

Conversational Shadowing For Rapport and Interactional Language Acquisition

Tim Murphey
Nanzan University

Abstract

This article describes various forms of shadowing, more particularly conversational shadowing that gets listeners to mirror input out loud. The research question is "Does shadowing give rise to the types of conversational adjustments that are thought to positively affect language acquisition?" In the first study, transcriptions of shadowing show that speakers do modify their input and adjust with many of the strategies and tactics that Long (1983) describes. Moreover, NN listener/shadowers are able to control the speed of NSs, their pauses and length of utterances, and direct more attention to adjustments attuned to their zone of proximal development (Vygotsky 1934). The data reveals that there may be a variety of effective types of shadowing, from those appropriate to skill training leading to more interactive and naturally selective shadowing that includes commenting and questioning. In the second study, students in an advanced class on language acquisition were given the results of the first study and asked to experiment with a working hypothesis through recording themselves shadowing, in various ways, NSs in their target language. Results from their investigations further reveal the rich potential of some forms of shadowing for some students at particular levels and the limitations of other kinds of shadowing. Finally, I discuss some supporting evidence from related areas and suggest research that might help us understand the potential of shadowing better.

1. INTRODUCTION AND BACKGROUND

If teachers accept the current interactionist theory of language acquisition as viable then it follows that they would want to find optimal ways for students to interact with others. We would want to create a lot of learning opportunities (Allwright 1984) for students in which they could adjust (Long 1983) and negotiate (Varonis and Gass 1985) in many ways in order to fine tune the input (Krashen 1985) and facilitate the collaborative construction of meanings (Py 1986) (also see Ellis 1991). This article investigates the use of listener shadowing of input to get speakers to modify their speech continually in order to jointly create more comprehensible input. I should note here that shadowing may at first appear to be "weird stuff", as one colleague has called it, although it is something we all do in different guises and modalities at different times in our lives.

In this article I will also be talking about the following varieties of shadowing: *lecture* shadowing, *reading* shadowing, and *conversational* shadowing which may go from *complete* to *selective* and *interactive* shadowing. In lecture shadowing listeners shadow silently in their heads what a speaker says. In all the other examples shadowing can be done out loud or silently to any degree. In reading shadowing, one student reads a passage while a partner shadows.

Conversational shadowing is the selective (partial) or complete repeating of what a partner says during conversation. Complete shadowing refers to when listeners shadow everything speakers say. Selective shadowing means they select only certain key words and phrases to shadow. Interactive shadowing, which includes selective shadowing, adds questions and comments from the listener into the conversation making it more natural and showing more involvement on the part of the listener. Rather than predetermined categories, these types of conversational shadowing emerged from the data described later in this article; I state them here in order to give the reader an overview.

Interpreters, psycholinguistics, and testing

Shadowing has been used extensively as an exercise for interpreters to enhance their timing, listening, and short-term memory skills before they even start translating. While one person speaks, the "shadower" repeats what is said a fraction of a second after the speaker. It has been used by psycholinguists to study how the brain processes language (e.g., Marslen-Wilson 1975). Also, Ferguson (1982) and Matsunaga (1990) have found that recording students shadowing progressively more complex and longer phrases is a reliable listening test that correlates well with other tests.

It should be noted here that most forms of out-loud conversational shadowing (hereafter CS) differ from the above in that they have the effect of slowing speakers down as they wait for the shadowing and thus the shadowing is actually produced in the pauses. In my experience this slowing down and chunking also happens in interpreting when the translation is audible to the speaker.

Pronunciation and mirroring

Acton (1984) used what I call shadowing to attempt to defossilize pronunciation in long-time residents in America. He called it "tracking" and notes:

It is an intense experience, one that eventually forces learners to focus on intonation contours, stress and rhythm, independent, to some degree, of the lexical content. With practice, the ability to attend to both form and content develops. In addition, as one becomes more proficient at tracking in face-to-face interaction (or tracking a model on videotape or television), one almost automatically begins to mirror the other person. Mirroring involves attempting to mimic posture, body movements, gesture, and facial expression to the greatest extent possible. . . . In both techniques (tracking and mirroring) there is an important "locking in" to the total expressive system of the other person. (pp. 77-78).

Acton also mentions (personal communication) that Joan Morley had "tracking" exercises included in several of her pronunciation materials to practice the production of suprasegmentals and intonational contours.

Lecture shadowing

For three years, in order to "turn their brains on" I taught students (n= 400+) how to shadow silently someone's speech and asked them to experiment with shadowing during their classes in English and Japanese (Murphey 1992). A lot of the feedback given to me during this time was from my mixed lecture classes on language acquisition which contained about 30 Japanese and 20 foreign exchange students each year. Thus, the speakers had easy access to native speakers and in fact were required for homework to experiment with their other-language partners with such phenomenon as shadowing and to report about it in their observation action logs (Murphey 1993).

