



Interrogating Neurotypical Bias in Facilitated Communication, Rapid Prompting Method, and Spelling 2 Communicate Through a Humanistic Lens

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Abstract

Purpose of Review Minimally-speaking autistic individuals can be effectively supported through evidence-based augmentative and alternative communication (AAC). Instead, some families/clinicians rely on facilitator-dependent techniques such as Facilitated Communication (FC), Rapid Prompting Method (RPM), and Spelling 2 Communicate (S2C). Research evidence unequivocally demonstrates that FC messages are generated by the neurotypical facilitator rather than the autistic individual. Although it is empirically unknown who is authoring messages generated with RPM or S2C, the technique has been compared along many dimensions to FC, and analyses of publicly available video-taped interactions of RPM and S2C indicate that facilitators tend to move the display and cue autistic individuals. Given the persistence and increased use of FC/RPM/S2C, this paper explores the consequences of neurotypical biases through a humanistic lens by drawing insights from postcolonial theory.

Recent Findings Our analyses reveal that there is a particular way in which the representation of autistic persons becomes a variation of the able or neurotypical society. If we admit the evidence that FC does not provide access to the voice of the person/s purportedly speaking, we would be committing “epistemic violence” against these persons by continuing these techniques. That is, we might do violence by distorting the will and desire of the very people that we seek to understand and include. Ventriloquism, a metaphor evoked by others to characterize facilitator-dependent techniques, is used here to scrutinize further the dynamics of the process involved in such situations.

Summary To prevent (or at least minimize) the stifling of autistic voices through procedures resembling ventriloquism, violence to the will of autistic persons, and epistemic harms, all our disciplinary and clinical efforts should converge to enable the rights of autistic individuals who have little or no functional speech to express their will and to amplify their voices using evidence-based AAC methods.

Keywords Autism · Disability studies · Facilitated Communication · Neurodiversity · Rapid Prompting Method · Spelling 2 Communicate · Postcolonial theory · Ventriloquism

Introduction

Approximately 25–35% of autistic individuals have little or no functional speech and benefit from supports with communication [1]. Many of these individuals are supported in their communication through independent access to augmentative and alternative communication (AAC) systems (e.g., manual signs, non-electronic communication boards, speech-generating devices, and tablets with AAC-specific applications) [2]. The National Clearinghouse on Autism Evidence and Practice (NCAEP) at the University of North Carolina at Chapel Hill has declared AAC as an evidence-based practice [3•]. The NCAEP is an independent entity

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Instead of using evidence-based AAC approaches, some parents and others working with minimally speaking autistic individuals rely on facilitator-dependent techniques such as Facilitated Communication (FC) and its variants (i.e., Rapid Prompting Method (RPM), Spelling 2 Communicate (S2C)). According to the American Speech-Language-Hearing Association, “Facilitated Communication (FC)—also referred to as “Assisted Typing,” “Facilitated Communication Training,” and “Supported Typing”—is a technique that involves a person with a disability pointing to letters, pictures, or objects on a keyboard or on a communication board, typically with physical support from a “facilitator.” This physical support usually occurs on the hand, wrist, elbow, or shoulder [4] or on other parts of the body” (<https://www.asha.org/policy/ps2018-00352/>).

Although proponents of facilitator-dependent techniques claim that their techniques fall under the umbrella of AAC [e.g., 5], the two most comprehensive and authoritative textbooks on AAC do not consider these techniques to be legitimate forms of AAC [2, 6]. Differences between facilitator-dependent techniques and AAC have been described by Travers et al. [7]. While spelling has been one of the output modalities since the inception of the AAC field (and before it was officially called AAC), when spelling is used in AAC, it should be based on a feature-matching process indicating that traditional orthography is an appropriate level of representation for a given individual rather than, as in the case of FC it seems, to be the default or only form [8]. Also, when spelling is used as part of AAC, it is produced independently [e.g., 9, 10•, 11, 12•].

