

between the two group members moving in the same direction towards a joint interpretation of the situation at hand. Consequently, they follow a course of action that is mutually constructed and shared, even though one group's approach looks very different from that of the other.

The two groups to be inspected in detail now are especially apt for comparison. Both groups were composed of two male students with similar foreign language experience. In both cases one partner was slightly older than the other. Yet each group's approach to working at *Philippe* and, especially, their assessment of their experience, could not have been more different. Thus a closer contrastive look at their *Philippe* sessions is motivated not only because we find them at opposite ends of the continuum presented above, but also because it is remarkable that such similar pairs of students (also in terms of sex, age, race, class and nationality) have come away from a couple of hours working together at *Philippe* with such disparate outcomes. Of course we could simply say that one group was motivated and the other was not, but that would be a superficial statement hiding the fact that both groups invested time and energy in *Philippe*, one by working at it in a way that closely matched the ideal projected by CALL materials designers and teachers; the other by rejecting *Philippe* as a learning environment. From observations, both groups were doing what they felt was right to do and worked hard at it.

Strauss' (1992: 1) discussion of the forces behind human motivation, that is, why we do what we do, illuminates our effort to understand why these pairs of students constructed such different CALL environments. Strauss sees human motivation as "the product of interaction between events and things in the social world and things in people's psyches." She stresses that "motivation is dependent on cultural messages and is realized in social interaction" where cultural understandings are constantly negotiated. She also points out that "it is important to investigate the types of experiences that lead people to feel (often without thinking about it much) that a certain course of action is their only reasonable alternative" (p. 13). These conceptions of motivation are appealing because they allow some room for the fact that "rarely, if ever, does the public realm of culture present a single, clearly defined, well-integrated reality" (p. 11). Crucial to understanding the motivations of the two focus groups in the following analysis is Strauss' notion that "members of a society can use the same languages and share exposure to many of the same repeated social messages while differing greatly in the penumbra of associations around their shaped concepts" (p. 12). The following ethnographic report of the two focus groups' actions will reflect just that.

The groups observed which had members of both sexes (7X, 9Y and 10Y) tended to devote more inter-learner interactional effort at a procedural level not necessarily conducive to smoother learning (e.g., trying not to impose their wishes on their partners). In addition, these students tended to offer different opinions about what they did and how they assessed *Philippe* in the interviews. This is an intriguing area for further research.

Harry (S47), a sophomore, showed up early for his session and approached me while I was in the office next to the *Philippe* station.⁸ He had come early to tell me that his partner, to whom he referred as "the kid," would probably not show up and that he would simply work by himself at the other *Philippe* station located elsewhere on campus. That was fine, but, since he stayed, I asked him if he would care to comment on *Philippe* based on the impressions from his first game. He said he had not liked it because it was not interactive (he "couldn't really go places") and that, being "a History person," he favored more traditional teaching programs. "If I knew this was part of this course, I wouldn't have taken it," he added. In the meantime his partner arrived, and they decided to go through the program because they wouldn't be able to meet again to complete their joint assignment on *Philippe*, which was due shortly.

John, (S48) the younger partner in this group, was a special student. He was a high school senior who took French classes at the university because he had apparently taken all the French courses available at his school. However, he did not appear to be any younger than Harry.

In the beginning of their session, Harry and John acted in a self-conscious manner, looking at the camera behind them and referring to their teacher as if she were behind it. For example, before starting their game they talked about the grades they had gotten in a previous assignment and Harry turned around and said to the camera: "I did better than a B, [teacher Y's first name]." Later in the session, Harry asked if I spoke French, and I answered with an ambiguous head movement which he took for a no.⁹ He then said in a sarcastic tone: "Oh, I forgot you were going to be a teacher or something." This remark as well as his other references to teachers indicated that this student didn't hold teachers in high esteem.

