

## Research Report

### FACILITATED COMMUNICATION AS AN IDEOMOTOR RESPONSE

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**Abstract**—Forty college students were taught facilitated communication via a commercially available training videotape. They were then asked to facilitate the communication of a confederate, who was described as developmentally disabled and unable to speak. All 40 participants produced responses that they attributed at least partially to the confederate, and most attributed all of the communication entirely to her. Eighty-nine percent produced responses corresponding to information they had received, most of which was unknown to the confederate. Responding was significantly correlated with simple ideomotor responses with a pendulum and was not affected by information about the controversy surrounding facilitated communication. These data support the hypothesis that facilitated communication is an instance of automatic writing, akin to that observed in hypnosis and with Ouija boards, and that the ability to produce automatic writing is more common than previously thought.

In an article published in the *Harvard Education Review*, Biklen (1990) contended that persons with autism and other developmental disabilities are capable of unexpected literacy and advanced communication skills when their efforts are “facilitated” by the provision of physical support to a hand, wrist, or arm held over an alphabetic keyboard or facsimile. Subsequently, research (reviewed in Jacobson, Mulick, & Schwartz, 1995) revealed that the facilitator, rather than the participant, is responsible for the content of the communication. The facilitator’s access to information affects the manner and extent to which communication occurs, and when different information is provided to the facilitator than to the person being facilitated, the resulting communication is consistent with the information that was presented to the facilitator (Bligh & Kupperman, 1993; Green, Chellquist, Krendel-Ames, Ross, & MacDonald, 1993; Hudson, Melita, & Arnold, 1993; Kallstrom, Piazza, Hunt, & Owen, 1993; Shane & Kearns, 1994).

Facilitators do not appear to be aware that the communications are coming from them, rather than from the persons whose communication they are attempting to facilitate. This observation led us to wonder how facilitators are able to produce complex communications without being aware that they are doing so. Facilitated communication can be classified as an automatism. Automatism is an action that is normally considered voluntary, but that is performed without the feeling that one is doing something. Other automatisms include the Chevreul pendulum illusion; table turning, tilting, and tapping; dowsing; Ouija board spelling; and automatic writing (Ansfield & Wegner, 1996; Spitz, 1997). Of these, facilitated communication seems most similar to automatic writing and Ouija board spelling. Each of these actions

results in complex written or spelled-out communications that are produced without apparent awareness of authorship.

Automatic writing has been observed in connection with spiritualism and in response to hypnotic suggestion (Hilgard, 1986). In both situations, it is considered a relatively rare phenomenon that can be observed in 10% to 30% of the population (Hilgard, 1986). However, most people who take workshops in facilitated communication appear able to learn to facilitate. This fact suggested to us that with sufficient motivation and a convincing rationale, most people might be able to produce automatic writing.

The purpose of this study was to investigate facilitated communication as an automatism. We wished to determine the frequency with which it could be taught, the effect of its credibility on its production, and its relation to more simple automatisms. To accomplish these goals, we used a commercially available training videotape to teach college students to facilitate and then asked them to facilitate the communication of a confederate, who was described as developmentally disabled and unable to speak.

#### METHOD

##### Training Session

Forty male and female undergraduate students volunteered to participate in the experiment for course credit. Participants were given a brief introduction that described facilitated communication as a method used to help autistic and other disabled individuals communicate through typing. They were informed that they would be viewing a videotape designed to train them in the use of this technique, and that afterward they would have an opportunity to practice facilitation with an individual who had a learning disability that prevented her from communicating verbally. They were told that the purpose of the study was to assess the effectiveness of the training tape in imparting facilitation skills. They then viewed two videotapes that they were told would teach them the facilitated communication technique.

The first videotape included a 5-min introduction obtained from an episode of the television program “Frontline” (Palfreman, 1993). In this introduction, facilitated communication is presented in a positive light as a revolutionary new technique that enables autistic individuals to communicate with the help of facilitators who assist them by supporting the hand or arm while communications are typed on a keyboard. Participants were randomly assigned to either a positive- or controversial-information condition, with the restriction that there be an equal number of students ( $n = 20$ ) in each condition. For participants in the controversial-information condition, facilitated communication was introduced as a “controversial technique,” and the tape included an additional 5 min, also taken from the “Frontline” episode, in which the controversy surrounding the technique was discussed. Next, all participants were shown a training videotape produced by Schubert and Biklen (1992) to teach individuals how to become successful facilitators.

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During the training, the confederate was able to observe each participant through a one-way mirror. While the videotape was being played, the first experimenter left the room briefly to learn from the confederate whether she recognized the potential participant. Two potential participants who were recognized by the confederate were told that the disabled individual had not arrived and were excused from further participation.

