Stuttering and the paradox of non-avoidance

By Paul Brocklehurst PhD.

The Stammering Self-Empowerment Programme (revised version - 15th August 2014)

www.stammeringresearch.org

Introduction

Wendell Johnson, one of the best known (and most controversial) stuttering researchers of the 20th century, is often remembered for his statement that "Stuttering is what you do trying not to stutter again"[1]. A clear implication of this is that if we could somehow stop ourselves from trying not to stutter, then we wouldn't stutter anymore. In this article, I first outline the theory that led Johnson to this seemingly paradoxical conclusion; I then consider the extent to which recent advances in our understanding of stuttering still support it; and then, finally, I discuss, from a practical perspective, the extent to which "non-avoidance" may be a helpful policy to adopt in everyday life, and some of the reasons why therapies based around non-avoidance don't always work as they should.

The origin of Johnson's adage

To understand how Johnson arrived at this statement, it is helpful to consider it in the context of the findings of two studies carried out by himself and members of his department in the early 1940s. The first of these involved a preliminary investigation of stuttering among some North American Indian tribes; the second involved a much more detailed study of the development of stuttering in children in white American families [2].

The investigation of stuttering among North American Indians began with one of Johnson's students, Harriett Hayes, who spent a year working as a teacher on a reservation in Idaho. Johnson had asked her to make a study of any stutterers or stories of stuttering she encountered during that year. However, not only was Hayes unable to find any Indians who stuttered on the reservation, but also the other teachers and the school superintendent, who had worked in close association with Indians for as long as twenty five years, informed her that they had never encountered a stuttering Indian.

To investigate potential reasons for this apparent lack of stuttering among these North American Indians, the following year, Johnson arranged for another student of his, John Snidecor, to conduct a broadly-based study of their way of life, with a special focus on their language and child-rearing practices. Two of the findings of Snidecor's report were of particular interest to Johnson: First, that these Indians apparently had no word for stuttering in their language; and secondly, their standards of childcare and training were extremely lax in comparison to the prevailing standards in American culture. In particular, Snidecor reported that the Indian children on the reservation were not criticized or evaluated on the basis of their speech, which was invariably regarded as satisfactory regardless of the manner in which a child spoke.

Alongside the Idaho Indian studies, Johnson's department also conducted a study of the onset of stuttering in young children in white American families [3]. In all, the parents of 46 young children who had been recently diagnosed as stuttering were interviewed and their children were observed for two and a half years. These families and their stuttering children were compared to the families of 46 normally-fluent children of the same age and backgrounds. A key finding of this study was that the parents of the children who stuttered appeared to have higher expectations of how their children should perform, and were more inclined to correct them when their behavior fell short of the expected standards. Johnson concluded that, in many cases these parents' high standards were unreasonably perfectionistic and were likely to cause their children to experience high levels of tension and anxiety. The approach of these parents to child rearing stood in stark contrast to that of the North American Indians that had been the subject of Johnson's other investigation.

The onset of stuttering

A somewhat unexpected observation that emerged from Johnson's interviews with the parents of the 46 children who stutter was that the repetitions and hesitations that initially led parents to believe that their children were stuttering were *not* accompanied by any tension or anxiety. On the contrary, Johnson noted that these initial symptoms were

> *"…by and large, indistinguishable from the hesitations and repetitions that characterize the normal speech of young children when they lack sufficient knowledge of what he they are talking about, when the listener does not respond readily to them, or when their vocabulary does not contain the seemingly necessary words."* (1946, p445).

