

Extending the Language Curriculum with Enabling Technologies: Nonverbal Communication and Interactive Video

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Abstract:

It is now possible to explore in great detail the workings of all communication channels thanks to advanced computer and video technology. Visual components of communication have begun to be exploited during the past 15 years via video tape. But we should now proceed further to teach previously ignored aspects of paralinguistic and nonverbal communication. Interactive video, particularly analog or digital videodisc, is well-suited to teaching the minute discourse processes that render a communication more native-like. In this article, the author will propose a pedagogical technique pioneered by Laurence Wylie¹ and technologically-enhanced by the author in order to make it feasible for today's teachers. The materials *In The French Body* and *In The German Body* support a method-acting approach known as the "Wylie Exercise" that permits the student to experience the rhythms and body language of native speakers. The video source material for this work is specially produced to ensure the validity of the experience. Additional speech analysis software makes it easy for students to achieve native-like intonation and rhythm in the verbal channel.

Introduction:

Though an exciting new technology may come along, it usually takes years for authors, producers or publishers to fully exploit its transformative potential. In language teaching, the conjoining of research in a heretofore marginalized area of the language acquisition paradigm, the application of that research to a new approach to learning, the realization of supporting materials in the newly available medium, and the implementation of the whole package in real classrooms has been over twenty years in the making.

The author and a team of professionals supported by the Fund for the Improvement of Postsecondary Education (FIPSE, U.S. Dept. of Ed.), have been working to make instruction in the social aspects of language available to language students in this country. This instruction includes sensitization to and experiential learning in the pragmatics of communication, in suprasegmental features of language such as intonation, stress and rhythm, and in the specific proxemics and body behavior of the target culture. Their role and importance has been established over the past 50 years by psychologists, anthropologists and sociologists, with some minor nods from traditional linguists.

The application of that research by Laurence Wylie in the 1970's led to a teaching approach which is used in a modified form in our proposed model. Included in the approach is a teaching exercise called the "Wylie Exercise" that has students method acting an unscripted segment of native conversation. However, the film technology available in the 70's (and eventually videotape) were not practical for providing students with access to the minute details of the source material.

Recently available interactive video technologies such as videodisc (and soon digital videodisc or DVD) can efficiently serve as texts for such a learning unit. Additionally, newly available speech analysis and feedback software can help students correct some articulatory deficits. In 1992, our first FIPSE project yielded the interactive materials necessary to conduct the learning exercise. Now, with a subsequent grant from FIPSE we can seriously begin the tasks of teacher training, materials testing and improvement, and eventual dissemination of the teaching approach supported by the *In The French Body* and *In The German Body* materials.

I. Interactional Synchrony and Nonverbal Communication

Early in this century, we language teachers began to move beyond the classical approach of teaching of modern living languages, an approach whose primary aim was to promote fluency in reading the great literature of the target language. Incremental advances in communication technology over the past 50 years has enabled us to focus more and more on the speech act and on the cultural contexts of language and communication. But while there is a great desire on both the part of teachers and students to incorporate a panoply of levels and modalities into language acquisition, we have not quite pushed out of the model which focuses our activity on the lexeme as opposed to an encompassing model of human interaction.

This struggle to move beyond mere words and sounds is reflected as early as 1949 when Charles Morris in his book on semiotics, *Signs, Language, and Behavior*, argues for a more inclusive definition of language and linguistics:

"...many persons, especially professional linguists will object to our omission from the definition of language the requirement that language signs be spoken sounds. On our part we see no theoretical reasons for the inclusion of such a requirement; to insist on it would be comparable to insisting that buildings made of different materials should not be called buildings. I would propose general linguistics to name the study of languages as defined (that is, *lansign*-systems); we can then differentiate between auditory, visual, tactual languages, depending on the sign-vehicles which occur. Students of spoken and written languages, however, can if they wish differentiate languages as a subclass of *lansign*-systems and hence language signs as a subclass of *lansigns*. In this case their study, if called "linguistics", would be some portion of general linguistics. (p.38)

In reality, the components of communication fall under at least three categories. (1) The *auditory* manifestation of language includes vocalizations such as words and their intonations but also, for example, the sound of an impatient toe tapping. (2) The *visual* channel includes written symbols such as that which composes an essay or letter and visual art, but also facial expressions and gestures. (3) The tactual or *proprioceptive* channel would be defined by the movement or feelings of the body in space. This would include touching and proxemics. Added to this last category and regulating all the others as well is *rhythm*.

Rhythms in personal communication and their role in successful cross-cultural encounters are important to teach. I am well aware of the disruptive nature of my request to reconsider our work in teaching about other cultural groups from the point of view of rhythms rather than words. But by becoming aware of the fascinating and powerful ways that rhythm penetrates every level of culture and human activity (spoken language included), we can achieve a better perspective on our roles as language teachers and vastly improve the overall quality and effectiveness of our instruction. More than anything else, I believe that language classrooms operating from this perspective will provide a more personally satisfying experience to students and be much more effective in creating citizens confident in reaching out to people of other cultures.

II. In Search of the Proper Medium

Now we must try to imagine what choices we could have made over the recent past had we thought to teach nonverbals in the language classroom. In fact, nothing would have been practical before the videodisc, and this is one reason the pursuit of this learning objective has never really been able to surface. Enumerated here are the some uses that have been made of video material in the past twenty years or so. For certain kinds of study, videotape can be the appropriate medium, or Quicktime/CD-ROM video, or videodisc. To be aware of this evolution is to be aware of the ways technology shapes and sometimes limits our thinking.

VIDEOTAPE

Before videotape appeared as a feasible classroom medium and teaching tool, we used film. Typically, the teacher showed a movie or documentary in class, asked questions, elicited some discussion, etc. This might be done post-screening or, in a more interactive case, the teacher could stop the film at critical points to carry out the activities in chunks.

As is usually the case, when the new technology of videotape came along, it was put to the old use first. That is, we now have many foreign films on video and can do those activities more conveniently with a VCR and very portable video cassettes. Because it came to be that one could expect a student to have a VCR at home, there was a certain extensibility of those activities.

At this point, the old language laboratories were now renamed "media centers" or some similar name. Taking their capabilities further, language lab directors subscribed to satellite services and taped live programming to give the classroom teacher authentic and up-to-date material to work with. Material demonstrating the different registers of journalism, sitcom, or commercial advertising could now present students with a wider range of communication types in the target language.

Textbooks authors and publishing companies began to get into the act with similar video ancillaries for their print-based content.

In going beyond the ancillary idea, *French In Action*, and then *Destinos* proved that videotape could carry the main content of a course and, with some very effective marketing strategies, the video telecourse for language learning became a practical reality.