As I went outside to check the sound recording from the camera located outside the room, I heard them talking about the legality of "being forced to be taped." I came in and told them that they did not have to do it at all, and that they could just tell me to shut the cameras off, or they could go do their work at the other station if they felt like it. They had not realized there was a second camera tape-recording their session, even though they had been told about it and in spite of it being in their full view. So Harry laughed nervously: "This is like the KGB or something. You're listening to what we're saying from somewhere else!" I clarified how I had heard their comment, insisted on turning the cameras off, but they backed off and insisted that the recording go on.

Their session was short (38 minutes) in comparison with the average hour-and-a-half spent by other groups in their class. This included time spent on completing the class assignments, down to the level of the word-

⁸ All proper names used here are pseudonyms.

⁹ This was to avoid problems observed in previous sessions (not in the corpus for this study): when told that the researcher understood French, students felt s/he was from the French

ing of the answers. While this was not unusual (the other focus group also did that), their time spent actually working on *Philippe* was relatively limited given their short session. In addition, despite their familiarity with computers, they had problems with the interface, not knowing what to do or how to go about doing what they wanted. I volunteered some information to help them, but they still refused to make use of most of it.

There is ample evidence in the recording of this session to conclude that these students rejected *Philippe* and refused to interact with it on its terms. More than that, the interview not only confirms their "hostility against *Philippe*" (a phrase actually used by Harry), but also makes clear that many of their criticisms of *Philippe* were based on (mis)interpretations of incidents in their interaction with the interface (e.g., they never realized that they needed a *complete* address to be able to visit an apartment for rent).

Their interview was extremely revealing, probably for them as well. In fact the interview was almost as long as their game session. During that conversation they gradually acted less aggressively. Initially they gave a thoroughly negative assessment of their time spent at *Philippe*. Based on their second game session, one can easily understand their feeling. What was striking, however, was the way they perceived the game: "The game doesn't work. It's not fun because it's ambiguous. It doesn't know what to do or where it wants to go. It should either be a film where you're a passive watcher or it should be a game, but the way it is is frustrating. In general, it's a bad idea."

In trying to have them be specific about what it was that bothered them, it became clear that their frustration was based on an inability to handle the interface on its terms, that is, within the limits of present-day technology. These students appeared to have felt genuinely betrayed by what they called "the illusion of the game." According to this view, in a real game they should be able to go into a café in Paris and ask people sitting at the next table whether they knew of an apartment for rent, and thus solve *Philippe's* problem. Although unrealistic expectations of this sort are common among *Philippe* users (e.g., to think that a human-like acting device will in fact answer the telephone and converse with them when they call), it is interesting that these students have gone on record as demanding things that they might have known were technically unrealistic. Furthermore, they blamed their teacher for having said they were going to have a "choose-your-own-adventure experience" with *Philippe* when in fact all they got was frustration. It seems that this strong self-deception (Alexander 1989) was indeed instrumental in maintaining the unity of their temporary bond as peers against outsiders. It legitimized their rating of the overall experience as "very low return for the amount of time spent."

department or that s/he would help them. When told otherwise, they would go into time-consuming unnecessary explanations when in need of help with the interface or during interviews.

They also spoke at length about how offended they had been at the orientation during class before they were told to work at *Philippe*. They complained bitterly about their teacher "and this woman who also spoke French" (i.e., X, the teacher from the other group) who gave a rushed orientation all in French without having anybody try out anything and who gave short shrift to student requests for clarification.

Although this is a complex picture possibly involving elements outside both the scope of this inquiry and beyond the reach of our data, there seems to be enough indication to conclude that these students did not use *Philippe* as an effective learning environment, and that their placement at the extreme negative end of our continuum is not an artifice of the categories used to analyze their interaction.

It is important to point out that Harry was much more aggressive than his younger partner, John. However, John never disagreed with any of the remarks made by Harry. Quite the contrary, he not only offered support for Harry's points during the interview, but also volunteered his own criticisms of *Philippe*, resenting the time he spent at it.