Many reported that it allows them to focus more of their 7 ± 2 bits of short-term memory awareness (Miller 1956) on what is being said rather than giving in to competing thoughts, internal dialog, and imagining (daydreaming), not to mention sleeping. Thus, shadowing seems to block some of the potential disruptions of listening comprehension originating *inside the head* (Dunkel 1993) as it focuses more attention on the auditory message outside. However, students reported that it is fatiguing, especially when the material is difficult to understand. They can usually only shadow in short spurts of 10 to 20 minutes (Murphey 1994).

Silent shadowing by listeners, of course, has little effect on speakers' modification of input *outside the head*. I have noticed, however, after teaching shadowing to a group, that, when I see students' lips moving (as they shadow my speech), I tend to slow down and chunk more carefully. It could be that this would also happen with other teachers once they realized students were shadowing.

Conversational Shadowing

I have also taught students (n=250+) for two years to do Conversational Shadowing (CS) and made half a dozen recordings of NNSs and NSs shadowing each other. While shadowing lectures is done silently, CS is done out loud, usually in a one-to-one situation. In

the lecture situation, the speaker/teacher does not usually know what information is being understood by which listeners. But because CS is done out loud speakers are led to adjust to the listener's immediate degree of registration/understanding as reflected in the listener's shadowing output. It was apparent from student reporting and my own observations that CS prompts the partners to employ many of the interactive strategies and tactics listed by Long (1983), to chunk language and information, to offer simplified versions of the NNS interlanguage utterances (Pica 1988) and to correct. In general CS also seemed to promote better rapport through reflective listening, although there may be moments of frustration while the partners are learning how to adjust. About 15% of my first-year 1993 students reported in term-end feedback that shadowing had a major impact on their learning. Yet I remained basically ignorant of the variety of ways that they were using it.

2. METHOD

Recordings of conversational shadowing

In the spring of 1994 I taught a new class of first-year students how to silently shadow my lectures and how to do CS. The emphasis was on shadowing as much as one could (everything if possible) with appropriate transformations (e.g. *I to you*) in order to let partners know what was understood and what was problematic. Exercises also included shadowing simple readings read by a classmate. Actual instructed practice time was approximately 20 minutes per 225 minutes class time per week for the first four weeks. After the first day's demonstration, students were told that they could continue shadowing all the time and to experiment with it. Some students reported in their action logs that they were using shadowing extensively in my class and other classes, and outside of class, while other students never mentioned it.

For analysis, two NNS students from the above class were recorded interacting with two NSs, one pair at a time alone in a room, shadowing each other while describing familiar topics. The subjects were all women. Both NSs interacted with the two NNSs one after the

other in the same order, first NNSa and then NNSb. NS1 interacted with them two weeks into the semester and NS2 was recorded with them after four weeks. The two weeks separating the recordings meant there was probably little practice effect from one to the other for the NNSs, while perhaps there could have been for the NSs since each of them worked with the two NNSs one after the other. Therefore their familiarity with the task and adaptation to it may have smoothed their interactions with NNSb. The NSs were instructed to first tell their partners about 1) a place with which they were familiar, and then about 2) their routine day. After that, the NNSs were to talk about the same two topics themselves. All participants were instructed at the beginning to shadow each other. Pairs were then left alone with a tape recorder going.

3. RESULTS AND ANALYSIS

While the change in topics from "known place" to "routine" were well marked with the NSs, the NNSs talked about both topics in a mixed fashion three out of the four times. Thus, the original number of 16 topic presentations became 13 actual segments. Table 1 below shows the lead speaker and topic at the far left, followed by the NS's word count and what percent of the total words in that segment the NS spoke.

Table 1: Share of words and wpm							
Seg. #	Lead speaker & topic	NSwds	%	NNSwds	%	seconds	wpm
NS1 with NNSa							
1.	NS1 known place	<u>82</u>	<u>55%</u>	66	45%	80	111
2.	NS1 routine	<u>161</u>	<u>55%</u>	132	45%	145	121
3/4.	NNSa combined topics	75	49%	<u>79</u>	<u>51%</u>	105	88
NS1 with NNSb							
5.	NS1 known place	<u>136</u>	<u>61%</u>	88	39%	140	96
6.	NS1 routine	<u>149</u>	<u>65%</u>	89	35%	130	110
7.	NNSb known place	83	37%	<u>140</u>	<u>63%</u>	160	84
8.	NNSb routine	105	43%	<u>143</u>	<u>57%</u>	165	90
TWO WEEK BREAK							
Seg. #	Lead speaker & topic	NSwds	%	NNSwds	%	seconds	wpm
NS2 with NNSa							
9.	NS2 known place	<u>105</u>	<u>52%</u>	96	48%	73	165
10.	NS2 routine	<u>111</u>	<u>52%</u>	102	48%	80	160
11/12.	NNSa combined topics	109	39%	<u>174</u>	<u>61%</u>	195	87
NS2 with NNSb							
13.	NS2 known place	<u>256</u>	<u>68%</u>	123	32%	245	93
14.	NS2 routine	<u>166</u>	<u>55%</u>	134	*45%	185	97
15/16.	NNSb combined topics	327	48%	<u>356</u>	<u>52%</u>	438	94

*NNS leads some

(Table 1 continued)

NNSb Total time 598 (9 minutes 58 secs.) total words 1292

NNSa Total time 1463 (24 min 23 secs.) total words 2295

After the NS's data come the NNS's word count for that segment and the NNS's percentage of total words in that segment. Finally on the far right is the length in seconds of that segment and the words per minute. The lead speakers statistics are underlined to help distinguish leaders and shadowers.

