-Kołaczyk (AMU Poznań). The Polish Literacy Tutor project is a result of collaboration between the School of English at AMU and the Center for Speech and Language Research (CSLR) at the University of Colorado, Boulder. It has become something of a tradition to present the progress of the Polish part of the project at PLMs.

The aim of the project is to develop a Polish version of the tutor, which is an interactive multimedia suite to assist in primary school reading instruction. Among other things, the suite contains a speech synthesis and recognition module, the core of the system being formed by a set of interactive ‘books’ with voice playback and recording, speech synthesis and speech recognition capabilities. This year, the participants included Ronald Cole (University of Colorado, Boulder, Director of CSLR), and members of the Poznań team (Mikołaj Wypych, Grzegorz Krynicki, Konrad Juszczyk, Dawid Pietrala, Paula Orzechowska, Paulina Zydorowicz, and Katarzyna Dziubalska-Kołaczyk). The topics included: collecting the corpora of Polish child speech for the training of the Polish speech recognition module; the training of the module itself; and recording the audio content for the books. (More information concerning the project is available from the website of the Poznań Center for Speech and Language Processing at http://elex.amu.edu.pl/ifa/cslp/.)

Worth noting was also the joint PLM/L&T panel ‘Linguistics for Technology, Technology for Linguistics’, organised by Katarzyna Dziubalska-Kołaczyk and the organiser of the L&T conference, Zygmunt Vetulani (AMU Poznań).

Kórnik Castle provided the scenery for the hugely enjoyable ‘dinner and dance’ event on the second day of the Meeting.

Next year’s 37th Poznań Linguistic Meeting (PLM2006) will be held on 20-23 April 2006 in Poznań. Sessions already planned include: ‘Language and Medicine’, which will discuss, among other things, computer-assisted speech therapy for Parkinson disease patients (based on the Lee Silverman Voice Treatment); as well as sessions on Australian and New Zealand English; indigenous languages of Australia and Oceania; historical English dialectology; and ‘Language and Logic’. We warmly invite contributions and suggestions for other sessions.


Jarosław Weckwerth
School of English, Adam Mickiewicz University, Poznań
e-mail: wjarek@ifa.amu.edu.pl

29
Between Stress and Tone Conference (BeST)  
16-18 June 2005, in Leiden, The Netherlands

The oldest university in the Netherlands in the city of Leiden hosted a conference entitled “Between Stress and Tone” (BeST) from 16-18 June, 2005. The main topic which appears in the very title of the conference may seem a bit narrow, but it has proved to be a rather wide area of research where various phonetic and phonological typologies of prosodic systems come together with the description and research of production, perception and function of stress and accent in particular languages. The BeST Conference was organised by the International Institute for Asian Studies (IIAS) and information concerning the organization and the programme of the BeST Conference may be found at their web sites (http://www.iias.nl/iias/show/id=43951).

Around fifty speakers presented at the conference and a total of approximately one hundred people attended. All presentations were plenary: there were four invited talks, each of 45 minutes, sixteen oral presentations of half an hour, and about thirty poster presentations that were demonstrated both in standard poster sessions and orally through very brief (4 minutes) plenary presentations called “précis presentations”.

The most extensive lectures were the invited talks of the four scientists: Larry M. Hyman, Harry van der Hulst, José Ignacio Hualde and Jerold A. Edmondson. L. Hyman gave a talk entitled “Word-Prosodic Typology” where he analysed the three premises that phonological typologies are based on: “exhaustivity”, “uniqueness” and “discreteness”. He gave a very systematic overview of the issues concerning the topic of prosody, listed and described different types of prosodic words and presented the most important definitions, characteristics and controversies related to prosodic systems: stress-accent system, pitch-accent system and tone system. H. van der Hulst in his talk entitled “On the Necessity of Word Accent” discussed how accentual structure, from the point of view of metric phonology, is manifested in terms of phonological asymmetries and phonetic cues. J. Hualde in his talk about Basque accentual dialectology analyzed the shift of accent position in the formation of the plural. Hualde explained dialectal differences by presenting the theory of the historical development of the accentuation system in Navarre which has changed from a stress-accent to restricted tonal accent. J. Edmondson gave an invited talk entitled “The Valves of the Lower Throat and their Functioning in Tone, Voice Quality and Stress: Laryngoscopic Case Studies”. Edmondson’s extensive research revealed that in many languages the configurations of the glottis and the surrounding parts of the throat may form additional valves that do not constitute a continuum of anatomical structures, but instead reflect “synergistic and hierarchical gestures and combinations” that include five dimensions: (1) the adduction of glottal folds, (2) ventricular incursion, (3) arytenoidal-aryepiglottic-epiglottic constriction, (4) epiglottic-pharyngeal constriction and (5) focal constriction. Edmondson concludes that many of the five described types of valves function as articulators and that the voices qualified as “breathy”, “harsh” and “yawny” constitute the basic glottal gestures and as such may constitute the phonological differences in Bai, Dinka and Somali.

Among the 30 minute oral presentations, Swedish was one of the most represented languages at the conference. Gösta Bruce broadened the present categorization consisting of
the five regionally classified prosodic types of realization of two pitch-accents in Swedish. His innovative classification includes seven types. Yuni Kim discussed the role of perception of accents and the shift in stress in Swedish accent 2, where the second syllable is used to carry the secondary stress and which then starts to make accent 1 by grouping together with the first syllable, becoming a part of the lexical accent. My Segerup analyzed the acoustic quality of Swedish Gothenburg word accents, which have a more limited tonal range of stressed syllables and a considerably shorter duration of stressed syllables in accent 2 than in accent 1. The research of accentuation in German and in other Germanic languages was also represented in several papers. C. Mooshammer and J. Harrington compared different acoustic and articulatory correlates of lexical word stress, sentence (focal) accent and vocal effort. L. Downing et al. analyzed non-accentual prosodic cues of focus in the tonal Bantu language Ntcheku Chichewa. Two papers described the historical development of word prosody in some Mexican languages: D. Guion and J. Amith analyzed the development of prosody in the Uto-Aztecan language Balsas Nahuatl, while G. Lowes examined the reconstruction of tonogenesis in Zapotec. Joan Baart analyzed the tone and stress in the northwest Indo-Aryan language territory and discovered numerous tonal languages existing in that linguistic area. She grouped them into three categories of language types: the languages with two tonemes – rising and falling tone (Shina, Barushaski, Indus Kohistani, etc.); the languages with three types of tonemes – mid tone or level, high or high-falling and low or low-rising (Punjabi, Hindko, Pahari-Pothwari, Gojri, etc.); and the languages with four or more contrastive tones (e.g. the Kalam Kohistani language has five different tonemes). S. Hellmuth described the pitch-accent in the Arabian language spoken in Cairo. G. Elordieta and A. Irurtzun analyzed the acoustic correlates of accent in various Basque prosodic systems. Y. Igarashi examined the falling intonations of the accented syllables in Russian and demonstrated the existence of two distinct patterns of the falling intonation which are phonologically represented as H+L* and H*+L. P. Wagner and J. Mandić studied the perceptive abilities of speakers of Bosnian Serbian. Their results indicated that a small number of errors occurred with the identification of those words whose contrast was based on the quantity of stressed vowels (long-falling/short-falling accents) and that the highest incidence of misidentification occurred with those words that made opposing pairs according to tone on short vowels (short-falling/short-rising accents). Draga Zec formulated and described seven Old Stokavian systems (two of which have not been confirmed) and three New Stokavian systems (that represent the base in standard varieties Bosnian/Croatian/Serbian) using five phonological limitations defined by optimality theory.

Poster presentations mainly represented descriptions and research results on prosody in individual languages and they were divided into the three thematic categories: (1) the languages of Africa, (2) the languages of Europe, America and Siberia and (3) the languages of Asia. A new approach to this type of presentation was introduced at the conference. In addition to the traditional poster sessions, several poster presenters gave a four-minute plenary oral presentation in the three sessions called “précis presentations”. The task of the presenter was to provide a “summary, highlights and advertisement” for their research. This ‘advertisement spot’ was especially stimulating for the presentations, but it was also a lively ‘humour spot’ at the conference, since many presenters, especially famous scientists, found inventive and witty solutions while trying to convince the participants of the conference to
devote their attention to their own posters. The main quality of the presentations was their precision in terms of content.

Poster presentations demonstrated the results of the research on stress and tones in the following African languages: Gumuz (Ethiopia), Kulango (the Ivory Coast), Nubi (Uganda), Maa (Kenya), Dinka (the Sudan), Migaaama (Chad) and Eton (Cameroon). It has been discovered that in the Gumuz language, instead of the three so far described tones, there are only two and that the accented vowels are three times longer than the unaccented vowels. In the Dinka language where singular nouns have a short stressed vowel and plural nouns have a long stressed vowel, measurements have been carried out in order to establish the relationship between the duration of nucleus and coda. The results have shown that the longer the coda, the shorter the stressed vowel, and that the shorter the coda, the longer the stressed vowel. In the Eton language, it is very difficult to clearly identify the tone: accented syllables may have two tones, while unaccented syllables may have only one.

Among Asian languages, the word prosody has been analysed in: Kammu (Laos), Mandarin (China), Tamil, Japanese, Vietnamese, Korean, etc. In the Kammu language, in which there are minimal tonal pairs, it has been discovered that the northern dialect is not tonal and therefore the existence of tones similar to those occurring in tonal dialects may only be described as a phonetic feature and not as a phonological one. In Japanese, the suprasegmental features of the interrogative word at the end of a sentence has been described and it has been established that the interrogative word has a falling tone (while the rising tone characterizes the declarative word), that the average f0 in the entire interrogative sentence is higher than in a declarative sentence and that the duration of the final syllable in the interrogative words is considerably longer.

Among European, Siberian and languages from other continents presented at the poster sessions, demonstrations most frequently focused on the description of the pitch-accent in the pitch-accent languages as well as prosody in the stress and tone languages. A demonstration was provided of the prosodic variations and dialectal diversity of Slovene, the Finnish language, other Scandinavian languages, the Siberian language Nentes, Russian, English, German and the Australian language Pintupi, as well as the Mexican language, Mayo. Particularly interesting were the results of the analysis of the f0 contour in an accented word, that is, the differences in the realization of nucleus between standard German varieties in Switzerland and in Germany. The phonetic analysis of the f0 contour demonstrated that in the patterns HL and LH in the nuclei, the Swiss reach the f0 peak later than the Germans (in the middle of the nucleus or as late as on the next syllable).

The convention was very well organized largely due to the excellent preparation by Bert Remijsen, Amis Boersma and Marloes Rozing, who took great care of the conference participants and in preparing all the necessary materials. At the very beginning of the convention, all the participants received a book of abstracts where each presentation was summarized on about two pages of text, with research results and references. Concerning the way the conference was conducted, particularly the sessions and discussions that followed the presentations, one could frequently notice the active involvement of many members of the programme committee: Vincent Van Heuven, Laura Downing, Harry van der Hulst, Robert Ladd and the others. After every presentation, there were at least three or four questions from the audience that would initiate a discussion. Most of the speakers handed out abstracts where their entire presentations were summarized on about ten pages.
There have also been some additional side-events. For instance, on the second day of the convention, a banquet was held in the botanical garden and upon the conclusion of the conference, after Vincent van Heuven's and Bert Remijsen's closing statements, one hour of sightseeing with a guide was organized.

The BeST Conference is the first conference with such specific title and it is very likely that it will remain the only such conference. Nevertheless that doesn’t mean that the topic of word prosody doesn’t constitute an important and independent topic area of other scientific conventions. The forthcoming conference entitled “International Conference on the Typology of Tone and Intonation” (abbreviated TTI), having a similar thematic scope, was announced at the BeST convention. It will be organized by Laura Downing and Caroline Fery and it will be held from 7-9 September, 2006, in Berlin, Germany.