John's mode of operation, of reinforcing rather than questioning his partner's proposals for understanding *Philippe*, is not surprising given his position vis-à-vis Harry: John is clearly academically-oriented, and he is also the only high-school student in an advanced university-level French class. Here we see him working together with a fellow male student majoring in an academic discipline (History). It seems John was bound to emulate Harry's behavior, especially when we can safely assume that John aspired to being a member of a peer subculture of intellectual-type college students. This scenario ties in with Corsaro and Eder's (1990: 209) research on peer cultures, according to which "the main concerns of the peer culture of students from middle-class backgrounds are closely tied to visible school activities and to the dynamics for obtaining peer status."

Harry's actions also make sense when we look at them with these peer culture concerns in mind. According to Corsaro and Eder (1990: 214), the central themes in peer cultures involve "[a] the importance of sharing and social participation, ... [b] attempts to deal with confusions, concerns, fears, and conflicts in their daily lives, ... [and c] resistance and challenging of adult roles and authorities." Harry had had considerable experience in French, but this was his first college French course. He had a patronizing attitude towards John, whom he referred to as "the kid from the suburb." So he was, on the one hand, John's senior and his socializer into urban college life (they also sat next to each other during the class meeting observed). On the other hand, he was John's peer, sharing some of the insecurities of being in this French class with a teacher they didn't seem to trust. His restlessness regarding teacher figures was possibly related to his recent decision to major in History, and the probability of becoming a teacher himself. Finally, his "cool rebelliousness" echoes Corsaro and Eder's remark that "the resistance of adult rules and authority provides children

with a sense of control and autonomy, and for this reason such resistance may be a universal feature of peer culture" (p. 215).

These students jointly built a cultural construct which rejected *Philippe* as a questionable, untrustworthy instrument that justified rebellion, first, against their teacher, who gave Harry a grade below what he believed he deserved; second, against teachers in general (thus schools), who did not teach them all they needed in order to perform as expected, and then forced them to perform while watching behind their backs; and finally, against technological attempts at sophistication in teaching which promise more than they can deliver. Their limited activation of *Philippe* as a learning environment makes sense when seen from this angle. While we could arguably find elements that reinforced their motivation to construct *Philippe* as a hoax, as their rushed orientation or their classroom experience, more powerful forces shaping their rejection of *Philippe* seem to be the cultural models (Strauss 1992) that they brought into the room, and the amalgam of emergent influences in the interactions during their sessions, especially their inter-learner interaction driven by peer culture concerns.

Let us now look at our CALL success story at the other end of the continuum. Brian (S29) and Gordon (S30) were, respectively, a sophomore majoring in finance and a freshman who had not yet decided his major. Brian was thus Gordon's senior, like Harry was John's senior. Both Brian and Gordon have similar background experience as foreign language learners: they both had Latin in high school, 5 years of French in school and they were both taking their first French course in college. Brian had also studied Hebrew and Russian, while Gordon had spent time in France. The result of their similar experiences but different interests surfaced in their conversations during listening efforts at *Philippe*: While Brian's forte was associations and vocabulary, Gordon was strong on sound recognition and was more acquainted with French cultural aspects.

Brian and Gordon spent more time at *Philippe* than any of the other groups. In their first game session, they got involved in the game to such an extent that they ran out of time before they were halfway through it, so they expressed their wish to schedule another session the next day. They were the only group that did that. In this second session to complete their first game, they actually played the second part of the game twice, because they were not happy with the ending they came up against in their first attempt. In their second game, when they had a specific task, they were one of the few groups that made a point of getting to the end of the story, even if they didn't have to do that to complete the assigned task. In the first interview Brian said: "We came back here because we thought it'd be cool to finish, not because of her assignment. We only had to spend half an hour. But the longer you take, the more you get out of it."

These two students not only spent a lot of time at *Philippe*, they also interacted intensively with the interface both by using the language help system and by exploring the various options for visiting places and gath-

ering information. In addition, the two interacted intensively with each other during most of the time they spent together in front of the *Philippe* station, collaborating in dealing with the interface, in devising strategies and making decisions in the game, and in sharing information for comprehension. Moreover, they seemed to be having genuine fun during most of the time they spent at *Philippe*. In the interview they felt that it was a good thing to have done it together. "We helped each other. Yeah, we were a good team."

