A History of Facilitated Communication

Science, Pseudoscience, and Antiscience

Science Working Group on Facilitated Communication

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Facilitated communication (FC) is a method of assisting people with severe developmental disabilities to communicate. Before its adoption as a teaching–treatment technique, the only research evidence in support of its validity consisted of a small number of descriptive reports in the professional literature and anecdotal reports in the popular press and disability media. In use, this technique, which involves providing physical support to people with disabilities as they type out messages on a keyboard or letterboard, appears to result in unexpected literacy and to disclose normative or superior intellectual skills among people with lifelong histories of severe developmental delay. Controlled research using single and double blind procedures in laboratory and natural settings with a range of clinical populations with which FC is used have determined that, not only are the people with disabilities unable to respond accurately to label or describe stimuli unseen by their assistants, but that the responses are controlled by the assistants.

Countless people throughout the world are not able to communicate adequately in speech. They may have cerebral palsy, head injury, or Down syndrome, or may have been diagnosed as having intellectual disability or autism. Intelligence tests based on expressive language underestimate their capacities, and because they cannot express their language they are often thought not to possess it. Their thoughts, ideas, needs, and desires go unspoken. They are trapped in a wordless prison. . . . In facilitated communication training, communication partners provide these people with physical support to help them overcome their neuromotor problems and develop functional movement patterns that will allow them to use communication aids. (*Teachers College Press* [sales brochure], 1994, p. 1)

Facilitated communication (FC) is a method, or group of methods, for providing assistance to a nonverbal person in typing letters, words, phrases, or sentences using a typewriter, computer keyboard, or alphabet facsimile. FC involves a graduated manual prompting procedure, with the intent of supporting a person's hand sufficiently to make it more feasible to strike the keys he or she wishes to strike, without influencing the key selection (Mulick, Jacobson, & Kobe, 1993). In practice, manual prompting is maintained indefinitely, posing the hazard of influence by the assistant (usually termed a *facilitator*). The procedure is often claimed to produce "unexpected literacy" (Biklen, 1990, 1992a, 1992b), revealed through age normative or superior communication content, syntax, and fluency (Crossley, 1994). This result is all the more remarkable because the typical individual using this procedure has a lifelong and unambiguous history of autism or moderate to profound mental retardation, or both, and is nonverbal. Since its introduction in the United States only five years ago, FC has become the eye of a growing storm of controversy. The most vexing questions concern the source of the communications generated with facilitation: Is the facilitator unwittingly selecting the letters that spell out the message? Or, is it true that FC can unlock hidden intellectual competence and reveal a massive misunderstanding of human potential by the developers and users of intelligence tests and developmental evaluations?

More confounding, however, is that, in the absence of scientific evidence of its validity and effectiveness (Fed-

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Photo by Stephen Benya, Albany, NY.

eral Trade Commission, 1995a, 1995b), and in the face of objective research findings clearly identifying widespread, systematic facilitator control of typed content, FC has become ubiquitous in special education and adult services for people with developmental disabilities. The general acceptance of FC by the public and segments of the professional community has called into question the rigor with which educational and therapeutic interventions are evaluated in publicly funded programs and the ability of many professionals to critically assess the procedures they use. As such, FC serves as a case study in how the public and, alarmingly, some professionals, fail to recognize the role of science in distinguishing truth from falsity and its applicability to assessing the value of treatment modalities.

The Culture of Developmental Disabilities Services

From the 1970s into the 1990s the development of community-based services and deinstitutionalization of residential services have remained important in the national service system for people with mental retardation and developmental disabilities. Federal legislation, through the Medicaid Intermediate Care Facility for the Mentally Retarded (ICF/MR) program, expedited institutional closure and the development of smaller, often increasingly privatized, community residential and support services. The effort was bolstered by mandating educational services for children and adolescents with developmental disabilities to age 21 years through the Education for All Handicapped Children Act (P.L. 94-142) and subsequent legislation aimed at enhancing community-based and integrated habilitation efforts. Together, these programs have lessened the demand for institutional services and increased the demand for vocational and community living alternatives that are now more normalizing.

The movement of people from institutions to the community was characterized at first by transfer of the most capable people. The vocational and domiciliary services that first evolved were tailored for them. The last to leave the institutions, and those who sometimes still remain in them, have tended to present greater demands in terms of complex health status and concurrent behavioral or psychiatric conditions than did the people who have been served previously in community settings (Dura, Mulick, & Myers, 1988; Gunsett, Mulick, Fernald, & Martin, 1989; Jacobson, 1991; Kobe, Mulick, Rash, & Martin, 1994). The system of community supports and professional services has had to develop capabilities to serve ever more complex clientele.

These developments have been paralleled by transformations in the credentialing of relevant service professions. Designed for an initially state managed professional service system in need of rapid reform, ICF/MR standards for professionals did not consistently mirror community licensing and certification requirements for professionals. Most government agencies, by tradition, were exempted from such requirements. Rather, the ICF/MR standard was that of the Qualified Mental Retardation Professional, or QMRP (Health Care Financing Administration, 1988). Criteria for QMRPs varied, but generally required far less training and experience than did community standards for most recognized professions. For example, the QMRP in psychology required completion of a bachelor's degree in psychology or a related field and a year of experience in developmental services. Furthermore, direct care workers, who were typically responsible for the implementation of professionally designed habilitation plans, were those with the least training and most vulnerable to job instability and turnover.

These conditions compromised the quality and continuity of care in ICF/MR settings, at least in relation to private health and human service sectors. Finally, the ICF/MR regulations provided for the interdisciplinary team as the body responsible for the Individual Habilitation Plan or Individual Program Plan that annually set forth the training and support to be made available to the person with a developmental disability. These plans emphasized not only health and social services but also skill development. This necessitated advanced instructional technologies to be used, most often based on operant learning principles (Berkson & Landesman-Dwyer, 1977; Huguenin, Weidenman, & Mulick, 1991; Landesman & Butterfield, 1987; Reid, Wilson, & Faw, 1991), implying arduous, and for severely disabled people, small gradual increases in functional skills.

As time went on, lax QMRP qualifications and the expansion of the interdisciplinary team to include members not typically recognized under noninstitutional professional regulation as professionals in any other sense led to marked variation in the quality of service planning and implementation (Meinhold & Mulick, 1992). Our view is that deprofessionalization and the resulting variability in service planning, implementation, and outcomes were accelerated by emphasis on teams and QMRP qualifications in the movement of ICF/MR services from the

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Photo by Dan Smith, The Children's Hospital, Columbus, OH.

institution to the community and that this continues up through the present time.