Elenmari Pletikos and Jelena Vlašić
Department of Phonetics, University of Zagreb
e-mail: epletiko@ffzg.hr; jvlasic@ffzg.hr

Phonetics and Phonology in Iberia
20-21 June 2005, in Barcelona, Spain

Phonetics and Phonology in Iberia (PaPI) is an international conference that brings together researchers in all areas of phonetics and phonology, with a special emphasis on the phonology-phonetics interface and laboratory phonology. PaPI provides a new interdisciplinary forum in Europe for discussion of phonetics and/or phonology and their related areas, such as language acquisition, language variation and change, speech pathology, and speech technology. The first edition of the conference was successfully held at the University of Lisbon in June 2003. Selected papers from the conference in Lisbon have been published in a volume entitled Prosodies by Mouton de Gruyter, Phonetics and Phonology Series.

The second Phonetics and Phonology in Iberia 2005 conference was held on June 20-21, at the Universitat Autònoma de Barcelona (UAB), Spain, and approximately 120 participants attended. It was jointly organized by the Departments of Catalan, English, French and Spanish at the UAB, together with the Grup de Gramàtica Teòrica and Grup de Fonètica UAB-IEC. More information about the conference as well as the Powerpoint-presentations corresponding to the talks, and picture galleries are available online at http://seneca.uab.es/papi.

For the current PaPI conference, 104 abstracts were submitted from representative countries in Europe, America, Africa and Asia. Anonymous reviewing of the abstracts allowed the organizing committee to get a 2/3 acceptance rate which guaranteed the scientific content and quality of the papers. The final program included 3 invited talks, 20 oral presentations, and 47 posters. A significant number of papers presented at the conference were on the relationship between phonetics and phonology, and laboratory approaches to phonology, showing the extreme vitality of this interdisciplinary field. In
recent years, experimental approaches and data evaluation have been crucial to test phonological claims and to provide answers to controversial issues in phonological theory. This conference continued to maintain a highly interactive character and provided a good forum for in-depth discussion of research work. We think that this aspect definitely strengthened ties and stimulated communication between researchers in a lively atmosphere, which was one of the goals of the conference.

The conference opening session began with an address by D. Robert Ladd (University of Edinburgh), who focused on the “Coordination of pitch movements and segments: What does it tell us about phonology?”. In this session, Ladd reviewed recent research on the way F0 movements are aligned with the segmental string, and evaluated the phonological implications of this research, specifically the phenomenon of segmental anchoring. He proposed that it may be more plausible to think of whole F0 movements as “gestures” in the sense of Articulatory Phonology. The phenomenon of segmental anchoring is then interpreted as the temporal coordination between the laryngeal F0 gesture and the supralaryngeal gestures that produce segments.

The second invited talk, by Daniel Recasens (Universitat Autònoma de Barcelona), was entitled “An interpretation of patterns of VCV coarticulation according to a model of articulatory constraints”. Recasens presented his Degree of Articulatory Constraint (DAC) model of coarticulation which accounts for the direction of consonant-to-vowel, vowel-to-vowel and vowel-to-consonant coarticulatory effects. In essence, patterns of coarticulatory strength and direction are determined by the degree of tongue dorsum involvement of the segment and manner requirements. Recasens illustrated how the DAC model captures coarticulatory behavior, and how it contributes to a better understanding of the principles of articulatory organization underlying phonemic planning. In addition, he showed how the model can account for assimilatory processes and the direction of sound change.

The third invited speaker, Louis Goldstein (Yale University & Haskins Laboratories), dealt with “Syllable structure and modes of coupled dynamical systems”. Goldstein presented a coupled oscillator model for planning intergestural timing in which gestural units are coordinated into larger structures through coupling of their activation dynamics. The model hypothesizes that there are two intrinsically stable modes of coupling: the in-phase mode – corresponding to the coordination of onset consonant gestures with vowel gestures, - and the anti-phase mode – corresponding to coordination of coda consonant gestures with the vowel. Because the in-phase mode is more stable than the anti-phase mode and both are more stable than other modes, several qualitative as well as quantitative properties of syllable structure are predicted, including cross-linguistic preference for CV syllables and the combinatorial internal structure of syllables (relatively free combination of onsets with rimes, but typically restricted combination within onsets and within rimes).

The 20 oral presentations and 47 posters presented original contributions on new and cutting-edge laboratory phonology research. The majority of the papers focused on Romance languages (including Portuguese, Catalan, French, Italian, Romanian, and Spanish), and geographical varieties of these languages (e.g., Brazilian and European Portuguese, Alguerese and Central Catalan, Andalusian and Madrid Spanish, etc.). A number of papers on Germanic and Afro-Asiatic languages were also presented at the conference. These papers addressed a variety of topics related to segmental processes, the importance of the syllable as a unit of production and processing, syllable structure,
prosodic structure and phrasing, and the acquisition of segmental contrasts and prosody. The quality of the research presented was outstanding, and participants were engaged in lively and instructive discussions.

The Spanish ToBI Workshop, held at the UAB on June 22, was organized as a satellite event at the end of the Conference on Phonetics and Phonology in Iberia. The general purpose of this meeting was to advance the development of a common transcription system for Spanish intonation, along the lines of American English ToBI and similar systems for other languages. Another goal of the meeting was to reevaluate Beckman et al.’s (2002) proposals for the analysis of Spanish intonation in the ToBI framework in the light of recent work on a number of geographical varieties of Spanish, including both scripted and unscripted speech.

The program of the workshop can be found at http://seneca.uab.es/filologiaca catalana/papi/tobi.html. The workshop had the format of a series of open discussions led by the participants who proposed various topics and provided problematic examples. In each talk, participants provided a set of sound files from read or spontaneous speech illustrating some specific problem of analysis that they had encountered and they wanted to discuss. Approximately 25 researchers on Spanish prosody participated in the event. Valuable contributions were presented, and the discussion sessions were very lively, full of proposals, suggestions, and constructive discussion.

The high quality of the conference talks and posters, the stimulating presentations by the invited speakers, as well as the interesting discussion sessions and the pleasant atmosphere, contributed to the success of the conference. A follow-up book entitled Segmental and prosodic issues in Romance Linguistics, a collection of oral papers presented at the conference, is currently under way.

The organizers would like to take this opportunity to thank all the individuals and institutions who contributed to the success of the conference and helped make it an enriching and stimulating experience for all participants. We are specially grateful to the members of the scientific committee, the volunteers, the Ministerio de Educación y Ciencia, and the Rectorat of the UAB that provided a wonderful venue for the conference. The conference featured a gala dinner for all conference participants.

*Phonetics and Phonology in Iberia* will be held every two years in the month of June and will be hosted by an Iberian university. We look forward to the next conference, which will be hosted by the University of Minho (Portugal) in June 2007, and after that by the University of Las Palmas de Gran Canaria (Spain) in June 2009.

Pilar Prieto
Catalan Department, ICREA and Universitat Autònoma de Barcelona
pilar.prieto@uab.es

and

Maria-Josep Solé
English Department, Universitat Autònoma de Barcelona
mariajosep.sole@uab.es
NOLISP (NOnLInear Speech Processing) 2005 was held in Barcelona between April 19 and 22, with the support of “Escola Universitaria Politecnica de Mataro”, the Spanish “Ministerio de Educación y Ciencia”, “Fundació Catalana per la Recerca i la Innovació”, ISCA, and EURASIP. It is the second workshop in a series of events (after NOLISP’03 Workshop held in Le Croisic, and NOLISP’04 Summer School held in Vietri sul Mare). It is closely related to European COST-277 “Nonlinear speech processing” action, and a large number of contributions and attendees came from overseas (Mexico, USA, Korea, Japan, etc.). Sixty people attended this event, where full 4-day oral presentations were made (4-keynote talks plus 39 regular presentations) with no parallel sessions, in a classical ISCA tutorial research workshop.

Many specifics of the speech signal are not well addressed by the conventional models currently used in the field of speech processing. The purpose of the NOLISP’05 conference was to present and discuss novel ideas, work and results related to alternative algorithms and analysis techniques for speech processing, which depart from mainstream approaches.

With this intention in mind, we provided an open forum for discussion, where alternative approaches were proposed, even if the results achieved at present did not clearly surpass results based on state-of-the-art methods.

The call for papers was launched at the beginning of 2005, addressing the following domains:

1. Non-Linear Approximation and Estimation
2. Non-Linear Oscillators and Predictors
3. Higher-Order Statistics
4. Independent Component Analysis
5. Nearest Neighbors
6. Neural Networks
7. Decision Trees
8. Non-Parametric Models
9. Dynamics of Non-Linear Systems
10. Fractal Methods
11. Chaos Modeling
12. Non-Linear Differential Equations
13. Others

All of the main fields of speech processing were targeted by the workshop, namely:

Speech Coding: The bit rate available for speech signals must be strictly limited in order to accommodate the constraints of the channel resource. For example, new low-rate speech coding algorithms are needed for interactive multimedia services on packet-switched networks such as the evolving mobile radio networks or the Internet, and nonlinear speech processing offers a good alternative to conventional techniques. Voice transmission will have to compete with other services such as data/image/video transmission for the limited
bandwidth resources allocated to an ever growing, mobile network user base, and very low bit rate coding at consumer quality will see increasing demand in future systems.

Speech Synthesis: New telecommunication services should include the capability to produce speech in a “natural way”. To achieve this, much research is required to improve the voice quality of text-to-speech and concept-to-speech systems. Enriched output signals of self-excited nonlinear feedback oscillators are expected to permit matching synthetic voices better to human voices. In this area, the COST Action was built on results obtained in signal generation by COST 258 Action “The Naturalness of Synthetic Speech”.

Speaker Identification and Verification: Security in transactions, information access, etc. is another important question to be addressed in the future, and speaker identification/verification is perhaps one of the most important bio-metric systems, because of its feasibility for remote (telephonic) recognition without additional hardware requirements. This line of work was built on results from COST 250 Action “Speaker Recognition in Telephony”.

Speech Recognition: Speech recognition plays an increasingly important role in modern society. Nonlinear techniques allow us to merge feature extraction within the classification problem and to include the dynamics of the speech signal in the model. This is likely to lead to significant improvements over current methods which are inherently static.

In addition, other topics were discussed in detail, such as Voice Analysis, where the quality of the human voice is analyzed (including clinical phonetics applications) and where techniques for the manipulation of the voice character of an utterance are developed, and Speech Enhancement, for the improvement of signal quality prior to further transmission and/or processing by man or machine.

Some presentations, photos and other items are available at the website www.nolisp2005.org. The next workshop will be held in Paris in 2007.

Dr. Marcos Faundez-Zanuy
Chairman, NOLISP'05
Escola Universitaria Politecnica de Mataro
Avda. Puig i Cadafalch 101-111
E-08303
Mataro (Barcelona), Spain
faundez@eupmt.es

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The title of the book should be exactly as given on the book cover. The length of the review can vary between 300 and 800 words, i.e., between half a page and one and a half pages.

The review should be factual and descriptive rather than interpretive, unless reviewers can relate a theory or other information to the book, which could be of benefit to our readers.

The text should provide as many names quoted or referred to as possible, to give the qualified reader a better idea of the orientation of the contents.

In case the reviewer is not a native speaker of English, I would appreciate it if s/he had the review edited by a native speaker of English before sending it to me. Otherwise I have to do this, which lengthens the editing process.

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e-mail: swantech@013.net.il
Fax: ++972-4-8235546
Tel.: ++972-4-8235546
Mail: Prof. Judith Rosenhouse, Ph.D.
Swantech (Sound Wave Analysis and Technologies, Ltd.)
89 Hagalil St
Haifa 32684
Israel

Please do not hesitate to contact me if you have any other related questions. Thank you for your cooperation.