Lilienfeld et al. [13••] provide documentation that FC continues to persist in the following ways: (a) it continues to be used as an intervention, (b) it is endorsed in some academic and institutional settings, (c) it enjoys continued and growing popularity in online and print sources, (d) it is promoted in the media as releasing previously unheard voices, and (e) it has been implicated in cases where caregivers are accused of sexual abuse. Two recent artifacts highlight the need for a re-engagement with this topic. First, a 2023 documentary film, *Speller*, portrays “S2C,” a variant of FC, in which a neurotypical facilitator is holding the letter board in mid-air as an autistic person selects letters on the board. The film portrays success stories involving nine individuals, including autistic individuals, who are portrayed as triumphing over impediments that arise due to their non-speaking condition through S2C. The film does not mention the serious problems identified with this method nor is there any reference to research evidence about the use of this method.¹ Second, Emiliano Rodriguez Mega’s [14] reported

on the desire of autistic individuals to have a voice in autism research priorities. The article shows a photograph of an individual communicating by pointing to a letter board that is held in mid-air by another individual who is not visible. The photo includes the caption “Rachel Kripke-Ludwig helps to ensure that autism research is relevant to autistic people.” Here, as in the film, FC and/or research evidence pertinent to its use are not mentioned. In these two examples drawn from popular culture and a scholarly journal, respectively, FC is being normalized uncritically, and evidence relating to its problematic use is ignored. FC has been examined through several perspectives, including an empirical lens [e.g., [15, 16], as a psychological phenomenon [e.g., 17•] and as an ethical and human rights issue [e.g., 18•, 19]. We propose to take a broader, humanistic approach to the practice of using FC (and its variants) by drawing on postcolonial theory alongside the empirical evidence.

We believe it is important to recognize, in the study of developmental disabilities, as the field of medicine has done more recently, that we should not “let the fascination with science and technology obscure the individual who suffers [...]” [20, p. 243]. We note here that we take the term “suffer” to include “experience exclusion or misrepresentation” and the struggles that ensue. Using a somewhat simplistic delineation of fields provisionally here, it is a humanistic rather than scientific (which we can take broadly, for our purposes, to be based in empirically verifiable knowledge) impulse, perhaps, that guides the use of FC: to be able to access and validate in reality the thoughts and desires of non-speaking people. Ironically, however, in an effort to do so, an utter disregard for scientific evidence (showing that the resultant messages do not emanate from the non-speaking person) requires an urgent return to the insights from the humanities regarding the accessibility of those thoughts and desires and an examination of the power structures that surround the discursive event that purportedly reveals them. In this paper, we do not take on current debates about the “scientific turn” in the humanities fields nor do we attempt to strictly define what falls within the humanities and what outside. Those questions are well beyond the scope of this discussion. What we propose is to draw central insights from an identifiable moment in a very specific branch of the humanities disciplines and humanistic social sciences, a relatively new sub-field that is interdisciplinary (and straddles, albeit not exclusively, literature, cultural studies, history, anthropology, and philosophy), which is concerned specifically with hierarchical relations in accessing the desires and will of people (individuals or groups)

¹ For a critique of this film, see <https://www.facilitatedcommunication.org/blog/a-review-of-the-movie-spellers-a-documentary-for-spelling-to-communicate>.

in situations of skewed power dynamics. While power might be said to operate always and everywhere in interactions, we are concerned with a very specific hierarchy: the autistic non-speaking individual conversing with the speaking world in a language that is normative and belongs to the latter. The humanistic field of postcolonial studies was founded on studies that sought to reveal how the dominant discourse during colonialism (most often in the colonial language) obscured the very presence of subjugated colonized persons (foundational works are: [21–23]). That basic understanding of discourse in situations characterized by asymmetry that is enabled by seizure of the means of production, military domination, and ideological control is helpful to our interest. The field’s systematic interest in discourse is germane to our concern with the extent to which access to non-speaking autistic persons’ authentic voices today is fraught when the communicative process, within an already asymmetrically organized societal structure, is burdened with dependency on often well-meaning but nevertheless potentially overpowering partners without whom no message can be transmitted.

Power Imbalances: Insights from Postcolonial Studies

The normalization of FC despite its demonstrated invalidity and the normalization of RPM/SC2 despite the absence of any research evidence to support their validity render urgent the stark power imbalances that autistic people, and particularly those who are minimally speaking, encounter in the world around them. Communication is central to a person’s identity. The use of these methods potentially bars individuals’ participation in society at large and presentation of their own distinct identity and personality. It has immediate and direct bearing on their lives and future. Nowhere has the power differential within FC been more clearly articulated than in Professor James Todd’s work. In a recent presentation to the National Council for Severe Autism [24•], he stated that (with FC) a neurotypical speaking person (i.e., the facilitator) who lives independently is physically manipulating an autistic person who is often non-speaking or has minimal speech, is often a child, and does not live independently. This lays out a very pronounced power differential.