Their assessment of *Philippe* contrasted sharply with the assessment given by Harry and John in almost every respect. Brian and Gordon were excited about doing *Philippe* from early on in their first session. They had good things to say just about everything in *Philippe* after their first game was completed. Brian said he hoped there would be other programs like it in the future. Gordon said they had become so involved with the game that they forgot to write notes, referring to the fact that they had to report in class what scenes they had seen. The following excerpt from this interview gives us a sense of how they perceived their experience.

B: once we got here, I never thought about what she [their teacher] said.

G: it was a good game. that's what it seemed like. it didn't seem like an assignment, it seemed like, you know, you sit down and play computer games all the time.

B: yeah.

G: it seemed like a big treasure-hunt type thing

B: when we didn't get him the apartment, it was "oh, we lost!"

G: we bummed — it was so (wild)

B: and now we won, cause we got him his girlfriend and everything.

They repeatedly said they liked the game and the story, especially for the fact that it became clear that different things happened depending on what they did. They actually referred to *Philippe* as "cool — like a choose-your-own-adventure," that is, by using exactly the same analogy that Harry and John used to describe what *Philippe* failed to be for them.

One could easily picture Brian and Gordon as overzealous students whose concerns are just the opposite of Harry and John's, and that this would explain why the two groups used and reacted to *Philippe* so differently. However, the similarities between the two groups are too big to warrant such an explanation, also because Brian and Gordon do not fit the stereotype of hardworking student. Rather they were both acting according to the same peer culture concerns as Harry and John. The crucial difference between the two cases, however, was that the integration of the cultural models Brian and Gordon brought together when they interacted with each other and with *Philippe* constructed *Philippe* as something "cool" and favored working intensely at it.

Aspects of resistance to adult rules are present in their interaction, as can be seen in Brian's insistence that the reason why they came back for a second session to complete the first game had to do with *their* decision, and not with what the teacher had assigned. In addition, their conversations before and after the games were revealingly filled with adolescent concerns. For example, having no apparent reason to mention such a thing, Gordon came in the room and sat down for his second game and said: "Gosh, I just had the best cigarette in my whole life." Another telling element was their constant cursing ("She got all fucking pissed!") throughout the tape-recorded sessions. In the second game session, Gordon came in with a black eye from a game on the weekend. Although that was hardly noticeable, his attempt to conceal it actually made it a topic of conversation twice. Many other conversation gambits between the two revolved around such issues marking a "behaved defiance" of adult behavior.

A crucial factor legitimizing Gordon's interest in spending time at *Philippe* was the fact that he reportedly lived with his French girlfriend, a topic of conversation that came up both in the interviews and in the students' conversations. So here was an undergraduate, a freshman, who lived with his French girlfriend and who therefore had a peer-culture legitimate "need" to improve his French. Given that *Philippe's* storyline revolves around a problem between Philippe and his girlfriend, Gordon's high level of motivation to work at *Philippe* was unimpeded by any concerns about a possible scar to his reputation as a cool, independent, sports-oriented, popular guy.

Brian was not the same type of guy, and in the very beginning of their first session, Gordon acted condescendingly towards him. Brian would say things like: "I didn't understand that, did you?" And Gordon would answer: "Yeah, this is fast and she is from the South," claiming not only to have understood the words but also to have identified the accent and therefore implying that Brian was not as sophisticated a listener as he was. However, Brian was persistent. As a result, it soon became clear that, despite his poorer listening proficiency, in terms of global comprehension, he was indeed as sophisticated as Gordon, only their fortes were in different specific skills. Less than 15 minutes into their first session, this became a shared understanding, as Gordon gradually changed his attitude towards Brian's listening comprehension doubts and questions. Soon they were interacting vibrantly, as if they were playing a game, with exuberant compliments ("You go, dude!!") and expressive nonverbal behavior like touching palms when they did something remarkably well, as if celebrating a scored point.