Judith Rosenhouse
Kooperation in der Kommunikation. Festschrift für Elmar Bartsch
München, Basel: Ernst Reinhardt Verlag (Sprache und Sprachen Series, 35) 247 pp.
(incl. List of contributors, pp. 205-6, ISBN 3-497-01498-2

Reviewed by: Judith Rosenhouse
Dept. of Humanities and Arts, Technion I.I.T., Haifa, Israel

Volume 35 of the series “Sprache und Sprachen” (‘Language and Speech’) of Reinhardt Publishing (in German) is dedicated to Professor E. Bartsch in honor of his 70th birthday. Although the book appeared about seven years ago, we find it relevant for reviewing even now – even more so since Prof. Bartsch is continuing his productive work at the University of Duisburg (Germany). The title refers to cooperation in communication, which is the field he has developed since the Department of Language and Speech opened in the University of Duisburg. The preface to the volume, written by the editors, explains the three major points in this field: man, cooperation, and culture. Any communicative act is complex and involves cooperation between the participants in this act; and culture is reflected in the way this communicative act is conducted. The book revolves around this theme. The contributions of Prof. Bartsch in this area are concisely presented in Part 5 of the book. There are 21 articles in this volume, arranged in five parts:

Part 1. Cooperation in communication: basic aspects; this Part includes the following papers:
Mönnich, A., “Cooperation in communication – realized by the acoustic sign” (pp. 37-51).
Fiehler, R., “What does one do when he is cooperative? A discourse-analysis explanation of the concepts ‘cooperation’ and ‘cooperativity’ ” (pp. 52-58).
Schwandt B., “He who overturns tables and benches puts hierarchies in question: about desks, auditoria, discussion halls and other places of cooperation (pp. 59-64).
Varwig, F.R., “‘Cooperation’ as a metaphor for ‘educational development by speech.’ A linguistic interpretation of Brecht’s ‘The wounded Socrates’” (pp. 5-73).
Krech, E.M., “Communication by speech – a science field of linguistics (pp. 74-81)
Heilmann, Ch. M., “Speech education: one dimension of speech communication” (pp. 82-90)
Naumann, C.L., “Reading symbols. On history, norms and reality of interpoints (pp. 92-99).
Geissner, H., “Co-, col-, com-, con-, cor- notes of forms of rhetorical communication” (pp. 100-109).

Part 2. Cooperation in communication: concrete examples
Lemke, S., “Cooperation as a principle – An example from Linguistics” (pp. 112-118)
Lotzmann G., “The model of the Inzigkofen conversations: a contribution to the interdisciplinarity of medicine, linguistics, pedagogy, sociology and speech acquisition” (p. 119-126).

Part 3. Cooperation in communication: in economy and management
Lepschy A., “Personal conversations as a contribution to the procedure of credibility of male and female applicants” (pp. 128-137).

Lueschow, F. and E. Zitzke, “To undertake needs discussions. Too many leading groups are afraid of confrontation” (pp. 138-147).

Teuchert, B., “Conduction conversations for leading groups – how to succeed in good enhancing conversations? Aspects of conducting cooperative conversations” (pp. 149-158).


Ockel, E., “Cooperation and solidarity in communication” (pp. 168-175).

Part 4. Cooperation in communication: in church, art, the media and school

Ritter, H.M., “Cooperations in art – small views” (pp. 178-183)

Pawlowski, P., “Dialog forms in wireless devices” (pp. 184-196)

Slembek, E., “The workshop: “a word for Sunday”” (pp. 197-203)

Roelofsen, A., “About the need to search oneself; ‘belief conversation’ as a conversation about the self and not on general things” (pp. 204-214)


Part 5. Cooperation in communication: by Elmar Bartsch. This section is dedicated to the subject of this Festschrift. It includes “speech contacts” (pp. 226-236); a bibliography by Prof. Bartsch (pp. 236-244) and Biographical stations in the life of E. Bartsch (pp. 245-246).

The book ends with the list of contributors to the volume (p. 247.)

This book is interesting due to its various points of view within linguistics and its teaching methodology and problems, which are stressed in it, or even meta-linguistics. The running theme is the fact that communication is a complex cooperative process that involves all linguistic components as well as social and socio-linguistic aspects. The titles of the papers demonstrate the variety of perspectives that the book presents, which includes semantics, reading in loud voice effectively (rhetorically), using punctuation signs in writing (and reading), turn taking in conversation, the cooperation between artist and audience in art, school problems related to communication, and the effects of discourse and rhetoric on religious topics and how to improve them (by effective speech), to mention just a few. The book does not directly relate to phonetics or phonology, however. We review it here because phonetics and phonology are referred to explicitly or implicitly in several of its papers as an integral part of the areas which linguistics and linguistic teaching should deal with, especially when training would-be teachers, and in particular language teachers. Three examples will suffice us here.

Mönnich’s paper (pp. 37-58) refers to acoustic aspects of speech, among other features. Vocal features (which are acoustic signs and can be described by acoustic terminology) are important for the perception, processing and understanding of the speech utterance by the listeners. Vocal quality also affects listeners emotionally, and whether they like or dislike the speaker. Mönnich’s paper describes this with listening experiments she conducts in a university course, that she teaches. This aspect is especially important for teachers anywhere, who would like their students to listen to them and take in their words without any difficulties. Mönnich describes the communication model for this topic which she provides in her course to enable students to become aware of (=learn) speakers’ vocal features and perceive their effects.
E. M. Krech’s paper (pp. 74-81) examines speech communication from a theoretical standpoint. She compares the German terms for linguistics and communication with the English ones, and notes that the German language has more ways to express this distinction than English has. It is Krech’s opinion, that in the German language, the speech communication science (“Sprechwissenschaft”) is considered just one way of communication. For her, communication is the mental activity conducted between speakers in concrete situations. Historically, she notes, speech communication in German was often associated with speech therapy for individuals with voice or speech problems. It was, however, also referred to as types of speech acts, such as debates, conversation, or lectures. She also quotes H. Krech (1959) who says that “in the spoken word there always works also the voice, in completing the content and often leading to the meaning” (which I interpret as a hint at the role of phonetics). Returning to speech pathology, she asks what should be the role of speech therapy – bringing the patient to the point where they succeed in holding a conversation? In many cases this is the highest point which can be reached, but at the same time it is also a limiting view, she thinks. For her, combining theoretical with practical aspects of linguistics / speech communication is the real meaning of the German term “Sprechwissenschaft”.

A practical or pragmatic view of communication is presented in Pabst-Weinschenk’s paper about “cooperative selling rhetoric” (pp. 159-167). After describing the communication structure, which involves a buyer and a seller; a need and interest on the part of the buyer, and an offer of solution suggested by the seller, all of which lead to the solution (the buyer accepts the offer or turns it down), the interaction between these points is described and depicted in a pyramid shape. This pyramid has three elements: the “stomach” (personal psychological features), the “leg” (the actual utterance, involving phonetics, i.e., speech signs, prosody, as well as gestures and the verbal-linguistic word level) and the “head” (the concept of the communication situation). She goes on to discuss other components of successful rhetorical conversations and concludes with the main theme that buyer orientation actually requires cooperative rhetoric.

As the book is a collection of papers from a conference, their structures vary greatly and it is unfortunate that abstracts did not precede each paper. The book will be interesting for German-reading linguists studying the meaning and structure of communication and the many sides of its “cooperativeness” – and who among us, linguists, is not thus interested? The editors, Mönnich and Jaskolski, have done a nice job with this volume, which proves to be relevant for more than the year it first appeared.

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Rhetorik zwischen Tradition und Innovation
München, Basel: Ernst Reinhardt Verlag (Sprache und Sprachen Series, 36) 287 pp.
(incl. List of contributors, pp. 205-6, ISBN 3-497-01499-0)

Reviewed by: Judith Rosenhouse
Swantech, Haifa, Israel

41
This volume appeared in the same year and same series as the volume edited by Mönnich, and Jaskolski (1999) “Kooperation in der Kommunikation. Festschrift für Elmar Bartsch” reviewed here. The two volumes are similar in orientation, structure and even the contributors in the two volumes overlap considerably. This volume contains 25 papers divided into three major parts:


The volume ends with a one-page epilogue (instead of a preface) by Mönnich, followed by the list of contributors.

The papers in this volume are not directly related to phonetics/phonology, as is the above mentioned book on rhetoric. Since any oral communication inherently involves these linguistic fields, several papers focus on phonetic aspects from angles which are hardly mentioned in “usual” phonetic studies. Two examples of this nature are found in the paper, “Body-conscious communication according to Veronika Langguth® - a rhetoric, which
moves from inside outward through breathing experience” by V. Langguth (pp. 114-127) and T. Merz’s paper “vocal work in rhetoric – important and feasible?” (pp. 128-134).

Langguth’s paper describes the importance and the effect of correct breathing on voice quality and thereby on effective speech and lecturing. Since speech requires voice, effective speech requires an effective voice, i.e., at once authoritative, lively and personalized. For this goal, one has to be conscious of his/her body (=vocal) features. She also describes several breathing exercises, which affect vocal resonance, speech rhythm and vocal relaxation. These features (which can be also observed by phonetic analysis devices) influence not only rhetoric, but are also linked to a healthier body posture in speech, better speaker’s space management and personal development.

Merz’s paper (mentioned above) deals with voice features more directly. She describes research results which reveal that men and women have different attitudes towards vocal features, voice importance and its modification for improvement. For example, men’s stronger voices mask the possibility for finer emotional expressions and they are less conscious than women of the rhetoric effect of the voice. Women, on the other hand, often unconsciously maintain girlish voice features, and it is rather difficult to change such speech habits because the process involves changing the voice source position. This paper also presents exercises for improvements of vocal production. Some of these exercises (ball games) are intended to improve formal relations between the participants in the training course, as well as warm up the body (e.g., shoulders for better breathing). For Merz, successful communication is when the speaker is present with his/her feelings, thoughts and words and when speech and voice operate in unison. A “good voice” is not enough for good communication, of course, but when the voice is not “good” all argumentation types are negatively affected. Microphones cannot correct this problem, because loudness alone does not improve voice quality, but leads to greater distance between speaker and audience.

R.W. Wagner’s paper “Practical exercises for cooperative and effective conversation” (pp. 137-151) stresses the reciprocal aspect of communication through exercises which elicit speech communication from both sides of the dialog. He stresses the importance of interesting and original ideas in the exercises. One of the examples (p. 145) is a section entitled “hoarse voices are so sexy! Researchers have found out why this is so” (which is directly related to our profession…). Wagner, Merz and Langguth describe their specific contributions to this field of communication research, referring the readers to their books (Wagner, 1996), just like Langguth (1998) and Merz with her video (Merz, 1998). A variety of games as teaching tools are also suggested in S. Berthold’s paper “betting games for conversational rhetoric” (pp. 152-160). G. Fey’s paper “Naturalness is the winning card! What is the present day trend in teaching rhetoric” (pp 104-113) reviews not only present trends but also quotes literature from the 1940-1950’s, which support naturalness in speech for greater effectiveness, as seen everywhere in modern TV news broadcasting.

In conclusion, this book is easy to read and interesting for researchers of rhetoric and its teaching, especially in Germany, and Prof. Mönnich should be thanked for her efforts. As noted in the previous review, we think that abstracts would have been useful as well as indexes though the latter are perhaps less common in conference collections. It should be also noted that the book is written in German and that most of the literature in the reference lists (in both the reviewed books of this series) is in German. This might limit its readership.
to readers of the German language. For phoneticians, several interesting points are scattered here and there in some papers, which makes them worth reading.

References
Merz, T. M. (1998) Lösung von Stimmblockaden in Kiefer, Kehle und Zunge (~ 110 minutes) VT-Nr. 748, VCR-GMBH, Dortmund (Video)

Cambridge University Press, United Kingdom. xiv + 402 pages, ISBN 0-521-82402 8,
Reviewed by: Asher Laufer
The Hebrew University, Jerusalem, Israel

This volume contains 20 revised versions of papers and commentaries presented at the Sixth Conference in Laboratory Phonology, which was held at the University of York in 1998. (The date on the book itself is 2003; however according to the publisher’s Internet site, the book was published in February 2004, but was available only after February 2005. Hence, the late date of this review.) This book is an addition to the series of books named “Papers in Laboratory Phonology”, which are the outcome of conferences held in various places with different editors. The guideline of this series is to find the relationship between mental models of linguistic theory (phonology) and the physical nature of speech (phonetics); resulting in the title “Laboratory phonology”.


The introduction, written by the editors, includes a discussion of the motivation for the conference, an explanation of its multi-disciplinary nature, and summaries of the contributions, showing their relationships both to one another and to the structure of the conference as a whole. The last paper in each part contains a commentary on the papers in the group or on most of them: Paper 5 comments on papers 2-4; paper 10 comments on papers 7-9; paper 15 comments on papers 12-14; and paper 20 comments on all the papers in the group, papers 16-20.