In turning to a humanistic understanding of the hierarchies at play in the discursive field and the connection of this predicament to material conditions, we are guided by debates central to the field of postcolonial studies, where the issue of representation in language and in society is suggestive for understanding how to intervene structurally to correct imbalances of power. For example, the historian Dipesh Chakrabarty [25•], drawing on previous work in postcolonialism, asked this question in a subtitle of an essay, “Who Speaks for Indian Pasts?” Chakrabarty was responding to

the perceived successes of Indians representing themselves as subjects of their own histories after centuries of British colonialism. He suggested that an authentic Indian (and more broadly non-European) version of history had not yet been realized, because “[t]here is a peculiar way in which all these other histories [such as ‘Indian,’ ‘Chinese,’ or ‘Kenyan,’ histories, for example] tend to become variations on a master narrative that could be called ‘the history of Europe’” (p. 1). In a similar vein, we might say that there is a “peculiar way” in which the representation of autistic persons becomes a variation of the “master narrative” of “able” or “neurotypical” society. The question of representation was similarly raised by another postcolonial scholar, Gayatri Chakravorty Spivak, who posed this question in an essay, titled: “Can the Subaltern Speak?” [22••]. In this essay, Spivak [22••] took to task two “activist” French philosophers of history as they conversed with one another in an interview format. She wrote that their exchange “enables one to glimpse the track of ideology” (p. 66). In this influential essay, Spivak revealed how these philosophers fail to “consider the relations between desire, power, and subjectivity” and that they thus fail to “articulat[e] a theory of interests” (p. 68). During her discussion, Spivak pointed to the distinction between two terms that signify “representation,” by reading the German text discussed by the philosophers (see especially, p. 71). These two German terms are *Darstellung* and *Vertretung*. The former could be taken to mean representing something that has a reality (giving a discursive presentation of something that exists or has already been presented, such as in an artwork). *Vertretung* could be explained as political representation where one person speaks in the name of their polity. What Spivak showed is that these two senses of the term are distinct, but they are not mutually exclusive. These two meanings are extremely helpful when we think about representation in the fraught context of individuals who are “represented” through mediation of the kind that occurs with FC, RPM, and S2C. The actual processes need to be scrutinized very attentively when our interest is in creating or inventing effective ways for these individuals’ voices to be heard, understood, and represented. When we attempt to represent in the sense of *darstellen* (that is, portraying them and their reality) the voice of autistic persons by using mediated means of communication,² we are also, most often,

² Some interactions with an individual using AAC and a neurotypical communication partner can involve mediation through the process of *co-construction*. With FC and its variants, however, this mediation takes on the form of “*other-construction*” by the facilitator. Therefore, facilitator influence cannot be reduced to or conflated with *co-construction* that occurs in AAC. For an essay distinguishing *co-construction* in AAC from what occurs with FC and its variants, please consult “Can facilitator influence be reduced to *co-construction* of meaning?” published by K. Beals on 12/20/2023 here: <https://catherineandkatharine.wordpress.com/2023/12/20/can-facilitator-influence-be-reduced-to-co-construction-of-meaning/#more-13317>.

representing them in the sense of *vertreten* (that is, speaking on their behalf). The portrait of the speaker that emerges is closely linked to expressions of their will in a heightened way. In other words, ignoring the evidence that FC does not provide access to the voice of the person/s purportedly “speaking” through FC facilitators would be committing “epistemic violence” [22••, p. 76] against these persons: violently distorting knowledge of the will and desire of the very people that we seek to understand and include. What is at stake is the “knowability” of what postcolonial historians and theorists call the “subaltern,” or least powerful, which is to be understood as the space that challenges understanding because its expression must occur in a web of power structures that prevent its voice from being heard and understood. The pertinence of these reflections becomes quite striking when we scrutinize the communication process involving non-speaking autistic persons. When we move a theory from one context to the next in this manner, “[t]here is in particular an intellectual, and perhaps moral, community of a remarkable kind, *affiliation* in the deepest and most interesting sense of the word” [26, p. 230].