In the course of the subsequent sessions, Brian's more traditional expertise as a foreign language learner became more and more useful and thus respected by his partner. For example, he would often pick up flaws in Gordon's reasoning, with resulting clarification of words heard incorrectly or he would read the written information on the screen and help

with words that Gordon was not familiar with. He therefore did not have to act *like* Gordon to contribute to their team effort. He did not have to oppose Gordon's less orthodox style in any way either, because it did not clash with his, nor did it come in the way of his own motivation to work at *Philippe* to practice or improve his French. In fact, it seemed that the interaction at *Philippe* conferred Brian with some prestige before a peer belonging to a subculture that was probably different from his own, since his knowing French ("See, I do know a little French!") was a clearly desirable attribute in Gordon's cultural model.

It thus seems that the chemistry was right between Brian and Gordon in the sense that the two produced a common construct of *Philippe* in which it was "cool" (i.e., acceptable and prestigious) to work at it and to explore it. In this unimpeded motivation to explore *Philippe's* potential, they reinforced each other's interest in getting involved in *Philippe* as a game and to some extent also as a story. This in turn led them to use the help system so that they could play to win, and to explore a lot to learn more about the story. Their interaction with the computer was thus intense and profitable leading to their positive assessment of it. The overall result was that they constructed an effective learning environment in using *Philippe*.

The chemistry was also right between Harry and John, if we look at it from a peer culture perspective. Unfortunately, the workings in their interaction did not enable them to turn *Philippe* into an effective learning environment and made them frustrated with it. Their pay-off was probably in the re-assurance that their expectations were indeed borne out in their experiences as they saw them. Harry probably felt he had been right about all his points; after all, he got only a B+ for a final grade in the course, even if his teacher said "he could have done much better."

Concluding remarks

The analyses presented above point to the enormous complexities involved in the construction of environments for cognitive development. The wide range of variation in the way different groups of students used *Philippe* shows the vast potential of multi-media technology in foreign language instruction. However, it also makes it evident that, if we must understand computer mediated learning as a promising new route to disperse knowledge and improve performance, we must also see it as something which depends, for its effectiveness, on a complex array of elements beyond the technology that is used.

Since cognitive development is a shared phenomenon, cultural aspects must be taken into consideration if we want to understand how learners may profit from a computer-assisted environment. The analyses above have shown that issues having to do with the learners' cultural models and the peer cultures they inhabit may have a decisive culture in the shaping of these learning environments in interaction. Moreover, the fact that we have looked at learners who share similar background categories, and

yet construct their computer-assisted learning environment so differently, suggests that looking exclusively at the computer may obfuscate other important elements in computer-assisted language-learning situations.

The present study is limited in scope since it does not examine in greater detail the interaction between teachers and learners nor the interaction among learners outside class activities. However, it presents a small contribution in heeding Crookall et al.'s (1992: 94) call for "accurate and detailed descriptions of the [CALL] phenomena," confirming these authors' belief that "In CALL activities, understanding the meaning of the events for the participants themselves (quality/process) is vital in any systematic attempt to define and assess the effectiveness of those activities (quantity/product)" (p. 114).

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Appendix 1

Glossing:

line 1 — These students used the help system to acquire top-down information for comprehension of the story (e.g., who the characters are) before they started watching it.

line 2 — After watching the opening scene, they used the language-help system to review it by watching and listening to segments of their own selection both on regular and articulate (slow) audio tracks.

line 3 — In exploring Philippe's apartment in the morning, they looked at the classified ads (Figaro), listened several times to the first message in Philippe's answering machine (directly related to their assigned task to recount one message for each part of the day) and only once to the other messages. Then they tried to call the people offering apartments in the classified ads, reviewed classified ads once again, and then checked the list of real estate agencies.

line 4 — Using the surrogate travel function, they visited an apartment for rent, writing extensive notes about it, and then they looked at the suggestion box for some information about the interface.

line 5 — They ran out of time and were forced to meet Philippe as arranged at 11 o'clock (game time); when asked by Philippe about any messages in his answering machine, they accessed the language-help system to watch the question being asked again with both regular and articulate audio, and then they told Philippe that Mme. Soloniac had called.