The common goal of all the papers is to bring phonological issues into the laboratory, and by this to root “phonology in the concrete world of what people/speakers do when they produce and perceive speech” (Introduction, p. 3) in an attempt to reconcile the intellectual streams of phonology and phonetics. The papers are indeed very diverse and use a wide range of laboratory and instrumental techniques to analyze the production and perception of speech: acoustic analysis; articulatory analysis using laryngography, laryngoscopy and electropalatography; measuring reaction times to cross-spliced stimuli; perceptual simulation by training a recognition device. The papers are based on various languages, including Arabic, English (British and American), Danish, French, Italian, Korean and Yorùbá.

The book has a uniform theme and is nicely organized, with numerous clear charts and tables. The papers are all printed in the same font, and treated as chapters in a book, and therefore there is a long list of references that serves all the papers only at the end of the book, followed by two separate indexes for names and subjects. But the outcome of the fact that the authors are coming from various disciplines and have diverse academic backgrounds is that the chapters are still like papers in a journal rather than chapters in one homogenous book with one subject.

Almost every paper is not self-contained, as if the authors wrote to a colleague in their mutual narrow sub-field. For example: the lexical database “CELEX” is mentioned on pp. 61, 67 (x2), 73, but only on p. 210 does Nearey give a reference to “CELEX”; AP (on p. 149), “Venn diagram” (p. 247), and RTR (p. 282) – are mentioned without any explanation (and they are not included in the indexes); also “Ward’s method” is mentioned on p. 246 with no reference.

Minor slips like “they are have” (p. 9, 1st line), repeated words (“that” on p. 6) or “cosenser” instead of “condenser” (p. 310) can be ignored, but an inconsistency between a description of a sound in the text and the way it appears in a figure and its legend puzzles and confuses the reader; e.g. in the middle of figures 16.3, 16.4 and 16.5 [t s] are written, but they refer to the pharyngealized sounds, so they should be written [tʰ sʰ]. A more serious mistake is the following: There is a contradiction between the text in the last paragraph on p. 284 and the legends of Figures 16.2 and 16.3, as well as the text on p. 286. The outcome
of the text on p. 284 is that \([s, \hat{k}, \hat{\emptyset}, \hat{\partial}]\) have a wider pharyngeal width than those of \([s, x, h, ?]\) (by the way, \(\sigma\) is transcribed \(s\) by mistake). This is contrary to the experimental result, which concludes clearly that pharyngeals and pharyngealized sounds have a narrow width in the pharynx (Fig. 16.2 and p. 287-290). This mistake is probably the result of a switch between the two groups of symbols on p. 286.

Such mistakes could be grouped into editorial and proof reading mistakes, but in a few papers I found methodological inaccuracies and unacceptable assumptions. Docherty raised such issues in his commentary to the 4 papers in his part (paper 20), but some of his critiques apply also to a few other papers in the book. Space limitations prevent elaboration on all issues, therefore I will limit myself to four major comments on only one paper –paper 16, by Zawaydeh.

The first comment relates to the grouping together of phonetic terms of the physical nature of speech with phonologic terms, which belong to the mental models of linguistic theory. In Zawaydeh’s paper uvulars, pharyngeals and emphatics are clustered as one group not less than eight times, and this is not an acceptable mixture: Uvulars and pharyngeals are phonetic terms for “places of articulation”, while “emphatics” is a phonological cover term. In Semitic languages, emphatics are considered a phonological group realized differently in various languages. In Arabic, for example, emphatics are realized as pharyngealized sounds, whereas in the Semitic language of Ethiopia, they are realized as ejectives (glottalized) sounds (see Catford, 1977: 70; Ladefoged, 1971: 25-28; Laufer & Baer, 1988: 182; Rabin, 1972, p. 1153; Ullendorff, 1955: 151-157).

The second comment relates to data collection and its naturalness. Scientists will prefer to base their linguistic conclusions on the use of natural speech, the size of a reasonable database, and a reasonable number of subjects. The study reported by Zawaydeh fails in these respects: It is based on a limited list of nonsense words of the form \(?aCa\), produced in citation form under laboratory conditions, and the endoscopic experiment was based only on part of this list (only 10 nonsense words, repeated 3 times) by a sole subject, the author himself (p. 283). Citation forms of nonsense words in a very limited context are not representatives of a language, and therefore, unless this study is supported by more naturally produced speech one should hesitate to accept the conclusions as representing the Ammani-Jordanian dialect. (Such caution is exemplified in other papers in the book, such as the paper by Hayward et al; see e.g. p. 318 - they found interesting relationships between voice quality and tone in Yorùbá, but they were reluctant to make final conclusions, and wish to base them on “much more research, based on more languages” (p. 320).)

My third comment relates to the interpretation of the endoscopic images. Zawaydeh claims that it is hard to determine the role of the aryepiglottic folds from the endoscopic images (p. 292, note 6), and she speculates that in Arabic, laryngeals are articulated through a constriction at the level of the aryepiglottic folds, and hence F1 is raised (p. 287). But from the two pictures of the laryngeals \([h, ?]\) that she herself presents (p. 285, right side of figure 16.2), one can see that the constriction is not made at the aryepiglottic folds. In the picture of \([h]\), the narrow opening between the vocal folds is clearly seen, and as nothing obscures this constriction from the lens, we can be sure that (a) the narrowest constriction is in the glottis, and (b) that there is no other base of articulation at the level of the aryepiglottic folds. Her own evidence rules out her supposition. Anyhow, she should have
tested the consonants in the context of various vowels. If she had taken pictures of /h/ in the vicinity of high front vowels, the epiglottis would not have blocked the view, and she would be able to see the larynx and the aryepiglottic area much better. As is well known, the epiglottis is retracted in low vowels (e.g. Laufer & Condax, 1985: 59-60; Russel, 1931: 39; Wilson, 1976), and this also results in a raised F1.

This brings us to the fourth comment, which relates to the acoustic interpretation of speech. Zawaydeh hypothesizes “that all guttural sounds, including the laryngeals, have a high F1” (p. 287), and she “extracted the formant frequencies at the temporal center of the second vowel” (p. 288). After assuming that some might argue that it is not right to rely on the results of tokens of low vowels, as “laryngeals would not have formant transitions, hence the high F1 is the F1 of the low vowel itself”. She conducts another acoustic experiment of read nonsense words of the form /ici/, and again she extracts the formant frequencies of the middle of the second vowel (p. 288). Measuring F1 of the following vowel may tell us something about coarticulation between sounds and how vowels are influenced by consonants, but if the aim is to find features of the pharyngeals and laryngeals, one cannot rely on these measurements. It is well known that the formant transitions to and from the consonant give us the information of the place of articulation (e.g. Ladefoged 1993: 199-208; Liberman et al, 1956; Liberman et al, 1959). Therefore, one keeps wondering why Zawaydeh did not measure the consonants themselves and their transitions from the vowels and to them. (By the way, even from her own data, represented in figure 16.5, it is difficult to come to her statistical conclusions on F1. See also Dochery, p. 351.)

Finally, laymen in phonetics and phonology will find it difficult to comprehend the book as a whole. Specialists in narrow areas of speech science can find various papers that will enrich and deepen their knowledge both in phonetics and in phonology.

References


47

Manuale di fonetica (fonetica naturale: articolatoria, uditiva e funzionale)  
(LINCOM Textbooks in Linguistics 03) München: LINCOM Europa (XIV + 481 pp. ISBN 3 89586 456 0)  
and:  
Manuale di pronuncia (Italiana, inglese, francese, tedesca, spagnola, portoghese, russa, araba, hindi, cinese, giapponese, esperanta)  
(LINCOM Textbooks in Linguistics 04) München: LINCOM Europa (XIV + 419 pp., ISBN 3 89586 457 9)  
Reviewed by: Mauro Tosco  
Dept. of African and Arab Studies, Università di Napoli “L’Orientale,” Naples, Italy  

These two books (henceforth M^F and M^P respectively, following the author’s own abbreviations) by Luciano Canepari (Professor of Phonetics at the University of Venice) are in Italian and can – and indeed, must – be read and reviewed together: the “Handbook of Pronunciation” (M^P a) is actually the second part of what was originally conceived as a single work (as stated by the author on M^F 6). In general, the “Handbook of Phonetics” (M^F) can by used alone, while M^P needs a previous exposure to the author’s own brand of phonetics.

It must be kept in mind that these are Manuali (“Handbooks”): students and language teachers are Canepari’s target, not linguists and phoneticians. Alas, a student I am not (no longer!), nor a language teacher. My observations will therefore be those of a fellow linguist. As such, I have certainly profited from reading these books, and, I believe that many people will find these books to be good additions to their collections. At the same time, a few words of caution are in order. It is mainly to the latter — rather than to the great merits of Canepari’s work — that the following lines are devoted.

The plan of the books is as follows:

M^F is made up, after a Preface and a Prelude, of an introductory chapter (Fare fonetica, “Doing phonetics”), a chapter on the author’s methodology and approach (Pronuncia e fonetica), a central part which takes up most of the volume (pp. 55-249) and which discusses, in turn, the vocal apparatus, the classification of sounds, different types of transcriptions, vowels, consonants, syllables, suprasegmentals, and intonation. A few final short chapters apply the author’s transcription and proposals first to the languages of Italy (as will be seen below, this translates, according to the author, into one language – Italian – and a number of “dialects”) and then to languages of different continents: altogether 350 languages/dialects/variants (among them, as will be seen, even dead languages). Here lies perhaps the most precious and welcome contribution of M^F & M^P: where else could one find, in one and the same book using one and the same transcription, the consonant, vowel and intonation charts of Ukrainian and Ojibwe, passing through Marathi and Tok Pisin?
Simpler, in a way, is the structure of *Ma P*: after a Prelude, the phonetics of Italian, English, and all the languages listed in the subtitle are discussed, in that order. Each language receives an in-depth analysis.

Taking, French, for example, the vowels (oral, nasals, rounded front, etc.) are discussed (*Ma P* 145-150), followed by the consonants (*Ma P* 150-154), and different phonetic and phonological issues: for French, the status of the *schwa* and of the *liaison*, among others. Intonation is given special emphasis. For each language, different regional and social varieties are discussed. Taking, English, for example, the following “accents” are taken into consideration: a neutral “international” accent (based upon the pronunciation used by radio and television networks), the American English of the media, and the British English of the media. For each language and variety, the same text (“The North Wind and the Sun”) is transcribed (together with the same text in Italian as pronounced by a speaker of that particular language; e.g., by an American and a British English speaker). In accordance with a general prescriptivist attitude of the two books, which is to be discussed later on, other “minor” accents are given less coverage. For English, these are: the Canadian, Australian, New-Zealandian accents, a “traditional” British accent (the Received Pronunciation), a “cultivated” British accent, and Cockney.

Esperanto is a welcome addition (*Ma P* 380-405), although only three paged are devoted (*Ma P* 392-394) to its orthographic problems and its solutions seem a bit exaggerated.

No previous knowledge of phonetics is required in order to use the books. Canepari’s approach is natural, but Natural Phonology in a specific sense. Rather, non-instrumental and, broadly speaking, a-theoretical phonetics is meant.

No literature at all is quoted in the books. While this may be acceptable for a students’ handbook, I find it difficult to accept in a book with such a wide scope. To highlight an example, the pharyngealized (“emphatic”) consonants of Arabic become in Canepari’s treatment uvularized. He is quite possibly right. Still, one would want, here as elsewhere, some “proof.” At the same time, no mention is made of the suprasegmental aspects of emphasis, whereby uvularization (pharyngealization?) spreads rightwards within the phonological word until, in certain dialects at least, a palatal segment is found (cf. Hoberman 1989 for an analysis of different Arabic dialects).

If students are the target of these Handbooks, the relatively long Chapter 7(*Ma F* 74-103) on the inconsistencies of I.P.A. and other transcriptions is not really germane. In it, the author discusses the deficiencies and inconsistencies of the “official I.P.A.” (**IPA** in the books), and proposes and employs an extended I.P.A. alphabet (**IPA**).

As anticipated, the accurate analysis of a great number of languages and varieties, as presented in the second part of *Ma F*, is a real bonanza of data, but charts, drawings, and palatograms could have benefited by a larger printing, and spectrograms and waveforms are obviously missing. But after that, the author moves to the phonetic description of dead languages (Chapter 22, *Ma F* 420-459). These languages include not only (Archaic, Classical, Imperial, and Ecclesiastic) Latin, Classical Greek, Sanskrit and Old Chinese, but also: Proto-Germanic, Proto-Slavic, Proto-Bantu, Egyptian, Sumerian, two stages of Proto-Indo-European, Proto-Algonquian, Proto-Athabaskan, for instance.