Following presentation of the videotape, participants answered a questionnaire evaluating the training tape on a series of 10-point scales. The first three questions were filler items concerning how clear and interesting the tape was. Questions 4 and 5 assessed participants' expectations about their ability to facilitate. Question 4 asked how successful they thought they would be, on a scale from 1 (*not at all successful*) to 10 (*very successful*). The final question asked participants to report how confident they were that they would be able to facilitate, on a scale from 1 (*not at all confident*) to 10 (*very confident*). Responses to these two questions were highly correlated ( $r = .86, p < .001$ ), and in subsequent analyses, they were summed to provide a measure of self-efficacy (Bandura, 1977).

After completion of the questionnaire, the experimenter informed participants that they would practice their facilitation skills with "Jackie," a 20-year-old individual who "was born with a number of developmental disabilities, including an inability to speak." Participants were further informed that Jackie had successfully been able to communicate when facilitated by other individuals in the past. In reality, Jackie (a pseudonym) was a normally functioning senior at the University of Connecticut.

Next, participants were given a sheet of paper that they were told contained more information about Jackie. The experimenter asked participants to read over and remember the details, as he would later question Jackie about herself while they helped facilitate her responses. This prefacilitation information included the number of brothers Jackie had, his name (their names), her home town, her favorite food, and her favorite activity. The information provided was different for every participant, and the confederate did not know the details that each had been given.

### Facilitation Session

After the training session, the experimenter escorted the participant to another room, where he or she was introduced to the confederate and seated next to her in front of a computer terminal. The participant was asked to grasp the confederate's hand and forearm and poise them above the keyboard as shown in the training tape. The experimenter stood behind the participant and confederate and asked the confederate the following six questions:

1. What is your name?
2. How many brothers do you have?
3. What is your home town?
4. What is your favorite food?
5. What is your brother's name? (What are your brothers' names?)
6. What is your favorite activity?

The confederate sat passively and stared at the spot on the wall behind the computer screen. She did not look at the keyboard or make eye

contact with the participant at any point during the procedure. Responses were saved as a computer file for subsequent scoring.

### Postfacilitation Assessment

After the facilitation session, participants were taken back to the first experimental room, where they were asked to recall the prefacilitation information they had been given by writing down the number of brothers Jackie had, his name (their names), her home town, her favorite food, and her favorite activity. After this, participants were administered a four-item questionnaire on which they were asked to evaluate the practice session. The first two questions were intended to be filler items asking how interesting and successful the session had been. Questions 3 and 4 asked participants to report from whom they thought the facilitated responses originated. Question 3 asked participants to rate the extent to which the content of the communication came from Jackie, on a scale from 1 (*none of the content came from Jackie*) to 10 (*all of the content came from Jackie*). Question 4 asked participants to rate the extent to which the content of the communication came from themselves, on a scale from 1 (*none of the content came from me*) to 10 (*all of the content came from me*).

Next, ideomotor responsiveness was assessed via the Chevreul pendulum illusion (Easton & Shor, 1976). The stimulus was a pendulum consisting of a metal washer fastened to a 30-cm string. Participants were asked to grasp the end of the string and to hold the pendulum directly above a line on a page that was placed on the desk in front of them. Ideomotor responding was indicated by movement in the direction of the line. The Chevreul pendulum illusion can be produced either by asking people to imagine the pendulum moving in the indicated direction (Easton & Shor, 1976) or by asking them to prevent the pendulum from moving in the desired direction (Ansfield & Wegner, 1996). To obtain the most reliable measure of ideomotor responding, we had students participate in two trials of Chevreul responding, one using each kind of instruction. Cognitive load has been shown to impede Chevreul responding when "imagine" instructions are given (Easton & Shor, 1976) but to enhance responding when "prevent" instructions are given (Ansfield & Wegner, 1996). Therefore, to maximize ideomotor responding, we induced cognitive load (counting backward in sevens) during *prevent* trials, but not during *imagine* trials. For the *imagine* trials, participants were given the following instructions:

I'd like you to imagine the pendulum moving in the direction of the line. Just concentrate on the idea that it will move in the direction of the line. Focus your attention on the pendulum and not on your hand; just ignore your hand. Imagine the pendulum moving back and forth in the direction of the line.

For the *prevent* trials, participants were given the following instructions:

I want you to try and prevent the pendulum from moving in the direction of the line. Just try and keep it still. Focus your attention on the pendulum, and not on your hand. While you're doing this, I'd also like you to count backwards from one thousand, by sevens. Please begin counting backwards by sevens, from one thousand, while preventing the pendulum from moving back and forth in the direction of the line.

Participants were given 30 s for each ideomotor trial. Task order was counterbalanced such that half of the participants within each information condition received the *imagine* trial first, and the remaining half received the *prevent* trial first.