Segments 1, 2, 9, and 10 are the times when NNSa was shadowing NS partners. The amount of time spent was much shorter than in other segments, while the WPM count was much greater. NNSa's average percentage of words in the total conversations, 46.5%, is also much higher than NNSb's percentage, 37.8%, in the same shadowing positions. Listening to the transcript, it is clear that NNSa made a strict interpretation of the task and followed the researcher's instructions well. However, this complete shadowing seems very mechanical, as if it were just imitation and the meaning didn't matter, as seen in Extract 1:

Extract 1 from Segment 9

(N.B. Each double line of transcription is one time line to show the approximate timing and repetition sequences.)

NS2: I'd like to tell you about Boston.

Boston, yes.

NNSa:

You'd like to talk with me about Boston.

NS2: Boston is in America, in the north east part of America.

NNSa: Boston is in America in the north east part of America.

NS2: It's a pretty big city

and it's where

NNSa:

pretty big city

it's where

NS2: the people who came from England to start America

NNSa: the people who came from England to start America

NS2: as a new country first came so it has a lot of history

NNSa: as a new country first came so it has a lot of history

NNSa does seem to control the length of utterances (chunking) of the speaker; however, her segments lack meaningful negotiation or a discourse structure that represents an exchange of ideas. There seems to be little excitement or curiosity about the information. Still, this type of shadowing may have its uses in the beginning stages for people learning

shadowing and also to get speakers to chunk. Shadowing appears to be a way for NNSs to actually participate more without necessarily creating new language. Still, complete shadowing apparently can disturb the speaker (as it may have disturbed those who interacted with NNSa).

What emerged from the data of the second Japanese student, NNSb, is that a much more productive and meaningful form of shadowing seems to be SELECTIVE SHADOWING of key words and problematic utterances. Going one step further, INTERACTIVE SHADOWING is when the listener not only selectively shadows but occasionally comments and questions concerning the topic. The extract below shows NNSb's selective shadowing and also her participatory questioning, contributing own-knowledge, and even translation. It is much more obviously a negotiated message, jointly constructed, and shows the partners are interested.

Extract 2 from Segment 13

(N.B. Each double line of transcription is one time line to show the approximate timing and repetition sequences.)

NS2: I'd like to tell you about two places. The first one is Boston.
 NNSb: Two places. Boston.

NS2: Do you know where the Boston is? Boston is in the north east north east
 NNSb: north east

NS2: of America. Just north of NY. right, in Massachusetts
 NNSb: Ah, near NY? Ah, ah, Massachusetts

NS2: yeah Massachusetts, um, and that that, it's a pretty big city.
 NNSb: uhu,

NS2: Many people, many businesses
 NNSb: xxxxxxxx

NS2: It mostly, it's, it's famous for being a historical place yes, The first
 NNSb: historical place

NS2: people who came to America who came to America
 NNSb: First people? who came to America

NS2: came to Boston. Uh, from from England. to Boston.
 NNSb: came to Boston? England

NS2: Ah, Plymouth Right, Plymouth Plantation Yes the Pilgrims came to
 NNSb: Ah, Primos Primoth yes uh,

NS2: Plymouth Ah, you know Plymouth Ah, world
 NNSb: Ah, yes I majored in world history

NS2: history. in high school Hahaha.
 NNSb: in high school So I know about America. Haha

NS2: That's great. Well, I lived, I live, I go to school in Boston.
 NNSb: you lived Ah, you go to school in

NS2: Yes, but my favorite place is in Vermont.
 NNSb: Boston. Your favorite place is

NS2: in Vermont. in Vermont, Vermont is the name of a state.
 NNSb: in umn, un? Vermont

NS2: Vermont It's a place name. um It's a state.
 NNSb: Vermont Ah, place name. Town name?

NS2: Like a prefecture shuu
 NNSb: State Ah, prefecture. ah shuu

It is also interesting to note that in this segment, the interactive nature of it allows the roles to be temporarily reversed. NNSb is supposed to shadow NS2, however, in the underlined portions above we see examples of the NNS taking the lead and the NS shadowing.

Notice also that, after the speaker gets used to someone shadowing, failure to shadow as with the mention of "Vermont", above indicates a need for more detailed explanation. Without shadowing, zero response is the norm and thus provides no information (feedback) to the speaker.