In the colonial situation described by the postcolonial theorists referred to above, domination occurred in a historical context that was engineered to impose the will of one people (the colonizer) on another (the colonized). Spivak states that “concern for the politics of the oppressed” can “hide the privileging of the intellectual” [22••, p. 87] in the very act of promoting the cause of the oppressed. Drawing on this insight, we ask how, in the process of communication, the will of other parties providing “assistance” to communicate might be privileged over that of those we seek to understand and hear, and how, if this were the case, could this impact the expression of the desire and intention of the presumed “speaking” autistic person, and ultimately, their agency?

FC (and Potentially RPM/S2C) as a Form of Ventriloquism

In order to answer these questions, it is important to consider what scholars and practitioners must do to guard against the continuing misrepresentation of autistic persons with little or no functional speech. Ventriloquism has been used as a metaphor for (colonial) oppression [27, 28], and FC (and potentially RPM/S2C) is reminiscent of ventriloquism, which the Cambridge Dictionary defines as “the ability to speak without moving your lips so that your voice seems to be coming from someone or something else, usually as a way of entertaining people.” In German, the term for ventriloquist is “Bauchredner” (“Bauch” = stomach; “redner” = speaker), drawing attention to the fact that the normal place where the voice can be identified via the mouth is dissimulated. As a stagecraft, ventriloquism usually

involves a “dummy” or “puppet” who appears to be doing the talking. Ventriloquism has been evoked in multiple fields, including art [29], theater and cinema [30], literature [31], theology [27], and human–computer interaction [32] to describe potentially dominating discourses that dissimulate their power.

In the context of FC, this analogy was first made by Routh [33•], and followed by others who found it to provide an apt description of the associated “communication” process. For example, Jarry [34] writes online: “Facilitated communication seduces many people with the mirage of making dreams come true. Unfortunately, it only ventriloquizes people. And these people deserve better.” Spruce [35] says online, “The big problem with FC is that the facilitator becomes a ventriloquist.”

Nevertheless, there are some important distinctions to be made between a ventriloquist engaging in a performance act, for example, and a presumably neurotypical facilitator engaging in FC. They have to do with the implicit contract amongst those involved in the communicative process. Members of the audience of the prototypical performance act of a ventriloquist know that it is not the puppet who is doing the talking although they enact a suspension of disbelief to go along with the illusion for the sake of being entertained. The performer is aware that their act is taken to be just that by the audience, and while a skillful performance might momentarily make the audience believe the puppet is speaking, the audience leaves in awe of the skill with which this transfer was accomplished and not with the idea that a puppet conversed with them!

In FC, on the other hand, unassuming communication partners (and likely, facilitators themselves) believe that it is really the autistic person who is communicating.³ Because facilitators are usually unaware that they are authoring the messages [e.g., 36•], or because they insert themselves subconsciously, everyone involved responds to the messages generated as if they were produced by the autistic person. In the absence of a shared understanding of it being an act (i.e., as in ventriloquism as a stagecraft), ventriloquism in FC is hidden “in the stomach,” as the German term highlights its hidden quality, rendering it truly insidious and oppressive. Put another way, with ventriloquism in stagecraft, there is a congruence between what the speaker knows and what the audience believes. With FC, there is likely an incongruence at the level of messaging because it would generate an unrealistically low probability that what the autistic person would want to say coincides with exactly, what the facilitator authored.

³ It is unknown what the non-speaking autistic person believes or what they experience while being facilitated. Their perspective is not knowable as long as they are being facilitated.

The Evidence Base

Initially, in the 1990s, FC was heralded as a miracle intervention that unlocked the potential of autistic individuals resulting in seemingly “effective” communicative interactions and literacy skills that had not been seen before. Some clinicians and researchers, while welcoming these outcomes, questioned the extent of these claims, and independent research studies began to be planned and implemented to probe the actual process of communication (and test the validity of FC). In one of the first experiments by Wheeler et al. [37••], conditions were created in which the facilitator had access to the same information as the autistic individuals, and others in which they had access to different information. For example, sometimes the autistic individual and their neurotypical facilitator would be shown the same picture (e.g., a cup) and asked to label what they saw with the letter board, and sometimes the pictures would be different (i.e., the autistic individual is shown a photo of a piano, and the facilitator is shown a photo of sneakers). When both saw the same photo, the produced spelling was correct (i.e., cup). Whenever the photos differed, however, the spelled output consistently produced what the facilitator saw (e.g., sneakers while the participant saw the photo of a piano). This study deflated the earlier euphoria around the idea that autistic individuals’ authentic voices were suddenly made accessible, that hidden intelligence was uncovered, and that these methods empowered them in seeking and claiming their own destiny. Many other studies were produced on the same topic producing replicated evidence that the use of FC did not enable the voices of autistic persons to be heard.

