

There are two ways that many stutterers can (if they wish) learn fluency as a second language; one method sounds decidedly more natural than the other one

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I am currently working on a biography of Einer Boberg, a clinician and researcher who was co-founder with Deborah Kully of the Institute for Stuttering Treatment and Research (ISTAR) in Edmonton, Alberta, Canada.

In the course of the work on the biography, I've been thinking about a variety of ways that people have sought to deal with stuttering. In thinking about such a range of approaches, it has occurred to me that it's useful to make a distinction—in fact, to draw a sharp line—between two fluency shaping "dialects."

The purpose of the following self-published research report is to acquaint anyone, who may be interested, with my reflections about such a distinction. My report follows below, for whatever value it may have.

Introduction

A point of view has been advanced in the stuttering literature which discourages the pursuit of fluency by people who stutter. There is much to be said for not seeking fluency, as I will note below.

For stutters who do seek to attain a measure of fluency anyway (as I have done), however, at least two speech reconstruction methods (to my knowledge, at any rate) are available. Each of these methods generates a distinct and particular fluency shaping dialect.

In discussing these two dialects, I will seek to achieve disambiguation regarding certain forms of language usage in the stuttering literature.

The paper is based on a review of selected stuttering treatment outcomes studies. It is based, as well, on interviews for a biography of the Canadian clinician and researcher, Einer Boberg (1935-1995).

My conclusions are outlined within the context of three concepts—namely, agency, framing, and organizational structures.

The most important conclusion concerns the disambiguation of the terms *fluency shaping* and *prolonged speech*.

Previously, many observers have characterized fluency shaping (and prolonged speech) as being synonymous with a speech therapy method based on the uniform prolongation of syllables.

In this widely disseminated method, each and every syllable that a stutterer (who is seeking to attain or maintain a measure of fluency) speaks is prolonged the same amount of time.

Whoa! (that being an exclamation used to express surprise, interest, or alarm, or to command attention). That is a strange way of dealing with syllables if you are a stutterer. I do not recommend it. (The definition of "whoa" is from the online Oxford Languages dictionary.)

This speech restructuring method reduces overt stuttering—and it also gives rise to a slow, monotone fluency dialect which listeners perceive as decidedly anomalous. Teaching a stutterer to engage in the uniform prolongation of syllables, as a way to reduce overt stuttering in the form of repetitions and blocks, tends to give rise to a manner of speaking which in my anecdotal observation has often been described (by stutterers and other observers) as "robotic."

The paper underlines that another form of fluency shaping is available, based on the differential prolongation of syllables.

In this method, the accented (stressed) syllables in a word or phrase are prolonged slightly longer than the unaccented syllables. This (in my view, decidedly more efficacious) method tends to generate a fluency dialect broadly characteristic of normally fluent speakers.

It must be underlined, however, that research indicates about one in five stutterers will not attain lasting command of fluency as a second language, no matter what form of fluency shaping they may end up learning in a speech therapy clinic. Fluency shaping is not a foolproof option that will invariably enable each and every stutterer to learn (and maintain) fluency as a second language. It's a method that has worked wonders for me, but clearly it's not going to work for every person who stutters.

The second most important conclusion in this paper is that whichever method of speech restructuring is chosen there is also tremendous value in accepting that one always remains a person who stutters.

1. Fluency as a second language; two fluency shaping dialects

The concept of *fluency as a second language* (Pill, 2001) occurred to me some years ago. It is based on the premise that, in visiting a treatment facility such as the ISTAR clinic in Edmonton, a person typically ends up relearning how to speak—they learn fluency as a second language.

This paper is dedicated to disambiguation—through the removal of the uncertainty of meaning—with reference to selected terms in the stuttering literature.

It may be noted, first of all, that the term *fluency shaping*, along with an associated term, *prolonged speech*, has often been equated exclusively with the Webster (1974) Precision Fluency Shaping Program (PFSP) speech therapy method.

This is a method which tends to give rise to “very slow monotone speech, with no emotion” (Borkman, 1999, p. 113).

It must be underlined, however, and strongly emphasized, that an alternative fluency shaping method is also available. The alternative method generates a speech rate and level of expressiveness broadly characteristic of normally fluent speakers.

2. Fluency shaping does not mean that a stutterer invariably speaks in a monotone

My interest in fluency shaping dialects arises from research for a biography of Einer Boberg (1935-1995), a Canadian speech-language pathologist. This paper is based, among other things, on a journal article (see below) devoted to a discussion of the terms “fluency” and “dysfluency.” It is also based on a wide range of interviews with stutterers, clinicians, and researchers around the world. As well, my research includes archival recordings from the 1980s and 1990s featuring Einer Boberg.

For the recent quotations used in this paper, from an interview or personal communication, I have shared a relevant segment of a draft of this paper with every person I have quoted. I want to make sure that each quotation accurately represents what each person wishes to say. This is a standard practice in forms of journalism that I’m familiar with, having worked (many years ago) as a volunteer focusing on media relations on behalf of self-help groups and associations for people who stutter.

2.1. The term fluency

At the outset, the term *fluency* warrants discussion. In a review of how the term is used, Tichenor et al. (2022) argued that the term fluency is not fully inclusive or representative of the stuttering experience. That’s because stuttering often occurs in situations where the terms fluency and dysfluency may not be useful in describing what is taking place.

In covert stuttering, for example, the most salient feature of observed behaviour may be the employment of word substitutions and circumlocutions when a person who stutters is speaking.

In such a form of stuttering, the flow of words may be disturbed, but the way of speaking may not (invariably) be perceived as dysfluent speech.

Stutterers who engage in covert stuttering may also be at risk of not receiving treatment, or, alternatively, clinicians providing treatment may encourage outwardly fluent speech while inadvertently promoting more-covert forms of coping with stuttering.

The avoidance of speaking may be an additional but overlooked feature of stuttering.

Despite such concerns, Tichenor et al. (2022) added that “The word fluency and the concept that it describes are not inherently problematic, and our goal in this article is not to make fluency itself taboo.”

Good to know.

2.2. Fostering positive stuttering identities

Constantino (2022) advocated the fostering of positive stuttering identities using stutter-affirming speech therapy. Through adoption of such identities, adult stutterers in the 20 percent category described as “intractable” (Langevin et al. 2006)—and, in fact, stutterers in general—would likely view their experiences more positively than otherwise.