Again, to take just one example, one might wish to know which reconstruction is followed in the phonetics of Proto-Semitic (*Ma F* 442). Certainly, the assumption of an
uvularized pronunciation of the “emphatics” runs counter to most recent proposals, which would rather consider an ejective realization (such as preserved in the modern Semitic languages of Ethiopia and Eritrea) as original (cf. Dolgopolsky 1977).

Finally, the last two pages (Chapter 23, M' F 460-461) propose a phonetic description of Extraterrestrial (Extraterrestre), which is defined, as I understand it, as a possible common inventory for an artificial interlingua — nothing to do, therefore, with a median phonological inventory, as described, e.g., in Maddieson (1984).

The references are presented and organized under the apt title of “Usable references” (Bibliografia utilizzabile). I fully agree that it is pointless, in a handbook, to list hundreds and hundreds of titles. At the same time, to criticize and quote, as the author does, from different handbooks (M' F 462) without giving the authors’ names and without even listing them among the References seems unfair.

Among the contemporary authors who get listed (generally with highly critical remarks), one finds Ladefoged, Maddieson, Laver and very few others. For the rest, the reader is plainly invited (M' F 463) not to waste his or her time with any material carrying in its title the explicit mention of phonology, especially if accompanied by such “dirty words” as autosegmental, generative, metrical, and so on. Better, suggests the author, to turn to typography: more than one page (M' F 462-463) is dedicated to this art, its conventions and its decadence in this computer-ridden era of sloppiness. Canepari criticizes the use of bold and italics together, rants against the small caps, and bemoans the demise of ligatures and the deluge of colored backgrounds.

As to the “ideology” of the books: one finds more than a hint of prescriptivism in the books, and from the very Preface of M' F (M' F X): a proposal is put forward to submit first graders to lessons in phonetics in order to develop their abilities in listening and reproducing sounds and have them learn a “correct” (neutral, not-regionally-tainted) pronunciation. This attention to the “right” pronunciation can indeed be seen to be at the root of the second volume, M' P. Thus, one should learn the “correct” pronunciation of Italian (the author dislikes the adjective “standard,” preferring “neutral”). Canepari laments (M' F 9) how those who favor the regional accents “cannot understand the importance of the possibility to free themselves from a heavy burden (often actually undesired at an unconscious level)” (non sanno comprendere l’importanza della possibilità di liberarsi d’un gravoso fardello (spesso, decisamente indesiderato, a livello inconscio)).

What Canepari, in his turn, seems to be unable to understand is that such a “possibility to free oneself” may be utterly unimportant to most people.

Coupled with prescriptivism, I was struck by a certain dislike for minority languages (be they of the government-recognized/mandated variety or not). This is especially evident in the chapter of M' P devoted to Italian. Everything is a dialect: there is no Sardinian language, but the dialect of Cagliari; there is no Piedmontese language: there is instead the Turin variety and a Southern Piedmontese variety from Alba (by the way, no Provençal variety of Italy is represented). The author therefore follows here a purely sociolinguistic definition of dialect (i.e., whatever is not a national, state language) – a definition which, if maybe justified from a strict phonetic perspective, is at odds with the linguistic reality (not to mention speakers’ sensibilities).
Canepari’s style is pleasant to read; at times colloquial, with more than a sprinkling of exclamation marks, dots, and rhetorical questions. His Italian orthography is, on the other hand, a bit old-fashioned, as can be seen in the liberal use of accents and apostrophes; orthographies such as *s’un* for *su un* (“on a”) are bound to puzzle any Italian who attended school after WW2. Even in the field of orthography the author cannot avoid the temptation to innovate, as in the use of the inverted question mark (¿) of Spanish, unknown in Italian. After all, has not he himself defined natural phonetics as “an artistic science” (*scienza artistica; M³ F 8*)?

These notes of criticism should not deter the prospective reader: I must reiterate that the amazing amount of data presented, discussed, and analyzed easily compensates for any problems noted in these books. It is a pity that these rich handbooks have been published in a minor language, scarcely used nowadays in science, and by a publisher whose distribution, as I know from personal experience, is not always reliable. Not only students, but linguists and phoneticians alike are encouraged to buy and consult at least M³ F, if not both books.

References

*Silbenschnitt und Tonakzente*
(Linguistische Arbeiten 463) Tübingen: Max Niemeyer Verlag
(pp., ISBN: 3 484 30463 4)
Reviewed by: Wiktor Jassem
Institute of Fundamental Technological Research, Polish Academy of Sciences

While there is still some indeterminacy in the typology of languages and dialects with respect to the functions of pitch (Gussenhoven 2004, chapters 6 & 7), there seems to be broad agreement as to whether pitch is being used both at the lexical and the postlexical level, or at the latter level only. Within the Germanic language family, both cases currently are found, and the individual historical developments resulting in lexical pitch vary. Whatever the function of pitch, its variations essentially affect the *vocalic* part of the syllable.

There are two groups of Germanic dialects with lexical pitch. Two dialects in the first, Nordic group have, for political rather than strictly linguistic reasons, assumed the status of separate languages, viz. Norwegian and Swedish (which in their standard forms are mutually more understandable than many ‘orthodox’ dialects of one language). Those in the other group, located near the borders of the Netherlands, Germany, France and Luxembourg, are jointly referred to as Franconian.

Linguists have named six broad features that are used, both at the phonetic and the phonological level of description, to differentiate the vowels proper, i.e., the syllabic
vocoids: (1) quality, (e.g., German, English, French etc. /i/ vs. /u/ (2) quantity (e.g. Czech /a/ vs. /a:/ (3) rounding (e.g., French or German /i:/ vs. /y:/, (4) tenseness (e.g., American English /i/ vs. /I/), (5) plus/minus ATR (advanced-tongue-root) (e.g., Igbo /u+/ vs. /u-/) and (6) syllable cut (see below). These features are not necessarily orthogonal, and more than three are rarely (if ever) used together. Syllable cut, if applied, replaces quantity (duration). The first three features have been well documented experimentally and are in general use. The fourth has, in the recent decades, somewhat fallen into disrepute for want of unambiguous objective evidence. ATR is under debate. The last-named feature has not so far found very many advocates outside Germanic linguistics. This is the subject of interest in the volume under review, i.e., in its relation to lexical pitch. According to the syllable-cut theory, vowels, especially if accented (or ‘stressed’), may differ in the way that their nuclear vowel is linked to an immediately following consonant, the link being either smooth or abrupt. The theory was particularly popular in the 19th-century research on German dialects, but has found supporters in no lesser authorities than Sievers, Trubetsky and Jespersen and was partially described in the 16th century by John Hart who applied it in his description of English vowels (R.W. Murray, pp. 103-128, in this volume).

Silbenschnitt und Tonalakzente consists of 12 contributions (eight in German and four in English) plus an Introduction by the editors (in English).

The book treats Silbenschnitt from various perspectives: descriptive, historical, experimental (psycholinguistic), and measurement-based.

D. Restle (Normierung der Silbenquantität..., pp. 35-66), using a good amount of geometry (not in the style of contemporary phonology) and some acoustic measurements, makes a brave attempt to show that the Silbenschnitt theory is also applicable to other languages such as Italian, Accadic or Macassaric (on the Celebes Island). J. Lenerz (Silbenstruktur und Silbenschnitt, pp. 67-86) gives a very detailed explanation of the theory and relates it to the Natural Phonology research, especially that of T. Vennemann. Th. Becker (Silbenschnitt und Silbenstruktur in der deutschen Standardsprache der Gegenwart, pp. 87-102) shows how to substitute Silbenschnitt for the short/long feature as traditionally (and persistently) used in the phonology of Modern High German. P. Hoole and Ch. Mooshammer (Articulatory analysis of the German vowel system, pp. 129-152) soundly demonstrates, that ‘syllable cut’ can be substituted for tense/lax in the form of pulsatile vs. distributed distinction, based on the broad concept of phonetic ‘force’. While there is more or less theoretical speculation in most of these papers, H. Spiekerman’s (‘Ein akustisches Korrelat des Silbenschnitts: Formen des Intensitätsverlaufs in Silbenschnitt- und Tonakzentsprachen’, pp. 181-200) is decidedly the most ‘concrete’ contribution in the sense of very clear graphical representations supported by measurements of the speech signal, representing three different languages, with statistical evaluations of the results. The paper by J. E. Schmitt (Die sprachhistorische Genese der Mitteldeutschen Tonakzente, pp. 201-235) is of special interest in that it gives innovative argumentation for a thesis that there is considerable parallelism in the development of lexical tone between the Scandinavian and the Franconian dialects: Durational or Silbenschnitt distinctions were first combined with tone, which at some stage in the historical development, became prevalent and phonologically distinctive.
Whether ‘syllabic cut’ will eventually become part and parcel of standard phonetic and/or phonological description continues to be an open question, but if it does, this volume will have been a significant contribution to its success.

Reference

Olsson, John (2004)
Forensic Linguistics. An Introduction to Language, Crime and the Law
London/New-York: Continuum, (xiv+269 pp. incl. Exercise Appendix (pp. 209-218), Text Appendix (pp. 219-250), Notes (pp. 251-254), Bibliography (pp. 255-259), Index (pp. 261-269), ISBN 0 8264 6109 3)

Reviewed by Chantal Paboudjian
University of Provence, Aix en Provence, France

The author John Olsson is a forensic linguist consulted by solicitors and law enforcement agencies on forensic texts both in Britain and the United States. He is also an academic linguist who teaches the world's first online course in forensic linguistics at Nebraska Wesleyan University and at the Forensic Linguistics Institute at website http://www.thetext.co.uk. He has submitted reports to the FBI, the House of Commons (the UK Parliament), the Foreign Affairs Committee, and has handled more than 80 authorship and plagiarism cases.

The author’s dual position, as practitioner and linguist, makes this book highly authoritative to a large audience. It is mainly intended for students of forensic linguistics at undergraduate and postgraduate levels, but also for non specialists concerned with linguistics, such as law enforcement officers, lawyers, psychologists, and experts from different forensic disciplines. The student of traditional academic linguistics is not the target audience, however it is difficult for linguists to overlook this volume for several reasons. First more and more linguists are interested in this field, which was once considered to be reserved for practitioners. It seems that the present publication, which constitutes a breakthrough text trying to reconcile the practitioner and the linguist, comes at the right time. It also presents the current state of forensic linguistics which, as underlined by John Olsson, is “an umbrella science for many fields of study” including phonetics, discourse analysis, psychology, foreign languages, child language, computational linguistics, and statistics. Finally much information and many ideas for future research can be derived from this volume.

The book is divided into twelve chapters and two appendices (one for the commentaries on exercises and one for forensic texts). The first six chapters are devoted to authorship and the last six chapters to related areas, including plagiarism, veracity in language, phonetics, and text types.

Chapter 1 Previous Authorship Studies (pp. 9-27) gives an outline of previous famous authorship studies such as the Shakespearian authorship. A description of methodology is provided including the statistical measurement of authorship. The Qsum or Cusum
(abbreviation for 'cumulative sum') analysis, the $X^2$, McMenamin's method of attribution, and Hänlein's author recognition method are briefly presented.

Chapter 2 Individuals and Language Use (pp. 29-37) considers some of the arguments relating to the notion of individual style (or 'linguistic fingerprint'). An interesting position of the author challenges the existence of a unique linguistic style in each individual. As individuality in language becomes more difficult to detect due to a greater standardization (regularities) in language and education in societies across the world, Olsson suggests looking for new ways that will enable distinguishing individuals from one another.

Chapter 3 Evidence in Court (pp. 39-48) discusses the legal sufficiency of scientific or technical evidence by experts in American courts and in a number of other countries where forensic linguistics is used.

Chapter 4. An Authorship Inquiry (pp. 49-58) describes a particular authorship case which the author treated. This case is presented to demonstrate how a descriptive attribution method using a series of orthographic and grammatical markers can determine a linguistic style when other scientific methods cannot be used.