Nine reviews of the authorship evidence related to FC, published in multiple languages (English, German, and Italian) by diverse author groups [38–48] arrived at the same conclusion: under controlled conditions, facilitators are authoring the messages and not autistic individuals. To date, there is not a single well-conducted and well-controlled peer-reviewed study that has shown that the autistic individual controls the messages being produced when using FC.

As a result of this overwhelming, unanimous, and unequivocal research evidence, approximately 30 national and international professional associations, in order to guide their members, ratified position statements against the use of FC (see <https://www.facilitatedcommunication.org>), including the American Academy of Pediatrics (AAP), the American Psychological Association (APA), the American Speech-Language-Hearing Association (ASHA), the American Association on Intellectual and Developmental Disabilities (AAIDD), the Association for Science in Autism Treatment (ASAT), the National

Council on Severe Autism (NCSA), and the International Society for Augmentative and Alternative Communication (ISAAC).

For RPM and S2C, a systematic review effort to synthesize the effectiveness evidence in terms of increasing motor, speech, language, and communication outcomes and decreasing problem behavior resulted in an empty review, with no studies meeting the criteria for inclusion [49•]. Empty reviews demonstrate an absence of evidence rather than an absence of an effect [50, 51]. Hence, it is still unclear whether RPM and S2C have any validity; that is, whether the messages generated are those of the autistic person.⁴ For parents and clinicians alike, this lack of evidence for RPM/S2C, specifically, needs to be viewed within the context of overwhelming evidence of facilitator control with FC, a similar facilitator-dependent technique. It is reasonable to ask whether the findings for one facilitator-dependent technique (i.e., FC) can be extended or generalized to other facilitator-dependent techniques (i.e., RPM and S2C). Although developers and proponents of RPM and S2C proclaim that their interventions are vastly different from FC, for clinicians interested in implementing evidence-based practice (EBP) [52], there is little that suggests any differences in terms of features that would be critical to the validity of the intervention (i.e., authorship). Given that these facilitator-dependent techniques are prone to the same biases associated with facilitator control (see below), the evidence on FC is highly relevant to them. Therefore, the available evidence on an intervention that is part of the same class of facilitator-dependent techniques ought to be considered when making decisions regarding how to best support independent communication by autistic individuals. When applying research evidence in practice, clinicians often need to decide whether the evidence applies to the interventionists (the agent of the intervention) and the type of the practice setting (e.g., clinic, school, home) concerned. Here, they would need to decide whether the evidence generated for FC has any bearing on RPM/S2C (a variation of an intervention). It makes sense that this evidence would play a role in evidence-based decision-making (together with clinical expertise and stakeholder perspectives—see below) until direct evidence relating to RPM and S2C becomes available. A reasonable and ethically defensible reaction to this “adjacent” evidence would be for developers and proponents of RPM/S2C to think about adaptations and procedural safeguards they could put in place to minimize the risk of facilitator control. Deciding these interventions

⁴ Establishing validity is a prerequisite to studying its effectiveness; in the event that RPM/S2C were found to be invalid (i.e., messages are authored by the facilitator), there would be no need to ponder its effectiveness.

are somehow different, without investigating whether or how those differences are significant, jeopardizes the will of the autistic individuals they aim to support by risking control over their messages, wittingly or unwittingly, by facilitators.

Developers and proponents of RPM/S2C interpret the absence of direct authorship evidence for RPM/S2C as a green light to continue to promote these techniques. Such a stance is indefensible. The onus of proof for novel interventions falls squarely on their proponents [53••, 17•, 54] and often this evidence is, at least initially, provided by the developers of the intervention. In the case of RPM/S2C, there is a sense of urgency because these techniques are implemented by the actions of the facilitator holding the letter board prone to the same neurotypical facilitator biases as FC, most prominently the ideomotor response or unconscious muscle movement [e.g., facilitatedcommunication.org]. While direct physical control of the autistic person is reduced, additional forms of neurotypical biases are introduced that are specific to RPM/S2C by relying on the display being held in mid-air by the facilitator.