Although Constantino (2022) referred to children and adolescents who stutter, it's arguable that the fostering of positive stuttering identities would also be valuable for adults who stutter.

2.3. Therapeutic alliance

Connery et al. (2021) described results of an e-Delphi Survey, involving adults who stutter and clinicians, aimed at obtaining consensus on core components of speech therapy for adults who stutter. I am highly impressed with this research. Listening to what stutterers have to say, in their role as clients, is an approach to speech therapy that most definitely warrants commendation.

The core components identified in the e-Delphi Survey included personal reactions to stuttering, limitations in life participation, and environmental factors, which include (p. 124) a “positive therapeutic alliance between a therapist and client, specifically with respect to collaborative decision-making and goal setting.”

The survey participants reached consensus on the importance of a “limited number of speech-focused intervention targets.” A focus on fluency skills, in other words, was not viewed as a priority.

The study noted that most efficacy studies involving treatment methods have used “speech-specific and listener-rated outcome measurements to determine intervention efficacy, thus failing to evaluate the wide-ranging non-speech-related personal goals an individual may have (Baxter et al., 2015; Connery et al., 2020b).”

In other words, many people have concluded that just focusing on fluency is not the way to go.

2.4. Speech reconstruction methods

For those stutterers who do seek to pursue fluency anyway, despite arguments favouring its de-emphasis, several speech restructuring options are available including among others:

Precision Fluency Shaping Program (Webster, 1974),
Kassel Stuttering Therapy Program (Euler et al., 2009),
Camperdown Program (O'Brian et al., 2003),
Comprehensive Stuttering Program (Langevin et al., 2006),
Smooth Speech Program (Block et al., 2005),
Dutch Precision Fluency-Shaping Program (Franken et al., 1992),
Dutch Comprehensive Stuttering Program (Langevin et al., 2006),
Fluency Plus Program (Kroll & Scott-Sulsky, 2010), and
University of Utah Intensive Stuttering Clinic (Blomgren, 2013).
Outcomes studies related to some of these options are outlined below.

2.4.1. Dutch Precision Fluency Shaping Program

Franken et al. (1992) reported that severe stutterers, after attending a Dutch adaptation of the Webster (1974) Precision Fluency Shaping Program (PFSP), emerged virtually stutter-free.

However, their posttherapy speech was rated by nonstuttering listeners as different from that of normally fluent speakers.

Speech samples of 32 severe stutterers were compared with those of 20 nonstutterers. The samples were rated on 14 bipolar scales by groups of about 20 nonstuttering listeners. The speech of stutterers before and after treatment differed from that of nonstutterers.

The pretherapy samples scored extremely high on a Distorted Speech dimension, given the presence of overt stuttering. On the same dimension, normally fluent speakers had very low scores.

In the posttherapy samples, the Distorted Speech dimension scores for the stutterers were now also very low. On a Dynamics/Prosody scale, however, their scores were extremely low, as well, indicating that the expressiveness of their speech was significantly diminished.

“It is quite probable,” the study concluded (p. 237), “that the relatively slow and unexpressive speech resulting from a fluency shaping program is much more acceptable and much more effective in everyday communication than the heavily stuttered pretherapy speech.”

However, studies involving fluency shaping based on the differential prolongation of syllables (a method which stands in contrast to the uniform prolongation method of the PFSP program)

underline that it is, indeed, feasible for severe stutterers to achieve significant reduction in overt stuttering, while simultaneously demonstrating a more natural sounding speech rate and level of expressiveness.

In this context, Langevin et al. (2006) described long-term outcomes for stutterers attending the Dutch and Canadian versions of the Comprehensive Stuttering Program (CSP) which is featured at the ISTAR clinic in Edmonton and elsewhere. The stutterers in the study demonstrated a mean speech naturalness rating within the range of the naturalness rating of nonstutterers.

Similarly, Teshima et al. (2010) stated that a study of posttherapy speech naturalness involving a 5 years follow-up of graduates, rated by student speech-language pathologists, community members, and listeners who stutter, found that stutterers graduating from the CSP program (in which clients practice the differential prolongation of syllables) achieved the range of naturalness ratings given to typically fluent speakers.

2.4.2. Kassel Stuttering Therapy Program

Von Tiling & Von Gudenberg (2012) analyzed listener responses to the speech pattern generated by the Kassel Stuttering Therapy Program, which is based on the Webster (1974) PFSP program.

Three subgroups of stutterers responded to video clips of dysfluent speech including prolonged speech, which was subsumed in this particular study under the category of dysfluent speech.

Prolonged speech in this case referred to the speech pattern of graduates of the Kassel program; 106 stutterers reported “listener perception beliefs” to five ways of speaking (p. 204):

- (1) normal fluency,
- (2) stuttered speech (repetitions, prolongations, blocks),
- (3) prolonged speech learned in the Kassel, PFSP-based fluency shaping therapy,
- (4) hesitant speech (verbal avoidance behaviours like interjections and revisions) and
- (5) a mix of stuttered speech and hesitant speech.

Listeners, all people who stutter, watched five short video clips, each depicting a conversation between three young men. Three subgroups of participants were compared:

- (1) adults who had encountered the Kassel method,
- (2) adults unfamiliar with the Kassel therapy, and
- (3) adolescents who had encountered it.

The stutterers in the study expected fluent speech to be perceived more positively than any of the four dysfluent ways of speaking. That is, they “indicated that they feel they will be perceived as unpleasant, afraid, communicatively incompetent and unintelligent by a listener when being dysfluent” (pp. 214-215).

For adult graduates of the Kassel therapy (based on the PFSP uniform prolongation method), such anxious cognitions appeared to be related to their use of avoidance strategies, characterized (p. 204) as “hesitant speech (verbal avoidance behaviors like interjections and revisions).”

These avoidance strategies were used by participants, despite an awareness that listeners tended to view speech based on such strategies more negatively, than when they encountered the Kassel therapy variant of prolonged speech.

The study referred (p. 215) to an earlier Von Tiling (2011) study indicating that fluent listeners found stuttered speech was actually more expressive of a speaker’s emotional competence than the prolonged speech described in the 2012 study.