Table 2, below, shows how interactive in terms of spontaneous comments and questions the NNSs were. Shadower comments and questions indicate moves by the listener to collaborate, co-produce the text, and negotiate the input, instead of simply shadowing for "form". The task the researcher gave was simply to shadow. NNSa, who interpreted the task strictly, seemed to have less rapport and less interest in the meanings of the messages being exchanged, as shown in absence of comments and questions. The fact that the segments with NNSa are so short may be because she makes almost no questions and

comments but simply imitates as one would in a class doing a drill. Thus the NSs were probably not very encouraged to continue the interaction. NNSb, on the other hand, seems to create good rapport through co-construction of the messages beyond the required task: she shows interest by her questions, comments, misunderstandings, and digressions. She, in effect, is showing the researcher what needs to be added to his description of effective shadowing in order to make it more viable.

Table 2 - Questions and Listener Comments					
Com = comments/ Dir.Q. = direct questions					
In. Q = questions given with rising intonation.					
Summary of NNS in Shadowing positions					
	Com./Dir.	Q./In..Q.	Total time	Total words by NNS	
NNSa	0	0	5	378 secs	396
NNSb	8	9	14	700 secs	434
Summary of NNS in Lead positions					
	Dir. Q./In..Q.	Total time	Total words by NNS		
NNSa	0	0	220 secs	253	
NNSb	4	20	763 secs	639	
NNSb Total time 598 (9 minutes 58 secs.) total words 1292					
NNSa Total time 1463(24 min 23 secs.) total words 2295					

As can be seen in Table 2, NNSb did considerably more commenting and asking than NNSa, even accounting for her increased interaction time. In fact, it is probably because of her participatory questioning and commenting that her segments lasted longer. Also, the native speakers responded to NNSb by giving 39 questions when they were shadowing her and 4 questions when they were leading. NNSa received only six questions when NSs shadowed her and zero when the NSs led. Some of this discrepancy could be due to the fact that NNSa went first and the NSs were warmed up to the task by the time they talked to NNSb.

Salient opportunities for learning: Offers, Corrections, and Uptake

Another way to analyze the data from these recordings is to look at how often offers, corrections, and uptakes (OCU) occur. An offer is when the NS offers an alternative way to say something that can facilitate the NNS's message making. Corrections are when the NNS makes a mistake and the NS corrects it within their shadowing response, sometimes

unnoticeably by the NNS. Uptake in this data is when the NNS actually uses the offer or correction afterwards, showing that it has been grasped at least for the moment. In extract 3 below, we see two corrections (*basketball, at home*) with uptake and then an offer (*quiet*) with uptake.

Extract 3

NNSb: but my older, ah, younger brother is 16
 NS1: so ah, ah, he is 16.

NNSb: They um? they ah he is a member of **basket club**. yes
 NS1: ah really **basketball club**

NNSb: **basketball club** So he is tired **in home** yes so **in home** **at home**
 NS1: aha okay oh, really **at home** aha

NNSb: ah, yeah there is no sound yes it's **quiet**, so
 NS1: oh, really! it's very **quiet**?

Obviously there may be offers and corrections without textually traceable uptake. At the same time, an offer may simply be a reminder of something known but temporarily unavailable, as I suspect *quiet* is above. And obviously, shadowing may be seen as a perpetual offering-uptake harmony, which it can be. However, one can also just shadow mechanically, as we have seen, without much attention to meaning. Instances of offers and corrections are more distinctly marked textually, and thus they are more noticeably available for uptake. Table 3 summarizes the differences between the two NNSs in terms of OCUs.

Table Three - Corrections, Offers, and Uptake (OCU)					
	Offer	Corr.	Uptake	Total time	Total words by NNS
Summary of NNS in Shadowing positions					
NNSa	0	0	0	378 secs	396
NNSb	1	1	1	700 secs	434
Summary of NNS in Lead positions					
NNSa	2	5	1	220 secs	253
NNSb	6	4	8	763 secs	639

Of course when the NNSs are shadowing, there were far fewer OCUs traceable. It is when the NNSs are leading that NSs probably become more acutely aware of their partner's productive interlanguage and can offer and correct appropriately. As can be seen above,

NNSb got partners to offer help much more often and she displayed much more uptake (shadowing).

It is interesting to note that NNSa who performed such a strict shadowing when the NSs were leading, does practically none of this when corrected or offered alternatives. It could be she interprets shadowing as simply a pedagogical task one turns on when performing a pedagogical role but which is not operationalized in other interactive positions, i.e. it is not spontaneous. Thus, she seems to miss opportunities for learning and practice. NNSb, on the other hand, whose shadowing style is selective and interactive, shadows out loud over 80% of the offers and corrections given her. These OCU's can be seen as evidence for Brown's (1977) assertion that caretakers stretch their partners' competence and as further evidence for Pica's (1988) study which found NSs offering appropriate interlanguage forms to NNSs when in trouble. From the above data, it seems that this stretching and offering depend a lot on the interactive strategies displayed by the NNS as well.