This led him to hypothesize that speech-related tension and anxiety only begin to appear *after the initial diagnosis of stuttering* – In other words, *after* the parents (or other adults) have evaluated the child's speech (either explicitly or implicitly) as "stuttering", or "defective", or "abnormal"; and that that the children' clinically relevant stuttering symptoms began as a result of interiorizing these parental evaluations…

> *"Insofar as the child interiorizes this aspect of his semantic environment, he too evaluates his speech as "defective", "difficult, "not acceptable," etc., and his manner of speaking is consequently made more hesitant, cautious, labored, and the like. In this way normal speech hesitations and repetitions are transformed into the exaggerated pausing, effort, and reluctance to speak which are so conspicuous and frustrating in the speech of adult stutterers".* (pp.446-447)

Johnson also provided the following description of how the process typically spirals…

> *The more anxious the parents become, the more they hound the child to "go slowly", to "stop and start over," to "make up his mind," to "breathe more deeply," etc., the more fearful and disheartened the child becomes, and the more hesitantly, frantically, and laboriously he speaks – so that the parents, teachers, and others become more worried, appeal more insistently to the child to "talk better," with the result that the child's own evaluations become still more disturbed, and his outward speech behavior becomes more and more disordered."*(p447)

Johnson went on to note that, *after being diagnosed*, practically all of the children involved in his study developed overt speech behavior that was in some degree unusual and of clinical importance.

On the basis of these findings, he proposed that the clinical disorder of stuttering is effectively caused by its diagnosis. He named this the "Diagnosogenic Theory" of stuttering. Johnson believed that the majority of the disfluencies that are diagnosed as "stuttering" in young children are not really stuttering at all. On the contrary, they are normal disfluencies.

To clarify this issue he explained that…

> *"Most young children and many adults speak quite non-fluently, repeating frequently, pausing conspicuously, saying ah or uh, etc. They speak very differently from stutterers, however, who may be even quite fluent by ordinary standards but who exhibit considerable strain, embarrassment, and apprehensiveness with regard to such non-fluency as they do have. It is the stutterer's anxiety and strain, the fear and the effort with which he pauses or says uh, repeats sounds or prolongs them, that serve to distinguish him from the so-called normal speaker."* (p451)

And, with regard to stutterers…

> *"Their peculiarity lies in the fact that whenever they do hesitate or repeat they make a great show of fear and effort, instead of proceeding to stumble along calmly as normal speakers do."*

Regarding the nature of stuttering, Johnson wrote…

> *… "Stuttering is an evaluation disorder. It is what results when normal non-fluency is evaluated as something to be feared and avoided; it is, outwardly, what the stutterer does in an attempt to avoid non-fluency."* (p452)

An important point that is easy to miss is that, according to Johnson's account, there is a progression of stages in the development of stuttering, starting with the avoidance of (normal) speech errors and disfluencies (or "non-fluencies" as he called them) and culminating in the avoidance of stuttering itself. Thus, in persistent stutterers, there could potentially be a number of triggers for stuttering in addition to avoidance of stuttering mentioned in his well-known adage. These include not only avoidance of normal speech errors and disfluencies, but also the desire to avoid saying anything inaccurate or socially inappropriate, or anything likely to elicit a negative response from the listener.

It must be said that, since Johnson first published the above account of his Diagnosogenic Theory, there have been a number of studies whose findings strongly suggest that children who receive a diagnosis of stuttering commonly had abnormally high levels of disfluency prior to their diagnosis[4-5]. It therefore it seems likely that in many (perhaps most) cases these high levels of disfluency produced by the young children stem from a pre-existing underlying impairment in their language or speech production systems. So, contrary to what Johnson first believed, the parental concern is not unfounded. Indeed, it is sometimes the children themselves who first show signs of concern about their speech or indicate their frustration with being unable to get their words out. So, Johnson's original assertion, that the speech of children who stutter is essentially normal prior to their diagnosis is, in most cases, probably incorrect. This conclusion is reinforced by a relatively recent

longitudinal investigation into the interaction styles of parents with children that subsequently began to stutter. The study found that these parent's interaction styles were no different to those of parents with children who did not subsequently start to stutter [6]. So, this too suggests that the high levels of concern or negative responses of parents of children who stutter towards their stuttering children's speech may begin in response to their accurate detection of some abnormality in their speech or language, rather than prior to the development of any abnormality.

Despite these more recent findings, Johnson's theory that stuttering is *an evaluation disorder* nevertheless remains highly plausible, and in recent years fresh evidence in support of this aspect of the theory has begun to emerge[7]. Researchers are also now starting to piece together details of the processes through which a speaker's anticipation of upcoming stuttering or speech errors can inhibit his ability to initiate articulation of the words he wants to say[8-9].