There is video-taped documentation of how RPM/S2C facilitators move non-stationary displays, which raises the question of undue influence on letter selection (e.g., see the interactions of Soma Mukhopadhyay with Keli in the 2010 documentary film “*A Mother’s Courage: Talking Back to Autism*”). Typically, the letter board used is low tech and opaque (i.e., someone observing behind the display is unable to see what is being selected). Occasionally, the use of translucent displays (stencils or clear letter boards) affords a glimpse into letter selection and the facilitator’s responses. Janyce Boynton, a former facilitator of FC [36•], analyzed letter selection by Ben Breaux in an interview with Christopher Banks, the CEO of the Autism Society of America.⁵ Her analysis revealed that the facilitator repeatedly calls out letters that were not selected by the autistic person. Had the display not been translucent, this would have never come to light.

There is no legitimate reason for the display not being stationary. Non-stationary physical displays held by a facilitator are prone to movement (intentional or not). Targeted letter selection becomes infinitely more difficult when the display is moving, and it is especially problematic for autistic individuals who, according to RPM/S2C proponents, have difficulties with motor planning. If the autistic individual’s communication is more effective with a display that is in front of their purview (at eye level) rather than flat on the table, this can be accomplished by using a stand or a table mount rather than holding it in mid-air [55•].

Proponents of RPM/S2C cite a study by Jaswal et al. [56•] as proof that S2C is effective. In this study, the eye

movements of autistic participants are tracked as they select letters (to answer questions) from a board that is held in mid-air while using S2C. The authors argue that the eye-tracking data show that the letter selections are deliberate and demonstrate that it is the autistic individuals who select the letters rather than the facilitator who is holding up the display. However, scholars have questioned theoretical and methodological aspects of the study along with its conclusions.

In her commentary, Beals [57•] (a) refuted the provided rationale for eschewing message-passing tests, (b) questioned the need for a letter board when the participants were supposedly able to answer questions orally, (c) called out the non-stationary display as a fatal flaw due to failure to control for cueing through movement of the display (“Were participants intentionally looking at letters, or were letters shifting into their lines of sight?” p. 49), and (d) questioned why the authors did not use electronic eye-tracking software if their goal was to test authorship via eye gaze (instead, they analyzed gaze manually by examining videotapes).

While we concur with Beal’s analysis, our reading of Jaswal’s paper yields additional criticisms: First, to properly investigate authorship (“agency”) by autistic participants, it would have been prudent to not only track their eye movements but also to allow the eye fixations to result in letter selection with the help of electronic eye gaze technology. This would have eliminated Jaswal’s failed attempt at arguing that two distinct behaviors (i.e., gazing and letter selection by index finger) are actually one and the same. Second, because of the non-stationary display, Jaswal et al. have not ruled out that the eye gaze data are part of a cued behavioral sequence. That is, the same cues that are cuing the selection of letters could have cued the eye gaze behavior. The fatal flaw, however, is the lack of facilitator blinding to the context of what needs to be spelled. Valid and sound authorship testing requires a blinded and non-blinded condition arranged within an experimental design [45, 46•, 58•]. Without blinded and non-blinded conditions arranged in an experimental design, the study by Jaswal et al. is essentially a descriptive or correlational design that is incapable of attributing authorship to autistic individuals—a causal relationship between an independent and dependent variable cannot be attributed without a controlled experiment. In sum, there is currently no evidence to verify that autistic individuals using RPM/S2C are the authors of the messages that are being generated.

Barriers to Authorship Testing

Unfortunately, the developers and proponents of these techniques impose barriers to science and evidence-based practice by discouraging facilitators from authorship testing. Some proponents and some self-advocacy networks call for communication choice, claiming to protect autistic

⁵ The analyzed video is here: <https://www.youtube.com/watch?v=BSvCldQIFP4&t=806s>.

individuals' right to communicate, which, they say, is only possible with RPM/S2C for some individuals.

Sharing the same concerns for autistic individuals' rights, we strongly propose that our collective concern for the right of persons with autism who cannot speak to communicate should result in immediate authorship testing in the case of all techniques that are prone to some of the same (and new) biases (neurotypical biases, presuming a facilitator is not autistic and neurodivergent biases, presuming an autistic facilitator uses speech to communicate) found with FC. We recognize that whether a facilitator identifies as autistic or neurotypical, the potential for bias exists and should be ruled out. As we have already shown, the argument that RPM/S2C is "different" from FC does not impact the effects of an essential and shared feature: continued reliance on a facilitator. In supposedly protecting autistic individuals from unnecessary testing, professionals who are more attached to presuming rather than verifying particular levels of competence in those individuals might be in actual violation of their clinical code of ethics and the knowledge and skills documents that should guide their clinical practice [59, 60].