Concerning Long's (1983) adjustment strategies and tactics (see Table 4 Below), "S1 Relinquish topic-control" and "S2 Select salient topics" were subsumed in the instructions for the task; however, there were digressions in which these were observed. All the other strategies and tactics were observed by both the NNS and the NS in differing degrees (many being qualitative distinctions that are difficult to quantify.)

Table 4 <i>Devices used by native speakers to modify the interactional structure of NS-NNS conversation</i>	
Strategies (S) (for avoiding trouble)	Tactics (T) (for repairing trouble)
S1 Relinquish topic-control	T1 Accept unintentional topic-switch
S2 Select salient topics	T2 Request clarification
S3 Treat topics briefly	T3 Confirm own comprehension
S4 Make new topics salient	T4 Tolerate ambiguity
S5 Check NNS's comprehension	
Strategies and Tactics (ST) (for avoiding and repairing trouble)	
ST1 Use slow pace	ST4 Decompose topic-comment constructions
ST2 Stress key words	ST5 Repeat own utterances
ST3 Pause before key words	ST6 Repeat other's utterances
(Long 1983)	

While Long originally was describing NSs performance, I think these strategies and tactics could equally apply to NNSs with a few qualifications. Of course "ST6 Repeat other's utterances" is shadowing itself. Apparently, when ST6 is done regularly all the other strategies and tactics seem to be operationalized.

4. DISCUSSION

Interpretation of task and Communicative Competence

It's generally accepted that conversation is a collaborative construction of meaning through negotiation. Interactive CS apparently enhances this construction through its ability to put more adjustment strategies and tactics into play. It's also important to note that we manifest different competencies with different people because they inspire different strategies and tactics from us, and we in them. The difference between the results of the two NNSs leads one to suspect that communicative competence exists only in reference to a person, text, or situation. Intuitively we know this already when we think of certain people with whom it is amazingly easy to interact, and others with whom pulling teeth might be easier, when we realize that speaking about some topics are easier than others and that some situations (the cafe or faculty meeting) are more comfortable. Lastly, there is the interpretation of the task that will change our competence as well. My own estimation of the two NNSs students in this study (after seeing them three times a week for a semester) is that they are both equally motivated, capable, and personable students. I contend their different communicative competencies in this particular case lie principally in their interpretation of the task and my instructions.

Interactional modifications

Ellis (1994) writes of theoretical claims that stress the importance of interactional modifications for comprehension and acquisition. He makes the distinction between discourse management and discourse repair: "The former are motivated by the attempt to simplify the discourse so as to avoid communication problems, while the latter occur when some form of

communication breakdown has taken place or in response to a learner utterance that contains an error of some kind" (p. 257). It would appear that appropriate conversational shadowing allows speakers to simplify their discourse more appropriately and to actually hear when repair is necessary, because of the ongoing comprehension check of the listener's (selective) repetition.

Naturally occurring shadowing for stretching

Teachers are of course concerned with stretching students' abilities; the problem has usually been knowing what part of any new material is problematic. More student shadowing could show us their level and point teachers and partners toward their "i+1". This already happens in L1 acquisition in which CS is readily observable by both caretakers and children. It seems clear that, when interacting with children, or anyone, using their words, phrase length, and interlanguage greatly facilitates being understood. Brown (1977) says that the main concern of caretaker speech is for communication, not language acquisition. However, just repeating and using their words is not all a caretaker does. Brown makes the important point that "successful communication on one level is always the launching platform for attempts at communication on a more [complex] level" (p.15). So, while caretakers will speak baby-talk, and natives foreigner talk, they will gradually modify and expand these utterances as the learners improve their abilities. Hypothetically, CS by more advanced speakers will increase the number of opportunities for learners to stretch their abilities as it provides more comprehensible input within a learner's zone of proximal development.

More pauses and shorter chunks

Lane et al. (1973) identified "the number of pauses — that is to say, the length of the runs — as the most potent variable in the constellation that makes up words per minute" for facilitating comprehension — more than articulation rate, length of pauses, syntactic complexity, or rhetorical entropy. They hypothesize: "Perhaps the second language listener is confronted with a problem in short-term memory. The longer the runs, the greater must be his

capacity for short-term storage of material that has, for the moment at least, little sense, assuming that he cannot process all the material as it comes along" (p. 18).

When a listener does CS, speakers begin to chunk their discourse into shorter utterances and give longer pauses between them so that much of CS is actually done in the pauses, not simultaneously as most interpreting is done. Speakers actually seem to *learn to pause* to suit each shadower, taking the shadowing output of the non-native speaker (NNS) as quality input to guide their adjusting. In the pauses, while listeners shadow, speakers may see that they need to repeat parts, chunk smaller, enunciate parts, and otherwise adapt to the person they are interacting with. Thus the ability of CS to appropriately regulate a speaker's MLU seems to be one of its great attractions.