Personal Commitment and Vulnerability

We believe that these trends made the developmental disabilities service system ripe for early adoption of a technique like FC. Deprofessionalization and variable service quality led to increasingly unpredictable or disappointing outcomes. The dominant philosophy of "normalization" emphasized training and therapies that appeared to be "the most culturally normative means possible" (Mulick & Kedesdy, 1988; Wolfensberger, 1972). This often led to common sense interventions applied without rigor by ill-trained staff. The increasing number of well-intentioned but poorly prepared personnel cannot be expected to render realistic assessments of client progress or evaluate the various "technological advances" that vie for precious program time and staff energies.

Parents are motivated to obtain the best and most effective services available for children and adults with severe disabilities, just as staff are motivated to provide the best services and training that they can. Both are vulnerable to the false promise of dubious therapeutic techniques, especially when authorities in the field misrepresent or misinterpret therapeutic effects in orienting parents and training staff. Probably the best known fad treatment that was precipitously and broadly adopted in the field of developmental disabilities was "patterning" (Delacato, 1966; Doman, 1974), a time-consuming treatment of years-long duration involving passive physical manipulation of the limbs and body that was later found to be of negligible treatment benefit. When first used, the intensity of patterning procedures required recruitment of at least several volunteers to work daily or weekly conducting physical manipulations to each person. For many who later became professionals in the field, volunteer patterning served as their first prolonged involvement with people with developmental disabilities.

Patterning services can still be obtained in some areas of the nation, despite lack of any credible scientific research demonstrating benefits. Indeed, there is ample basic science to support the contrary position that interactive participation of the organism and contact with contingencies of reinforcement is essential for establishing the neural substrate of organized behavior during development (e.g., Riesen, 1975). The same can be said about rehabilitative efforts for later neurological damage (Taub et al., 1994). There are also contemporary examples of dubious therapies, such as the use of Irlen lenses (tinted overlays and lenses) to correct reading disorders (Hoyt, 1990; Parker 1990; Solan, 1990; Ward, 1991), therapeutic activities relying on greatly delayed recovery of repressed memories (Loftus, 1993; Wright, 1993a, 1993b), and gentle teaching (an alternative to applied behavior analysis; see Bailey, 1992; Mudford, 1995), that remain highly controversial.

How do controversial treatments come to be adopted and their premises so widely accepted? In this article we attempt to identify a scientific history of FC that illustrates this process. The critical elements, we believe, are an unexpected but apparently dramatic treatment response, a superficially plausible "theory" for this effect, and a disavowal by the proponent of conventional standards of scientific procedure and proof. Readers are cautioned that these relationships are essentially unstudied but fall broadly within the realm of phenomena for which social psychological research methods, particularly those involving indirect or disguised measures, are relevant.

Of course, these critical elements must be coupled with receptive and vulnerable parents and paraprofessionals and a complacent professional community. Why are these groups so receptive and vulnerable? Smith (1994) captured this essence well when he stated (in the context of the current intellectual tendency toward postmodernism; see Hollinger, 1994), "It is emptiness and hopelessness that make people vulnerable to false prophets, cult leaders . . . who help them become true believers . . . again, secure in the comfort of new absolutism" (p. 407). (Observations of emptiness and hopelessness as motivating factors are not limited to contemporary contexts; Durkheim, 1897/1930.) Those who assist, care for, treat, and, yes, love people with developmental disabilities and severe communication impairments are prone to hopelessness and despair; current interventions yield results slowly if at all; regression or setbacks are commonplace, and practitioners of accepted clinical approaches have no magical cures to offer. Simply stated, fad "treatments" appear to offer hope when all other treatments seem less providential.

A Brief History of Facilitated Communication

Origins

The story of facilitated communication begins in Australia in the early 1970s. A teacher at St. Nicholas Hospital,

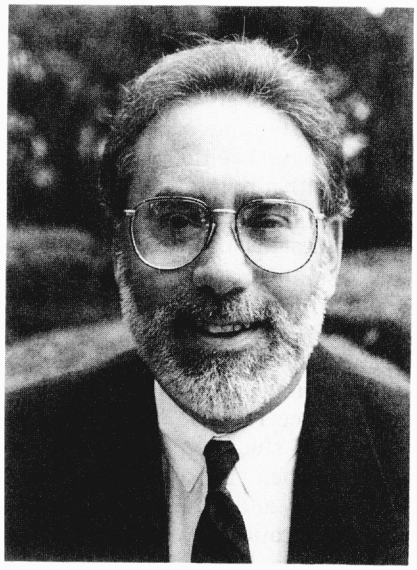

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Photo by Stephen Benya, Albany, NY.

Rosemary Crossley, using FC, produced communications by 12 children diagnosed with physical and mental handicaps. Her findings indicated that these children possessed normal or superior intellectual skills (Crossley & McDonald, 1980; Hudson, in press). These findings were disputed by the hospital (Hudson, in press), and findings regarding 1 of these children were later disputed by the Health Commission of Victoria (*Wallace v. Health Commissioner of Victoria,* 1984; cited in Hudson, in press).

In 1986 the DEAL Communication Centre, with Crossley as program coordinator, opened in a Melbourne suburb, advocating the use of FC in developmental services centers in the state of Victoria. FC was rapidly adopted in these settings (Hudson, in press). In 1988 a group of professionals in developmental disabilities authored an article in response to widespread use of FC and evidence emerging that communications were being influenced by facilitators (Interdisciplinary Working Party on Issues in Severe Communication Impairment, 1988). This report stimulated a review of the reliability and validity of FC by the Intellectual Disability Review Panel (IDRP; 1989).

> The IDRP intended to conduct a major experimental evaluation . . . but encountered a major obstacle. Almost all disabled people using (FC) were clients of the DEAL Communication Centre, and the Centre refused to cooperate with the study . . . DEAL preferred a qualitative methodology involving naturalistic observation. (Hudson, in press, p. 8)

In the end, the IDRP was able to obtain cooperation from only three of the subjects.

The IDRP found that two of these three subjects could not communicate with FC, but that the third could. Both Cummins and Prior (1992) and Jacobson et al. (1994) suggested that the findings do not warrant a firm authoritative conclusion about the abilities of the third subject. Three other subjects participated in a message-passing study (in which they recounted what was said or done during the immediately prior absence of the facilitator; e.g., Szempruch & Jacobson, 1993). They were reported to have been successful in passing messages to their facilitators, but critical information regarding their nonfacilitated literacy and communication skills was not provided in the report, rendering interpretation difficult. Nevertheless, these findings are widely cited by proponents of FC as evidence for the general utility of the intervention. There have been a number of subsequent studies and clinical assessment reports involving FC in Australia, including Hudson, Melita, and Arnold (1993); Moore, Donovan, Hudson, Dykstra, and Lawrence (1993); and Moore, Donovan, and Hudson (1993). The findings of these studies have been consistent with the detection of facilitator influence over the content of typing. In this research facilitator influence has been found to be endemic, although there was no indication that facilitators were knowingly or intentionally influencing what was typed. There are obvious related phenomena in which people fail to perceive their active influence over physical interaction or language production, including automatic writing, the use of ouija boards, and channeling (Hall, 1993).