Based on research evidence related to FC, it follows that for RPM/S2C, the same risk of facilitators' interference in authorship potentially applies. To prevent authorship testing under the guise of advocacy is at best illogical and at worst unethical if not oppressive. As pointed out by Todd [24•], the refusal does not arise from the autistic individuals who are being facilitated, but rather, it comes from the developers and the facilitators. Even in this foundational matter, autistic individuals are spoken for by facilitators. By blocking investigation in the name of advocacy, it seems that to elicit yes/no responses from autistic individuals in relation to testing is somehow more of a violation of their personhood than the continued ventriloquism that renders them subaltern and voiceless, in most cases for their entire lifetime. This represents a serious omission and oversight on the part of FC/RPM proponents who seek to uphold communication choice and rights.

Todd [24•] reasonably hypothesized that by opposing testing facilitators are protecting their own roles. In particular, when developers refuse to do authorship testing, they prevent verification of the use to which products, training, and consultations to professionals and unassuming parents are being put. When we consider the monetary returns that these products and services generate, it becomes a flagrant violation of ethics to resist testing to find out whether they benefit autistic individuals. It is shocking that the very possibility they might cause harm and violate the will of the individuals using them does not prompt a willingness for, if not an insistence upon, thorough and pervasive testing.

To refuse authorship testing for individuals being considered for RPM/S2C is also against the tenets of EBP, which involves the integration of research evidence, relevant

stakeholder perspectives, and clinical expertise [52, 61]. When direct external research evidence from studies and reviews is scant (as it is for RPM/S2C), clinician expertise should take a more prominent role in the EBP process. Specifically, clinicians should compensate for this lack by collecting data directly with the person and engage in authorship testing. When clinicians recommend or prescribe RPM/S2C without such testing, it indicates that clinicians are not engaging in EBP. In keeping with EBP, all relevant stakeholders, and particularly the direct stakeholders, that is the autistic individuals, should be consulted using a separate and independent method of communication.

Facilitated Communication and Neurodiversity

Coined by Judy Singer, "Neurodiversity" emphasizes that all brains are different and that this diversity should be valued by society [62••]. The Neurodiversity Movement has advanced the rights of neurologically atypical disabled people including autistic individuals. The demand and call for "nothing with me without me" has extended from education to clinical services and to neurodiversity approaches in research [63]). As a construct and a movement, neurodiversity stands and falls with authentic (as in independent) autistic voices, defined here as voices originating from autistic individuals that are created through independent access [55•] to a stationary display. The outputs generated by FC (and potentially RPM/S2C) do not constitute authentic autistic voices crucial to the Neurodiversity Movement, because they are not independently produced and, as far as the current evidence shows, they seem to be the voices of neurotypical facilitators (as an assumption) or else neurodivergent facilitators who are speaking. At the same time, this distorted output is being celebrated by some as autistic voices that have been "set free." This puts FC (and potentially RPM/S2C) and the Neurodiversity Movement at odds with one another.

Self-advocacy becomes a very complex concept when autistic persons' communication is facilitated by neurotypical individuals. How can one advocate for one's own interests and needs when one is spoken for by the facilitator? For example, in the 2017 documentary film *Deej*, a young autistic man who is non-speaking and uses FC chronicles his journey from early childhood in the foster care system through graduating from high school and attending and eventually graduating from Oberlin College. At one point, Deej looks at the Lincoln Monument in Washington, DC, while a voice over states "I look at holy, loving Lincoln and give myself the courage I need to free my people." Presumably, this message is being typed through facilitated means, although this is not represented on the screen. Because Deej is being facilitated and there is no public record of

independent authorship testing that proves he is authoring these messages, we cannot be sure whether this advocacy for his people originates from him. In a critique of the movie, Foster [64•] states:

Anybody who supports merit-based inclusion would presumably celebrate Deej’s enrollment in high school and college, provided that the achievements were genuine. Unfortunately, Deej’s reliance on FC forces truth seekers to consider who graduated from high school and gained admittance to Oberlin College: Deej, or his facilitators? The answer is intertwined with the history of FC (p. 2).