How often clients should apply the PFSP speech pattern is a matter of controversy according to Von Tiling & Von Gudenberg (2012). Some clinicians advocate use of such a speech pattern at all times, whereas others believe it should be one option among other ways of speaking including stuttered speech, spontaneous fluency, and stuttering modification.

In the event the PFSP speech pattern is used at all times, Van Tiling & Von Gudenberg (2012) stated (p. 216) that several theorists have argued that “it is likely to become just another avoidance strategy and will not be effective in the long run.” Their own study, they stated, supported such an argument.

The study underlines the value of disambiguation—that is, the achievement of clarity in language usage regarding frequently used terms. The term *avoidance*, for example, has variable meanings. When Boberg was quoted (Pill, 1988, p. 392) as characterizing avoidance as the most salient feature of stuttering, he was referring to the avoidance of speaking situations.

Tichenor et al. (2022, p. 646), in contrast, referred to “clinician-sanctioned avoidance of observable stuttering behavior,” by which they may have meant word substitutions and circumlocutions and, additionally, the avoidance of speaking situations. Von Tiling & Von Gudenberg (2012), meanwhile, referred (p. 204) to avoidance in the context of “hesitant speech (verbal avoidance behaviors like interjections and revisions).”

Given such variations in meaning, it is helpful to establish clearly what is being discussed when the topic of avoidance arises. Regarding how, in turn, the term *hesitant speech* may be defined, Von Tiling & Von Gudenberg (2012, p. 207) observed that

Hesitant speech contains no core behaviours [repetitions, prolongations, and blocks], but it does contain associated behaviours, such as interjections (starters, fillers), revisions, incomplete phrases and pauses that occur when the speaker seeks to avoid core behaviours (Guitar, 2006; Vanryckeghem et al., 2004). Hesitant speech contains more and longer interjections,

revisions, incomplete phrases and pauses than the speech of most normally fluent people. It is, like stuttered speech, a form of coping with the feeling of stuttering, or, in a word, a form of stuttering.

2.4.3. Fluency Plus Program

The Fluency Plus Program in Toronto is a comprehensive treatment program featuring the uniform prolongation of syllables. Kroll & Scott-Sulsky (2010) stated the program includes the fluency shaping elements of the Webster (1974) PFSP therapy along with “cognitive restructuring procedures.”

The latter procedures are intended, among other things, to persuade clients to move toward the “goal of desensitization to the awkwardness associated with using a modified speech pattern” (p. 295). I am not aware of research documenting whether the graduates of the program speak in a slow monotone or with a natural sounding speech rate and level of expressiveness. If such research exists, please let me know.

2.4.4. University of Utah Intensive Stuttering Clinic

The Fluency Plus Program integrates the PFSP method with “cognitive restructuring.” Similarly, Blomgren (2013) described a comprehensive approach at the University of Utah Intensive Stuttering Clinic based on the speech restructuring techniques developed by Webster (1974, 1982, 1986), Boberg & Kully (1985), and Kroll (1991). Blomberg (2013, p. 9) stated that “Comprehensive approaches for treating stuttering in adults address both improved speech fluency and stuttering management.”

The University of Utah Intensive Stuttering Clinic uses three “core fluency facilitating techniques,” namely (p. 15), “(1), the stretched syllable target, (2) the gentle phonatory onset target, and (3) the reduced articulatory pressure target.” An additional four techniques would be taught to some clients depending on individual needs. The stretched syllable target involves the uniform prolongation of syllables.

“The primary goal of the stretched syllable target,” the article noted (p. 15), “is to stretch the duration of each and every spoken syllable.” I am not aware of research documenting whether graduates of the program speak in a slow monotone or with a natural sounding speech rate and level of expressiveness. If such research is available, please let me know.

4. Case studies

4.1. Comprehensive Stuttering Program

This section will outline the evolution of the clinical program which Einer Boberg and Deborah Kully developed in Edmonton starting in the 1970s. The account of Boberg’s career is based among other sources on audio cassette tapes featuring Boberg’s observations recorded on the following occasions:

- July 1987 at the Comprehensive Stuttering Program clinic in Edmonton
- October 1988 and April 1989 in Toronto
- August 1991 in Banff, and
- August 1994 in Munich

Einer Boberg was born Ejner Bidstrup Bovbjerg, in 1935, in Drumheller, a town in southern Alberta near Calgary and grew up in Dalum, a small Danish settler colonialist farming community near Drumheller (Treaty 7 Elders and Tribal Council, 1996; Bouwsema, 2009). Boberg, who stuttered severely as a child, dropped out of school in grade 9 and went to work on his family's farm in Dalum. He tried farming for a year before returning to school.

After he finished high school, he learned about a stuttering modification program in Minneapolis, Minnesota, and attended a summer clinic at the University of Minnesota, where he achieved control over his speech, but after eight months had a relapse. On a second visit to Minneapolis, he regained control and maintained it for several years.

He began to study music at St. Olaf College, a private liberal arts college in Northfield, Minnesota, and then moved to Vienna to study the violin. In Vienna, one day in 1960, he met Julia Sluce who was visiting Vienna from London. Ten days after they met, Einer Boberg and Julia Sluce decided to get married.

Boberg was speaking quite fluently at the time, but when his fiancée went back to London to prepare for the wedding, he had a second relapse. After the wedding he abandoned the study of music and decided to pursue, instead, a career in speech-language pathology. The newlyweds travelled to the United States where they proceeded with their respective academic studies.

Boberg completed a BA and MA at the University of Iowa, the latter in 1963, and a PhD at the University of Minnesota in 1968. In Iowa he studied stuttering modification and being open about stuttering. For his PhD in Minnesota, he studied behaviourist approaches to stuttering with a focus on operant conditioning.

As a result of Boberg's formative experiences during the decade from 1960 to 1970, the clinical program subsequently developed in Edmonton combined features of both fluency shaping and stuttering modification (Boberg & Kully, 1989). Boberg also adopted a strategy of continuous improvement beginning from the treatment program's inception. In August 1971, the Boberg family moved to Edmonton where Boberg became head of a newly opened program in speech-language pathology at the University of Alberta.