Facilitated Communication in the United States

In 1989, Douglas Biklen, a sociologist and professor of special education at Syracuse University, observed Rosemary Crossley's work with FC during a visit to Australia. He returned to the United States and introduced FC to speech pathologists and special educators working with autistic nonverbal students. Although Crossley's work was initially with clients who were physically disabled, Biklen extended use of the technique to a group with marked cognitive impairments. Nevertheless, his group reported immediate and startling results; previously nonverbal students with autism were typing, with facilitation, words, sentences, and paragraphs of remarkable clarity and intellect.

The first major articles on facilitated communication in the North American literature appeared in the *Harvard Educational Review* (Biklen, 1990, 1992a; Cummins & Prior, 1992). These were followed shortly by additional articles (Biklen, 1992b, 1992d; Biklen & Schubert, 1991; Biklen et al., 1991; Biklen, Morton, Gold, Berrigan, & Swaminathan, 1992), a book that, in part, contains revisions of previous articles (Biklen, 1993a), and a newsletter, *The Facilitated Communication Digest* (Biklen, 1993b). These sources, in contrast with the Australian studies already noted, reported successful intervention using FC and used qualitative or ethnographic methodologies (such as methods described by Leninger, 1994). Biklen (1990) and most of these other sources reported on critical procedural elements in FC (e.g., Biklen, 1990, lists seven attitudinal dimensions and 18 procedures). However, neither here nor in other reports of facilitated communication that present accounts of consistent benefit of the technique were unambiguous or standardized measures of communication used for baseline and post-treatment performance assessment (e.g., Department of

Family Services and Aboriginal and Islander Services, 1993). This is crucial because subsequent research was to show that FC training yielded no expressive content that exceeded pretraining levels, as concluded in detailed reviews of the behavioral science and social science FC studies by Green (1994) and Green and Shane (1994). Details that are crucial to scientific communication are lacking in these studies, leading one reviewer of Biklen (1993a) to state that "there is no evidence in this volume that an ethnographer, psychologist, educator, or sociologist would recognize as the product of systematic research. . . . Nothing here resembles research" (Thompson, 1994, p. 671).

The works aforementioned constitute a small proportion of the writings promoting the use of FC. Crossley has also been actively producing professional publications that describe past applications of FC and promote its expanded use (Borthwick & Crossley, 1993; Crossley, 1992a, 1992b; Crossley & Remington-Gurney, 1992; Remington-Gurney, Batt, & Crossley, 1992). Some of this literature explicitly criticizes "psychologists" for holding people with disabilities to unreasonable (i.e., objective) standards for demonstrating their communication skills (e.g., Borthwick & Crossley, 1993).

Considering the lack of substantive converging or precedential literature constituting a foundation for core assumptions of FC (to be addressed later), initial academic response to accounts of FC benefits with people having severe disabilities was remarkably muted (e.g., Calculator, 1992a, 1992b; MacLean, 1992; Silliman, 1993). Yet more noteworthy is that some communications disorders and special education professionals, their students, and some parents of people with severe disabilities began to promote the use of FC through publication and training opportunities in the absence of a substantive scientific foundation (Bing, 1993; Calculator & Singer, 1992; Donnellan & Haskew, 1993; Donnellan, Sabin, & Majure, 1992; Duchan, 1993a; Duchan, & Sonnenmeier, 1993; Ferguson, 1994; Higgenbotham, Sonnenmeier, & Duchan, 1993; Hill & Leary, 1993; Koppenhofer, Gilmer, & McElroy, 1993; McSheehan & Sonnenmeier, 1993; Sonnenmeier, 1993; Veale, 1992). Much of the publication of articles promoting the use of FC has also occurred outside of the peer-reviewed literature; popular magazines (Chazin, 1993), newspapers (Chideya, 1993; Heinrichs, 1992a, 1992b, 1992c, 1992d, 1992e; Randall, 1993a, 1993b; Schofield, 1993a, 1993b), television (Bryen, 1993; Palfreman, 1993; Smith, 1993), and newsletters (Biklen, 1992c; Duchan, 1993b; Hudson, 1993; A. Kurtz, 1992; Reichel, 1993; Rimland, 1992a, 1992b, 1992c; Schubert, 1993; Von Tetzchner, 1992) have constituted the primary media for communicating superficially positive and surprisingly negative social consequences of the FC phenomenon. Needless to say, media accounts of FC have often been selective, incomplete, and inaccurate in their presentations.

Early criticisms of FC as a theoretically and conceptually unsound phenomenon were few (Cummins & Prior, 1992; Green, 1992; Green & Shane, 1993; Mulick, Jacobson, & Kobe, 1993; Prior & Cummins, 1992; Schopler, 1992; A. Schwartz & Jacobson, 1993; Wolfensberger, 1992). However, since FC has come into widespread use there has been growing research interest in this phenomenon. The findings of controlled, as opposed to qualitative, studies have been consistently negative, indicating that FC is neither reliably replicable nor valid when produced (Green, 1994; Green & Shane, 1994). Conventional research designs, using single and double blind procedures, repeated measures and self-controls, or message passing (conveying information in FC interactions that reflects what was previously said or done with a research participant in the absence of the facilitator, thus, conveying information and communication) typify the controlled studies (see Table 1). Relevant controlled, peer-reviewed, published studies repeatedly show that, under circumstances when access to information by facilitators is systematically and tightly manipulated, the ability to produce communication through FC varies predictably and in a manner that demonstrates that the content of the communication is being determined by the facilitator (Bligh & Kupperman, 1993; Cabay, 1994; Crews et al., in press; Eberlin, McConnachie, Ibel, & Volpe, 1993; Hudson et al., 1993; Klewe, 1993; Moore, Donovan, & Hudson, 1993; Moore, Donovan, Hudson, Dykstra, & Lawrence, 1993; Regal, Rooney, & Wandas, 1994; Shane & Kearns, 1994; Siegel, in press; Simon, Toll, & Whitehair, 1994; Szempruch & Jacobson, 1993; Vasquez, 1994; Wheeler, Jacobson, Paglieri, & Schwartz, 1993; see Table 1); so do controlled studies in professional journals that are not peer reviewed (Cummins & Prior, 1992; Ogletree, Hamtil, Solberg, & Scoby-Schmelzle, 1993), and controlled studies presented at professional meetings (Apel & Vandervelde, 1993; Beck et al., 1992; Green, Chelquist, Krendel-Ames, Ross, & MacDonald, 1993; Kallstrom, Piazza, Hunt, & Owen, 1993; Marks, Conrad, & Hart, 1993; Meinhold, 1993; O'Donnell, Bomba, Markowitz, & Holmes, 1993; Price & Kirkpatrick, 1993; Teodoro, Meinhold, & Koch, 1993). The sample studies included in Table 1 are representative of others and involved participants who were diagnosed with autism, cerebral palsy, or epilepsy in combination with mental retardation or with moderate, severe, or profound mental retardation. The studies were conducted in community service, educational, and institutional settings with participants' accustomed facilitators, and participants had typically generated previous written content in FC interactions ranging from multiple phrases to multiple paragraph letters, self-reports, and expositions.

