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AN EXPERIMENTAL ANALYSIS OF FACILITATED COMMUNICATION

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We evaluated the authorship of messages produced through facilitated communication by 7 adults with moderate or severe mental retardation and their facilitators. The clients had been reported to be communicating fluently through facilitated communication. We controlled the facilitators' access to information to be communicated in two evaluation formats, naming pictures and describing activities. In both formats we conducted three conditions: (a) the facilitator and client had access to the same information, (b) the facilitator did not have access to the picture or activity, and (c) the facilitator was given false information about the picture or activity. The results showed that the clients typed the correct answer only when the facilitator had access to the same information, never typed the correct answer when the facilitator had no information or false information, and typed the picture or activity presented to the facilitator when it was different from the one experienced by the client. These results provide unequivocal evidence for facilitator control of typing during facilitated communication.

DESCRIPTORS: facilitated communication, mentally retarded adults, control, communication

Facilitated communication is a procedure in which a facilitator uses some degree of physical assistance to help a client spell out messages by touching letters on a letter display (Biklen, 1990). The facilitator typically supports the hand of the client as the client uses his or her index finger to point to letters on a letter board or to touch keys on an electronic keyboard. The facilitator can be a professional, paraprofessional, or parent, and the client is a nonspeaking person with autism or other developmental disability. According to Biklen and others (Biklen, 1990, 1992, 1993a; Biklen & Schubert, 1991; Crossley, 1992), the use of facilitated communication has produced unexpected literacy in individuals previously thought to be seriously intellectually impaired. Biklen maintains that individuals with autism suffer from a neurological disorder called dyspraxia, which interferes with the production of speech, and that facilitated communication allows autistic individuals to overcome this condition and communicate at a level that suggests that they are not intellectually impaired. Although facilitated communication was developed for individuals with autism, it is widely used with individuals with other developmental disabilities (e.g., mental retardation).

Subsequent to the introduction of facilitated communication, a number of researchers published papers questioning the validity of the procedure (e.g., Cummins & Prior, 1992; Dillon, 1993; Green, 1993; Green & Shane, 1993, 1994; Jacobson & Mulick, 1992; Mulick, Jacobson, & Kobe, 1992; Prior & Cummins, 1992; Thompson, 1993). These authors maintained that Biklen and other proponents of facilitated communication had provided no experimental proof of unexpected literacy and that facilitator control of the typing was the most plausible explanation for the messages typed during facilitated communication sessions. Following the publication of these criticisms, a number of researchers published experimental studies that demonstrated facilitator

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control of the typing in facilitated communication (for a review, see Green, 1994).

Wheeler, Jacobson, Paglieri, and Schwartz (1993) conducted a study in which clients, who had reportedly demonstrated unexpected literacy through the use of facilitated communication, were shown pictures and asked to type the names of the pictures using facilitated communication. Wheeler et al. manipulated the facilitator's access to the pictures to be identified by the client by using a T-screen apparatus that allowed them to show different pictures to the client and the facilitator. Wheeler et al. demonstrated that (a) the client–facilitator pair typed the name of the picture correctly only when the facilitator was shown the same picture, (b) the pair never typed the name of the picture correctly when the facilitator was not shown the same picture, and (c) when the facilitator was shown a picture that was not the same as the picture shown to the client, the pair typed the name of the picture shown to the facilitator. These results suggested strongly that the facilitators controlled the typing and that the clients demonstrated no unexpected literacy.

A number of other studies, using different methodologies, produced similar findings. In each study, the researchers controlled the facilitator's access to information to be typed by the client during facilitated communication sessions (e.g., Hudson, Melita, & Arnold, 1993; Moore, Donovan, & Hudson, 1993; Moore, Donovan, Hudson, Dykstra, & Lawrence, 1993; Regal, Rooney, & Wandas, 1994; Simon, Toll, & Whitehair, 1994; Vazquez, 1994). Across three types of evaluation formats (naming pictures, answering questions, and describing activities), results show that it is rare for the client to produce correct information when the facilitator does not also have access to the information, and that when the client and facilitator have different information, the information presented to the facilitator is typed during the session.