Chapter 5 Sampling and Authorship (pp. 59-68) illustrates “some of the dangers of using statistical results from short texts rather than using descriptive and/or observational methodologies”. The author discusses inter- and intra-author variations based on statistical authorship tests.

Chapter 6 Single-Text Inquiries (pp. 69-98) considers different types of single-text authorship investigations by indirect attribution or by identification. The chapter also provides a brief introduction to statistics with definitions and applications of methods such as t-tests, ANOVA, or Chi-Square.

Chapter 7 Authorship Profiling (pp. 99-105) shows how much a writer's use of language reveals about his/her personality. As such, the chapter contains some consideration of the handwriting, the style of printing, the punctuation, and the forms of letters which constitute linguistic evidence.

Chapter 8 Detecting Plagiarism (pp. 107-118) defines and illustrates plagiarism with its different aspects namely 'word for word plagiarism' and 'mosaic plagiarism' (a mixture of plagiarist and victim's languages).

Chapter 9 Veracity in Language (pp. 119-139) with its 23 sub-sections skims through the main oral and written techniques of statement analysis. It consists in an initiation to the marking up of the different categories of witness narratives namely time, place, sequence, descriptions, and tense/aspect.

Chapter 10 Forensic Text Types (pp. 141-169) is a highly illustrative chapter which presents several text types in forensic linguistics such as emergency calls or ransom demands, and discusses some of their main features. We learn, for example, that the main characteristics of hoax calls are long pauses between turns, and slow pace in information providing.

Chapter 11 Phonetics (pp. 171-189) is a simplified introduction to phonetics, mainly to articulatory phonetics and spectrogram reading, intended for non linguists. A description of the speech process and definitions of the spectrogram and the formant are provided. Current
voice identification methods using formant plotting and fundamental frequency are also briefly considered. Phoneticians will certainly be interested to read this chapter despite a note from the author suggesting for students with some knowledge in linguistics to skip the section. They will get a confirmation on which aspects of phonetics are most useful in forensic linguistics. For example, the identification of speakers using disguised voice, accent or native language can be quite a challenge to phoneticians.

Chapter 12 The Forensic Cookbook (pp. 191-208) contains miscellaneous notions useful to the student of forensic linguistics, i.e., the measure of lexical density, statistical formulae and several useful notions for a basic understanding of statistics ($X^2$, t-test, standard deviation). Back to phonetics, a presentation of the Fourier Transform, and a definition of the decibel can be found.

There are some weak aspects to the volume like the sketchy character of some chapters or the comparatively long portion devoted to statistics in chapter 6 which could distract readers from the subject of the section. Another thing worth noting is that I haven't been able to locate R. Scherer's article found online by Olsson on 25/08/2002 under the address http://www.voicefoundation.org/VFScherervoiceprod.html. I have found it, however, on http://www.voicefoundation.org/library/voiceproduction.pdf.

However the greater asset of this book is its practical aspect. The chapters are short and well organized and the topics focus on the essentials. Hence, readers can easily find the information needed. The book is also contains an appropriate number of examples from a wide range of forensic texts, which make the topics clearer and anchored in reality. All of the texts can be found (with a little work) in the appendix and on the website quoted above. Moreover, the ten exercises, disseminated in the chapters and commented on in an appendix, allow the readers to have a vivid illustration of what they have just studied.

This practical aspect may also serve a didactic purpose for the linguist who may feel more comfortable in approaching a field frequently considered as hard to define and reserved for law enforcement practitioners. Moreover s/he won't feel like treading unknown ground since most major contributions to forensic linguistics by academic linguists like Coulthard (1994), Crystal (1991), and Hollien (2001), and publications in general phonetics by Ladefoged (2001) or Ronald C. Scherer (2002) are quoted. Olsson's work shows that the field is moving into new directions and becoming more attractive to linguists. There is no doubt more attention will be given to it within academic linguistics in the years to come.

Notes:
Sun-Ah Jun (ed.) (2005)
Prosodic Typology. The Phonology of Intonation and Phrasing
Oxford: Oxford University Press (ix + 462 pp + a CD., including: Preface, List of
Contributors and Index, ISBN 019-924963-6)
Reviewed by: Judith Rosenhouse
Swantech, Haifa, Israel

This collection of articles reflects most of the papers from the workshop entitled
“Intonation: Models and Transcription” which was a satellite event of the 14th International
Congress of Phonetic Sciences in San Francisco, California, in 1999 and was organized by
the editor herself.

In addition to 13 chapters on different languages, the volume includes two “frame”
articles: “1. Introduction,” (pp. 1-8) and “16. Prosodic typology,” (pp. 430-458), both by
Sun-Ah Jun, Chapter 2. “The original ToBI system and the evolution of the ToBI
framework” (pp. 9-54) by M. E. Beckman, J Hirschberg and S. Shatuck-Hufnagel provides
a fundamental basis and background for readers who are not well acquainted with the
system. Following this chapter are “case studies.” The languages represented in this book
are: English, German, Greek, Dutch, Serbo-Croatian, Italian and Swedish (from Europe),
Japanese, Korean, Cantonese and Mandarin (from Asia), Chickasaw (a Native American
Indian language) and Bininj Gun-Wok (an Australian aborigine language also known as
Mayali). The editor says in the Introduction (p. 1) that these languages differ not only
geographically but also in the type and degree of lexical specifications of prosody. Some
have lexical stress (English and Greek), lexical pitch accent (Japanese), or tone (Mandarin,
Cantonese); others have both stress and pitch accent (Swedish, Chickasaw) or none of these
(Korean).

What links these studies is the method used. They all use the Autosegmental Metrical
(AM) model of intonational phonology and combine it with the ToBI (Tone and Break
Indices) transcription system of intonation to analyze their individual language systems. The
variations that have been applied are due to the linguistic differences which required
adapting the ToBI system to the individual language needs.

The chapters of this book (after the first two and before the last chapter) proceed as
follows:
3. M. Grice, S. Baumann and R. Benzmueller, “German intonation in autosegmental
metrical phonology” (pp. 55-83);
4. A Arvaniti and M. Baltzani, “Intonational analysis and prosodic annotation of Greek
spoken corpora” (pp. 84-117);
5. C. Gussenhoven, “Transcription of Dutch Intonation” (pp. 118-145);
6. S. Godjevac, “Transcribing Serbo-Croatian Intonation” (pp. 146-171);
7. J. J Venditti, “The J ToBI model of Japanese intonation” (pp. 172-200);
8. S-a. Jun, Korean “Intonational phonology and prosodic transcription” (pp 201-229);
a Pan-Mandarin system for prosodic transcription” (pp. 230-270);
and prosodic annotation conventions for Cantonese” (pp. 271-300);
11. M. K. Gordon “Intonational phonology of Chickasaw” (pp. 301-330);
The AM model perceives intonation as a phonological system, and describes intonation “as a sequence of distinctive tonal units (High, Low and their combinations) forming a hierarchical prosodic structure” (pp. 1-2). Since the prosodic model of ToBI is phonological, it is not adequate for the description of languages with different prosodic structures than English (e.g., Japanese, Korean, or Swedish), or for varieties of the same language (i.e., dialects). This is why most of the researchers whose works are presented in this volume have adapted the system to their specific needs (G_ToBI, K_ToBI, etc.). Even the basic system which was designed for English has been renamed (already in previous studies) MAE_ToBI for Mainstream American English, as described and explained in Chapter 2.

While each of the chapters 3-15 deals with a specific language, each presenting its special problems, features and solutions, Chapter 16 is an attempt to look at the findings of the book from a “global” point of view. Thus, for example, Table 16.1 summarizes the eleven ToBI systems discussed in the preceding articles by the following features: language, types of tiers (extra-ToBI only), types of intonation break point indices, and types of tones on the tones tier and prosodic units. Table 16.2 refers to prosodic typology in 21 languages (i.e., more languages than those studied in the volume) based on prominence and the rhythmic/prosodic units. The Table is divided into columns by prominence (lexical vs. post lexical) and rhythmic/prosodic unit (also lexical vs. post lexical) and into four groups by the traditional characteristics of their word prosody: stress accent languages, lexical pitch accent languages, non-stress and non-lexical-pitch languages, and tone languages. This Table shows, indeed, that this type of categorization makes it possible to determine the relationship between the types of prominence and the types of rhythmic/prosodic unit both at the lexical and the post-lexical level. These important generalizations are summarized in a list (p. 446), as follows:

a) “All languages have at least one prosodic unit above the word.
b) In stress languages, the prominence of a word is always marked by post-lexical pitch accent (i.e., marking the head of the word), but not often by marking the edge of the word.
c) Most of the lexical pitch-accent languages mark the prominence of the word in two ways at the post-lexical level: culminatively, by marking the head of the word and demarcatively by marking the edge of the word.
d) Languages that do not have any feature of lexical prosody mark the prominence of the word demarcatively at the post-lexical pitch accent.
e) Non-tress languages can have post-lexical pitch accent.
f) The number and type of rhythmic/prosodic units at the post-lexical level are not predictable from the lexical rhythmic unit of the language, nor from the type of lexical prominence.
g) There is no direct relationship between the type of lexical prominence and the type of lexical rhythmic unit. Also, there is no relationship between the type of post-lexical prominence and the type of post-lexical rhythmic/prosodic unit. However, the edge marking of the post-lexical prominence is predictable from the AP category in the post-lexical rhythmic/prosodic unit."

As ‘b-d’ above imply, the type of post-lexical prominence is partially predictable from the type of lexical prominence.

Also summarized in this chapter are the similarities and differences across the studied languages. Thus, the author (and editor) provides a model of prosodic typology. The ToBI transcription system is likewise considered in light of the extensions made in the various studies demonstrating its flexibility.

At the end of the book, Sun-Ah Jun calls for more analyses and descriptions of the prosodic structures of other languages using ToBI, in order, possibly, to verify the model.

It should be noted that the book is accompanied by a CD which includes sounds file samples (.wav) for ToBI, and the 13 languages. The sound files are linked to their corresponding figure captions and to the content of the chapter.

In sum, this book is a substantial contribution to the study of intonation. It is the first book introducing the history and principles of the AM model and the ToBI system, and the first book with a CD presenting intonation sound files. The volume is obviously intended for professionals in the area of phonology and phonetics, and mainly for students of intonation who use the AM model and ToBI, or wish to learn how to use them. Professionals specializing in each of the various studied languages, or in comparative linguistics, will clearly benefit much from the individual analyses in each chapter of this book.

Advertisement

Automatic Speaker Identification and Voice Card Comparisons
by Olga Ilina, Project Manager
Forensic Audio Speech Technology Center, St. Petersburg, Russia
e-mail: ilina@speechpro.com, phone: +7 812 331 0665, fax: +7 812 327 92 97

In July 2003, the Speech Technology Center in St. Petersburg, Russia announced the release of software for instant automatic speaker identification in telephone channels and automatic voice comparison. Speakers are identified based on specific voice and speech parameters.

The main features of this system are:
1. The application analyses and identifies real free speech signals automatically.
2. Even poor quality signals can be used for identification. This is particularly important in countries where analog phone stations and low quality lines are still widely employed.
3. Identification is fully automatic, and saves hours of time for forensic experts. Personnel qualification and experience requirements are also decreased.
4. Voice comparison is fully language independent, so can be used to identify the criminals of any nationality.

To identify a speaker, the system compares his/her personal automatically generated “voice cards” to other “voice cards” stored in the database. These voice cards contain all the important voice and speech parameters of a speaker.

**Step-by-step description of instant automatic speaker identification**

1. **Signal input and separation of speakers**

The system receives a signal recorded from a phone line, or other source, in 16-bit PCM format with an 8 kHz or more sampling rate as a WAV-file. The signal should meet the following requirements:

- It should be 16 or more seconds long;
- Signal/noise ratio should not be less than 10 dB;
- The frequency range should be 300-3400 Hz or better.

The conversation segments belonging to different speakers are separated. This may be done either automatically or manually (in case speakers are talking simultaneously for most or part of the recording). All the segments belonging to a particular speaker are saved as a separate sound file for later processing.

2. **Noise-cancellation and FFT average spectrum calculation**

Then the files are processed with an adaptive broadband filter. At the same time, FFT average spectrum is calculated (data for this calculation are acquired before the filter is applied). The algorithm used for identification was chosen and optimized based on the results of testing.