In addition to blind studies in which participant access to information is controlled and production of typed responses to stimuli seen or heard by the person with a disability, but not by the facilitator, is assessed, a primary methodology that has been used is message passing. In message passing, the person with a communication impairment is shown a picture or object, manipulates or uses an object, or engages in an activity with an investigator, all in the absence of the facilitator. Immediately afterward, the facilitator engages in an FC session with

Table 1
Representative Scientific Studies of Facilitated Communication

Authors	No. of participants	No. of FC success[a]	Methods
Bligh & Kupperman (1993)	1	0	Court-ordered evaluation: message passing with four conditions, facilitator blind to (a) question, (b) answer, (c) both, or (d) neither
Cabay (1994)	4	0	Message passing with set work using fill-in and open ended questions with auditory and visual presentation of stimuli in the absence of facilitators
Crews et al. (in press)	8	1 (?)[e]	Message passing involving naming or describing familiar objects and reproducing words and numerals presented visually, orally, and haptically
Eberlin, McConnachie, & Leckman (1993)	21	0	Pre- and posttesting of information production with no blind and single blind, over the course of eight weeks of participation in FC
Hudson, Melita, & Arnold (1993)	1	0	Court-ordered evaluation: single and double blind testing (total of four) conditions with same or different stimuli simultaneously presented to both facilitator and participant using headphones
Klewe (1993)	13	0	Single and double blind conditions in which pictures were shown to only the subject or to both facilitator and subject with screening of each other's stimuli; mention of simultaneous EMG monitoring of facilitators and participants
Moore, Donovan, & Hudson (1993)[c]	4	0	Message passing in two phases: (a) subject presented with concrete object with facilitator absent and could touch or use it, verbalize about it (if possible), and listen to a verbal stimulus description; (b) investigator spoke to subject in conversation about a personally relevant topic. Conversational FC interaction with facilitators blind to stimuli then used to solicit nature of stimuli or topics
Moore, Donovan, Hudson, Dysktra, & Lawrence (1993)	8	0	Message passing with and without earphones and single, double, or no blind, similar to Hudson et al. above
Regal, Rooney, & Wandas (1994)	19	0	Message passing involving naming or multiple-choice responses indicating shapes, color, numbers, or pictures presented visually and aurally. Facilitators were blind to stimuli in delayed probe trials using FC
Shane & Kearns (1994)	1	0	Double blind conditions with stimuli presented separately to participant and facilitator using screening or headphones. Tasks included copying letters or words, describing pictures in response to spoken questions, describing activities, or naming familiar objects (or pictures of them)
Siegel (in press)	2	0	Target personal information and subjective questions presented aurally to participants initially with accustomed facilitators and later with independent facilitators (experienced staff unaware of the target information and previous responses)
Simon, Toll, & Whitehair (1994)	7	2 (?)[d]	Message passing with a double blind phase in which facilitators were given accurate or inaccurate information; target responses included random selections from among 20 activities feasible in the setting, in one of which participants had just engaged, and during which participants were given photos, and written, verbal, and manually signed descriptions of the activity to induce salience
Szempruch & Jacobson (1993)	23	0	Message passing requiring production of descriptive responses by participants subsequent to having been shown verbally labeled pictures, with facilitators blind to the stimuli presented

(table continued)

Table 1 (*continued*)

Authors	No. of participants	No. of FC success[a]	Methods
Vasquez (1994)	2	1 (?)[e]	Single blind procedures in which the facilitator was asked to look away during visual target stimulus presentation and message passing. Target responses included naming of familiar objects presented visually under single blind and describing videos in response to spoken questions under delayed message passing
Wheeler, Jacobson, Paglieri, & Schwartz (1993)	12	0	Double and single blind procedures using visual screening of simultaneously presented familiar pictures under four conditions: (a) facilitator blind, participant types unaided, (b) facilitator blind, participant types with FC; (c) FC with double blind and same stimuli; and (d) FC with double blind and different stimuli. Counterbalanced block conditions across participants and randomized stimulus sequence within blocks. Independently confirmed diagnostic classifications for participants

[a] Number of participants demonstrating any accurate communication under blind conditions. Most studies used repeated measures under different conditions with facilitator–participant pairs as their own controls. Double blind conditions permitted identification of facilitator control when simultaneous differing stimuli were presented. [b] One participant correctly produced five numerals in delayed response to stimulus presentations. [c] Participants and facilitators from the other Moore et al. (1993) study participated in additional evaluations that were designed by the facilitators that included controlled access to information but no special apparatus. [d] Two participants produced a total of three accurate responses, involving one word and two short phrases; extended and repeated follow-up with these two participants resulted in failed replication (E.W. Simon, May 1994, personal communication). [e] One participant produced four accurate single-word responses on trials when information access was controlled for the facilitator; see Green (1994) and Jacobson et al. (1994) for possible procedural confounds.

the person with a disability in which a description of the picture, object, or activity is sought. Many of these studies were conducted with the express purpose of demonstrating that "FC works" or to determine "whether FC works."

Unsurprisingly, given the contention and assertions about the ambiguity of research findings, there have been highly divergent public policy responses to the advent of FC. States have issued studies and established priorities to promote FC (Department of Rehabilitative Services [DRS] and Department of Mental Health, Mental Retardation and Substance Abuse Services, 1992), issued guidelines to promote technology transfer of FC (Moseley, 1994; Office of Mental Retardation, 1994) and issued cautionary guidelines based on controlled research and the potential for legal liability (Campbell, 1993; Maul, 1994; Office of Protection and Advocacy for Persons with Disabilities [OPAPD], 1993).

Promotional policies have directly incorporated content from FC publications. For example, proponents of FC claim that people with autism require and benefit from the physical support component of FC because of the presence of a neurological impairment termed *global* or *developmental apraxia.* This dyspraxia or apraxia is described as a motor disorder characterized by difficulties in initiating, maintaining, or terminating actions but alleviated by provision of support and interruption of perseverative behavior. In one instance regulations now inaccurately indicate that people with autism, in general, are affected by this disorder (Office of Mental Retardation, 1994). There is no scientific or neuropsychologic support for this assertion.

Cautionary policies stem from recognition of a social phenomenon that is national in scope (Margolin, 1994) and distinct from the clinical phenomenon of FC: There has been wide reporting in the media, at professional conferences, and in the clinical literature of allegations of abuse, most often sexual abuse, made through FC. Such allegations occur at an undetermined, although socially significant, frequency (Levine, Shane, & Wharton, 1994). Although heightened risk of sexual abuse of people with developmental disabilities (Furey, 1994) is a critical concern for practitioners, administrators, and clinicians alike, findings that demonstrate facilitator control of typed content challenge the credibility of allegations made through FC and create confusion for those who are mandated child abuse reporters.