Although a growing body of experimental research casts grave doubts about the validity of facilitated communication (e.g., Green & Shane, 1994), Biklen and others have criticized these experimental evaluations (e.g., Biklen, 1993b, 1993c; Crossley, 1993; Duchan, 1993). Biklen (1993b) claims that (a) experimental arrangements cause clients to become anxious or resistant in facilitated communication sessions, thus impairing their performance; (b) testing destroys the rapport and trusting relationship between the client and facilitator, which also impairs performance; (c) facilitators were not adequately trained in experimental studies; (d) clients had not been in facilitated communication training long enough to be tested; and (e) the autistic subjects in experimental studies had word-finding difficulties (aphasia) and, therefore, that naming pictures or activities is not a valid way to evaluate facilitated communication. Although Green (1994) argued that the criticisms leveled by Biklen and others are baseless and lacking in validity themselves, these criticisms are embraced by facilitated communication users who reject the results of experimental research.

The purpose of this study was to evaluate further the possibility of facilitator influence during facilitated communication while addressing a number of the issues raised by Biklen. We used evaluation formats involving naming pictures and describing activities. We chose the activity format because it is the most naturalistic evaluation of facilitated communication. Clients often describe previous activities or experiences during facilitated communication sessions. We chose the picture format as a direct replication of Wheeler et al. (1993) and for comparison with the activity format, which involved a more complex response. We addressed concerns raised by Biklen in the following ways. First, we used client–facilitator pairs, referred by a local service provider, who were reported to be their most accomplished facilitated communication users. All were reported to be producing conversational communication through facilitated communication. Second, a baseline condition was always conducted first to establish successful communication through facilitat-

Table 1
Description of Clients

Subject	Age	Gender	Level of mental retardation	Prior expressive language	Type of facilitated communication
Molly	41	F	moderate	touch talker, signs	sentences
Bob	52	M	severe	signs, pictures, words	sentences
Kirk	23	M	not specified (autistic)	signs, vocalizations	sentences
Kelli	29	M	severe	signs, pictures, sounds	sentences
Brad	23	M	severe	words	sentences
Darren	20	M	severe	signs, words	verb-noun phrases
Cindy	21	F	severe	pictures, signs, words	sentences

ed communication and to rule out word-finding problems. Third, in the activity condition, the clients did not have to name an object, but rather described an activity. Therefore, word finding was not an issue in this evaluation format. Fourth, we measured anxiety behaviors and escape behaviors in every experimental session. If any client exhibited anxiety or escape behaviors, the experimental trial was terminated and data were not used from that session. Fifth, all sessions were conducted in their usual locations, at the usual times, with the established facilitators. Sixth, any time that the facilitator was not comfortable for any reason, the facilitator could terminate an experimental trial. By developing the methodology of the present study to address concerns raised by Biklen, we hoped the results would be more acceptable to proponents of facilitated communication.

METHOD

Participants

Subjects were 7 client–facilitator pairs from an eastern North Dakota agency that provides residential and day services for individuals with mental retardation. The study began with 8 client–facilitator pairs, but one was dropped because it was not possible to ensure control of the experimental manipulation in the residential setting in which facilitated communication sessions were conducted. The clients were adults diagnosed with moderate or severe mental retardation. However, in the past year, several of the clients had their diagnoses changed to "developmental disorder not otherwise specified" as a result of their participation in facilitated communication. Secondary diagnoses included cerebral palsy, epilepsy, autism, attention deficit hyperactivity disorder, or pervasive developmental disorder. Table 1 provides a description of the clients.