Following each ideomotor task, both the experimenter and the participant reported the latency of the pendulum's movement (i.e., the amount of time it took to move in the direction of the line) and its arc (i.e., the distance of its movement). Latency scores were as follows: (a) 3 = less than 5 s, (b) 2 = longer than 5 s but less than 10 s, (c) 1 = longer than 10 s, and (d) 0 = no movement in that direction. Arc was rated in a similar manner: (a) 3 = movement of at least 4 in. in the direction of the line, (b) 2 = movement of more than 2 in. but less than 4 in. in the direction of the line, (c) 1 = movement of less than 2 in. in the direction of the line, and (d) 0 = no movement in the direction of the line. Ideomotor responding was scored as the sum of the four ratings (*imagine* latency, *imagine* arc, *prevent* latency, and *prevent* arc). Because experimenters' and participants' ratings were highly correlated ( $r = .76, p < .001$ ), they were summed to provide a single measure of ideomotor responding. Internal consistency for this measure of ideomotor responding, as assessed by Cronbach's coefficient alpha, was .84.

Following the Chevreul session, students were thanked for their participation in the study and were debriefed. However, in order to ensure that potential participants remained blind to the purpose of the study, we did not inform any participants that Jackie was actually a confederate until all of them had completed the experiment.

## RESULTS

Responses typed on the computer were scored from printouts by two independent judges who were blind to participants' condition. Judges coded the number of meaningful responses (i.e., responses consisting of recognizable words). Interrater reliability was very high ( $r = .99, p < .001$ ), and differences were resolved through discussion. Analyses of variance did not indicate any significant between-group differences in self-efficacy or in number of facilitated responses. Therefore, the groups were combined for subsequent analyses.

Participants demonstrated a substantial degree of facilitation. The mean number of meaningful facilitated responses was 3.53 out of 6 ( $SD = 2.05$ ), and 89% of the responses corresponded to the information provided to the participant. A frequency distribution of the number of meaningful responses produced by participants in this study is presented in Figure 1. As indicated in the graph, there was a bimodal distribution of response frequency, and all of the participants produced at least one meaningful response. All participants responded to the question "What is your name?" which is not surprising, given that this information was provided not only during the training session, but also when each participant was introduced to the confederate. Unlike the answers to the other questions, the answer to this question was known to the confederate. However, even with this question excluded, 80% of the participants produced responses to questions, and 84% of their responses corresponded to information provided to the participant, but unknown to the confederate.

Participants rated their responding as coming from the confederate ( $M = 7.50, SD = 2.58$ ) more than they rated their responding as coming from themselves ( $M = 2.43, SD = 1.72$ ),  $t(39) = 9.18, p < .001$ . The modal response was that all of the communication came from the confederate and none from the participant. All participants indicated that at least some of the communication came from the confederate, and no participant indicated that all of the communication came from himself or herself. Ninety percent of the participants rated the communication as coming from the confederate more than they rated it as coming from themselves, 5% rated the communication as coming from themselves more than they rated it as coming from the confederate, and the remaining 5% gave equal ratings for themselves and the confederate as

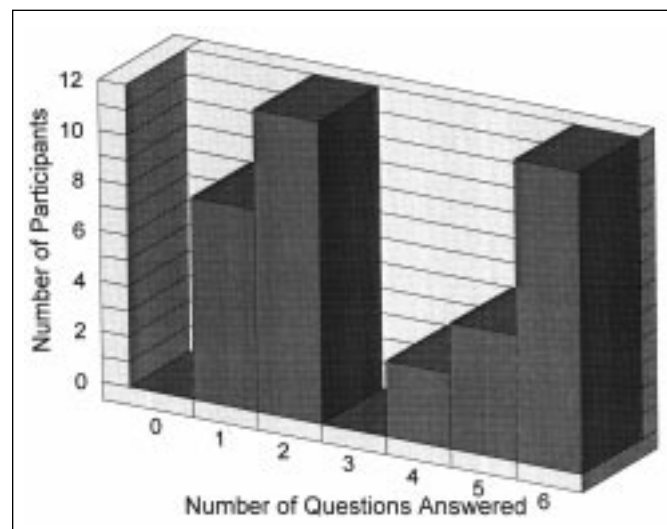
being the source of the information. Thus, participants indicated relatively little awareness of their agency in producing these responses.

After the facilitation session, participants successfully recalled a mean of 4.65 ( $SD = 0.74$ ) of the six items of information about the confederate that had been presented to them prior to the facilitation session. Number of items recalled was correlated positively with the number of correctly facilitated responses ( $r = .34, p < .05$ ) and negatively with the number of incorrectly facilitated responses ( $r = -.39, p < .01$ ) and gibberish responses ( $r = -.50, p < .01$ ). Ideomotor responding on the pendulum was significantly correlated with the number of meaningful responses produced ( $r = .32, p < .05$ ), but not with the number of gibberish responses ( $r = .02$ ).