Consciously Noticing

Some researchers put an emphasis upon consciously being aware of input, or of noticing it, saying it may contribute to "intake enhancement". Ellis (1994) summarizes this view:

Noticing is of considerable theoretical importance because it accounts for which features in the input are attended to and so become intake (information stored in temporary memory which may or may not be subsequently accommodated in the interlanguage system). Schmidt and Frota (1986) suggest that for noticed input to become intake, learners have to carry out a comparison of what they have observed in the input and what they themselves are typically producing on the basis of their current interlanguage system. (p. 361)

Such a comparison between input and what learners can actually produce appears to be more available through shadowing. The beginner can shadow everything, while the intermediate and advanced can prime their brains to shadow only new and partially acquired input. Both Ellis (1994) and Schmidt (1990) feel that the role of unconscious learning has been exaggerated and that while learning can take place without learners being aware of it, it is probably enhanced by noticing consciously.

Another discourse feature which gets speakers to notice more is "recasts," something conversational shadowing seems to encourage. Long's (1994) description of what how recasts work sounds very similar to the description of corrective feedback during shadowing:

Recasts are utterances which rephrase a child's utterance by changing one or more sentence component (subject, verb or object) while still referring to its central meanings. Following a child's utterance, 'Jimmy eat all the bread', a simple recast, in which one component is changed, might be 'That's right, Jimmy ate all the bread.' Following 'Jimmy watch TV', a complex recast, in which two or more components are changed, might be 'Yes, Jimmy's watching television, isn't he?' . . . adult recasts of children's utterances which contained the target structures were found to speed up productive use of passives, relative clauses, and previously non-used auxiliaries, to do so more than models of the same items, and to do so more when the child's rather than the experimenter's utterances were recast. . . . One possible reason for the effectiveness of recasts is that children imitate them two or three times as often as other parental responses. . . . This is true provide they are not too far removed from the child's initial attempt, as is usually the case. Adults recast child utterances with one error more often than those with multiple errors, and recasts with one added or corrected morpheme are in turn more likely to be imitated by the child than recasts with two or more such morphemes which are often ignored. (p. 21-22)

In shadowing of the NNS by the NS, these recasts seem to happen automatically in the data. In selective shadowing, corrective recasts seem to appear naturally which parallels L1 acquisition as well as L2:

[Richardson classifies] NS responses to learners' grammatical and ungrammatical utterances containing any of seven classes of target grammatical morphemes into Farrar's four categories — corrective recasts, non-corrective recasts, topic continuations and topic changes — she then looked at NNS reactions to each type of response. Paralleling the L1A finding, NNSs were found to be . . . more likely to imitate the correct grammatical morpheme after a corrective recast (negative feedback) than after any of the other three responding moves (positive evidence). . . . Richardson found that the NNSs imitated 42% of the corrective recasts compared with 26% of the non-corrective recasts, suggesting that they were indeed responding at least in part to the negative evidence in corrective recasts rather than to their imitative component. (Long 1994, p. 26)

There is some evidence in the little data I have collected that when NSs selectively shadow partners regularly, they provide these corrective recasts and they can indeed be imitated by the NNS. NNSb shows this, while NNSa does not. Again, I feel this happens because of the way the speakers interpreted the task.

Finally, Long (1994) suggests the importance of classroom activities which "stimulate negotiation for meaning . . . for they may be one of the easiest ways to facilitate a learner's focus on

form without losing sight of a lesson's (or conversation's) predominant focus on meaning" (p. 40). It seems that shadowing, because it does get listeners to reveal what they are understanding, would encourage just this kind of negotiation no matter what the task.

NS shadowing of the NNS

Pica (1988) found in her study of NNS responses to non-comprehension signals from NSs that, instead of NNS modifying their own interlanguage, the NSs "modeled target (modified) versions of NNS interlanguage utterances for them (p. 45)." In other words, NSs offered what they thought the NNSs wanted to say and these reformulations were appropriate to the NNSs interlanguage. While Pica's goal was to show that learners can somewhat reshape their interlanguage when NSs can't understand, she found the NSs reshaping it for the NNSs. It is more probable, to my mind, that reformulated input from the NSs provides the real push toward the next level of appropriate difficulty; learners figuring out how to change their interlanguage on their own probably occurs much less than their recognition of appropriate $i + 1$ coming from their interlocutor. The point is that a NS's shadowing of a learner's discourse allows the NS to produce much more of this fine-tuned input and points awareness toward form while meaning is already known. Without meaning secured, awareness of form has nothing to attach itself to. This is another way of describing acquisition through comprehensible input, or the input hypothesis -- known meaning accompanied by partially acquired or new forms that are within one's zone of proximal development. However, learner output is needed in order to create such input (discussed in conclusion).