Personnel from the agency recommended client–facilitator pairs who had reportedly been producing open-ended conversation during facilitated communication. The communication produced ranged from simple verb–noun phrases for Darren (e.g., "ate pizza") to full sentences for the other 6 subjects (e.g., "I had pizza this weekend"). Clients had been using facilitated communication for 6 to 18 months. All clients received physical assistance from their facilitator via the wrist or hand. Each client was paired with 1 familiar facilitator for all trials. Two of the facilitators worked with 2 clients each, for a total of 5 facilitators (see Table 2 for a description of the facilitators). The primary investigator interviewed the potential pairs and procured demographic information and informed consent from clients, guardians, and facilitators.

Materials and Settings

Experimental sessions were conducted in the client–facilitator pairs' normal setting (day program or group home) and at the usual time of day in an effort to reduce the potential for anxiety or other negative reactions to the experi-

Table 2
Description of Facilitators

Subject	Age	Gender	Level of education	Type of facilitated communication training	Experience[a]	Experience with clients[b]
Morgan	30	F	BS	workshop/videos	2	1
Roberta	31	F	BSW	workshop/direct training	5.5	4.5
						4.5
Rachel	31	F	MA	workshop/direct training	2	1.5
						1.5
Louise	34	F	AA	in-house training	5	3
Carol	24	F	BS	workshop	3.5	1.5

[a] Number of years worked in developmental disabilities.
[b] Number of years worked with client(s).

mental trials. Through self-report and staff input in individual interviews, activities familiar to the client and familiar pictorial stimuli from prior facilitated communication training were chosen for use in the experimental trials. Twelve to 24 activities and 24 picture cards were chosen for each client.

In the activity format, the facilitator was asked to leave the experimental area so that she was blind to the activity. In the picture identification format, a T screen (75 cm high) was used to present separate picture cards to the client and the facilitator. As they sat in front of the screen, they could each see the card presented on their side but could not see the card presented to their partner on the other side (Wheeler et al., 1993). When trials were run in the residential setting, manila folders were used to show the pictures separately to the client and the facilitator. The picture was placed on one side of the folder and shown to the client. Because the folder was opened at a 90° angle, the facilitator was blocked from seeing the picture. When a separate picture was shown to the facilitator, the manila folder blocked the client's view. The T screen was not used in the residential setting because it was difficult to transport and could not be used easily. Individualized alphabet boards provided by the facilitators were used during the sessions. A videocamera was used to record all sessions.

Experimental Design

The experiment employed a within-subject reversal design that replicated three experimental conditions: known, unknown, and false information. The order of the three conditions was randomly determined, except that in order to establish a baseline for the pair, the first condition was always the known condition. Four experimental trials were conducted in each condition.

Procedure

Experimental sessions were scheduled weekly in an attempt to become a normal part of the client's routine. Client–facilitator pairs were arranged as they normally were, usually sitting next to each other. Research assistants spent time with the client–facilitator pairs before experimental sessions to allow the participants to become accustomed to them and the equipment (usually one session). Each experimental trial consisted of a question posed to the client. Experimental trials were embedded into normal facilitated communication sessions.

The basic experimental manipulation involved control of the facilitator's access to the information about an activity or a picture that was to be communicated in each experimental trial. When asked to identify the picture or describe the activity, the client typed a message on the alphabet board with the assistance of the

facilitator. Three experimental conditions were used: (a) known (the facilitator had knowledge of the activity or picture), (b) unknown (the facilitator did not have knowledge of the activity or picture), and c) false information (the facilitator was given false information about the activity or picture). The activities and pictures were randomly selected with replacement for each trial. If the client signed, gestured, or verbalized the name of the picture or activity before the answer was typed, the trial was terminated and messages typed during that trial were not included in the results. The exception was when the sign, gesture, or verbalization was not observed by the facilitator.