3. **Signal standardization**

Frequency Response (FR) of the filtered signal is automatically normalized using a previously determined average FFT spectrum and typical FR of a phone channel. Normalization is necessary to compensate for the interferences encountered by speech signals in phone and record channels. It also makes it possible to compare speech signals recorded from different phone lines.

During normalization, the signal level in every frequency band is multiplied by a certain coefficient. This coefficient is calculated as a result of the analysis and comparison between the average spectrum of the signal and a typical phone channel spectrum.

4. **Detecting speaker’s individual voice and speech parameters and saving them as a «voice card»**

The first four formants are automatically detected and analyzed, and then a “voice card” is calculated. This card contains the speaker's voice and individual speech parameters, including level of voice individuality and variation range within different instances of the speaker voice. Level of distinction between voice and speech parameters of the speaker and five other “model speakers” is also stored on the “voice card”.

The development of one “voice card” takes approximately 3 or 4 seconds. The user may add his/her comments to the entry, and then it is stored in the system database.
5. Comparing cards and identifying the speaker

To identify the speaker, the system compares his/her “voice card” to each one stored in the database. Note, that in each pair of compared cards, one of them should be developed for a signal at least 16 seconds long and the other one – at least 96 seconds.

The system was tested using a sample database containing more than 500 recordings of about 100 different speakers recorded by the SMART LOGGER© digital multi-channel voice logging and monitoring system. The conversations were recorded on analog and digital phone lines of several different providers.

The accuracy of identifying the “far-end” speaker during testing was:
- 91% when both compared signals were at least 96 seconds long.
- 85% if one of the signals was at least 16 and the other one – 96 seconds long.
- 90% if one of the signals was at least 16 and the other one – 96 seconds long and both were recorded from the same channel.

The application's calculation of voice and speech identification took no more than 0.7 seconds for each pair of compared cards using a Pentium III/1000 Hz PC. The largest possible number of cards stored in the database for automatic comparison is 100,000.

System architecture

The automatic speaker identification and voiceprint comparison system is based in a TCP/IP network and can be installed as a network with one central server, where the comparison is made and terminals at the remote locations where local users can submit files for comparison to the server and obtain the comparison results.

All voice cards are stored in a database in a central location. Voice cards created at remote client stations are submitted to the central server through a TCP/IP connection (LAN/ WAN/ Leased Line/ Internet) and are automatically compared to the central Voice Cards Data Base content. Results of the comparison are sent back to the remote client stations.

Possible applications for police/military use

- Creating a database of voice and speech of unknown voices associated with criminal activity and crime witnesses, as well as other persons being monitored by police;
- Creating a database of voice and speech for individuals known to have been convicted of criminal activity or currently are being monitored by the police.
- Automated voice card comparisons allow one to narrow down the number of suspects dramatically and saves considerable time and resources

The system allows one to:
- Join several crimes into one case, if an unknown participant of all the crimes is detected.
- Identify a criminal/suspect or a witness, if his voice and speech are recorded in the database.
- Identify people contacted by a criminal/suspect.
- Identify links and associates in criminal groups
Software and equipment for experts in speech technologies: noise cancellation, speaker identification, speech analysis and more...

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☑️ **Advanced forensic audio training** focused on noise cancellation and speech enhancement.

☑️ **IKAR Lab.** Everything for Advanced Sound and Speech Analysis - all that an expert may need.
New Publications


55. Wilson, Alastair (2005) *From 'Thump' and 'Swish' to 'This' and 'That': Sound symbolism in deictic modifiers.* Ph.D. Dissertation, University of Manchester, Department of German


Meetings and Conferences

**2005**

20-22 January, 2005
2nd Old World Conference in Phonology (OCP2)
Tromsø (Norway)
http://castl.uit.no

10-11 February, 2005
Processes of Communication – Cognition, Interaction, Robotics
Bielefeld (Germany)
http://www.techfak.uni-bielefeld.de/GK256/workshop2005/index1.html
e-mail: sonja.folker@uni-bielefeld.de

17 February, 2005
Tips and tricks for teaching Linguistics with technology
London (UK)

e-mail: calasfrederic@wanadoo.fr

18-20 February, 2005
31st Annual Meeting of the Berkeley Linguistics Society (BLS 31)
Berkeley, CA (USA)
http://www.linguistics.berkeley.edu/BLS/
e-mail: bls@socrates.berkeley.edu

21-23 February, 2005
Telephony Voice User Interface conference (TVUI)
San Francisco (USA)
http://www.tmaa.com/conference/

23-25 February, 2005
Speech perception within or outside phonology? Workshop as part of the 27th annual meeting of the German Society for Linguistics (DGfS)
Cologne (Germany)
http://www.zas.gwz-berlin.de/events/percphon/
e-mail: silke@zas.gwz-berlin.de

24-25 February, 2005
A Century of Experimental Phonetics: Its History and Development
Grenoble (France)
e-mail: 100ans@icp.inpg.fr

66
10-11 March, 2005
CUNY Workshop on Phonological Features
New York (USA)
http://web.gc.cuny.edu/Linguistics/events/workshop.htm
e-mail: ccairns@gc.cuny.edu

11 March, 2005
Première Journée de Phonétique Clinique
Paris (France)
http://www.cavi.univ-paris3.fr/ilpga/JPC-2005/

18 March, 2005
2nd Workshop on Prosody, Syntax, and Information Structure (WPSI 2)
Potsdam (Germany)
http://www.sfb632.uni-potsdam.de/events/ws180305.php
e-mail: ishihara@rz.uni-potsdam.de

19-23 March, 2005
International Conference on Acoustics, Speech, and Signal Processing
Philadelphia (USA)
http://www.icassp2005.org;
e-mail: info@icassp2005.com

30 March, 2005
Synchrony Meets Diachrony in Phonology
Geneva (Switzerland)
http://www.unige.ch/glow05
e-mail: marc.van.oostendorp@meertens.knaw.nl

31 March, 2005
Workshop „Sprachtechnologie in Fahrzeugen“ (Language Technology for Vehicles)
Bonn (Germany)
http://www.gldv.org/2005

4-5 April, 2005
The Second Baltic Conference on Human Language Technologies
Tallinn (Estonia)
http://ioc.ee/hlt2005/
e-mail: hlt2005@phon.ioc.ee

12-14 April, 2005
Yarmouk University 17th International Conference on Language, Linguistics, Literature & Translation (Yarmouk Conference 2005)
Irbid (Jordan)
14 April, 2005
foNETiks: One Day Meeting for Young Speech Researchers
University College London, London (UK)
http://www2.cmp.uea.ac.uk/~abj/one-day-meeting/

e-mail: drmrzughoul@yahoo.com

14-16 April, 2005
16th International Conference on Pragmatics and Language Learning
Bloomington, Indiana (USA)
http://www.indiana.edu/~pll2005/index.htm
e-mail: cfelixbr@indiana.edu

18-24 April, 2005
Giving the Gift of Language
Missoula (USA)
http://www.nsilc.org
e-mail: neyooxet.greymorning@mso.umt.edu

19-22 April, 2005
Non Linear Speech Processing (NOLISP'05)
Barcelona (Spain)
e-mail: faundez@upm.es

21-23 April, 2005
2nd LANGUAGE and TECHNOLOGY Conference: Human Language Technologies as a Challenge for Computer Science and Linguistics
Poznań (Poland)
http://www.ltc.amu.edu.pl
e-mail: ltc@amu.edu.pl

22 April, 2005
Exotic Phonetics
Poznań (Poland)
Web Site: http://elex.amu.edu.pl/ifa/plm/
e-mail: wjarek@ifa.amu.edu.pl

25-27 April, 2005
5th Annual Conference on Teaching Foreign Language Phonetics
Soczewka (Poland)
e-mail: anetadk@poczta.onet.pl; ewaklim@uni.lodz.pl

3-5 May, 2005
Voice World Europe 2005
London (UK)
13-14 May, 2005
**Deaf and Hearing Impaired Children Europe 2005**
London (UK)
http://www.dhice.org

20-23 May, 2005
**3rd North American Phonology Conference (NAPhC3)**
Montreal, Quebec (Canada)
http://cmll.concordia.ca/linguistics/naphc/
e-mail: reiss@alcor.concordia.ca

26-28 May, 2005
**13th Manchester Phonology Meeting**
Manchester (UK)
http://www.englang.ed.ac.uk/mfm/13mfm.html
e-mail: patrick.honeybone@ed.ac.uk

2-4 June, 2005
**7th Annual Meeting of the French Network of Phonology (RFP 2005)**
Aix-en-Provence (France)
http://www.lpl.univ-aix.fr/~rfp2005/
e-mail: rfp2005@lpl.univ-aix.fr

6-10 June, 2005
**Traitement Automatiques des Langues Naturelles 2005 (TALN05)**
Dourdan (France)
http://www.limsi.fr/TALN05
e-mail: taln05@limsi.fr

8-10 June, 2005
**47th International Symposium ELMAR-2005 focused on Multimedia Systems and Applications**
Zadar (Croatia)
http://www.vcl.fer.hr/elmar/2005/

11 June, 2005
**IATEFL Pronunciation Special Interest Group: Pronunciation in Practice**
http://www.rdg.ac.uk/epu/iatefl_event.htm
e-mail: j.e.setter@rdg.ac.uk

15-17 June, 2005
**ISCA Workshop on Plasticity in Speech Perception**
London (UK)
http://www.psp2005.org.uk
16-18 June, 2005
Between Stress and Tone (BeST)
Leiden (The Netherlands)
http://www.iias.nl/iias/agenda/best/
e-mail: A.C.L.Remijesen@let.leidenuniv.nl

20-21 June, 2005
Phonetics and Phonology in Iberia (PaPI 2005)
Barcelona (Spain)
http://seneca.uab.es/papi;
e-mail: cg.papi2005@uab.es (06/04)

23-25 June, 2005
Conference on Manner Alternations in Phonology
Berlin (Germany)
http://www.zas.gwz-berlin.de
e-mail: cmap@zas.gwz-berlin.de

24-25 June, 2005
3rd International Conference on Phonology and Morphology
Seoul (Korea)
http://society.kisti.re.kr/~pmc/

27-29 June, 2005
International Conference on Storytelling and Cultural Identity (ICS)
Terceira/Azores (Portugal)
http://www.cm-ah.pt
e-mail: ics@www.brocku.ca, fagundes@spanport.umass.edu

29 June – 2 July, 2005
The 5th EURASIP conference focused on Speech and Image Processing,
Multimedia Communications and Services (EC-SIP-M 2005)
Smolenice (Slovak Republic)
http://www.ktl.elf.stuba.sk/ec2005/first%20ann.ppt

1-2 July, 2005
Journées d’Etudes Toulousaines en sciences du langage (JETOU)
Toulouse (France)
http://www.univ-tlse2.fr/erss/jetou2005/
e-mail: halima.sahraoui@univ-tlse2.fr

6-9 July, 2005
15th Annual Meeting of the Society for Text and Discourse (ST&D 2005)
Amsterdam (Netherlands)
7-9 July, 2005
Language and Global Communication Conference (LGC2005)
Cardiff, Wales (UK)
http://www.global.cf.ac.uk
e-mail: LGC2005@cf.ac.uk

9-13 July, 2005
SLU 2005 AAAI Workshop on Spoken Language Understanding in conjunction with The Twentieth National Conference on Artificial Intelligence - AAAI 2005
Pittsburgh (USA)
http://www.aaai.org/Conferences/National/2005/aaai05.html

11-14 July, 2005
12th International Congress on Sound and Vibration
Lisbon (Portugal)
http://www.icsv12.ist.utl.pt

17-22 July, 2005
Phonology in the Cognitive Grammar Worldview. A session of the 9th International Cognitive Linguistics Conference
Seoul (Korea)
http://www.iclc2005.org/
e-mail: geoffnathan@wayne.edu; mompean@um.es

24-27 July, 2005
Auditory-Visual Speech Processing (AVSP 2005)
Vancouver Island, (Canada)

25-29 July, 2005
Xth International Congress of the International Association for the Study of Child Language (IASCL)
Berlin (Germany)
http://www.ctw-congress.de/iascl/info.html
e-mail: mail@ctw-congress.de