VIDEODISC

Videodisc which came along in 1978 and took hold in the language market around 1990 provided a way to show video interactively. It is an excellent medium for the feature-length movie since not only is the image quality superior to videotape, but the chapters or frames of the video are addressable and can be displayed in any segment through the use of a computer program. The disadvantage to this medium is the lack of a general installed base of players and the cost of replicate discs. This has kept most videodisc materials within the confines of the classroom and lab.

CD-ROM

People were fascinated with the idea that they could get everything in one screen and on a compact medium. CD-ROM with its eventually high installed base was a very attractive option for publishing video material for exercises. It never was able to fill the feature-length movie niche as the quality and capacity of the CD was too low. (The new DVD or Digital Videodisc technology solves that problem.) Similar to the videotape, teachers could now expect a student to have easy access to a CD player outside of the classroom or media center.

TYPES OF AUTHENTIC MATERIALS

Another area that needs discussion is that of "authentic materials". They are by definition materials produced by native speakers for native speakers. Ever since the advent of videotape technology and its availability to language teachers, we have been moving more and more toward the use of authentic materials with our non-native students. Of course, every French literature course I took in college would fit into the authentic materials category, but only in the domain of the reading skill. The study of foreign films became instantly more practical in the 80's as video playback machines proliferated and as language laboratories and campus film libraries built their catalogues.

Once comfortable with the obvious uses of videotape technology, the language profession began to examine ways to provide authentic material for the speaking and listening skills. One new vehicle was the journalistic and broadcast video such as the satellite broadcast (often downloaded to videotape) or the Voice of America foreign language radio program (downloaded to audiotape). *French In Action* and some new videodisc programs such as *Dialogues* are published texts for use in the language classroom that simulate real native-to-native interactions.

TECHNOLOGY IN THE SERVICE OF A NEW PEDAGOGY

The videodisc programs *In The French Body* and *In The German Body* employ authentic material in order to help teachers present to students the ways that nonverbal channels of communication figure in to create a total communication between native speakers. ACTFL's National Standards document released in February 1996 makes extensive reference to the benefit of this awareness. In the past, psychologists (Birdwhistell, Ekman, Hall, Knapp, Rosenthal, et. al.)ⁱⁱ have written about the many ways facial expression, hand gesture, posture and other nonverbal features contribute to the messages or simple affirmations passed back in forth in a typical interaction. While this research has not been widely adapted to language teaching, it very much incorporated in the cross-cultural and intracultural training provided law enforcement, medical, and legal personnel as well as social workers and clinical psychologists. With the method and materials developed for the "In The...Body" project, teachers can now make this information available to language students.

III. The New Teaching Approach

WHAT IT MEANS TO LEARN THE NONVERBAL

If a student wishes to improve his or her understanding of and performance of culturally appropriate behavior there are several approaches that have been available up to now.

1. Being in direct contact with native speakers. A problem in this case is that, while the learner may see and hear what the native speaker is doing, he or she may not perceive them accurately and has no guide for correcting possibly false perceptions.
2. Private instruction from a person with special training in this area. Such instructors are quite rare.
3. Self-instruction with the aid of a written guide and video or audio tapes. Unfortunately, print representations of nonverbal behavior are often very difficult to decipher, audio or videotape presentations are often exaggerated because they are based on a stereotyped, scripted model. Such models are tainted by the author's bias. Additionally, there is no feedback for the student.

I propose that in order to acquire nonverbal, rhythmic or paralinguistic elements of communication, a student needs a more direct and experiential approach than what is otherwise available. Using a teaching method that was pioneered by Laurence Wylie from 1974 to 1986 and harnessing new technologies that I learned while employed at the MIT Media Lab in the 80's, I developed the approach and materials under discussion here. The materials were developed under a 1989-1992 grant from The Fund for the Improvement of Postsecondary Education (FIPSE). The field testing of the materials and method are currently funded from a new FIPSE grant spanning 1995-1998 and called "Face-to-Face With Change: The Implementation of a Technology-Enabled Language Learning Component."ⁱⁱⁱ

The exercise that this material was designed to support is called the "Wylie Exercise" after its original author. Another term for this kind of learning is the Whole Body Approach^{iv}. In the course of the exercise, a student memorizes a short conversation in the

target language. On the surface, such an exercise will immediately bring to mind the dialogue memorization technique of the audio-lingual (ALM) days. Admittedly there is a tie, but with a very important evolution.

The old ALM material was the product of an author's imagination (as are many dialogues in textbooks still today.) The dialogue was recorded onto audiotape by an actor. With this material, students were expected to learn lexical and morphological elements of the target language. In the best of cases, the students was urged to produce these dialogues with a good pronunciation.

In the material used for a Wylie Exercise, the student is presented with an authentic conversation, produced by native speakers one time only in the course of an ethnographic filming. The student is encouraged to reproduce this conversation and its rhythm. To master the rhythm, the student must learn every verbal, suprasegmental and nonverbal detail of the native speaker. All details such as intonation, hand gesture, posture, foot position, etc. contribute to the rendering of this conversation in its proper rhythm.

Classroom experience shows that students who normally do not have access to native speakers have more confidence in this material. It puts them in direct contact with native speakers who speak as in normal dialogue rather than through a script. By experiencing the range of rhythms exemplified in several of these conversations the student will obtain a more natural way of speaking the target language in spontaneous situations. At the very least, students will be better able to decipher the subtle shifts that occur in the text and subtext of real life encounters. In the best of cases, the student will use what he or she learns in producing spontaneous language in a rhythm that is within the range of most native speakers.

THE PRACTICE OF TEACHING TOTAL COMMUNICATION

Teacher Preparation. 7 to 10 hours minimum are required in order to carry out one unit of the Wylie Exercise the first time around. The student will also be required to use the multimedia system made available in the language lab outside of class time. A teacher who is sensitive to native behaviors and is patient in guiding students is also required. To show the current version of *Dans la peau des Français (In The French Body)* or *In deutsche Haut geschlüpft (In The German Body)*, one needs a videodisc player, a video monitor, and a Macintosh computer with the built-in microphone or a MacRecorder microphone. In the ideal situation there is one station in the classroom which stays in a secured closet when not in use and at least one other in the lab. If two stations are not possible, one station on a rolling cart can move between lab and classroom.

Preliminary work. Today's language student often arrives in the class with preconceived notions about language learning. If he or she is not correctly oriented to whatever method is being used the results may be negatively skewed. You can help students understand the Wylie Exercise and its importance by providing readings on cross-cultural issues and on nonverbal studies and by showing the documentary "Communication With The French" by Midge MacKenzie before beginning the exercise.