Activity format. In a separate room, the client engaged in a familiar activity for approximately 5 min with the research assistant. Examples of activities included drinking coffee, looking at a magazine, eating soda crackers, playing cards, and putting together a puzzle. During the activity, the research assistant described the activity a minimum of five times to ensure that the description of the activity was salient for the client. Immediately following the activity, and out of hearing of the client, the researcher either told the facilitator what the activity was (known), provided no information about the activity (unknown), or told the facilitator about an activity that did not happen (false information). The session then commenced, and the facilitator embedded the experimental trials within the normal routine. The experimental trial consisted of asking the client what activity he or she had engaged in with the research assistant. There were no time limits on the sessions. The number of activity trials in each session varied for each pair (from 2 to 12) depending on how quickly they completed the trials.

Picture format. During the experimental trials, separate picture cards were placed on each side of the T screen for the client and facilitator, or the pictures were shown separately to the client and facilitator using a manila folder. During the session, the facilitator asked the client to type what picture he or she had seen. There were no time limits on the sessions. In the known condition, the pictures presented to the client and facilitator were identical. In the unknown condition, a picture was presented to the client only. In the false condition, the pictures presented to the client and facilitator were different. Two to four picture trials were conducted in each session.

Target Behaviors, Recording, and Reliability

The primary target behavior was the communication output produced during the experimental trial (the name of the picture or description of the activity). During the trials, the facilitator determined when the client had completed his or her answer to the question and verbally reported it to the research assistant. The research assistant recorded the reported response. The facilitator's report was used as the dependent variable because no electronic devices with permanent products of typing were used by the participants. Although the facilitators were free to interpret words that were spelled incorrectly, facilitators' reports were used as the dependent variable, because that is the standard practice in sessions conducted without electronic devices.

Escape or avoidance and anxiety behaviors were recorded in each session. Escape or avoidance behavior was defined as turning away from the alphabet board, pushing the board or the facilitator away, getting up or leaving the session, aggressive behavior toward the facilitator, saying or signing "no" or other refusal to participate, or engaging in screaming or other disruptive behavior. Anxiety behaviors were defined as grimacing, shallow or rapid breathing, crying, repetitive nonpurposeful verbalizations, or repetitive nonpurposeful movement. An individualized list of possible escape or avoidance behaviors and anxiety behaviors was developed for each subject. The research assistant recorded the frequency of escape or avoidance and anxiety behaviors in each session.

Table 3
Postexperimental Questionnaire Completed by Facilitators

1. How well do you think your client did when both of you saw the same picture?										
	0%		25%		50%		75%		100%	M = 82.1% (range, 50 to 100%)
2. How well do you think your client did when you could not see the picture he or she was looking at?										
	0%		25%		50%		75%		100%	M = 67.9% (range, 25 to 100%)
3. How well do you think your client did when you each saw a different picture?										
	0%		25%		50%		75%		100%	M = 60.7% (range, 25 to 100%)
4. How well do you think your client did overall with pictures?										
	0%		25%		50%		75%		100%	M = 71.4% (range, 25 to 100%)
5. How well do you think your client did when you knew what activity he or she did?										
	0%		25%		50%		75%		100%	M = 78.6% (range, 50 to 100%)
6. How well do you think your client did when you were not told about the activity?										
	0%		25%		50%		75%		100%	M = 64.3% (range, 25 to 100%)
7. How well do you think your client did when you were told about one activity, but he or she did another?										
	0%		25%		50%		75%		100%	M = 57.1% (range, 25 to 100%)
8. How well do you think your client did overall with activities?										
	0%		25%		50%		75%		100%	M = 57.1% (range, 25 to 100%)
9. How much influence do you think you had in the answers?										
	total client				equal				total facilitator	
	1	2	3	4	5	6	7	8	9	M = 3.4 (range, 1 to 6)

Sessions were videotaped to assess interobserver agreement. Two observers independently recorded the communication output and the frequency of escape or avoidance and anxiety behaviors from the tape on 25% of the experimental trials. Agreements on communication output were scored when the two observers recorded the same response. Disagreements were recorded when the observers recorded different responses or when one observer failed to record a response recorded by the other observer. Percentage of interobserver agreement was calculated by dividing agreements by the sum of agreements and disagreements and multiplying by 100%. Percentage of interobserver agreement on escape or avoidance and anxiety behaviors was calculated by dividing the smaller frequency by the larger frequency of each identified behavior and multiplying by 100%. Interobserver agreement was 100% for all target behaviors.