In response to the ASHA position statements on Facilitated Communication (<https://www.asha.org/policy/ps2018-00352/>) and Rapid Prompting Method (<https://www.asha.org/policy/ps2018-00351/>), the Autistic Self Advocacy Network (ASAN) has proclaimed that taking steps to prevent autistic individuals from using FC or RPM/S2C is curtailing their right to communicate. In FC, it is unequivocally clear that the voice of the autistic individual is supplanted by the voice of the facilitator: autistic individuals are not the ones communicating via FC. Thus, it is illogical to argue that their rights to communicate are taken away by the consequences of position statements such as that of ASHA. By ignoring the overwhelming research evidence against FC, ASAN appears to take an anti-science and pro-pseudoscience stance. The result, ironically, is a case of epistemic violence that subalternizes autistic individuals who are minimally speaking. The result, ironically, is a case of epistemic violence that subalternizes autistic individuals who are minimally speaking. The triumph of Deej might, in reality, be his tragedy.

Minimally speaking autistic individuals who use FC (and potentially RPM/S2C) are subjected to multiple layers of ventriloquism—the oppression is inflicted by the neurotypical community whose members are developers of these techniques and individuals who serve as facilitators, as well as by (self-) advocates and their networks. This collusion is akin to the documented collusion between colonial powers and postcolonial elite governments of the former colonies in the process of negotiating “apologies” for past atrocities as documented by Bentley [65, 13••, 36•]. Bentley, who also draws on Spivak’s essay used by us, believes that although the apology might actually be a collusion between former colonizers and new elite exploiters of the nation who are those in power in the postcolonial state, the occasion nevertheless allows “unintentionally” for “the colonized to articulate their contemporary and historical experiences” (p. 2). Here, the occasion for testing, could explode the broader power structure by questioning the architecture that surrounds communication. Bentley remarks in his context that “these groups have experiences of being marginalized by the very state that purports to represent them” (p. 3). Here,

the FC specialists and their tech partners are supposed to represent non-speaking autistic persons but might end up marginalizing the latter in a similar manner.

Conclusion

The aim of this narrative review was to explore the consequences of neurotypical biases through a humanistic lens by drawing insights from postcolonial theory. We put forth the following takeaways: (a) the continued use of FC (and potentially RPM/S2C) risks committing “epistemic violence” against autistic individuals, i.e., it might violently distort knowledge of the will and desire of the very people that we seek to understand and include; (b) the process of FC (and potentially RPM/S2C) operates very much like ventriloquism, obscuring the source of messaging and snatching away the agency of autistic communicators; (c) it is incumbent upon developers (and proponents) of RPM/S2C to take on the task of producing research evidence, using methods that enable an examination of the effects of an independent variable on a dependent variable, to validate that autistic individuals are authoring RPM/S2C messages; (d) in practice and in each case, authorship testing is imperative prior to adopting FC/RPM/S2C with autistic individuals; (e) neurotypical biases in FC (and potentially RPM/S2C) are incongruous with the Neurodiversity Movement, which depends on authentic (independently produced) autistic voices. In addition to the “epistemic violence” caused by FC (and potentially RPM/S2C), there are real harms associated with facilitator-dependent techniques documented elsewhere [e.g., <https://www.facilitatedcommunication.org/false-allegations>] and other forms of egregious violations of individuals’ consent and will. One notorious case is that of a facilitator, Dr. Anna Stubblefield, giving herself consent via FC to have sexual relations with a young man called D.J. while a court ruled her acts amounted to rape [66]. Stubblefield allegedly even published an article in DJ’s name which was written with FC. Further, important life decisions (e.g., medical care) and arrangements related to daily living may be made against a person’s will. Lastly, opportunity costs arise from pseudoscientific techniques that could take away from resources permitting evidence-based AAC approaches that could allow families to know their autistic children. To prevent (or at least to minimize the risk of) stifling autistic voices through procedures resembling ventriloquism, which do violence to the will of autistic persons, all our efforts should converge to enable the rights of autistic individuals who have little or no functional speech to express their will. We recommend that proven methods of communication through AAC could be used to make room for the expression of these individuals’ will and the amplification of their voices.

Author Contribution AP brought in constructs from postcolonial theory. AP and RS conceptualized/discussed how these constructs inform the use of facilitator-dependent techniques. RS wrote the majority of the manuscript minus the postcolonial sections. AP provided feedback on several draft versions. AP and RS revised the manuscript together.

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Data Availability No datasets were generated or analysed during the current study.

Declarations

Conflict of Interest The authors declare no competing interests.

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