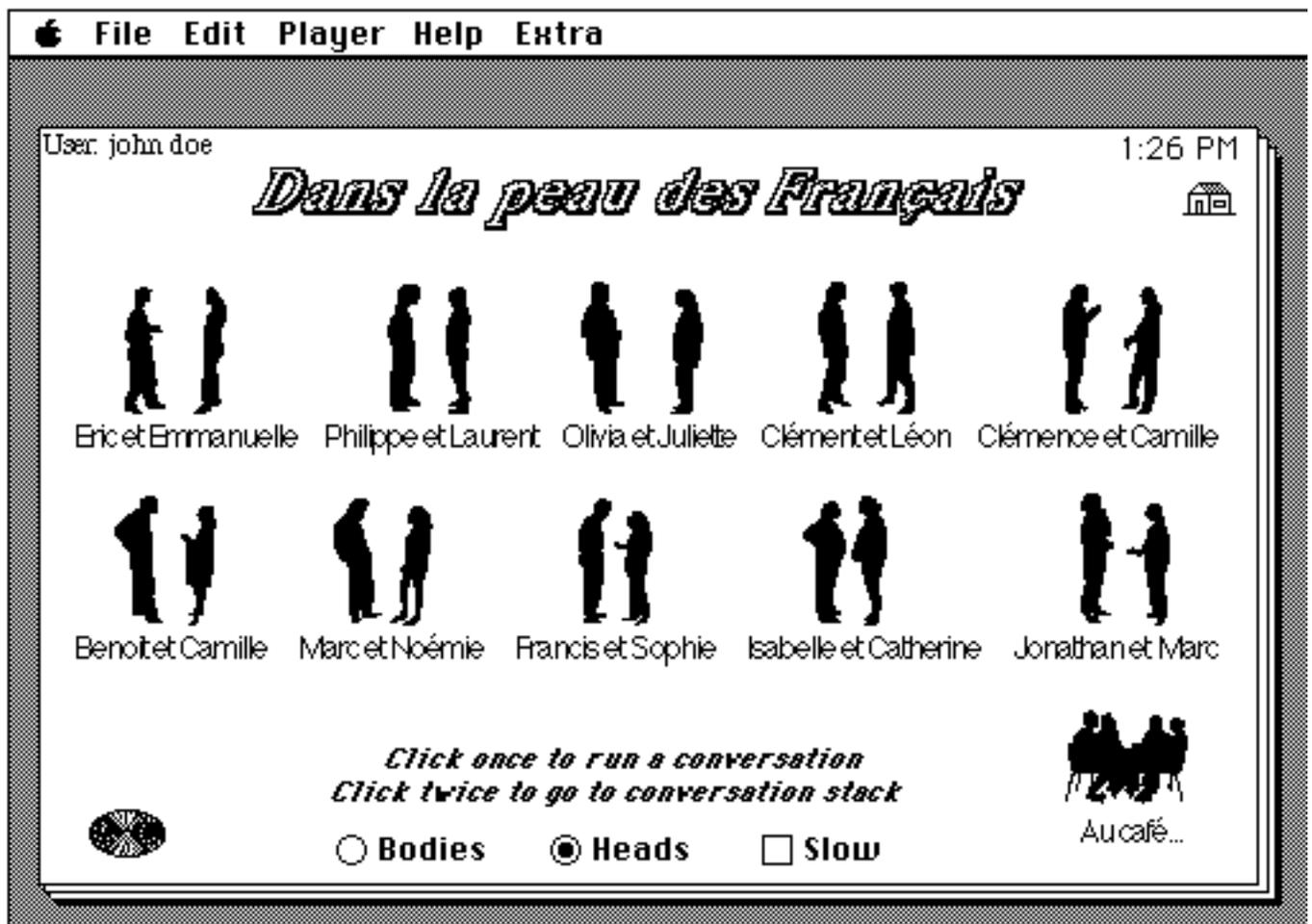
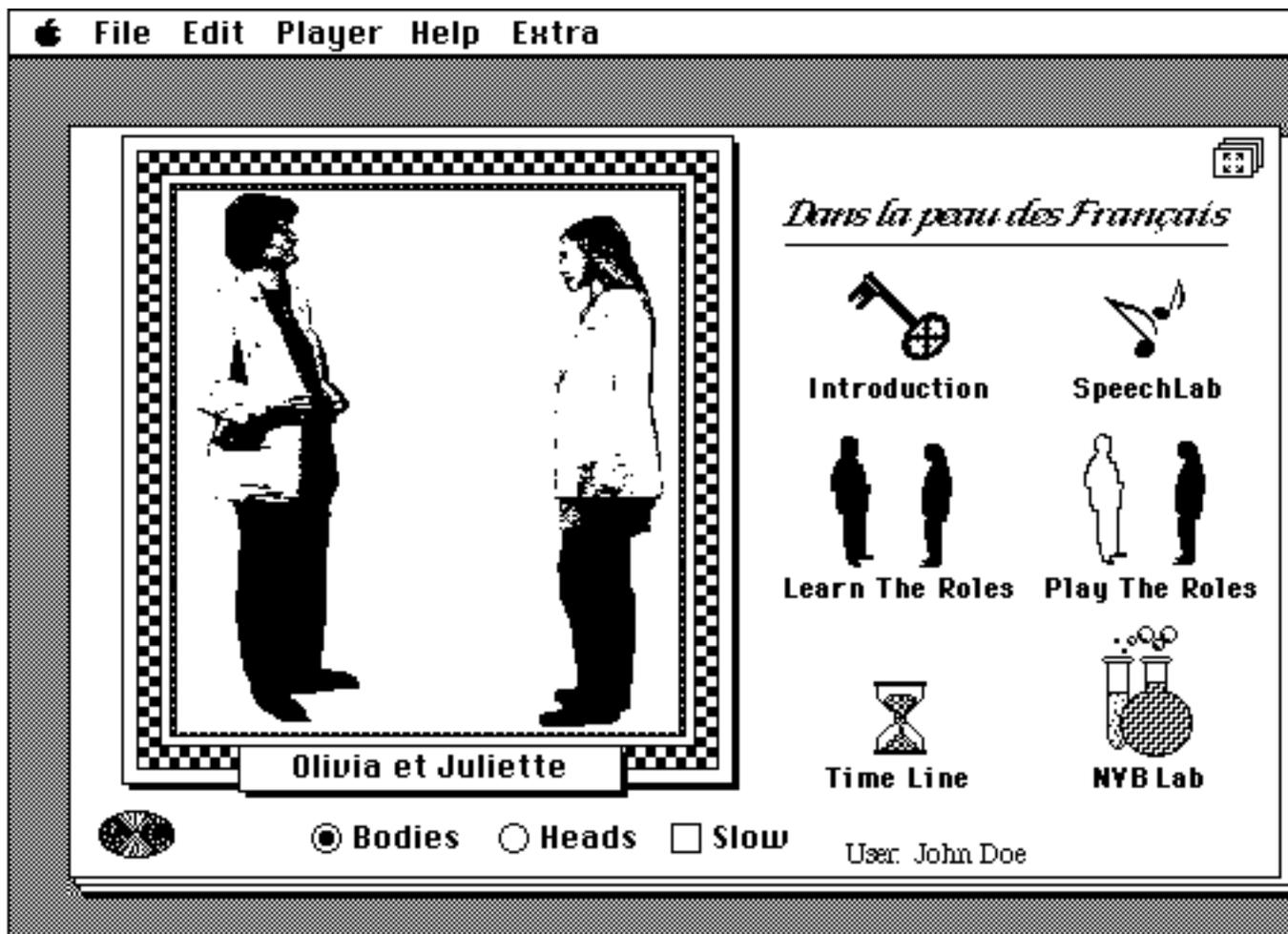