When the experiment was completed but before the results were communicated to the facilitators, the facilitators completed a questionnaire that assessed the degree to which they believed that they influenced the communication during facilitated communication sessions. The questions and answers are listed in Table 3.

RESULTS

The percentage of correct responses for the three conditions (known, unknown, false) in the picture format and the order of conditions for each client–facilitator pair are presented in Figure 1. The percentage of correct responses was high for all clients in the known condition and was at or near zero in the unknown and

Subject	Condition					
	Known	Unknown	False	False	Known	Unknown
Molly Facilitator	75	0	0 100*	0 100	100	0
	Known	Unknown	False	False		
Bob Facilitator	75	0	0 75	0 25		
	Known	Unknown	False	Known	False	Unknown
Kirk Facilitator	100	0	0 75	75	0 75	0
	Known	False	Unknown	False	Known	Unknown
Kelli Facilitator	50	0 75	0	0 75	100	0
	Known	Unknown	False	Unknown	False	Known
Brad Facilitator	75	0	0 100	0	0 100	100
	Known	False	Unknown	False	Known	Unknown
Darren Facilitator	100	0 50	0	0 50	50	0
	Known	False	Unknown	Unknown	Known	False
Cindy Facilitator	75	0 25	0	0	0	25 0

Figure 1. Percentage of correct responses across conditions in picture format trials for each subject. The asterisk indicates the percentage of trials in which the facilitator typed the name of the picture seen by the facilitator when it was not the same as the one seen by the subject.

false conditions. Conversely, all facilitators had a high percentage of correct responses in the false condition (the pair typed the word for the picture seen by the facilitator). Across the 7 subjects, the mean percentage of correct responses in the known condition was 75%, and in the unknown and false conditions the mean percentage was 0% and 1.8%, respectively. In 66% of the trials for the false condition, the subjects typed the picture seen by the facilitator. Only 1 of the 7 subjects had any correct answers in the unknown or false conditions. Cindy had one correct answer in the false condition. Six of the 7 clients signed or verbalized the name of the picture in 45 trials.

Results in the activity format mirrored those in the picture format for all 7 pairs (Figure 2). In the known condition, the answers were most often correct. In the unknown and false conditions, the answers were always incorrect. In the false conditions, the pair frequently typed the activity told to the facilitator. Across the 7 subjects, the mean percentage of correct responses in the known condition was 87%, and in the unknown and false conditions the mean percentage was 0%. In 80% of the false con-

Subject	Condition					
	Known	Unknown	False	Unknown	False	Known
Molly Facilitator	100	0	0 100*	0	0 100	100
	Known	Unknown	False	False		
Bob Facilitator	100	0	0 75	0 100		
	Known	False	Unknown	Unknown	False	Known
Kirk Facilitator	100	0 100	0	0	0 75	75
	Known	Unknown	False	Known	Unknown	False
Kelli Facilitator	75	0	25	50	0	0 75
	Known	Unknown	False	Known	Unknown	False
Brad Facilitator	75	0	0 100	100	0	0 100
	Known	Unknown	False	Unknown	False	Known
Darren Facilitator	100	0	0 75	0	0 75	100
	Known	Unknown	False	False	Known	Unknown
Cindy Facilitator	100	0	0 75	0 50	50	0

Figure 2. Percentage of correct responses across conditions in activity format trials for each subject. The asterisk indicates the percentage of trials in which the facilitator typed the activity told to the facilitator when it was not the same activity experienced by the subject.

dition trials, the client typed the activity that was correct for the facilitator. Five of the 7 clients signed or verbalized the name of the activity in 13 of the trials.