Din in the head

One might say that teachers have known the advantages of repetition for a long time. Choral repetition and "repeat after me" have probably always been in classrooms from the beginning. What the data here points to is that doing it a lot can make it a habit for individuals to consistently use and that when used conversationally it will provide many psycholinguistic and discourse facilitation advantages. Shadowing may also increase the echo effect in the

brain. We hear everything twice: once when the speaker says it, and then again when we say it. This allows short-term memory a better signal from which to access meaning and also gives it more time to do so. An increased amount of on-line meaningful repetition could also spur more subsequent automatic replay activity in the mind (see Murphey 1990 for a survey of the research on the Din in the head, and Krashen 1993 for an update). One anecdotal example of this is when the author was at a week-long workshop in Belgium a few years back with an American presenter and a French simultaneous interpreter. Except that it wasn't simultaneous. The American would pause and the translator would translate in the pauses in a finely choreographed dance. After two days I noticed I was dreaming everything first in English and then in French, every sentence in my head was being translated automatically into French.

Vygotskian Parallels

Finally there are several concepts that have grown out of Vygotskian (1934/ 1962) psycholinguistics that may have relevance to shadowing: 1) the social, interactive nature of language acquisition and concept formation; 2) the idea of regulation or control as the learner passes from other- to self-regulation; and 3) the zone of proximal development. All of these concepts are interrelated as their description below will show.

In Vygotsky's (1978) words, "Every function in the child's cultural development appears twice, on two levels. First on the social, and later on the psychological level; first, between people as an interpsychological category, and then inside the child, as an intrapsychological category" (p. 86). Of course, this also applies to adults learning a foreign language, as language is first presented interpsychologically (between two interlocutors) and only later, when it has been acquired to a sufficient degree, can we say that language is used intrapsychologically. As one shadows, one is seizing the language from another mind and trying to make sense out of it. When this shadowing is done out loud, the mind of the shadower is bared and the speaker can realize what is needed and make adjustments that lead to more "sense" making. Thus, before speech is used individually, it is used socially to construct meanings between individuals, in Long's (1994) terms to "negotiate meaning."

When meaning has been established interpsychologically, then it is on its way to being acquired for intrapsychological use. This then is the great advantage of egocentric (out loud inner speech) speech in young children; they are forever baring the language processing going on in their minds as they speak the words that happen to appear in their mind and thus caretakers are able to adjust appropriately to them and enrich the "sense" of the words they use. Adult conversational shadowing may also allow this to happen (as long as we are careful at the same time not to break any conversational maxims in the process).

Shadowing also appears to be a fascinating step between being other-regulated and self-regulated. At first we seem to be at the mercy of those who control us with their language, yet as we repeat their language and come to at least be able to control our own output, amazingly enough we begin to exert some control over the speaker as we fail to repeat in conversation, or repeat erroneously. Silence, except when presented within the context of the possibility of expression, has none of the controlling power that attempted imitation through shadowing does.

The zone of proximal development (ZPD) is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with peers" (Vygotsky, 1978, p. 86). Schinke-Llano (1993) paraphrases Vygotsky's conception of the ZPD in the following way: "Learning occurs as the result of mediation in which an adult or more skilled peer acts as the 'go between' between the learner and the task, or problem at hand. In certain ways, the ZPD is reminiscent of Krashen's $i+1$ construct" (pp. 123-124). In conversational shadowing, the NS has a heightened awareness of the NNS's level because of more ample feedback and can potentially fine-tune the input specifically while at the same time stretching the learner to the limits and beyond.

5. IMPLICATIONS AND HYPOTHESES

The different results of the two NNSs have helped to conceptualize a tentative understanding of the different kinds of shadowing and where we might go in our teaching and action research. NNSb shows us what needs to be added to the description of effective shadowing. NNSa shows the dangers of interpreting any technique too narrowly.

I believe that complete shadowing may still be useful at the beginning stages of learning, in order to focus attention and activate schemata. At later stages, more selective shadowing would probably be more appropriate. In fact, advanced students tell me they lose track of the meaning if they try to shadow everything. Apparently, L1 learners don't shadow everything anyway, as Lightbrown and Spada (1993) report:

It is also important to note that his [Peter 24 months] imitations are not random; he doesn't imitate everything he hears. Very detailed analyses showed that Peter imitates new words and sentence structures until they become solidly grounded in his language system, and then he stops imitating these and goes on to imitate other new words and structures. (p. 3)

This of course supports the idea of selective shadowing - and beginners might very well "select all" at first and in so doing get speakers to adjust appropriately. So if what is most important is shadowing new input, continually until integrated, then the problem becomes getting that new input to present itself often enough to be shadowed and integrated. Teachers will need to construct classroom formats such that this recycling is possible (Murphey, in press. See also Krashen's idea of "narrow reading" 1985, Cho and Krashen 1994, and Krashen's "narrow listening" in progress).