In the summer of 1972, he set up an experimental, intensive three-week program later entitled the Comprehensive Stuttering Program (CSP). In the summer of 1978, Deborah Kully, then a student speech-language pathologist, began working at one of the early experimental clinics. Boberg & Kully (1985, p. 1) observed that since 1972, "the program has been modified many times and in many ways: strategies and concepts have been added, particularly from the works of Perkins (1973), Ryan (1974), Martin (1968), and Van Riper (1973)."

4.2. Introduction of differential prolongation

Deborah Kully (personal communication, September 19, 2022) outlined how the differential prolongation method of the CSP program was developed. She stated that

prolongation as a treatment method arose out of the work of [Israel] Goldiamond [Goldiamond, 1965] who discovered its robust fluency enhancing effects through his research. Drawing on Goldiamond's work, Gavin Andrews and Roger Ingham developed an innovative program wherein fluency was established through prolongation and speech rates were increased in a series of steps within a token economy system. The early version of the CSP was based on Andrews' and Ingham's program and was predominantly behavioural in nature. Dramatic gains in fluency typically occurred immediately post treatment. However, follow-up revealed that gains were often short-lived and that abrupt relapse often occurred. Attention was then given to the issue of maintenance of fluency. Indeed, Einer's series of conferences [in Banff, west of Calgary] did much to highlight the issue and stimulate research into maintenance issues.

Based on research and writings relating to maintenance, including our own investigations, ongoing data collection and feedback from clients, we added many components to strengthen transfer and maintenance of fluency gains and self-management skills. Among these many components was differential prolongation which was aimed at facilitating speech naturalness.

Kully refers above to a study by Ingham & Andrews (1973). Regarding speech naturalness, Boberg & Kully (1985, p. 54) described how differential prolongation can be taught through tailored instruction.

“Rather than working on stress as a separate substep,” they stated, “we encourage development of a differentially prolonged pattern (where unstressed syllables are shortened) primarily by modeling the correct pattern and reinforcing its occurrence.”

Boberg and Kully noted that clients differ in the ease with which they develop and sustain appropriately stressed prolongation of syllables. In general, they remarked, clients improve as they proceed through successive rates.

“The majority of clients will automatically achieve more natural intonation once they reach 120 spm [syllables per minute]. Therefore, we do not become too concerned if a client fails to achieve complete de-emphasis of unstressed syllables at slower rates.”

“However,” they added, “clients who develop absolutely no durational distinction at the early rates will often continue to display this difficulty throughout subsequent rates.”

This was described as very undesirable “as the abnormal stress pattern will characterize their speech whenever they use rate control as a fluency facilitator during transfer or maintenance. These clients should be singled out for special practice.”

Such practice might involve reading material that the clinician has prepared by marking the stressed versus unstressed syllables or having the client reading in chorus with the clinician. The client might also practice choral reading with the speaker on their demonstration tape. Boberg & Kully (1985, p. 54) cautioned, as well, that “The clinician should also watch for use of repetitive or excessive inflection because these patterns are similarly undesirable.”

4.3. Startup of ISTAR clinic, 1986

Julia Boberg (1999) stated that Boberg’s experimental three-week intensive summer clinic was set up through the University of Alberta Hospitals. Each summer, the clinic was refined based on previous results (Boberg, 1976). In 1985, Boberg approached the University of Alberta Hospitals and the University of Alberta to request space and funding for a year-round program. The idea drew support, but space and funding were not to be had.

A chance conversation between Boberg and another tourist at a hot tub at Fairmont Hot Springs in British Columbia, however, gave rise to funding which enabled the startup of a year-round, fees-based clinic. The tourist Boberg spoke with was a prominent member of the Alberta Elks Foundation. A startup Elks grant was arranged along with a five-year pledge to cover rent for a new speech clinic at the University of Alberta, named the Institute for Stuttering Treatment and Research (ISTAR). In following years, additional grants were provided.

4.4. Maintenance of fluency skills

In July 1987, Boberg described how the posttherapy speech-skills maintenance program at the ISTAR clinic had been improved over time. Previously, maintenance was not discussed until the third week of the three-week program. However, it had become clear that it would be preferable to begin discussing maintenance earlier, in the second week. In the final week of the July 1987 clinic, Boberg met with clients in small groups and each person devised their own, personalized maintenance program.

In discussing the need for maintenance, Boberg spoke about an accountant from Alberta, who had achieved impressive gains in fluency at a previous summer clinic at the University of Alberta. In the last week of the clinic, the accountant had not stuttered once. “He went into every transfer situation he could think of, and he never stuttered once. He was absolutely self-confident that he wouldn’t have any trouble again. And he went home and for six months, he never stuttered a single time. And, of course, he then thought of himself as a normal, fluent speaker.”

But then, one day, six months later, he was giving a presentation at work. As he spoke, “suddenly, he felt tense, and some of the old fears came rushing back and he started to stutter. And, you know, this just actually crushed him, because nobody had seen him stutter for a long time. They all assumed he was a normal speaker now, and so he sort of fell apart. He called me the next morning and said, ‘My world is collapsing,’ and he disappeared—or we didn’t hear anything. He really relapsed quite badly. And then, finally, about two years later, he reappeared, came back for a refresher clinic. And then he recovered and went back, and with a more realistic goal, that he wasn’t going to be 100 percent.”

5. *First person account*

5.1. *Attendance at PFSP and CSP clinics, 1976 and 1987, respectively*

I attended a three-week PFSP clinic in 1976 and a three-week CSP clinic in 1987 (Pill, 1988). I stuttered severely starting at age 6, at times unable to say any words at all, and at other times (given that stuttering is variable, as William Webster, 1998, and others have noted), speaking quite fluently.

Soon after graduating from a PFSP clinic in Toronto in 1976, I had a relapse but retained enough command of my speech to graduate in 1983 from the University of Toronto faculty of education. During practice teaching, I focused on the coordination of breathing and speech production, as when reading a chapter from a novel to a class of middle school students. The PFSP clinic which I attended was the precursor of the Fluency Plus Program in Toronto.