We analyzed the error pattern for each subject to determine whether incorrect answers were comprised of complete words, no responses, or uninterpretable typing. We found that, across subjects in both formats, 90% of incorrect answers were complete words and 10% were wholly or partly uninterpretable.

During 18% of the experimental trials across conditions, 6 of the 7 subjects used some other form of communication to identify the pictures or activities. The communication forms included signing, verbalizing, gesturing, and pointing. For example, one client pointed to the telephone in the room when she saw a picture of a telephone. Another patted the top of her head when she saw a picture of a hat. Others signed or said the name of picture or activity they had just experienced. Of the trials with alternative communication forms, 36% were repeated because the facilitator observed the alternative communication response.

Only 1 client, Brad, displayed anxiety behav-

iors during one of the experimental sessions. Just prior to the session, he had been incontinent and was observed to be mumbling loudly and crying during the session.

All clients appeared to enjoy the sessions, as evidenced by greeting the research assistants with smiles, handshakes, and hugs. Only 2 of the clients displayed escape behaviors. Molly pushed the alphabet board away after taking approximately 10 min to respond in a trial in the activity condition. Kirk displayed escape behaviors by pulling his hand away on two separate occasions during the picture condition. He appeared to be distracted during those two occasions, because he kept saying he wanted pop.

The questionnaire results are presented in Table 3. The results show that the facilitators estimated that the clients performed better when the facilitator had knowledge of the correct answer in the picture and activity formats. However, facilitators also estimated that clients answered correctly more often than not in false and unknown conditions (means of 57% to 71%). Finally, facilitators reported that the clients largely controlled the communication during sessions.

When the results of the study were described to the facilitators and other agency staff, they responded in various ways. The facilitators did not express opinions when debriefed, but their facial expressions suggested disbelief, surprise, or anger. The facilitators' responses may have been muted because the debriefing occurred in the presence of a high-level agency administrator. Some group home staff expressed relief that the results matched their own beliefs about facilitated communication. Others maintained that our results did not apply to their clients and expressed concern that the agency would terminate the use of facilitated communication. An agency administrator reported that facilitated communication was being used less frequently as a result of the findings from our study.

DISCUSSION

Three main conclusions were drawn from the results of this study. First, consistent with prior research (e.g., Green, 1994), no communication came from the client through facilitated communication. If the clients had been authoring the messages, a high percentage of correct responses would have occurred across all three conditions. The results cannot be explained by hypothesizing that clients did not recognize the pictures, did not remember the activity, or had word-finding difficulties. Several clients communicated, either through sign language, gestures, or spoken words, what they had seen or done. In fact, they accurately named or signed the pictures and activities on many occasions (18% of the trials).

The second conclusion is that the facilitators controlled the typing. This is also consistent with prior research (Green, 1994). The primary evidence for facilitator control is 66% and 80% of correct responses for the facilitator in the false condition. The picture or activity that was typed through facilitated communication matched what was made available to the facilitator and not what was seen by the client. However, all facilitators indicated a belief that the client was authoring the messages.

Regarding the issue of facilitator control, it is interesting to note that there was a 23% refusal rate to answer in the unknown condition compared to refusal rates of 3% and 7% in the known and false conditions. Also, in the unknown condition, in which the facilitator did not have knowledge of the picture or activity, it took longer for most pairs to respond than it did in the other two conditions. The higher refusal rate and longer latency to respond could not have been influenced by the client, because all three conditions were indiscriminable to the client.

A third conclusion is that anxiety and avoidance behaviors were ruled out as possible explanations for the failure to find facilitated communication to be a valid means of communi-

cation for these adults with mental retardation. Only three of 320 trials (1%) were terminated because of escape or avoidance behavior. Only 1 client exhibited anxiety behavior on one occasion (0.3%). In addition, the high percentage correct during the known condition (baseline) ruled out anxiety or resistance as a cause for poor responding in other conditions, given that conditions were indiscriminable to the client.