Figure 1.
Main Menu of *Dans la peau des Français*

The instructor (with or without class input) chooses one of the 11 conversations on the videodisc. These interactions represent several subject, demographic, emotive and register types. For each conversation, students will spend about a month learning all details of the verbal behavior (words, phonetics, intonation, speed, and dynamics) and of the nonverbal behaviors (kinesics, proxemics and the rhythms that rule them). Students begin by simply observing the conversation, guided by the instructor. Here is one possible sequence of events:



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Figure 2.
Conversation Main Menu "Olivia et Juliette" from
Dans la peau des Français

Day 1. The instructor plays the conversation through first without the sound, first in long shot (Bodies) version and then in the close up (Heads) version which shows only the faces. The students offer their impressions and try to guess what it might be about given the body behaviors and facial expressions. Then it is played with the sound on. Often students claim that they don't understand a word, but working with them and replaying segments, key words can be pieced together in order to obtain a general overview of the content. The instructor can elicit more information by asking questions such as "Do these people seem to know each other?" or "Are they angry, distrustful, friendly, joking, etc.?"

The close up or "Heads" version of the video material is very useful in having students understand the words because they can easily read the lips. Also, the emotive tone will be easier to decipher since facial expressions, which tend to be more universal than other nonverbal expressions, will be more visible. The long shot or "Bodies" version of the conversation will give the instructor the opportunity to discuss with students the importance of hand, arm, leg, and foot position. Together these two views allow us to

consider all the articulations that go into the interactional rhythm and synchrony that is so vital to creating the feel and tone of what is happening between the interactants.

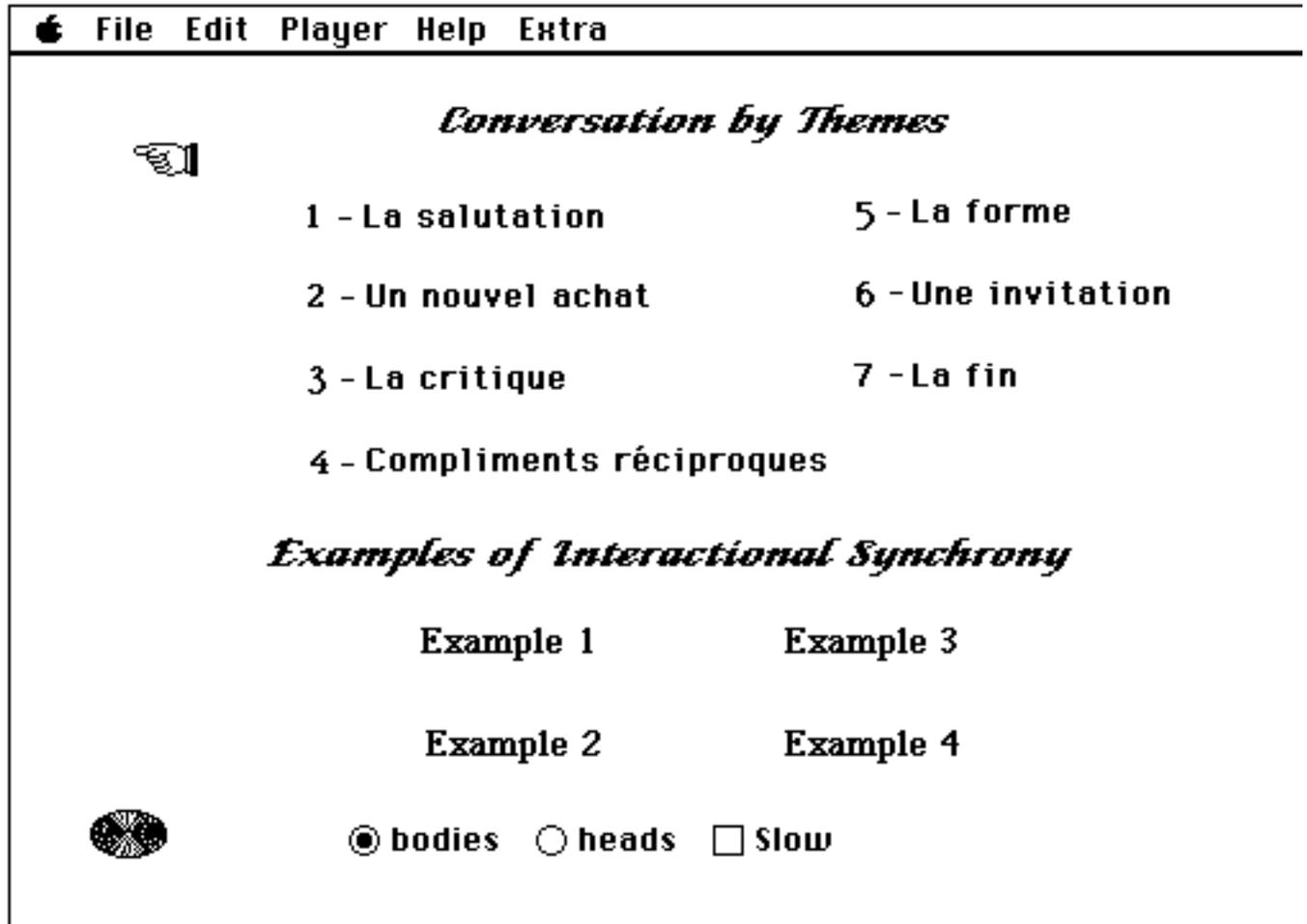


Figure 3.
Section "Introduction"
dans la conversation "Olivia et Juliette" de
Dans la peau des Français

The computer program offers a section called "Introduction" which breaks the conversation down into its thematic segments. This is useful in working through the conversation the first time. The software can be set to allow students only access to this part of the program so that they can be assigned a fill-in-the-blanks exercise to do for homework the first day. (When full access is permitted later the students will be able to see the dialogue lines). At this point, students are being pushed to understand the discrete vocabulary and phrases that make up the conversation on their own.