In May 1987, by chance I read a newspaper article about the newly opened ISTAR clinic in Edmonton (Pill, 2020). On my return to Toronto after attending the clinic in July 1987, I began to make fluent presentations to large audiences, but it felt very strange to be able to do this. In September 1988, I founded a self-help group for people who stutter in Toronto so that I could compare notes with other stutterers. Within a year, with help from the group, the adjustment to speaking freely before large audiences was achieved.

For less pressing issues related to adjustment to fluency, I focused on the systematic alteration of self-talk, applying principles based on cognitive behavioural therapy. I would write down a typical negative thought that arose, for example, when preparing for an upcoming speech, and would then write down an alternative positive thought. When feelings of apprehension (in this example, about an upcoming speech) arose, I would repeat the alternative positive thought. After founding the self-help group in Toronto, for the next fifteen years I was active as a volunteer on behalf of people who stutter.

A memory of volunteer work concerns a series of lectures which I delivered, in Estonian, in 1990 at a children's clinic in Tallinn, the capital of Estonia, regarding how stuttering was approached in countries such as Canada. The lectures led to the founding, in 1993, of the Estonian Stuttering Association.

In September 2018, I again visited Estonia to give a talk at an annual Scandinavian seminar for people who stutter. One Estonian, whom I had met in 2018, named Mart Kangur, told me that he had attended my lectures in 1990. As a result, Kangur had decided to go to university. Until he heard the lectures, he did not think that he, as a person who stutters, should take such a step. Kangur is now a well-established Estonian poet, whose volumes of poetry I now have the pleasure of reading,

5. 2. *Posttherapy maintenance*

I spent four years and four months working every day on the maintenance of fluency skills. I spoke twice a day at home, one minute at a time, at a series of four speaking rates. I also practised rate changes for one minute twice a day, switching between 150 syllables per minute (spm) and 190 spm. My speech rate was usually 180-220 spm as calculated from recordings of real life speech performance.

The only time I switched to an obvious, noticeable form of prolonged speech was on rare occasions where I slowed down briefly to about 150 spm, in order to maintain fluency, when I sensed my speech production system was tightening up. I would briefly speak on such occasions at 150 spm, after which I would move back to 190 spm.

By about a decade after the Edmonton clinic, the conscious application of speaking skills (in coordination with a brief rate change from 190 spm to 150 spm, then back up to 190 spm) occurred only on rare occasions. Other than that, most of the time I have been speaking fluently, spontaneously saying whatever comes to mind without attention to speech production. Decades earlier, I just could not believe how normally fluent speakers could have a thought, and then just go ahead and express that thought through spoken language. I was constantly amazed that people had the capacity to perform such a feat.

5.3. Elimination of word substitutions and avoidance of speaking situations

Another feature of maintenance work was the elimination of word substitutions. After July 1987, word substitutions were now rarely in evidence, as was the case also with the avoidance of speaking situations. In the past I would have avoided speaking at length in front of classmates when taking courses. Now, I frequently spoke out in class.

The first few times of stepping into such previously avoided situations were often experienced as very challenging; sometimes the application of fluency skills would start to slip. On such occasions, the strategy was to praise oneself lavishly for stepping forward into situations previously avoided. Extra at-home practice would ensue, going over, at a slow rate of speech, the words or phrases that had proven difficult, so that on the next occasion the fluency skills would be applied correctly.

6. Summing up what I have learned

A review of the above-noted research studies, interviews, audio recordings, and case studies gives rise to a series of insights which may be outlined in the context of three interrelated concepts - namely, agency, framing, and organizational structures.

6.1. Agency plays a central role in determining how stuttering is addressed

6.1.1. Agency refers to the capacity to influence events and processes. The client of treatment services has agency when they can say, "Show me the tools, teach me the skills, and I will put the show on the road." My case study, outlined above, is a study in the power of agency – the agency of a clinic, and the agency of an individual.

My personal case study underlines that the central issues in this paper, for example, a client's posttherapy speech rate and speech naturalness; the elimination of word substitutions and circumlocutions; and the elimination of the avoidance of speaking situations, can be analyzed within a framework that distinguishes between clinical programs which involve the differential prolongation of syllables, as compared to programs which involve the uniform prolongation of syllables.

Stuttering treatment outcomes studies have documented the long-term efficacy, for about 80 percent of clients, of speech reconstruction methods featuring the differential prolongation of syllables, in addressing the central issues highlighted in this paper. The remaining 20 percent of clients can benefit from individualized stuttering management methods which a program such as the Comprehensive Stuttering Program (CSP) provides.

6.1.2. Goldiamond (1965) established that the uniform prolongation of syllables generates a speech pattern which largely eliminates overt stuttering. Such an approach offered clinicians an augmented level of agency with regard to treatment outcomes. Thereafter, clinicians at programs such as the CSP further augmented the level of agency, by teaching clients to engage in the differential prolongation of syllables. The latter approach gave rise to a more effective treatment strategy because clients found it easier to transfer, into everyday speaking situations outside the clinic, a speech pattern which sounded more natural than the one generated by the uniform prolongation method.

6.1.3. In the Fluency Plus Program (Kroll & Scott-Sulsky, 2010), a form of "cognitive restructuring" has the purpose of persuading hesitant clients to acquiesce to the adoption of a uniform prolongation dialect. Such an approach appears to assume that a clinician has more or less exclusive possession of agency. The client is not seen as in possession of much in the way of agency.

In contrast, with the therapeutic alliance model (Connery et al., 2021), agency is more equally distributed between clinician and client. The two sides collaborate to create an individualized approach to speech therapy. The client's input is taken closely into account. Such an approach generates continuous improvement in the provision of clinical services which leads to continuous improvement of the therapeutic alliance.

The differential prolongation school of thought appears to place "jurisdictional authority" (Abbott, 1988) within a framework which acknowledges that client input warrants close consideration.

The uniform prolongation approach appears to demonstrate less interest in client input. Space precludes further discussion of agency. However, starting points for additional discussion would include Hacking's (2006) account of the "classifications" whereby science "makes" certain kinds of people and Hacking's (2015) account of the history of "objectivity."

6.2. Framing influences the conceptualization of stuttering

When frame analysis as outlined by Goffman (1974) is applied to stuttering, a central issue concerns the definition of terms. This paper has addressed the definition of specified terms related to stuttering in general and in relation to the varied meanings (depending upon which of the fluency shaping dialects is being generated) associated with the terms *integrated* and *comprehensive* as descriptors of clinical programs.