The fourth conclusion is that there was no difference in responses to the activity and picture scenarios. This suggests that the clients had no ability to spell the names for pictures of common objects or the descriptions of familiar activities. However, 6 of the 7 clients used sign language, gestures, or speech to identify several of the pictures and activities.

A number of problems were encountered with the implementation of experimental trials. It was more difficult to establish and maintain experimental control of the activity format, because this procedure required the facilitator to be out of the area while the activity occurred. In addition, requiring the research assistant to name the activity five times during the session required that the room be soundproof or that the facilitator be out of hearing distance. One client–facilitator pair was dropped from the study because we could not reliably shield the facilitator from auditory (and sometimes visual) contact with the client during the activity.

A second problem, previously mentioned, was that some clients used another means of communication to identify the picture or activity. Research assistants had to observe closely to see if clients used gestures, sign language, or speech, and trials had to be repeated when the client's communication could have influenced the facilitator.

A final area of concern was how to explain the occurrence of the one correct answer in the false condition. It is possible that an event in that experimental trial contributed to this correct answer. During the previous trial, the client had grabbed the facilitator's picture so the research assistant dropped that trial and went on to the next one. In randomly determining the order of pictures with replacement, the next picture the client saw just happened to be the same one the facilitator had seen in the previous trial. Therefore, it is not clear in this case whether the communication was authored by the client or influenced by the facilitator. Equally plausible is that the answer was typed correctly by the facilitator by chance.

These results and the results of previous studies have a compelling implication. The experimental data strongly suggest that facilitated communication is not a valid means of augmenting communication, and therefore, should not be used. The data are unequivocal in this regard, yet facilitated communication continues to be disseminated and implemented widely. For those continuing to use facilitated communication, these and previous findings also have implications.

First, every communication produced through facilitated communication should be verified through another means such as verbalizations or sign language (e.g., Sundberg, 1993), or validation procedures used in experimental studies should be implemented to determine authorship of messages with current facilitated communication users. If a second facilitator is brought in for validation, as suggested by Biklen (1993b), it is imperative that the facilitator not have access to information regarding the previous communication (Borthwick, Morton, Biklen, & Crossley, 1992).

The second implication for those who are currently using facilitated communication is informed consent. In light of the lack of research support for facilitated communication, it would be prudent to treat facilitated communication as an experimental procedure. Thus, the client and legal guardian should be informed of the inherent risk of influence associated with facilitated communication. It would also be advisable for any agency permitting the use of facilitated communication to have a protocol specifically for its use.

The third implication for those who are us-

ing facilitated communication is that frequently, when it is used along with other forms of communication, only the facilitated communication is considered valid. Given the research findings, it is imperative that existing avenues of communication not be ignored in favor of communication produced through facilitated communication.

The fourth implication is a benefit that has accrued to the users of facilitated communication. Persons with disabilities have, some for the first time, been treated with dignity and respect because caregivers and family now believe that, with facilitated communication, they have more normal intelligence. If an individual's treatment team should choose, as a result of experimental research, to discontinue the use of facilitated communication, they should not abandon other means of augmented communication. In addition, agencies must ensure that staff members continue to treat individuals with dignity and respect in the absence of facilitated communication.

REFERENCES

Biklen, D. (1990). Communication unbound: Autism and praxis. *Harvard Educational Review, 60,* 291–315.

Biklen, D. (1992, January). Typing to talk: Facilitated communication. *American Journal of Speech and Language Pathology,* pp. 15–17.

Biklen, D. (1993a). *Communication unbound: How facilitated communication is challenging traditional views of autism and ability-disability.* New York: Teachers College Press.

Biklen, D. (1993b). Notes on validation studies of facilitated communication. *Facilitated Communication in Maine, 2,* 2–4.

Biklen, D. (1993c). Questions and answers about facilitated communication. *Facilitated Communication Digest, 2,* 10–14.