Margolin (1994), in a review of legal cases involving facilitated communication, reported that at least five dozen allegations in the United States made through facilitated communication had resulted in legal proceedings charging caregivers, including parents, teachers, and program staff, with abuse. With two exceptions, such legal proceedings have been terminated before extended prosecution or trial. Unfounded or unconfirmed allegations of abuse, regardless of the initial form of the accusation, however, typically result not only in financial burden for costs of self-defense but also in sustained separation of family members and stigmatization, unemployment, and alienation of those who have been accused (Levine et al., 1994). Cautionary policies state either that the authenticity of allegations made through FC must be verified before being acted on by mandated abuse reporters

(Campbell, 1993; OPAPD, 1993) or that FC should be incorporated in individual plans of services using the same forms of periodic review, monitoring, and treatment evaluation to which other treatments are subjected and that, as an experimental technique, fully informed prior consent is advised (Maul, 1994).

Although the poignantly clear conflict between qualitative and controlled research findings that we have depicted should indicate the dilemmas presented by the FC phenomenon, to this point we have not grappled with the fundamental issue of whether FC, and especially the unexpected literacy that appears to emerge from its use, involves pseudoscience (i.e., treating as a science that which is not) or antiscience (disavowal of scientific methods as epistemologically valid). It is clear that different methods of study dramatically differ in their findings with respect to FC. We argue that FC is a pseudoscientific procedure serving antiscientific ends. Fortunately, the characteristics of pseudoscience and antiscience are well established and familiar (Brown, 1982; Bunge, 1984; Casti, 1989; Cromer, 1993; Gardner, 1957; Holton, 1994; Huber 1991; P. Kurtz, 1994; Sabbagh, 1985–1986; Shore, 1984; Skeptics Society, 1994; Thagard, 1988) and are clarified next.

Pseudoscience, Antiscience, and Facilitated Communication

The phenomenon of FC satisfies many of the criteria of pseudoscience: Demonstrations of benefit are based on anecdotes or testimonials; baseline abilities and the possibility of spontaneous improvement are ignored, and related scientific procedures are disavowed; and therapists who use FC unsuccessfully are blamed for not doing it correctly or not believing that it will work (Brown, 1982; Casti, 1989). Controlled research that disconfirms the phenomenon is criticized on grounds of rigor and procedure not even remotely addressed by studies that purport to demonstrate the effectiveness of the technique (see Biklen, 1993b). Selected findings, rather than the composite of findings, of controlled studies are critiqued and interpreted (Biklen, 1993b; Borthwick & Crossley, 1993).

The apparent benefits of FC directly challenge the scientist–practitioner standpoint that (a) autism is a discretely separate clinical condition from mental retardation, (b) mental retardation of varying degrees occurs at extremely elevated rates among people with autism, and (c) general delays or deficits in language function are closely related to general delays or deficits in intellectual development. A corollary to the third point is that the everyday facility with which people with autism or mental retardation use a language (e.g., spoken, written, or pictorial) is an accurate depiction of their ability to do so and that there is no clinically significant phenomenon that inhibits the overt production of communication and "masks" normative communication skills (i.e., actual production is representative of "internal" speech skill). This standpoint is firmly grounded in an immense psychological literature in cognitive development, social development, and both general cognitive and social problem solving by children and adolescents (e.g., Dykens, Hodapp, & Leckman, 1994). That there is a strong presumptive relationship, in general, between overt production and actual ability is a cornerstone of psychological assessment methodology, statistics, and psychometrics.

However, the seemingly incredible results from using FC cannot be accepted as credible unless the foregoing several premises, including correspondence of covert ability with overt behavior, can be explained away and discarded. The credibility of FC rests on three explanatory constructs constantly put forth by proponents to account for incredible results: the lack of validity inherent in confrontational testing, word finding problems of people with autism, and the broad and unrecognized influence of developmental dyspraxia or apraxia. Virtually all of the explanations offered to account for the failure of people with severe disabilities to produce accurate responses under controlled conditions that assure control of facilitator knowledge of correct responses rest on these premises. We review each of these in turn.

Confrontational, or *adversarial, testing* is a term used in speech pathology to describe procedures that involve asking a client for a specific response, as opposed to the use of naturally occurring speech samples in unconstrained conversation. Proponents of FC have contended that confrontational testing challenges the confidence of people with severe disabilities by asking them to perform on demand and thereby diminishes their responses during facilitation. In controlled research studies, as indicated previously, responses are most often completely inaccurate. As stated by Crossley (1992b), with respect to "aid users" (i.e., people with disabilities communicating with a facilitator):

> In adversarial validation only one question is being asked: can the person to [sic] use his/her communication aid or strategy effectively? There will be a number of people involved who hope he/she cannot. Tests may be administered or suggested by people who hope the aid user will fail. Hostile observers may be present at testing sessions. In most cases the aid user has everything to lose and nothing to gain from test participation. If they pass, nothing will change. If they fail, they may lose what little in the way of communication they have. (p. 47)

This is essentially the same argument set forth to account for why parapsychological effects are not detected under controlled conditions (Gardner, 1957). Briefly, the phenomenon is posited to be weak and prone to distortion by the presence of skepticism or all but the most ambiguous evaluation methods (Aach, 1991; Blackmore, 1991; Bunge, 1984; Gardner, 1989; Sabbagh, 1985–1986). Ironically, validation procedures used in legal proceedings, where the aid user may have a great deal to gain and methodologies have not been especially complex have produced results similar to those of controlled studies (Bligh & Kupperman, 1993; Green, 1994; Jacobson & Mulick, 1994a). In court, despite evident situational motivation (e.g., to obtain retribution and to avoid returning to live with a family member by whom they have purportedly been abused) and straightforward assessment

procedures, findings still demonstrate facilitator influence of typing and inability to respond accurately by the aid user unless the facilitator knows both the question and the correct answer (Bligh & Kupperman, 1993).

Instead of controlled situations, proponents of FC suggest that qualitative criteria for validity should be used:

1. Style, speed, accuracy of students' fine motor control movement to the letters or keys is fairly consistent across facilitators. . . .
2. Individuals make typographical errors that are unique to them. Some individuals fairly consistently hit more than one key at a time when typing. . . .
3. Many individuals produce phonetic or invented spellings that are unique to them and do not appear in the writings of others, despite the fact that several individuals sometimes share a common facilitator. . . .
4. Some individuals type phrases or sentences that are unusual and would not be expected from the facilitators. . . .
5. Individuals sometimes produce content that is not known to the facilitator. . . .
6. . . . Through facilitated communication individuals reveal their personalities (Biklen et al., 1992, pp. 19–20).