Van Tiling & Van Gudenberg (2012) and Tichenor et al. (2022) underlined that covert stuttering can be readily framed as an integral component of the experience of stuttering. With uniform prolongation, covert stuttering tends to remain in place after treatment.

Because uniform prolongation generates a slow, monotone speech pattern, it is likely to be used by graduates of uniform prolongation programs only intermittently.

As a result, covert stuttering, featuring word substitutions and situation avoidances, will tend to remain in place.

One way to address such a state of affairs is to teach clients differential prolongation of syllables, and to systematically teach the strategies which are required to eliminate word substitutions and the avoidance of speaking situations.

6.3. Each fluency dialect is outcome of an organizational structure

Each of the two fluency shaping dialects under review exists within what Goffman (1974, p. 5) termed a *subuniverse*, a world onto itself possessed of a certain “cognitive style.”

Within the two subuniverses, associated with the two distinct fluency dialects, the following characteristics may be tentatively outlined.

The uniform prolongation subuniverse, when functioning as a standalone program, appears to feature a one-size-fits-all mode of instruction. Client feedback may have no particular place to go.

The differential prolongation subuniverse, in contrast, provides individualized, tailored instruction related to speech restructuring and attends closely to client feedback.

7. Recommendations for further research

7.1. Acoustic and perceptual analyses

Evidence-based categorization of speech patterns associated with currently available speech restructuring programs would be helpful. Mark Onslow (personal communication, February 2, 2023) has commented:

As far as I can tell, there is no way of knowing which treatment programs are associated with which variant of prolongation. This is because prolongation has never been operationalised, and clinically it is taught with loosely described procedures. In my view,

if the matter is of interest, the only way of exploring it is with acoustic and perceptual analyses of speech samples from graduates of such treatments who are successfully using prolongation to control stuttering. You might find Lecture Eight in my textbook [Onslow, 2022] of interest:

<https://www.uts.edu.au/asrc/resources/asrc-resources>

7.2. Dialect mapping

Labov (2012) among other sociolinguists has conducted extensive research regarding regional North American dialects. Further research might seek to develop a world dialect map indicating where the two fluency dialects under review, as identified by acoustic analysis of speech samples of graduates using prolongation, are geographically distributed worldwide. Acoustic measurements would reach beyond (and serve to verify and corroborate) the employment of perceptual judgements to identify the two fluency dialects.

8. Conclusions

An excerpt from an interview with Dario Strangis, a speech and language pathologist in Turin, Italy, who stutters, and clutters, will serve as the introduction to concluding remarks for this paper. Strangis (interview, July 13, 2022) stated that

In Italy, we have the problem that historically, speech therapists and other professionals working with people who stutter, as it happened in America and other places for a lot of years, they are often very fluency focused. And things are changing, and I'm really happy about it. And that's thanks to all of the colleagues and friends of mine who stutter that are working hard for that, raising awareness, and doing research, and explaining to everyone that we do stutter, and we do have brown eyes, and that's basically the same; that's how we work, and that's okay.

The most important conclusion of this paper, for those stutterers who, while aware of the arguments favouring the de-emphasis of fluency, seek to pursue speech reconstruction anyway, concerns the disambiguation of fluency shaping, and of prolonged speech.

Previously, the latter two terms have been conflated with the uniform prolongation method of which the PFSP program appears to be the prototype.

Conflation in this case refers to the merging, in the minds of observers, of two approaches—namely, the uniform prolongation method and the differential prolongation method—into a single term, fluency shaping, or into another single term, prolonged speech.

In the event a person is actually aware there are two very different forms of fluency shaping or prolonged speech available, it may be likely they would choose the method which involves the differential prolongation of syllables.

Such a choice gives rise to a speech pattern which is generally characteristic of that of normally fluent speakers and has a greater likelihood of being used consistently.

The second most important conclusion is that whichever method of speech restructuring is chosen (in the event a person chooses to pursue fluency), there is also tremendous value in accepting that one always remains a person who stutters. As Boberg (1989) noted, the pursuit of fluency and the acceptance of being a person who stutters are fully compatible endeavours.

References

Abbott, 1988 A. Abbott

The System of Professions: An Essay on the Division of Expert Labor. University of Chicago Press, Chicago, 1988.

<https://press.uchicago.edu/ucp/books/book/chicago/S/bo5965590.html>

Baxter et al, 2015 S. Baxter, M. Johnson, L. Blank, A. Cantrell, S. Brunfitt, P. Enderby, E. Goyer

The state of the art in non-pharmacological interventions for developmental stuttering. Part 1: a systematic review of effectiveness. *International Journal of Language and Communication Disorders*, 50(5) (2015) 676–718.

<https://onlinelibrary.wiley.com/doi/10.1111/1460-6984.12171>

Block et al., 2005 S. Block, M. Onslow, A. Packman, B. Gray, G. Dacakis

Treatment of chronic stuttering: Outcomes from a student training clinic. *International Journal of Language and Communication Disorders*, 40, (2005) 455-466.

<https://onlinelibrary.wiley.com/doi/abs/10.1080/03093640500088161>

Blomgren (2013) M. Blomgren

Behavioral treatments for children and adults who stutter: a review. *Psychology research and behavior management*, 6 (2013) 9–19. <https://doi.org/10.2147/PRBM.S31450>

Boberg (1976) E. Boberg

Intensive Group Therapy Program for Stutterers. *Human Communication*, (1) (1976) 1.

[Intensive Group Therapy Program for Stutterers \(1976\)](#)

Boberg (1987) E. Boberg

Presentation regarding maintenance of fluency. Second week of three-week ISTAR clinic in Edmonton, Alberta (July 16, 1987) [Audio cassette recording].

Boberg (1988) E. Boberg

Presentation in Toronto, Ontario, regarding development of treatment program at ISTAR clinic in Edmonton, Alberta (October 22, 1988) [Audio cassette recording].

Boberg (1989) E. Boberg

Presentation regarding history of stuttering treatment and research, Toronto, Ontario (April 13, 1989) [Audio cassette recording].

Boberg (1991) E. Boberg

Comments during plenary session, Canadian Conference for People Who Stutter, Banff, Alberta (August 25, 1991) [Audio cassette recording].