File Edit Player Help Extra

Click on each line, listen and repeat:
Page 1 

O: Salut, Juliette!
 J: Salut, Olivia! Je suis contente de te voir.
 O: Moi aussi.
 J: Qu'est-ce que c'est joli ça!
 O: C'est vrai? Tu l'aimes bien?
 J: Tu l'as acheté où?
 O: Je l'ai acheté aux Galeries Lafayettees.
 J: C'est pas vrai!
 O: J'ai fait mes courses pour l'été. Alors euh, j'ai tout acheté pour l'été, la veste, les ***, le pull, tout ça.
 J: C'est génial! J'aime pas trop ton pull par contre...
 O: C'est vrai? Pourquoi?
 J: Ben, non.
 O: T'aimes pas la couleur?
 J: Ben je sais pas..il ne va pas avec tes godasses.


 bodies
 heads
 Slow




Figure 4.
 Learn the Roles section of the conversation "Olivia et Juliette"
Dans la peau des Français

Day 2. Students return to class on Day 2 with the results of their listening comprehension research. As a group, we go over the various dialogue lines using the videodisc to play the dialogue lines in order. Slow motion replays of some segments give the students the opportunity to see and hear the more difficult items. Unlike slow motion on film or audiotape, this audio remains at its normal pitch. The disadvantage with videodisc is that, the slower it is played, the more audio "holes" are heard. This interferes with comprehensibility in a different, but less important, way. (With the new DVD material the computer will be able to perform audio interpolation to fill in these holes.). The slow rates offered in our current program are 6%, 13%, 25%, 50%, and 75% of normal speed. A slow rate of 75% will sound more natural than 13%. But, when one is trying to isolate a particular phoneme or coordinated movement, the 13% rate of play can become necessary.

After Day 1 we almost always begin the class with a 5 minute exercise warm-up. These warm-ups are derived from techniques used in the theater to help people become aware of their use of movements and space. Students learn to feel where their bodies are in space, heightening what is called the "proprioceptive" sense. We also perform vocal exercises to move our mouths from a slack "American" stance to a tenser French one. These are exercises commonly used in phonetics courses and include such things as minimal pairs,

both French/American and French/French and tongue twisters. Students tend to enjoy these exercises as they help students relax from other courses where they simply sit, listen, and strain to take notes. More importantly, this emphasis sets a tone that conveys to students that communication is an act involving the entire body rather than just a few mouth muscles.

In one of our exercises, students stand in a circle. They begin by completely relaxing their bodies, bending over at the waist and letting themselves go in ragdoll fashion. The teacher directs them (in the target language, of course) to first tighten, then relax various muscles starting from the toes going up until they reach the head and neck muscles. Having gotten in touch with various muscles and their body's location in space, they can begin to selectively tighten or loosen the various muscle groups that would be typical for a native speaker of the target language/culture. For French, we must start with the foot position which is critical to obtaining a posture that is within the range of postures typical for most of the people living in France. Another aspect would be the arm and hand placement which for the French is typically above the waist, with upper arms very close to the rib cage. The facial muscles will be of particular importance in obtaining a good pronunciation. American students will almost always feel tired after holding these positions the first few times. But eventually they will come to move into these positions automatically when speaking in French.

After the gross motor work, we turn our attention to the muscles of the face and mouth. Optimally, the room will have some mirrors so that the students can watch themselves as they work. Hand held mirrors can also be obtained for as little as \$1 a piece at discount stores. Standard pronunciation exercises are used with particular attention to the pure vowel sounds of French. With the mirrors, students can immediately be made aware of the role of the facial muscles in good pronunciation. After the phonetics work, the teacher can then move on to pronunciation of the dialogue phrases.

In an ideal world, all language teachers would have perfect pronunciation and intonation. We know that this is not the case, especially in the United States, which in spite of the immigrant populations, is quite linguistically isolated. Our videodisc is particularly useful for the teacher who is not averse to using a native model with students. The teacher can play the dialogue phrase by phrase, or better still, breath group by breath group by clicking on the dialogue lines in the computer program. The teacher may also prepare certain segments ahead of time, using the "Notebook" facility in the program in order to demonstrate certain sounds or intonations.