line 6 — Upon returning with Philippe to his apartment they responded to his question about the location of the check to pay the plumber by saying they had no idea where it was, a problematic and unusual reply. After the plumber left without fixing the leak in the sink, they looked at Philippe's note with his aunt's address and at the classified ads, but did not listen to the answering machine, an indispensable activity to get information leading to a few of the possible solutions of the game.

line 7 — They chose to go to Philippe's aunt's apartment. When Philippe asked for their advice on whether or not to ask his aunt if he could stay in her apartment, they first accessed the help system to listen to his question again, and then told him to go ahead and ask her. When Philippe asked whether he should give up, given his aunt's reaction, they once again resorted to help system to review his question, and then told him to abandon the idea.

line 8 — They then followed Philippe back to his apartment at the end of the day, and watched the final scene in which Philippe faces the failure which is also the students'.

Appendix 2

group	session record	student ID, sex	class	major	French as FL instruction	other FL experience	experience in France
1X	1 & 2	S22, F	SR	Chem	4 yr HS, 2 sem U	-	-
		S23, F	ES	Fren	?	Korean NS	visit as child
2X	1 & 2	S24, F	JR	Econ	4 sem U	Urdu NS,	-
		S25, F	JR	Bio-chem	2 yr HS, 2 sem U	Taiwanese NS	yes, without NS contact
		S26, F	SO	Art Hist	2 yr HS, 2 sem U	-	-
3X	1 & 2	S27, F	JR	Econ	4 yr HS	Spanish	2 wk holiday
		S28, F	SO	Bio-chem	4 sem U	Hindi NS, Arabic	1 mth w/ own family
4X	1 & 2	S29, M	SO	Finan	5 yr HS, 1 sem U	Russ 3 sem, Lat, Hebrw	1 wk w/ class
		S30, M	FR	undec	5 ys HS, 1 sem U	Latin	6 mth on/off w/NS
5X	1&2	S31, F	SO	n/a	4 yr HS, 2 sem U	Spanish, Latin	6 wk (3 w/ NS)
		S32, F	SO		6 yr HS, 1 sem U	-	1 wk
6X	1	S33, F	FR	undec/ Fren	4 yr HS	-	-
		S34, F	SO	Psych	4 yr HS	Spanish NS	-
7X	1	S35, F	SO	undec	4 yr HS, 2 sem U	-	-
		S36, M	JR	Busin	2 yr HS, 2 sem U	Polish NS, Germ 1 yr	summer w/ Fr family

(Appendix 2, continued on next page)

Appendix 2, continued

group	session record	student ID, sex	class	major	French as FL instruction	other FL experience	experience in France
8Y	2	S37, F	SO	Hist	3 yr HS, 3 sem U	Latin in HS	summer w/ NS
		S38, F	JR	Bio	4 yr HS, 3 sem U	Latin in Middle Sch	3 wk (1 w/ NS)
		S39, F	SR	Eng	4 yr HS, 5 sem U	-	summer w/ NS
9Y	2	S40, F	FR	undec	6 yr HS	Span 3 yr	
		S41, M	SO	Hist/IR	3 yr HS, 2 sem U	-	
		S42, M	FR	undec	5 yr HS	Hebrew	
10 Y	2	S43, M	JR	undec	3 yr HS, 1 sem U	Arabic	summer w/ NS
		S44, F	SO	undec	3 sem U	Korean	7 wk w/NS
11 Y	2	S45, F	FR	undec	4 yr HS	Latin 3 yr	6 wk (1 w/ NS)
		S46, F	FR	undec	4 yr HS	Gujarati NS, Latin 2 yr	1 mth w/ own family
12Y	2	S47, M	SO	Hist	6 yr HS	Hebrw 4 yr	1 mth
		S48, M	HSSR	n/a	5 yr	Hebrw 3 yr, Indonesian 1 mth	1 mth +hosted Fr. Student 1 mth

NS = native speaker; ES = exchange student; SR = senior; JR = junior; SO = sophomore; FR = freshman; HS = high school; U = college; FL = foreign language