With the exception of Item 5 in this listing of validation criteria, none of these criteria is readily falsifiable, and all are easily contaminated by clinician or researcher expectations or knowledge gained through social interactions and review of records in the work setting. With regard to Item 5, rigorous control of facilitator knowledge is seldom maintained in clinical settings. In reality, when experimental control of facilitator knowledge is assured, this criterion is satisfied only to a limited extent in very exceptional circumstances (e.g., over multiple trials, a single word is typed accurately in contrast to complex statements under nonexperimental circumstances involving the same individuals; see Green, 1994). Furthermore, in training seminars, and in professional articles (e.g., Biklen, 1990) potential facilitators are instructed not to test communication competence and to assume that the individual with severe disabilities is able to communicate competently. One researcher in the field of autism summarized this perspective:

> The ideologues promoting "Facilitated Communication" use an especially pernicious form of sales technique. They claim that "Facilitated Communication" requires faith and a trusting relationship to be effective. They claim that research is inappropriate because it interferes with the trusting relationship. (Schopler, 1992, p. 331)

In the speech pathology literature, *word finding problems* refer to difficulties in speech production that involve stating a correct word, without necessarily designating a particular etiology for the difficulties. Causative factors in the individual case might involve retrieval processes, motor production processes, or cognitive processes (e.g., disinhibition or inhibition), although it may be assumed that the person would be able to produce an accurate response if the problem or deficit did not prevent this. In other words, the person has the knowledge necessary to respond but is unable to use this faculty.

In the FC literature, word finding problems (particularly problems of this sort attributed to people with autism) are claimed to account for why these individuals "fail" in confrontational testing. Testing usually involves double blind or single blind conditions (e.g., where the individual and facilitator are shown the same or different stimuli but are not aware of which stimuli are being shown to both) or message passing (e.g., in which the individual is asked to produce an object or stimulus description for the facilitator). These individuals, including those who have severe or profound mental retardation who do not also have autism (Biklen, 1993a, 1993b) are claimed to have specific deficits in retrieval of nouns (Borthwick & Crossley, 1993) that impair their responding. Strikingly, because distinctive and characteristic communication styles are a major clinical feature of people with autism who are verbal, there is a substantial literature on the communication skills of these individuals. This literature indicates that people with autism do have word finding problems with respect to verbs (which would be expected because of specific social cognitive deficits associated with autism) but not necessarily with respect to nouns (Jacobson et al., 1994). In confrontational testing, with the exception of Simon et al. (1994), all of the stimulus labels that were attempted under controlled conditions were nouns.

Furthermore, although it has been averred by FC proponents that only single-word (and "one specific word") responses were the target responses, in fact all studies have defined accurate multiple word or approximate descriptions as potential target responses as well. Relevant circumlocutions of the forms often observed in other clinical populations would have been accepted as accurate responses in all studies but have almost never occurred. It is also not clear why word finding problems eliminated virtually all correct responding in these studies (where individuals were allowed considerable time to type out their responses) and did not affect word choice in so-called "free conversation."

In depicting age normative or superior verbal skills through typing, the FC literature must also account for the failure of people with autism and moderate to profound mental retardation to develop normative adaptive behavior. This is achieved by invoking the construct of developmental dyspraxia or apraxia, as noted earlier. Dyspraxia (or apraxia) refers to difficulties (or inability) in the initiation, control and moderation, and cessation of voluntary movement. Thus, it is reasoned that people with autism and moderate to profound mental retardation fail to exhibit normative adaptive behavior because of their inability to control body movements, not because of delayed or slower learning and maturation.

Motor factors figure prominently in rationalizations of FC; Crossley and Remington-Gurney (1992) have stated that FC procedures can compensate for a wide range of motor problems, including poor eye–hand coordination, low muscle tone, high muscle tone, index finger isolation and extension problems, perseveration, impulsivity, tremor, radial/ulnar muscle instability, ini-

tiation problems, impaired proximal stability, reduced proprioception, and use of both hands for a task requiring only one (Brown, 1982, noted that the premise "many symptoms, one cure" frequently describes pseudoscientific notions). Recently, it has been suggested by M. Leary (cited in A. Kurtz, 1994, p. 2) that people with autism are also affected by emotional dyskinesia ("inability to call up an emotional response when needed") and paradoxical kinesia ("the ability to do things sometimes and not at others").

There are some superficial similarities in motor topologies among people with autism and individuals with specific movement disorders (Hill & Leary, 1993), and selected components of dyspraxias have been reported at higher rates among people with autism compared with chronological and developmental age-matched controls (Jones & Prior, 1985). However, controlled neurological or neuropsychological research does not implicate developmental dyspraxia as a cardinal feature of autism or more severe forms of mental retardation, and there is evidence to the contrary (e.g., Sigman, 1994). For example, in recent years the nature of developmental verbal dyspraxia in children has been described in detail by Stackhouse (1992; Stackhouse & Snowling, 1992), and a manual (hand) apraxia scale has been developed (Burd, Cook, & Randall, 1990). These sources do not indicate behavioral characteristics that are common in children or adults with autism or mental retardation. The claim that developmental dyspraxia is a cardinal feature of autism or mental retardation is based only on the uncontrolled observation that these individuals demonstrate unexpected literacy or seem to require help doing almost everything (Biklen, 1993a, 1993b). Therefore, it is inferred that because this literacy implies intellectual ability in the normal-to-superior range, these nonverbal children and adults must have motor disorders that prevent the expression of competence vocally, manually, or gesturally. The circularity of this reasoning is demonstrated in the following excerpt:

> Many of the interpersonal factors crucial for success in facilitated communication are known. They are known, to a large extent, because we have been told by people who are typing. . . . Fundamental to success is the facilitator's self-fulfilling conviction that there exists for the learner a level of cognition as yet unobserved. (A. Kurtz, 1992, p. 8)

If FC is a pseudoscientific phenomenon, as we assert, how do we account for its apparent initial acceptance by segments of the academic community (Hall, 1993)? It is understandable that people providing facilitation services might not perceive that they are influencing the content of typed material that they attribute to the person with a severe disability (see, for example, Skinner, 1957, on the topic of self-editing or Johnston and Hawley, 1994, on biases about expected and unexpected inputs, and Salzman and Newsome, 1994, for a plausible neural mechanism underlying cortical influence over perceptual decision making that may have implications for other perceptual mechanisms). The complete answer, we believe, additionally lies in a widespread and possibly growing antiscientific sentiment in Western society and almost certainly in elements of the helping and healing professions and their academic spokespersons (Gergen, 1994; Holton, 1994; P. Kurtz, 1994; Sampson, 1993; Smith, 1994). The following four excerpts from a conference presentation, journal article, book, and newsletter, respectively, exemplify this sentiment:

> Facilitated communication can be looked at as a post-modern idea. . . . It is social constructivism in communication. It is understood as a product of sender and receiver processes rather than standing back and interpreting what a sender is trying to send. Facilitated communication is a product of an interactive process. In the reality of communication it is defined within that context. (Sailor, 1994; p. 10)