Spontaneous Recovery from stuttering

Before discussing how practicing avoidance reduction may potentially help people who stutter, it is important to highlight the fact that many children who stutter recover spontaneously[a]. There are likely to be two reasons for this spontaneous recovery. First of all, as children grow older, their language and speech production mechanisms gradually mature and become more stable. This means that they become less prone to producing speech errors and disfluencies and they find it easier to successfully get their messages across, even without trying very hard. Secondly, as children grow older, they are likely to become more skilful in tailoring their utterances to their audience, and in maximizing the likelihood that listeners will understand and pay attention to them. As a consequence of both of these changes, it is likely that their faith in their ability to get their messages across increases and their fear of stuttering, and speech errors, and of associated negative listener responses reduces. As this fear reduces so does the tendency to block and produce other stuttering-related symptoms, and in many cases the stutter completely disappears.

Avoidance reduction

For those people who do not experience spontaneous recovery from stuttering, Johnson's theoretical perspective suggests that it should be possible to at least reduce its severity by reducing the extent to which stutterers try to avoid it[b]. Thus, the second half of the twentieth century has seen the development of a whole range of therapy approaches based around the concept of non-avoidance and avoidance reduction; the best known of these being Joseph Sheehan's "Avoidance Reduction Therapy"[10-11] and Charles Van Riper's "Block Modification Therapy"[12]. Both Sheehan and Van Riper were close associates of Johnson. Currently, in the UK and USA a substantial proportion of the varieties of therapy available to people who stutter incorporates aspects of avoidance reduction and block modification. In contrast, in Australia, avoidance reduction and block modification approaches are less popular. These differences in the popularity of such techniques reflect the fact that not all therapists are convinced of their effectiveness.

---

[a] Johnson would argue that many of the children diagnosed as stuttering never really stuttered in the first place, inasmuch as they never internalized the diagnosis. Whatever the case, it is likely that spontaneous recovery is also common even among children who have internalized the diagnoses.

[b] It is noteworthy that Johnson's research also suggests that it should be possible to reduce the severity of their stuttering by reducing the extent to which stutterers try to avoid speech errors and normal disfluencies. However, this conclusion is generally overlooked.

From a theoretical perspective, approaches to therapy based around non-avoidance or avoidance reduction make a lot of sense. Unfortunately, however, it is a common experience of people who stutter who have tried such therapies that, although they help to a certain extent, they can be very difficult to put into practice in real life, and the benefits they bring often fall far short of what is really needed. Because the benefits of such approaches to therapy are often marginal, clinicians are divided about the usefulness of this approach. In this section I will focus on some of the reasons why this approach may fail. In particular, I want to highlight the need for a very clear understanding of what exactly it is that needs to be avoided in order for such approaches to be successful.

Non-avoidance of stuttering

Non-avoidance/avoidance-reduction approaches to stuttering therapy primarily involve teaching people who stutter to re-evaluate their stuttering so that they no longer perceive it as something to be avoided. To make such re-evaluation easier, students are generally taught ways of modifying their secondary symptoms so that they are less disruptive and do not appear so abnormal. There is also general agreement that it is important to stop using any form of force to push through the blocks that occur.

However, even with such re-evaluations of stuttering and modification of secondary symptoms, non-avoidance of stuttering is not an easy goal to achieve. Most people who stutter have deeply ingrained memories of the negative impact of stuttering on their lives. So, all in all, it is quite understandable that the drive to avoid stuttering is very strong. A further, and perhaps greater, obstacle is that most stutterers also have many memories of their attempts to avoid stuttering being "successful" – at least in the short-term, and these memories of successful avoidance further reinforce the drive to avoid stuttering. To be able to overcome this drive and develop a robust habit of non-avoidance of stuttering, one needs to take a long-term approach and one needs to learn to ignore many of the feelings that arise prior to and during speech and one needs to learn not to be seduced by the temporary benefits that avoidance can bring.