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Notebook page 1 

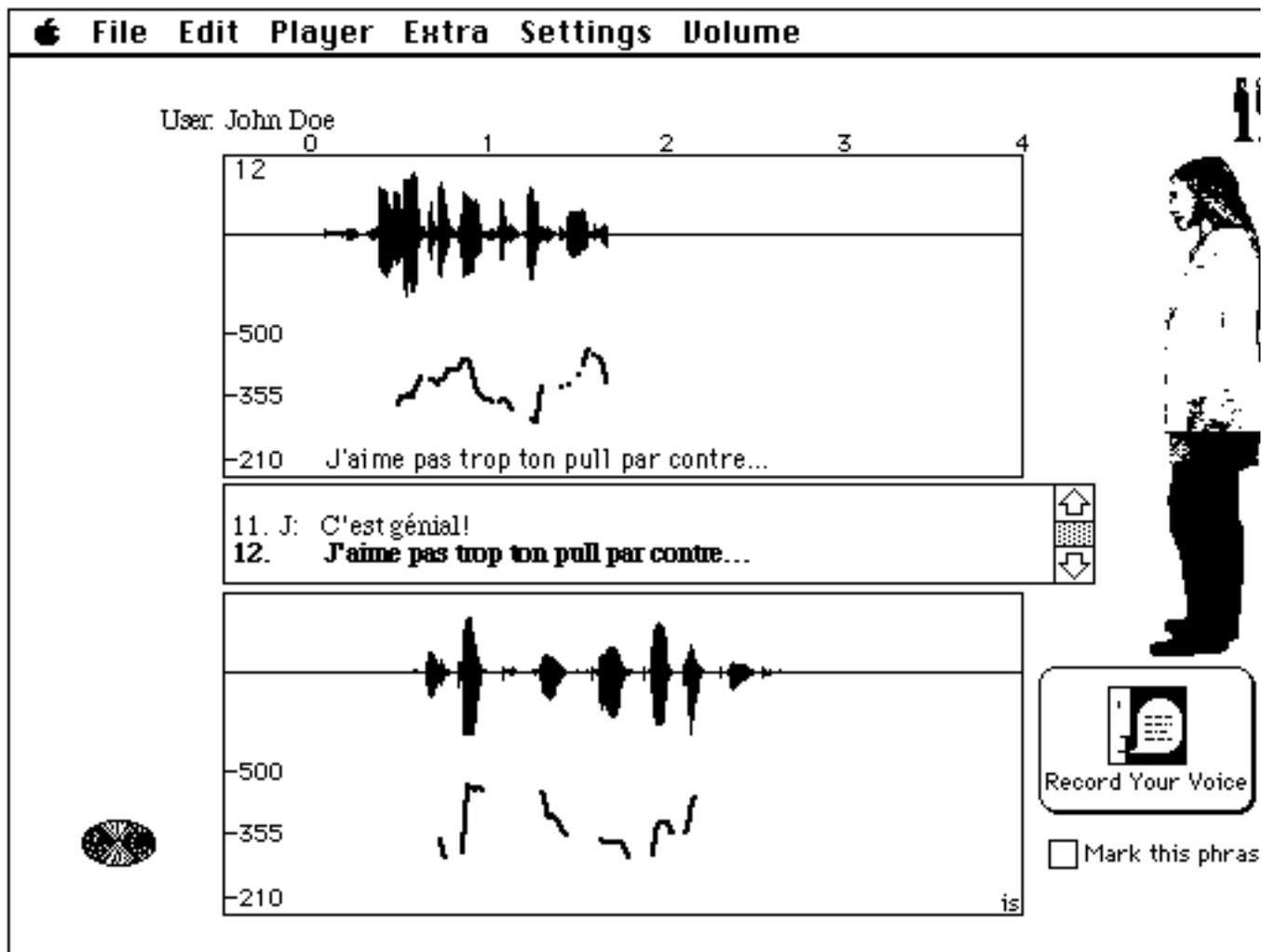
	start	end	remarks
1. Play	09598	09617	"Salut, Juliette" le son /y/
2. Play	09730	09743	"Tu l'aimes bien?" le son /y/
3. Play	09730	09743	"Tu" compar- /u/ et /y/
4. Play	09902	09907	"tout" compar- /u/ et /y/
5. Play	09898	09915	"j'ai tout acheté" le son /u/ en contex
6. Play	09964	09985	"le pull, tout ça" de /u/ à /y/
7. Play			
8. Play			


 Slow
 Clear Page


Figure 5.
 Notebook section for "Olivia et Juliette",
Dans la peau des Français

By repeating after the native speakers, students are assured that what they are learning is authentically French.

After the physical and phonetics exercises, students line up face to face in front of the television monitor. On one side are the people playing the role of the interactant on the left and on the other the right. With the teacher playing the dialogue line by line, students repeat after the natives again according to their role. The first time students do this, they will only be able to perform perhaps three or four of the lines because they will also be working on learning the movements that accompany the dialogue. To learn the spoken conversation without also learning the body behaviors and postures that go with them is to instill bad habits that will be difficult to unlearn later.



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Figure 6.
SpeechLab™ from "Olivia et Juliette"
Dans la peau des Français

Using the SpeechLab™ section of *Dans la peau des Français* or *In deutsch Haut geschlüpft* students can work individually on their intonation. SpeechLab™ is the product of a collaboration with Eric Keller^v of the University of Lausanne (Note 3). His Signalyze™ software is a very popular Macintosh tool which is in use by linguists, biologists, psychologists and other speech researchers throughout the world. Professor Keller kindly prepared for this project a simplified version of the part of his program that analyzes the fundamental frequency or pitch of a phrase using the temporal analysis method^{vi}.

Figure 6 shows that two windows are present in the SpeechLab screen. The top half of the screen shows the model pitch curve. If a student clicks in this area the videodisc player will play that segment of the conversation so that the student can hear and see what is going on while reading its graphic representation. Then, when the student is ready to record his or her voice, he or she clicks on the "Record Your Voice" button in the lower right. A

record mode bar runs across the screen for 4 seconds to show the student that he or she should now be speaking. After the recording, the computer takes a few seconds to analyze the student's recording. Then the student's pitch curve is drawn into the bottom window. The student can click in that window to hear his or her voice played back while studying its graphic representation. Finally the student compares the top and bottom halves of the screen to self-evaluate his or her progress toward achieving native-like intonation for that phrase.

Neither student nor teacher needs detailed instruction in signal analysis in order to decipher these graphical displays. They only need to be able to see that they are more or less similar in the following three ways:

1. Length: is the student's phrase the same length as the native speaker's?
2. Rhythmic replication of the vowels: Are the black "lumps" or vocalic elements of the signal display (the top display within each of the windows) in approximately the same positions as those of the native speaker?
3. Intonational accuracy: Does the student's intonation curve follow more or less that of the native speaker?

At the end of a recording session, the student can store his or her work on the hard disk, on diskette or by printing it out. The print out method is usually the most convenient for the instructor.

Day 3. At this point the work with students will take on a somewhat predictable pattern. There are the physical exercises at the beginning of class to get them out of their American bodies and into their French bodies. There will be practice in the sounds and phrases of the dialogue section being worked on. There will be repetition as a group, in pairs and individually. The teacher will be alert to what students are doing both verbally and nonverbally so as to encourage students to adopt the more native-like behaviors. The videodisc material is constantly being played and referred to. As time moves on, the discussion will gradually move from the literal interpretations of the dialogue to its more subtle meanings. This is the level of study permitted by the use of this material and this technology.

It is important that the instructor listen to student comments with an open mind. We should avoid being too anxious to "set them straight" as we do in many other language teaching settings. The spirit of inquiry and debate that this teaching environment creates is what gives the students a sense that they are quite capable of seeing and interpreting meanings on their own. I have often had students point things out about these communications that had escaped me entirely (I, who am so confident that I know it all!) Unfortunately, the instructor will also encounter offensive and stereotyped interpretations. It must be expected; one must hold off from criticizing the student who falls in this trap. Rather, guide students using a Socratic approach toward a more humanizing interpretation of the exchange or behavior in question.

In the language laboratory students will continue their work on intonation for the section of the dialogue they are working on. If they are working on memorization they can use the "Learn The Roles" or "Play The Roles" sections of the videodisc/computer program.