> One of the most intriguing and controversial examples of attending to an individual's effort to communicate is facilitated communication. Despite the debates about the effect and role of the "facilitator," this method clearly begins with the assumption that a desire to communicate exists in more people than previously thought and that an appropriate intervention focus is to realize that intention. (Ferguson, 1994, p. 9)

> Some critics of facilitated communication appear to approach it from a positivist perspective. The tradition of positivism attempts to address social science questions as if human experience could be understood in cause and effect terms, much as one understands the natural science of physics. This perspective contradicts the perspective to which I hold, which is that objects, events, observation, and understanding are by definition socially constructed. (Biklen, 1993a, p. 136, footnote)

> The emergence of new paradigms invariably requires the abandonment of old "knowledge"—what we thought we knew. That people whose professional lives are steeped in this old knowledge find it difficult to abandon it is understandable; that they would use old, invalid knowledge in a desperate attempt to keep the Jens and Wallys (FC users) of the world constrained within the limits of the old paradigm is not. (Bakeman, 1994, parentheses added).

The first excerpt (Sailor, 1994) is from a keynote address on emerging practices in supporting people with developmental disabilities that was presented at a California conference on community integration. Like other sources (Duchan, 1993a, 1993b), it affirms the validity of FC from a postmodern standpoint by drawing an analogy between facilitated communication and inferential processes that are evoked in everyday discourse (see Borthwick & Crossley, 1993). Essentially, this analogy is that FC is mutually constructed and interpreted as to meaning in the same way that people commonly question, repeat, and probe to understand each other's statements in everyday conversation. As a rhetorical device, analogy offers an interpretive clarification of previously stated material; it does not constitute a causal explanation of what has been stated. Sources abound that aver the validity of communications obtained using FC or that account for why FC works or cannot be tested on the basis of such analogies. Insubstantial descriptions in this form

often appear to be mistaken for causal explanations. Moreover, critics of positivist interpretations of behavioral science who invoke "uncertainty" and kindred concepts in analogic or metaphorical reasoning, ironically, refer to phenomena that have become accepted within the sciences precisely because of robust verification, prediction, and replication of effect (Gross & Levitt, 1994), and thus, in one stroke, both accept and reject positivist empiricism.

The second (Ferguson, 1994) excerpt illustrates the willingness of some writers to either disregard the high consistency of the research findings that demonstrate facilitator control of typed content or to identify considerations that are claimed to mitigate the ramifications of the ineffectiveness of the procedure. There is no scientific evidence for any of the avowed positive side effects of FC (including that therapists who are FC users believe more in the desire of people who are nonverbal to communicate than do therapists who do not use FC, or that the former are more likely to attempt to improve the communication skills of people with disabilities). Brief mentions of FC, or allusions to it, often occur in the context of articles in professional journals that address wider concerns (this excerpt appeared in an article by Ferguson, 1994, on communication and [community] membership of people with developmental disabilities) and inadvertently lend unwarranted credence to the perspective that FC falls in the realm of clinically beneficial augmentative or alternative communication procedures.

The third excerpt (Biklen, 1993a; from a book on FC) exemplifies the perspective, common among proponents of FC, that objective knowledge of human behavior is not possible and, indeed, confuses the methods of behavioral science with those of social science. More critically, however, within this perspective proponents imply that all possible interpretations of human behavior have equal validity, and therefore disconfirming scientific evidence is not pertinent (e.g., Sarbin & Kitsuse, 1994). But this argument fails to provide a clear rationale for how a superior intellectual and logical (socially constructed) argument may be made for the validity of FC, unconfirmed and unsupported by scientific evidence, in contrast to the position of (socially constructed) skepticism or rejection, confirmed overwhelmingly by scientific and applied research.

The fourth excerpt (Bakeman, 1994) is from an FC newsletter article, a rejoinder to a cautionary letter to the editor on negative FC side effects by Schwartz and Jacobson (1993; authors of this article) in the newsletter of the American Association on Mental Retardation. Special topic newsletters and technical assistance materials developed by university groups who actively market FC are probably the primary source of new information on FC for people using this technique in clinical settings. As in this excerpt, it is common to find commentary regarding the ignorance, inflexibility, or imperceptiveness of researchers who find little support for the validity of FC juxtaposed with personal experiences or information. Newsletters carry a combination of articles condemning nonconfirmatory research on the basis of presumptive, arbitrary, and idiosyncratic criteria; reports of workshops promoting FC; and personal accounts of successful and unvalidated FC interactions and transcriptions of these. Because these newsletters never publish material that characterizes nonconfirmatory research as plausible and have included comment on only a small part of the research literature, many users are systematically sheltered from awareness of disconfirming evidence.

Distrust of Science and Embracing of Antiscience

In the brave new world of postmodern analysis, terms from the physical sciences, like the *uncertainty principle, chaos,* and *paradigm shift* are loosely and often inaccurately used in an *Alice-in-Wonderland* revision of scientific method (Gross & Levitt, 1994; Rae, 1986/1994). For example, the position is espoused that utilitarian and accurate measures of performance by people with disabilities cannot be developed due to uncertainty or that a fad treatment unsubstantiated by controlled research can precipitate a paradigm shift. At the same time, other tenets of conventional science are selectively rejected according to their referential precision and lack of social ambiguity (e.g., demonstration that, in FC, questions regularly cannot be answered accurately unless the facilitator knows both the question and correct answer).

First of all, the uncertainty principle refers to measurement problems at the subatomic level. It has nothing to say about the practical reliability and validity of physical measurements at the macroscopic level—which make possible such things as precision tools and mass production of goods to very close tolerances—much less about behavioral processes. The mathematics of chaos are conceptualized as a completely deterministic system and not, as the name implies, indeterminacy or mysticism. With respect to paradigm shifts, Kuhn (1970) asserted that new empirical findings and methods of conducting science force scientific thinkers to abandon old paradigms before embracing the next dominant scientific orientation and the newly interpreted body of research findings (Meinhold & Mulick, 1992; Mulick & Meinhold, 1992). To be considered at all within a scientific paradigm, FC must be measured against the same standards for treatment effectiveness, prediction, and control that have allowed researchers and clinicians to work and communicate within the conventional scientific paradigm (cf. Kuhn, 1974). The construct of paradigm shift has nothing to do with FC because there are no new, valid observations, only assertions.

Proponents of FC maintain that the observer in a controlled study can never be impartial or objective but rather acts as a critical variable in the interplay of influences that determine the individual's output, destroying the very phenomenon he or she seeks to study. This is known as the observer–participant phenomenon in quantum physics. In this "paradigm" all communicative reality is relative and so must be reconstructed by the participant–observer; indeed, there is no real message, only the results of an interaction. Needless to say, it be-

comes difficult to construct objective scientific methodologies when the existence of an objective posture and external reality is denied by potential research participants (in the case of FC, by the facilitators). But where are the controlled studies by the FC proponents? Why is there such an indifference to scientific proof?