Biklen, D., & Schubert, A. (1991). New words: The communication of students with autism. *Remedial and Special Education, 12,* 46–57.

Borthwick, C., Morton, M., Biklen, D., & Crossley, R. (1992). Severe communication impairment, facilitated communication, and disclosures of abuse. In M. Shevin & L. Toutges (Eds.), *Facilitated communication: Advanced topics* (pp. 81–89). Fargo, ND: Friendship Incorporated.

Crossley, R. (1992). Getting the words out: Case studies in facilitated communication training. *Topics in Language Disorders, 12,* 46–59.

Crossley, R. (1993). Facilitated communication: Some further thoughts. *Communicating Together, 11,* 14–16.

Cummins, R. A., & Prior, M. P. (1992). Autism and assisted communication: A response to Biklen. *Harvard Educational Review, 62,* 228–241.

Dillon, K. M. (1993). Facilitated communication, autism, and ouija. *Skeptical Inquirer, 17,* 281–287.

Duchan, J. F. (1993). Issues raised by facilitated communication for theorizing and research on autism. *Journal of Speech and Hearing Research, 36,* 1108–1119.

Green, G. (1993). Response to "What is the balance of proof for or against facilitated communication?" *AAMR News & Notes, 6*(3), 5.

Green, G. (1994). The quality of the evidence. In H. C. Shane (Ed.), *Facilitated communication: The clinical and social phenomenon* (pp. 157–225). San Diego: Singular Press.

Green, G., & Shane, H. C. (1993). Facilitated communication: The claims vs. the evidence. *Harvard Mental Health Letter, 10,* 4–5.

Green, G., & Shane, H. C. (1994). Science, reason, and facilitated communication. *Journal of the Association for Persons with Severe Handicaps, 19,* 151–172.

Hudson, A., Melita, B., & Arnold, N. (1993). Assessing the validity of facilitated communication: A case study. *Journal of Autism and Developmental Disorders, 1,* 165–173.

Jacobson, J. W., & Mulick, J. A. (1992). Speak for yourself, or . . . I can't quite put my finger on it! *Psychology in Mental Retardation and Developmental Disabilities, 17,* 3–7.

Moore, S., Donovan, B., & Hudson, A. (1993). Facilitator-suggested conversational evaluation of facilitated communication. *Journal of Autism and Developmental Disorders, 23,* 541–551.

Moore, S., Donovan, B., Hudson, A., Dykstra, J., & Lawrence, J. (1993). Evaluation of facilitated communication: Eight case studies. *Journal of Autism and Developmental Disorders, 23,* 531–539.

Mulick, J. A., Jacobson, J. W., & Kobe, R. H. (1992). Anguished silence and helping hands: Miracles in autism with facilitated communication. *Skeptical Inquirer, 17,* 270–280.

Prior, M., & Cummins, R. (1992). Questions about facilitated communication and autism. *Journal of Autism and Developmental Disorders, 22,* 331–337.

Regal, R. A., Rooney, J. R., & Wandas, T. (1994). Facilitated communication: An experimental evaluation. *Journal of Autism and Developmental Disorders, 24,* 345–355.

Simon, E. W., Toll, D. M., & Whitehair, P. M. (1994). A naturalistic approach to the validation of facilitated communication. *Journal of Autism and Developmental Disorders, 24,* 647–657.

Sundberg, M. L. (1993). Selecting a response form for nonverbal persons: Facilitated communication, point-

ing systems, or sign language? *The Analysis of Verbal Behavior, 11,* 99–116.

Thompson, T. (1993). A reign of error: Facilitated communication. *Kennedy Center News, 22,* 3–5.

Vazquez, C. (1994). A multi-task controlled evaluation of facilitated communication. *Journal of Autism and Developmental Disorders, 24,* 369–379.

Wheeler, D. L., Jacobson, J. W., Paglieri, R. A., & Schwartz, A. A. (1993). An experimental assessment of facilitated communication. *Mental Retardation, 31,* 49–60.

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