## DISCUSSION

Perhaps the most impressive aspect of these data is the extent of automatic writing that we obtained. All of the participants produced at least one response. As is the case with professional facilitators, most of the students attributed their responses to the person being facilitated, rather than to themselves. Nevertheless, most of the information contained in the responses was known only to the facilitators. The answer to one of the questions was known to the confederate. Although the possibility that the confederate inadvertently supplied some of these responses cannot be ruled out unequivocally, the procedures she followed render this very unlikely. The confederate was not looking at the keyboard, screen, or participant while questions were answered, and she was in contact with the keyboard physically only when her extended index finger touched a key. Typing comprehensible messages in this manner is likely to exceed the abilities of even the most expert typists. Therefore, it is likely that all of the comprehensible responses were produced by participants, rather than by the confederate. If this is the case, automatic writing was displayed by 100% of the participants.

A more conservative estimate of the rate of participants' ideomotor responding is provided by excluding responses to the question "What is your name?" With this question excluded, 80% of the sample produced comprehensible responses. Some of these responses were dif-



**Fig. 1.** Frequency distribution of the number of questions answered by participants. Numbers on the x-axis refer to the number of questions answered, not to the question numbers.

ferent from the information with which the participants had been provided, and correlational analysis indicated that this discrepancy may have been at least partly due to their failure to remember the information accurately. The most conservative estimate of automatic writing can be obtained by counting only "correct" responses and excluding the question to which the confederate knew the answer. Calculated in this manner, the frequency of automatic writing was 68%.

Our attempt to introduce doubt about the validity of automatic writing did not succeed. Including information about the controversy surrounding facilitated communication did not affect self-efficacy ratings, nor did it affect the number of responses that were produced. In this sense, illusory facilitation appears to be a very robust phenomenon, not unlike illusory correlation, which is not reversed by warning participants about the phenomenon (Waller & Keeley, 1978).

There are two factors that should be considered in interpreting the failure of the credibility manipulation to alter self-efficacy ratings or response rates. First, even in the controversial-information condition, the procedure was highly biased toward promotion of the validity of facilitated communication. Considerably more positive information than negative information was provided on the videotape, and the positive information was more emotional than the dry experimental study that was shown in the portion of the tape presenting the controversy surrounding facilitated communication. Also, the rationale given by the experimenter implied confidence in the validity of the procedure. Second, the participants seemed very highly motivated to help in what seemed to be an exceptionally important project, one that required them to work in a helping relationship with a person who appeared to have a severe communication disorder. For example, one participant seemed so nervous about doing the procedure right that he was shaking all the way through facilitation. Another participant was overheard describing her experience to a fellow student in the hallway of the psychology department. She confessed to being nervous because she did not know how well she had been able to help the "disabled" person communicate. Thus, the motivation to help may have inhibited the development of skepticism about the procedure.

There was considerable variability in the degree of responding produced by students, and the number of responses they produced was correlated significantly with Chevreul pendulum responding. This finding suggests that a proclivity for automatic responding is a component of illusory facilitation. However, the association with ideomotor responding left most of the variance in response rates unexplained. Establishing the determinants of these individual differences remains an important task.

Perhaps the greatest value of the present study is its demonstration of an experimental paradigm for investigating automatic behavior. Simple automatic responses can be elicited in most people, and their frequency can be increased further by hypnosis (Hilgard, 1965; Kirsch, 1997; Kirsch, Silva, Comey, & Reed, 1995). However, training in facilitated communication seems unique in its ability to provoke complex automatic behavior in a substantial majority of people, possibly because it engages participants in what seems to be an exceptionally important and meaningful task. Our paradigm brings this phenomenon into a controlled laboratory setting.

Among the questions that might be answered through this experimental paradigm is what psychological mechanisms produce automatisms (Ansfield & Wegner, 1996; Kirsch & Lynn, 1995, in press). For example, one hypothesis is that automatisms require sustained attention (Spiegel & Spiegel, 1978), in which case cognitive load should detract from their occurrence. Hilgard's (1986) neodissociation theory also predicts a decrement in response rates if attentional resources are taxed.

In contrast, Wegner's (1994) ironic process model predicts that cognitive load would enhance responding. Finally, this paradigm can be used to investigate individual differences in automatic writing. In particular, it would be worthwhile to examine the relation of facilitated communication responding to hypnotic and nonhypnotic suggestibility, absorption (Tellegen & Atkinson, 1974), dissociative capacity (Bernstein & Putnam, 1986), and responses to the Stroop (1935) test.

**Acknowledgments**—We thank Deborah Fein for allowing us to use her video and computer equipment for this research. We thank Pamela Julien for her assistance during the planning stages.

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(RECEIVED 2/7/97; ACCEPTED 3/26/97)