27-30 July, 2005
PTLC2005 Phonetics Teaching and Learning Conference
London (UK)
e-mail: ptlc2005@phon.ucl.ac.uk

30-31 July, 2005
The State of the Art in Speech Error Research (WOTSOTAISER), Workshop at the LSA Institute
Cambridge, MA, (USA)
http://web.mit.edu/lsa2005/events/schutze_ferreira.html

3-6 August 2005
Annual Conference of the International Association of Forensic Phonetics and Acoustics
Marrakesh (Morocco)
http://www.iafpa.net

10-15 August, 2005
Summer School Variation in Speech Production and Speech Perception - the Nordic Network on Variation in Speech Production and Speech Perception (VISPP)
Palmse (Estonia)
http://ioc.ee/vispp2005>

25-27 August, 2005
Phonological Variation: The Case of French
Tromsoe (Norway)
http://castl.uit.no

29 August - 2 September, 2005
Forum Acusticum Budapest 2005
Budapest (Hungary)
http://www.fa2005.org

31 August - 3 September, 2005
PEVoC-6th Pan-European Voice Conference
London (UK)
http://www.pevoc6.com
e-mail: info@pevoc6.com

1st September, 2005
Young Researchers' Roundtable on Spoken Dialogue Systems
Lisbon (Portugal)
http://www.cs.cmu.edu/~dod/roundtable
e-mail: yrr-organizers@cs.cmu.edu

2-3 September, 2005
6th SIGdial Workshop on Discourse and Dialogue
Lisbon (Portugal)
http://www.sigdial.org/workshops/ workshop6/

2-4 September, 2005
2nd International Speech Therapy Conference (ISTC-2): 'Aphasia and Autism - Speech and Thinking Disorders'
Wroclaw (Poland)

4-8 September, 2005
9th European Conference on Speech Communication and Technology
INTERSPEECH 2005/EUROSPEECH
Lisbon (Portugal)
e-mail: info@interspeech2005.org

4-8 September, 2005
13th European Conference on Signal Processing EUSIPCO-2005
Antalya (Turkey)
http://www.eusipco2005.org/

8-9 September, 2005
Discourse Prosody Interface 2005
Aix-en-Provence (France)
http://www.lpl.univ-aix.fr/~prodige/idp05

10-12 September, 2005
Disfluency in Spontaneous Speech (DiSS)
Aix-en-Provence (France)
http://www.up.univ-mrs.fr/delic/Diss05
e-mail: diss05@disfluency.org

12 - 14 September 2005
UK Language Variation & Change conference (UKLVC5)
University of Aberdeen (Scotland)
http://www.abdn.ac.uk/langling/uklvc5/
e-mail: uklvc5@abdn.ac.uk

12-16 September, 2005
International Conference on Text, Speech and Dialogue (TSD 2005)
Karlovy Vary (Czech Republic)
http://www.kiv.zcu.cz/events/tsd2005

14-16 September, 2005
Session on Natural Language Processing and Text Mining in Medicine at KES 2005 (NaTeMed2005)
Melbourne (Australia)
e-mail: amund.tveit@idi.ntnu.no
15-17 September, 2005
4th Int'l Symposium on Image and Signal Processing and Analysis - ISPA 2005
Zagreb (Croatia)
http://www.isispa.org/

18-24 September, 2005
Recent Advances in Natural Language Processing (RANLP-2005)
Borovets (Bulgaria)
http://www.lml.bas.bg/ranlp2005
e-mail: nicolas@us.ibm.com

19-23 September, 2005
Speech Analysis, Synthesis and Recognition
Krakow (Poland)

26-28 September, 2005
16th Conference of Electronic Speech Processing and Czech-German Workshop
on Speech Processing
Prague (Czech Republic)
http://workshop.ure.cas.cz

29-30 September, 2005
4th International Electropalatography (EPG) Symposium
Edinburgh (United Kingdom)
e-mail: alee@qmuc.ac.uk
http://www.qmuc.ac.uk/ssrc/conf/epg4_2005/

6-8 October, 2005
Human Language Technology Conference/Conference on Empirical Methods in
Natural Language Processing (HLT/EMNLP-05)
Vancouver, B.C. (Canada)
http://www.cs.utexas.edu/~ml/HLT-EMNLP05/

11-13 October, 2005
The 2nd International Joint Conference on NATURAL LANGUAGE
PROCESSING (IJCNLP-05)
Jeju Island (Korea)
http://www.afnlp.org/IJCNLP05/

13-15 October, 2005
Conference on Turbulences
Berlin (Germany)
http://www.zas.gwz-berlin.de/turbulences
E-mail: marzena@zas.gwz-berlin.de
16-19 October, 2005
2005 IEEE Workshop on Applications of SIGNAL PROCESSING to AUDIO and ACOUSTICS
New Paltz, New York (USA)
http://www.LNT.de/~WASPAA05/

19-22 October, 2005
Sounds of Silence: Empty Elements in Syntax and Phonology
Tilburg (Netherlands)
http://let.uvt.nl/sos
e-mail: sos@uvt.nl

17-19 October, 2005
10th International Conference on Speech and Computer (SPECOM 2005)
Patras (Greece)
www.wcl.ee.upatras.gr/SPECOM2005
e-mail to: bobola@wcl.ee.upatras.gr

25-27 October, 2005
III Congresso de Fonetica Experimental/ 3rd Conference on Experimental Phonetics
Santiago de Compostela (Spain)
http://www.usc.es/iicf/exindex.htm
e-mail: sec3cfe@usc.es (11/04)

29-31 October, 2005
4th International Workshop Models and Analysis of Vocal Emissions for Biomedical Applications (MAVEBA 2005)
Firenze (Italy)
http://maveba.det.unifi.it

4 - 6 November, 2005.
11th Mid Continental Workshop on Phonology (MCWOP11).
Ann Arbor, MI (USA)
http://www.ling.lsa.umich.edu/mcwop/
e-mail: mcwop11@umich.edu

8-9 November, 2005
Workshop on Models of L1 and L2 Phonetics/Phonology
Utrecht (Netherlands)
http://www.fon.hum.uva.nl/paola/modelsworkshop.html;
e-mail paola.escudero@uva.nl

18 - 19 November, 2005
Toronto Workshop on Phonetics, Gender and Sexual Orientation
27 November - 1 December, 2005  
**Automatic Speech Recognition and Understanding Workshop - IEEE ASRU 2005**  
Cancun (Mexico)  
http://www.asru2005.org

8-10 December, 2005  
**Seoul Workshop on Phonological Typology**  
Seoul (Republic of Korea)  
e-mail: jongho@snu.ac.kr

15 - 17 December, 2005  
**ConSOLE XIV: 14th Annual Conference of the Student Organization of Linguistics in Europe**  
EHU-UPV (University of the Basque Country), Basque Country, Spain.  
http://www.egu.es/console  
e-mail: consoleXIV@ve.egu.es

**2006**

17-19 January, 2006  
**3rd Old World Conference in Phonology (OCP3)**  
Budapest (Hungary)  
http://nytud.hu/ocp3  
e-mail: ocp3@nytud.hu

21 January, 2006  
**Recherches Actuelles en Phonétique et Phonologie**  
Paris (France)  
http://www.atala.org/article.php3?id_article=278

9-11 April, 2006  
**ISCA Workshop on Multilingual Speech and Language Processing** (Multiling - 2006)  
Stellenbosch (South Africa)  
http://www.unistel.co.za/multiling2006  
e-mail: jcr@sun.ac.za

20-22 April, 2006  
**1st Slovene International Phonetic Conference – SloFon 1**  
Ljubljana (Slovenia)
http://slofon.zrc-sazu.si
e-mail:slofon@zrc-sazu.si

2-5 May, 2006
Speech Prosody 2006
Dresden (Germany)
http://www.ias.et.tu-dresden.de/sp2006
c-mail: Ruediger.Hoffmann@ias.et.tu-dresden.d

9-10 May 2006
Voice World Europe 2006
London (UK)
edward.low@terrapinn.com

11-12 May, 2006
2nd Workshop on Multimodal User Authentication
Toulouse (France)
http://mmua.cs.ucl.ac.uk

11-14 May, 2006
International Conference on Conversation Analysis (ICCA-06)
Helsinki (Finland)
c-mail: eveliina.korpela@helsinki.fi

21-25 May, 2006
Speech Pathology Australia National Conference: Frontiers
Fremantle (Western Australia)
e-mail: c.j.williams@curtin.edu.au

May 31-June 3, 2006
11th Meeting of the International Clinical Phonetics and Linguistics Association
Dubrovnik (Croatia)
http://icpla.ffzg.hr
e-mail: vesna.mildner@ffzg.hr

9-13 June, 2006
2nd Biannual Russian Conference on Cognitive Science
St. Petersburg (Russia)
http://cogsci06@cs.msu.su

7-10 June, 2006
5th International Conference on Speech Motor Control
Nijmegen (The Netherlands)
http://www.slp-nijmegen.nl/smc2006/
19-29 June, 2006  
**Phonology Fest 2006**  
Bloomington, Indiana (USA)  
http://www.indiana.edu/~phono/  
e-mail: phono@indiana.edu

25-27 June, 2006  
**NIST Speaker Recognition Evaluation 2006 Workshop**  
San Juan (Puerto Rico)  

25-29 June 2006  
**11-th International Conference SPEECH AND COMPUTER (SPECOM'2006)**  
St. Petersburg (Russia)  
http://www.specom.nw.ru  
e-mail: specom@iias.spb.su

28-30 June, 2006  
**IEEE Odyssey 2006: The Speaker and Language Recognition Workshop**  
San Juan (Puerto Rico)  

29 June-1 July, 2006  
**10th Conference on Laboratory Phonology (LabPhon10)**  
Paris (France)  
http://www.lpl.univ-aix.fr/~labphon10/  
e-mail: labphon10@lpl.univ-aix.fr

6-8 July, 2006  
**Approches Phonologiques et Prosodiques de la Variation Sociolinguistique: le Cas du Français (PFC 2006)**  
Louvain-la-Neuve (Belgium)  
Web Site: http://pfc2006.fltr.ucl.ac.be/  
e-mail: pfc2006@rom.ucl.ac.be

12-14 July, 2006  
**The 5th International Conference on Voice Physiology and Biomechanics: Variations across Cultures and Species**  
Tokyo (Japan)  
http://www.vocology.jp/scvph2006/

7-9 September, 2006  
**International Conference on the Typology of Tone and Intonation**  
Berlin (Germany)  
e-mail: downing@zas.gwz-berlin.de
8-10 September, 2006
3rd Conference on Laboratory Approaches to Spanish Phonology (LASP3)
Toronto, Ontario, (Canada)
http://www.chass.utoronto.ca/spanish_portuguese/phonology/
e-mail: lasp@utoronto.ca

11-15 September, 2006
Ninth International Conference on TEXT, SPEECH and DIALOGUE (TSD 2006)
Brno (Czech Republic)
http://www.tsdconference.org/

17-22 September, 2006
INTERSPEECH’2006 - ICSLP. 7th INTERSPEECH event
Pittsburgh (USA)
http://www.interspeech2006.org/

28 September-1 October, 2006
Stuttgart (Germany)
www.gesprochene-wort.de
e-mail: gesprochene-wort@t-online.de

**2007**

27-31 August, 2007
INTERSPEECH (EUROSPEECH)-2007
Antwerp (Belgium)
http://www.interspeech2007.org/

**2008**

22-26 August, 2008
INTERSPEECH (ICSLP)-2008
Brisbane NSW (Australia)
mailto:denis.burnham@uws.edu.au>
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USA
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Fax: ++1-813-974-0822
e-mail: rbahr@chuma1.cas.usf.edu

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Hungarian Academy of Sciences
Benczúr u. 33
H-1068 Budapest
Hungary
++36 (1) 321-4830 ext. 172
++36 (1) 322-9297
e-mail: gosy@nytud.hu

Editor in Chief:

Prof. Dr. Angelika Braun
University of Marburg
FB 09 - IGS
Department of Phonetics
Wilhelm-Röpke-Strasse 6A
D-35 039 Marburg
Germany
Tel.: ++49.6421.282.4603
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