I would hypothesize that low-level students would benefit from complete shadowing longer, while intermediate and advanced students could move faster through selective shadowing and into interactive shadowing. It could be that the stage one type of complete shadowing may be useful at the beginning of conversations (to show one's cards) or when speakers begin to speak too quickly at any time during a conversation, used as a management tool. The three types are thus choices that one can make in order to manage communication

interactively at different times in one's development or within one conversation. I suspect that a certain degree of automacy of selective shadowing would be desirable in most situations.

As my understanding of shadowing is now, I believe for the technique to be maximally effective, certain training tasks could be used for turning on the brain in class and the three phases of CS could be exercised for eventual out of class use, as noted below:

Related Pedagogical Shadowing Tasks

(for getting used to doing it, for turning on and experimenting with the brain). Examples:

- a. **Lecture shadowing** (silently inside the head) of teachers & other speakers. (Also possibly out loud with radio & video.)
- b. **Pair reading shadowing**, out loud-for getting partners to adjust.
- C. **Song shadowing**, repeating as a background chorus would.

N.B. These forms of shadowing could also span the continuum from COMPLETE to SELECTIVE shadowing. Note also that the first may be done by some students unconsciously and the last is done by a lot of natives naturally.

Conversation shadowing (CS)

I. **COMPLETE** shadowing (out loud — for negotiating speaker speed)

II. **SELECTIVE** shadowing (key words/problems out loud)

III. **INTERACTIVE** shadowing (May briefly include COMPLETE, regularly includes SELECTIVE shadowing plus INTERACTIVE ingredients such as questioning, commenting, reversing roles of leader and shadower. Meaning-based.)

The kinds of questions and action research that would be interesting to look at with actual recordings and transcripts when possible are:

1. What is happening when NNSs shadow each other?
2. What happens when NNS selectively shadow NSs who know nothing about shadowing?
3. What are the advantages and disadvantages of shadowing Vs being shadowed?
4. How can one effectively teach complete shadowing, and then selective and interactive shadowing?
5. How much practice is necessary before it becomes an automatic strategy?

6. What are the different contexts in which different forms of shadowing might be useful for learning and for discourse management?

A research project with twenty students has just been completed that looks at several of these questions. It involved students making their own recordings with unknowing subjects whom they shadowed first completely, then selectively and interactively. Preliminary results suggest that this may be an appropriate sequence for low-level students, but that higher-level students are greatly disturbed by the complete shadowing, as it breaks Grice's maxims of conversation relevance and amount (Murphey in progress).

6. CONCLUSION

More subjects need to be recorded before we can clearly understand the varieties of CS. It could be that the two NNSs in this study are not at extremes and others will show even more interesting results. And at the same time it is quite probable that even the same subjects would give quite different results with different instructions on the part of the researcher.

Shadowing is simple, easy to teach, and easy to do. When NNSs shadow, it gives them double the echo-time, slows down the NSs, and shows the NSs where problematic areas are. When the NSs shadow, it allows them to check comprehension, offer alternative interlanguage forms, and give high-quality input to their partners within their zone of proximal development (Vygotsky 1934/1962).

Complete shadowing shows the speaker that language is grasped at the auditory level but does not give evidence of semantic comprehension and involvement. Selective shadowing by targeting key, meaningful words does give this evidence. Commenting and questioning further indicate deeper levels of involvement with the communication. One student of mine likens a conversation with a NS to riding an uncontrollably wild horse. Shadowing allows NNSs to put reins on the horse — giving NNSs more control where they seldom before dreamed they could have it.

In general, quality input is difficult to create without NNS output that directs NS adjustments. Speakers need to know what to adjust to if they are to adjust appropriately. Unless learners dare to "show their cards" (i.e., what their mind is registering) and experiment with what they have (the output hypothesis), their partners will not have the necessary information to adjust their input (the input hypothesis). Egocentric speech in children makes them "show their cards" and their interlocutors can respond with adjusted input. Older learners may be slowed down learning a new language because of their ability to hide their competence in inner-speech, and thus interlocutors have trouble adjusting to them.

Adjustment in interaction is the bridge between the output and input hypotheses, and shadowing is possibly the two-way traffic that can carry what is needed to each participant so they can get on with business. Sending merchandise across the bridge without knowing what is needed on the other side is risky business. Expecting the other side to send you what you need without them knowing what you've got is simply wishful thinking.

NOTES

I would like to thank the following people for commenting on earlier drafts of this paper: Bill Acton, Charles Adamson, Mohammed Ahmed, Dick Allwright, François Grosjean, Stephen Krashen, Yuki Mizuta, Paul Nation, Jim Nord, David Nunan, Bernard Py, Tadashi Sakamoto, Tsuyoshi Sasaki, and Ed Skrzyczak. I would also like to thank my students who have courageously experimented with shadowing in many forms in this action research and have taught me so much through their valuable feedback.

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