Perhaps one reason can be found in postmodern arguments regarding social construction of reality, such as those of Gergen (1994), a proponent of social construction in social psychology, who wrote,

> Consider the ideal of objective knowledge. In psychology, as in other sciences, the claim to "objective knowledge" operates as a conversational trump. It disregards or denigrates all hands not dealt in these terms (e.g., evidence, measurement, reliability). Any views not based on scientific tenets . . . can be dismissed as folk beliefs—or more pejoratively, as value-based, superstitious or despotic. In terms of its relational implications, "science talk" is thus as totalizing as that of the demagogy that science has sought to replace. (p. 413)

FC proponents often place themselves in the camp of the postmodernists (Duchan, 1993a, 1993b; Duchan & Sonnenmeier, 1993; Sailor, 1994) in that they view language as a relational activity with indefinite referents. Gergen (1994) stated, "if language is important not because of its capacities to represent *what is the case* but because of its *practical* implications, it must be viewed on a par with activities of pragmatic import" (p. 415, emphasis added). What does this posture imply for FC? Indeed, in our view, as applied scientists, what can be of greater practical consequence than assisting people with severe communication impairments to participate in consensually validated symbolic activity? Proponents of FC would undoubtedly agree that for people with developmental disabilities and no capacity for speech, it is pragmatically of the utmost importance to link symbol with referent in a consistent and reliable way comprehensible to the entire speaking and reading community. Yet they have failed to demonstrate this. The pragmatic question, which can be addressed by applied scientific methods, therefore, is whether the person with a severe disability is actually engaged in typewritten communication.

Although arguments that challenge research findings based on experimental demand characteristics are not new (Rosenthal & Rosnow, 1969; Sebeok, 1980; Umiker-Sebeok & Sebeok, 1980), and may obtain in poorly constructed protocols testing FC or for the occasional anxious individual, the near universal failure of otherwise competent FC users to perform under controlled observation leads to a more parsimonious explanation. It is more likely that the phenomenon is not exhibited under rigorous observation because it doesn't exist, not because of some global refusal or inability to perform by all individuals with autism and mental retardation. Imagine that despite the great variability of autistic persons, the one thing they all have in common is a refusal to perform when involved in a rigorous observational task. One would be hard-pressed to point to any other aspect of the behavior and motivation of people with autism and mental retardation that would be so uniformly exhibited by people of different ages, developmental and educational histories, cognitive profiles, and behavioral abilities. Yet proponents of FC assert that each of the several hundred participants in controlled studies who failed to perform (Green, 1994) did so because of loss of confidence, refusal to comply (despite having given informed consent, often through FC itself), or a situation-specific word finding deficit. In such interpretations, parsimony gives way to the desire to believe.

Similarly, a 50-year literature on the cognitive impairments associated with autism, and a much more extensive history on cognitive impairments in mental retardation (both of which document not only impairment but also ability level) are simply discounted and rewritten because scientific researchers failed to recognize how the methods used to describe the syndrome shaped its description. Proponents of FC (Biklen, 1993a, 1993b; Borthwick & Crossley, 1993; Hill & Leary, 1993) assert that virtually all cognitive tests and observational procedures used by those studying autism were flawed in their findings because they failed to take into account the overriding influence of developmental apraxia. As already noted, there is little evidence for such an hypothesis. Nevertheless, this hypothesis is embraced by proponents because it offers an explanation for the persuasive benefits of facilitation. Yet, how could one study even the epidemiology of developmental apraxia when the methods of controlled observation, representative sampling, and cautious generalization can be disregarded, or worse, considered unnecessary, as they are in the methodologically compromised studies cited by proponents in support of FC (Biklen, 1993a; Borthwick & Crossley, 1993)? Or, is it only selected phenomena that cannot be studied with rigorous methodologies?

FC appears to be most vigorously embraced by social theorists and human services advocates who aggressively assert the equality of people with disabilities and their full participation in all aspects of society. For example, prior to his work in FC, Biklen had established a national reputation as a strong proponent of educational inclusion (Biklen & Knoll, 1987). It is perhaps a short leap from a position that people with disabilities should have a full range of opportunities to the position that people labeled as disabled are, in fact, not disabled at all. Indeed, one could suggest that the professional community has somehow confined such individuals through unflattering descriptions that say more about the limitations of Western society than the limitations of people (Jacobson & Mulick, 1994b).

Are all organic and functional deficits to be redefined as cultural sequelae, incapacities with meaning only as they relate to the fit with societal demands (see Coon, 1992; Fischoff, 1990; Leahey, 1992; O'Donohue, 1989; Schwartz, 1990; and Weinberg, 1989 on related dilemmas)? Or, is there an objective foundation to disability that can be defined, quantified, and measured, a foundation that has something to do with unusual characteristics and features of the actual development and perfor-

mance of an individual? Some proponents of FC (Haskew & Donnellan, 1992) have advocated that consensus regarding substantive issues, such as the efficacy and utility of FC, defines a foundation for social action and public funding rather than scientifically grounded conceptions of reliability and validity. But, if scientific findings are demagogic by nature, and all perspectives are grounded in social construction, on what basis can FC proponents claim that their view represents a higher truth or a more valid depiction of social reality? The uncritical acceptance and dissemination of FC by erstwhile prestigious universities, and by some practitioners, once again underscores the dangers inherent in promoting a scientific theory to further a social and epistemologic agenda, particularly when there are derivative clinical practices with the potential to negatively impact vulnerable people.

It is probably inevitable that occasional embracing of fad treatments and precipitous unjustified adoption of some therapeutic practices will occur. The pace of research and development efforts that result in marked improvement in clinical practice is slow, and the frequency of real breakthroughs that revolutionize practice is low. On the other hand, parents and advocates are profoundly committed to assuring that children, adolescents, and young adults with severely disabling conditions have access to ameliorative treatments. Too often fad treatments emerge in low incidence populations with severe handicaps, populations for which few, if any, curative treatments can be offered. Fad treatments are not benign; they supplant use of proven and reliable methods when these methods do not also appear to produce dramatic breakthroughs.

Scientists–practitioners and others who prepare, train, and supervise therapists, especially, have an obligation to balance exploratory use of experimental or unproven but seemingly promising techniques with skilled application of treatment methods that conform to accepted community standards and responsible interpretation of evaluation findings. Moreover, practitioners who themselves lack the skills to evaluate the effects of controversial or unproven treatments have an obligation to assure that appropriate evaluation of treatment effects occurs. We suggest that such obligations are inherent in the relationship of professionals to society at large, and not simply confined to those disciplines with ethical codes containing explicit provisions to this effect. Practitioners must offer both appropriate treatment and protection from inappropriate care. They need the skills to know the difference.

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