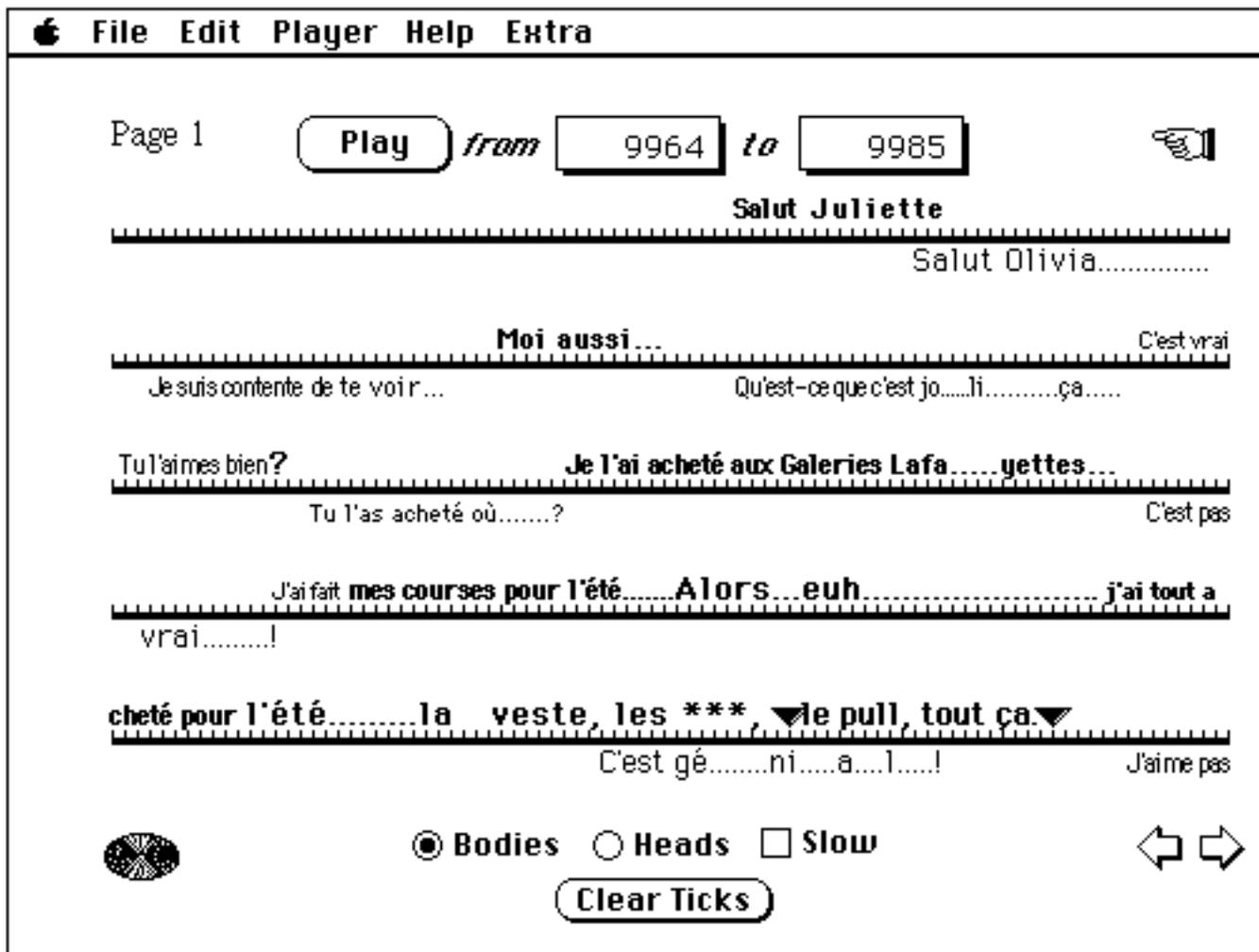
Here, they can use the computer as their partner since the program can block the sound and/or the text of the role they are learning.

Day 4. Students must learn the rhythms of this conversation (and eventually the range of acceptable rhythms in French.) We can find out something about the pacing using a hand held metronome (around \$35 in a music store) or by using the metronome in the computer program's Controller screen. By trying different paces while the video plays we can determine which one sounds right for this particular conversation. After we have the right meter worked out, we can conduct the physical and oral exercises with the metronome in the background. The SpeechLab intonation work and "Play the Roles" (being able to say your role in time with the native speaker) contribute to the achievement of the native-like rhythm which is so vital to comprehension and comprehensibility.

Experience has taught us that students should only learn these dialogues in short segments of three or four lines at a time. In the early years of this approach, students would learn all their dialogue lines first and then incorporate the nonverbal. The result was an intermediate performance in which American habits of nonverbal expression were incorporated into their French speech. This is exactly the opposite of what we want. [But this cannot be so terribly shocking as students of modern languages have virtually always learned to speak without incorporating all the communicative channels. Let us please discontinue this damaging practice at once!]

While learning a chunk of dialogue students must be directed to pay attention to the following elements before moving on to the next chunk:

1. Memorize the words.
2. Learn the pronunciation.
3. Learn the intonation.
4. Duplicate the posture of the native speaker.
5. Make the same arm, hand, leg, facial etc. movements.
6. Copy the physical space separating the native interactants and make space adjustments as they occur.
7. Having mastered all the above elements, perform the dialogue in its original rhythm and pacing.



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Figure 7.
TimeLine from "Olivia et Juliette"
Dans la peau des Français

The "Bodies" and "Heads" versions of the TimeLine section of the computer program will help students perceive and master the nonverbal elements discussed above. The text representation in the TimeLine is very different from the usual script and serves our purpose well. It shows the words as they occur over time by arranging the words of the two interlocutors around a line on which each mark indicates 1/30th of a second (one video frame). Each line represents 3 seconds of dialogue. The words above the line are those of the speaker on the left; below the line is the speaker on the right. This arrangement permits us to see overlaps in speech and when printed out and distributed to students can be used to notate nonverbal elements. The software allows the user to select any portion of the dialogue by clicking on beginning and end points and then pressing the play button. Any segment of special interest can be saved to a notebook file by selecting the "Add to Notebook" selection from the menubar. We have the dialogue available in the more conventional form through the "Learn the Roles" section of the program, but this version allows us to consider the phrases of nonverbal communication that may or may not correspond to verbal sentences.

Days 5 & 6. We continue to operate in workshop fashion. Students are noisy and moving about, working in pairs or in peer-coaching groups of four. We now take some time out to videotape the students so that they can compare their performances to those of the native speakers. The videodisc/computer station is available for reference at one end of the room, the camcorder is at the other end.

Students discover rather quickly that the words are the least of their problems in learning this conversation. To arrive at the proper synchrony presents the greatest challenge. This begins with the greeting which in the case of the French usually involves a handshake or a series of kisses. In all human communication the greeting is critical in setting the pace for the rest of the interaction. The instructor will always spend more time teaching this than any of the other segments as it aids tremendously in facilitating the proper rhythm for rest of the dialogue. The pace at which speakers walk up to each other, their manner of touch, eye contact, the synchronization of greeting words, and finally the speed at which a topic for conversation takes hold are all to be observed and incorporated.