Boberg (1994) E. Boberg

Presentation at workshop on relationship between self-help organizations and speech professionals. First World Congress on Fluency Disorders (August 1994) Munich, Germany [Audio cassette recording].

Boberg and Kully (1985) E. Boberg, D. Kully

Comprehensive Stuttering Program. Clinical Manual & Client Manual. College-Hill Press, San Diego, 1985.

Boberg, E., & Kully, D. (1989) E. Boberg, D. Kully

A retrospective look at stuttering therapy. *Journal of Speech-Language Pathology and Audiology*, 13 (1989) 5-13.

[A respective look at stuttering therapy \(1989\)](#)

Julia Boberg (1999) J. Boberg

A Dream, a Hot Tub and an Institute. In Association of Professors Emeriti of the University of Alberta, *Echoes in the Halls: An Unofficial History of the University of Alberta*. University of Alberta Press, Edmonton, 1999.

<https://www.uap.ualberta.ca/titles/103-9781552200742-echoes-in-the-halls>

Borkman (1999) T. Borkman

Understanding Self-Help/Mutual Aid: Experiential Learning in the Commons. Rutgers University Press, New Brunswick, New Jersey, 1999.

Bouwsema (2009) K. Bouwsema

Danes in Alberta, 1903-1939: A Dynamic Culture in an “Invisible” Ethnic Group [Master’s thesis, University of Calgary]. Library and Archives Canada, Published Heritage Branch, 2009.

https://www.collectionscanada.gc.ca/obj/thesescanada/vol2/002/MR54394.PDF?is_thesis=1&oclc_number=731319876

Connery et al. (2020b) A. Connery, R. Galvin, A. McCurtin

Effectiveness of non-pharmacological stuttering interventions on communication and psychosocial functioning in adults who stutter: a systematic review and meta-analysis of randomized controlled trials. *Journal of Evidence-Based Medicine*, 14 (2020b) 1–10.

<https://onlinelibrary.wiley.com/doi/epdf/10.1111/jebm.12408>

Connery et al. (2021) A. Connery, J.S. Yaruss, H. Lomheim, T.M. Loucks, R. Galvin, A. McCurtin

Obtaining consensus on core components of stuttering intervention for adults: An e-Delphi Survey with key stakeholders. *International Journal of Language & Communication Disorders*, 57(1) (2021) 112-127.

<https://onlinelibrary.wiley.com/doi/10.1111/1460-6984.12680>

Constantino (2022) C.D. Constantino

Fostering Positive Stuttering Identities Using Stutter-Affirming Therapy. *Language Speech and Hearing Services in Schools*, 54(3) (2022) 1-21.

https://pubs.asha.org/doi/abs/10.1044/2022_LSHSS-22-00038?af=R

Euler et al. (2009) H.A. Euler, A. Wolff, Von Gudenberg, K. Jang, K. Neumann

Computer-assisted therapy for speech disfluency: The long-term effectiveness of the Kassel Stuttering Therapy (KST). *Sprache Stimme Gehör*, 33, (2009) 1-10.

<https://www.thieme-connect.com/products/ejournals/abstract/10.1055/s-0029-1242747>

Franken et al. (1992) M.C. Franken, L. Boves, F.M. Peters, R.L. Webster

Perceptual evaluation of the speech before and after fluency shaping stuttering therapy. *Journal of Fluency Disorders*, 17(4) (1992) 223-241.

<https://www.sciencedirect.com/science/article/abs/pii/0094730X9290035O>

Goffman (1974) E. Goffman

Frame Analysis: An Essay on the Organization of Experience. Northeastern University Press, Boston, 1974.

Goldiamond (1965) I. Goldiamond

Stuttering and fluency as manipulative operant response classes. In L. Krasner & L.P. Ullman (Eds.), *Research in Behavior Modification*. Holt, Rinehart & Winston, New York, 1965.

<https://www.semanticscholar.org/paper/Case-studies-in-behavior-modification-Ullmann-Krasner/3ef544d7f66957afd4b33f26b9e6b3b7d8cd7bd2>

Guitar (2006) B. Guitar

Stuttering: An Integrated Approach to Its Nature and Treatment (3rd ed.). Lippincott Williams & Wilkins, Baltimore and Philadelphia, 2006.

Hacking (2006) I. Hacking

Making Up People. *London Review of Books*, 28(16), August 17, 2006.

<https://www.lrb.co.uk/the-paper/v28/n16/ian-hacking/making-up-people>

Hacking (2015) I. Hacking

Let's Not Talk About Objectivity. In Y.J. Tsou, A. Richardson, F. Padovani (Eds.), *Objectivity in Science*. Springer International Publishing, Switzerland, 2015.

https://www.researchgate.net/publication/301982112_Let's_Not_Talk_About_Objectivity

Ingham and Andrews (1973) R. Ingham, G. Andrews

An analysis of a token economy in stuttering therapy. *Journal of Applied Behavior Analysis*. 6(2) (1973) 219-229.

https://www.researchgate.net/publication/240300255_An_analysis_of_a_token_economy_in_stuttering_therapy1

Kroll (1991) R. Kroll

Manual of Fluency Maintenance: Guide for Ongoing Practice (2nd ed.). Clarke Institute, Toronto, 1991.

Kroll and Scott-Sulsky (2010) R. Kroll, L. Scott-Sulsky

The Fluency Plus Program: An Integration of Fluency Shaping and Cognitive Restructuring for Adolescents and Adults Who Stutter. In B. Guitar, & R. McCauley (Eds.), *Treatment of*

Stuttering: Established and Emerging Interventions. Lippincott Williams & Wilkins, Philadelphia, Baltimore, New York, London, 2010.

<https://slh.lwwhealthlibrary.com/book.aspx?bookid=1084>

Labov (2012) W. Labov

Dialect Diversity in America: The politics of Language Change. University of Virginia Press, Charlottesville and London, 2012.

https://www.researchgate.net/publication/286859380_Dialect_Diversity_in_America_The_Politics_of_Language_Change

Langevin et al. (2006) M. Langevin, W.J. Huinck, D. Kully, H.F.M. Peters, H. Lomheim, M. Tellers

A cross-cultural, long-term outcome evaluation of the ISTAR Comprehensive Stuttering Program across Dutch and Canadian adults who stutter. *Journal of Fluency Disorders*, 31(4) (2006) 229-56.