At this point the students should be encouraged to meet in pairs outside of class time, preferably in the lab where they can refer to the video. Manufacturing videotaped or audio copies of the conversation can be burdensome for the teacher unless the language lab support staff is willing to help. I have often had students just tape it on their own time if they wish. In any case, you will eventually have students asking for this, so be sure to set their expectations properly on this matter early on.

Day 7. This last day is reserved for final videotaping of the dialogue performances. It is important on this day to carry out the physical and vocal exercises that have been used as warm-up in previous class sessions. Students will also need to rehearse the dialogue once or twice as a group and/or with their partners.

At taping time, students are asked to wait in the hall for the instructor to call them in. If it does not risk disturbing other classes in the vicinity, students may choose to practice while waiting in the hall.

After class, the teacher grades the taped performances along four major lines: memorization, pronunciation/intonation, rhythm/synchrony, and body language. (A form for this purpose is provided in the binder accompanying the multimedia package.) Each area counts 25% toward the final grade for this unit. The teacher replays each conversation several times, first looking at one student and then the other, making notes as to what was good and what might need improvement in each area. With the two grading sheets set out before him or her, the teacher can quickly note any elements needing commentary as the video plays.

In the following class period, the teacher returns the grading sheets to the students and then plays the tape back for group feedback and discussion. The instructor will have to use his or her judgement in deciding how to handle this last session. It is wise to take a gentle approach in criticizing the performances, always remembering to accentuate the positive. Conducted with sensitivity, this session can contribute greatly to students' desire to

overcome cultural obstacles to good communication. It is difficult for students, particularly the first time around, to have themselves exposed to the criticisms of the group. But if done properly, the students will be left with a spirit of confidence and cooperation that will go a long way to improving their self-image as people who can learn a foreign language.

CONCLUSION

It is important to know that interactive video can play more than a supplementary role in the language classroom. With *In The French Body* and *In The German Body* the multimedia materials play the central role in allowing teachers to deliver the information to students and in the pedagogical practice of a transformative kind of language learning. This method, which was invented in the 1970's, did not obtain general distribution using the technologies available at the time. Even with that hurdle overcome, we face new problems in encouraging the teacher corps in this country to adopt a new way of teaching and in seeing technology as an integral part of that new way. For one thing, many teachers see technology as a threat to their employment, and in truth the gleam in some administrators' eyes can be a terrifying thing to anyone who values good teaching practice over what might be a misguided fad. Another bias that relegates technology to the backwaters is the notion that it is only good for taking over the monotonous parts of teaching. *Dans la peau des Français* fits neither of these categories. We hope that the use of this system of language learning delivery will enrich students, give life to the classroom experience, and elevate teachers in their understandings of the target culture.

As for this method, which is quite feasible for the many campuses that are now equipped with Macintosh computers and videodisc players, it has the potential to transform language learning globally. Students of French or German (and soon other languages) can have a more profound experience of French or German communication and in so doing will achieve greater cultural understanding. Our students often express an improved confidence level because, for once, they have mastered the phonological and behavioral elements of a real French conversation. This ultimately has a wonderful effect on their motivation to continue the study of the target language and culture.

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ⁱ Laurence Wylie, was "Professor Emeritus in French Civilization" at Harvard University, Cambridge, Massachusetts. He is well known for work in French Civilization studies, the basis of his popular textbook *Les Français* (2nd edition, Prentice Hall, 1995). He is also known for a 1972 book on French gestures called *Beaux Gestes*. In spite of the success of this very accessible guide, his most important

work in devising an approach to learning total communication in French is not very well known. It is hoped that the present work in our "Face to Face" project will overcome the banalizing influence of "Beaux Gestes" which in the minds of some has come to symbolize the study of nonverbal communication in language learning. His article "Communication With The French" *The French Review*, May 1985 explains the basis of his method. Professor Wylie, to our sorrow, passed away on July 28, 1995

ii Here is a list of some of the major works in this field:

- Argyle, Michael. *Bodily Communication*. 2nd edition, Internation Universities Press, Inc. Madison, CT, 1988
- Birdwhistell, Ray. *Introduction to Kinesics*, 1952.
- Ekman, P. and W. V. Friesen, "The Repertoire of Nonverbal Behavior: Categories, Origins, Usage and Coding," *Semiotica* 1 (1969): 49-98.
- Hall, Edward T., *The Silent Language*, Doubleday, 1959.
- Knapp, Mark L., & Judith A. Hall, *Nonverbal communication in human interaction*, 4th ed., Fort Worth, TX: Harcourt Brace. 1996
- Rosenthal, Robert, Archer, D., DiMatteo, M.R., Koivumaki, J.H., and Rogers, P.L. *Nonverbal Behavior: Applications and Cultural Implications*. Edited by Aaron Wolfgang. NY: Academic Press, 1979.

A more complete bibliography is available at <http://face-to-face.org/>

iii This article and information on the new project can be viewed at <http://face-to-face.org/> on the World Wide Web.

iv The "Whole Body Approach" is a term coined by Wilga Rivers in a personal communication 3/21/97.

v Eric Keller is professor of computer science at the University of Lausanne, Switzerland, where he directs a laboratory for the scientific analysis of speech (LAIP). He obtained his doctorate in linguistics from the University of Toronto. He is the author of 3 books and 50 scientific articles on speech. His software product Signalyze™ 3.0 for sound and speech analysis is recognized as a standard in the field.

vi Fundamental frequency (F_0 or "pitch") is the physical variable that reflects what we perceive as intonation or tone of voice. It corresponds to the frequencies of the large, regular oscillations perceived in the voiced elements of speech. These oscillations originate in the vibrations of the larynx. Intonation can distinguish a question from a response, express exclamation, or emphasize certain words in a sentence. Intonation is used differently from one language or dialect to another. Certain languages such as Chinese or Vietnamese use tone to distinguish one word from another. The voice's fundamental frequency is not the only physical variable associated with intonation. In English, syllables that seem to be "high" are also characterized by greater amplitudes and are longer than those perceived as being low.

In sum, the analysis of temporal structure attempts to identify the major highs and lows, visible in voiced segments of the speech signal. The correct identification of the temporal distance between two peaks or two valleys permits us to calculate the fundamental frequency, in other words, how many such peaks or valleys are produced per second. (Taken from an explanation by E. Keller in the Signalyze™ Users Manual, 1992.)