<https://pubmed.ncbi.nlm.nih.gov/16914189/>

Martin (1968) R.R. Martin

The experimental manipulation of stuttering behaviors. In H.N. Sloane, Jr., B.D. Macaulay (Eds.), *Operant Procedures in Remedial Speech and Language Training*. Houghton Mifflin Co., Boston, 1968.

<https://catalogue.nla.gov.au/Record/2085131>

O'Brian et al. (2003) S. O'Brian, M. Onslow, A. Cream, A. Packman

The Camperdown Program: Outcomes of a new prolonged-speech treatment model. *Journal of Speech, Language, and Hearing Research*, 46, (2003) 933-946.

<https://pubs.asha.org/doi/abs/10.1044/1092-4388%282003/073%29>

Onslow et al. (1996) M. Onslow, L. Costa, C. Andrews, E. Harrison, A. Packman

Speech outcomes of a prolonged-speech treatment for stuttering. *Journal of Speech, Language, and Hearing Research*, 39(4) (1996) 734-749.

<https://pubs.asha.org/doi/abs/10.1044/jshr.3904.734>

Onslow (2022) M. Onslow

Lecture Eight: Evidence-based speech restructuring treatments for persistent stuttering. In *Stuttering and its treatment: Eleven lectures*. Australian Stuttering Research Centre, Sydney, 2022.

<https://www.uts.edu.au/sites/default/files/2020-07/Stuttering%20and%20its%20Treatment-Eleven%20Lectures%20%28May%202020%29.pdf>

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Perkins (1973) W.H. Perkins

Replacement of stuttering with normal speech: II. Clinical procedures. *Journal of Speech and Hearing Disorders*, 38(3) (1973) 295-303.

<https://pubs.asha.org/doi/10.1044/jshd.3803.295>

Pill (1988) J. Pill

A comparison between two treatment programs: A personal account. *Journal of Fluency Disorders*, 13 (6) (1988) 385-398.

[https://doi.org/10.1016/0094-730X\(88\)90006-X](https://doi.org/10.1016/0094-730X(88)90006-X)

Pill (2001) J. Pill

Fluency as a Second Language [Keynote Presentation]. Canadian Stuttering Association Conference, Calgary, Alberta (August 24, 2001)

<https://preservedstories.com/wp-content/uploads/2015/12/Jaan-Pill-Aug-2001-presentation3.pdf>

Pill (2020) J. Pill

Teasing & Bullying (Canadian Stuttering Association Conference, November 2020 - First Draft) [Video, October 29, 2020]. YouTube.

<https://www.youtube.com/watch?v=SLMtzPg3jfl>

Ryan (1974) B.P. Ryan

Programmed Therapy for Stuttering in Childhood and Adults. Charles C. Thomas, Springfield, Illinois, 1974.

<https://catalogue.nla.gov.au/Record/358865>

Teshima et al (2010) S. Teshima, M. Langevin, P. Hagler, D. Kully

Post-treatment speech naturalness of Comprehensive Stuttering Program clients and differences in ratings among listener groups, *Journal of Fluency Disorders*, 35, (1) (2010) 44-58.

<https://pubmed.ncbi.nlm.nih.gov/20412982/>

Tichenor et al. (2022) S.E. Tichenor, C. Constantino, J.S. Yaruss

A Point of View About Fluency. *Journal of speech, language, and hearing research: JSLHR*, 65(2) (2022) 645–652.

https://doi.org/10.1044/2021_JSLHR-21-00342

Treaty 7 Elders and Tribal Council (1996) Treaty 7 Elders and Tribal Council, with W. Hildebrandt, D. First Rider, S. Carter

The True Spirit and Original Intent of Treaty 7. McGill-Queen's University Press, Montreal and Kingston, 1996.

<https://www.mqup.ca/true-spirit-and-original-intent-of-treaty-7--the-products-9780773515222.php>

Van Riper (1973) C. Van Riper

The Treatment of Stuttering. Prentice-Hall, Englewood Cliffs, New Jersey, 1973.

Vanryckeghem et al. (2004) M. Vanryckeghem, G.J. Brutton, N. Uddin, J.V. Borsel

A comparative Investigation of the speech-associated coping responses reported by adults who do and do not stutter. *Journal of Fluency Disorders*, 29(3) (2004) 237-250.

<https://pubmed.ncbi.nlm.nih.gov/15458833/>

Von Tiling (2011) J. Von Tiling

Listener perceptions of stuttered speech, prolonged speech, and verbal avoidance behaviors. *Journal of Communication Disorders*, 44 (2011) 161-172.

<https://pubmed.ncbi.nlm.nih.gov/20947094/>

Von Tiling and Von Gudenberg (2012) J. Von Tiling, A.W. Von Gudenberg

Listener perception beliefs of stuttering, prolonged speech and verbal avoidance behaviors in people who stutter. *Canadian Journal of Speech-Language Pathology and Audiology*, 36(3) (2012) 204–219.

https://cjslpa.ca/files/2012_CJSLPA_Vol_36/No_03_176_263/Von_Tiling_Von_Gutenberg_CJSLPA.pdf

Webster (1974) R.L. Webster

The Precision Fluency Shaping Program: Speech Reconstruction for Stutterers. Communications Development Corporation, Roanoke, Virginia, 1974.

Webster (1982) R.L. Webster

Precision Fluency Shaping Program: Speech Reconstruction for Stutterers. Communications Development Corporation, Roanoke, Virginia, 1982.

Webster (1986) R.L. Webster R.L.

Evolution of a target-based behavioral therapy for stuttering. In G. H. Shames, H. Rubin (Eds.), *Stuttering Then and Now*. Charles E. Merrill Publishing Company, Columbus, Ohio, 1986.

William Webster (1998) W.G. Webster

Brain Models and the Clinical Management of Stuttering. *Journal of Speech-Language Pathology and Audiology*, 22 (4) (1998) 220-230.

https://cjslpa.ca/files/1998_JSLPA_Vol_22/No_04_206-285/Webster_JSLPA_1998.pdf