A major source of confusion with respect to the non-avoidance of stuttering is *exactly what aspect of stuttering to stop avoiding?* The theoretical answer to this is that we need to stop avoiding the primary symptoms. Then, the secondary symptoms of stuttering should stop of their own accord, because the secondary symptoms all result from our attempts to avoid (or push through) the primary symptoms. I would even go as far as saying that it is vital to understand that non-avoidance of stuttering boils down to non-avoidance of primary symptoms and, in particular, non-avoidance of blocks[c]. Ultimately, if we are still producing secondary symptoms, it means that we are in fact still trying to avoid blocks, which means that we are not practicing non-avoidance properly. It is worth noting also that most people who stutter also produce some repetitions and prolongations in order to avoid blocks [d]. If one is practicing non-avoidance properly, these repetitions and prolongations will also stop occurring, although, of course we will continue to produce "normal" repetitions and prolongations.

The key to successful non-avoidance of blocks is to first learn some appropriate alternative ways of continuing to get our messages across quickly and efficiently when blocks occur. This is important

[c] The distinction between primary and secondary symptoms is discussed in detail in my YouTube videos on the topic, entitled "The primary and secondary symptoms of stuttering"
[d] This topic is covered in detail in the article: The uses and abuses of disfluencies

because, until we have learned some alternative ways of continuing that we are happy to use in real life, we are bound to continue to perceive blocks in a highly negative way (as a serious obstacle to communication) and invariably, despite our best intentions, we will continue to try to avoid them in one way or another. It is worth noting that much of the avoidance of blocks that people who stutter engage in is very subtle, often involving slowing or pausing when an upcoming block is anticipated, and many people who stutter are unaware that they are doing it (see my article on this topic).

So, ultimately, an adequate degree of non-avoidance of blocks only becomes achievable when we are able to perceive them as minor inconveniences rather than major obstacles, and to perceive them in this way only becomes possible when we know that they won't hold us up for long. To my mind, a major reason behind the poor success rates of traditional avoidance-reduction and block-modification approaches to therapy is that they slow people down too much. Similarly, simply waiting for the block to pass is not an option. Whatever techniques we adopt, if they slow us down too much, they will not help us overcome our fear of blocking and we will not progress. Conversely, techniques (escape behaviors) that involve the use of force to push through blocks are not helpful either. Although they may sometimes appear to work, they too ultimately increase the fear of blocking, and can develop into secondary symptoms of stuttering, thus further adding to the problem. The need to keep moving forward at a reasonable speed without pushing was therefore a key consideration in my development of The Jump.

Non-avoidance of speech errors and disfluencies

To my mind, another important factor behind the relatively poor results from therapies based around non-avoidance is that, almost invariably, they only train stutterers to reduce their avoidance of *stuttering*. Almost invariably, therapies seem to completely ignore all the evidence that suggests that stuttering also occurs in response to our attempts to avoid speech errors and normal disfluencies. To remedy this, there is a need for clinicians and people who stutter to recognize that, *on its own, non-avoidance of stuttering is not enough*. As Johnson pointed out, people who stutter start by avoiding speech errors and normal disfluencies (non-fluencies), and although the tendency for speech errors and normal disfluencies to occur reduces as speakers mature, it is nevertheless likely that, in most persistent stutterers, avoidance of speech errors and normal disfluencies continues to constitute an important factor in the persistence of the disorder. Indeed, recent research has demonstrated that, on average, adults who stutter produce approximately twice as many speech errors as non-stutterers[13]. So, in addition to non-avoidance of stuttering, it is also necessary to stop avoiding normal speech errors and disfluencies.

The good news is that, compared to reducing our avoidance of stuttering, reducing our avoidance of speech errors and normal disfluencies is relatively easy. The way to achieve this is simply to allow normal speech errors and disfluencies to occur and not do anything to change them when they do occur; at least, not unless you absolutely have to. It is helpful to bear in mind that, most of the time, listeners themselves recognize when a speaker has made a speech error and most of the time they are able to correctly guess what the speaker intended to say. On the rare occasions when, as a result of a speech error, the listener has misunderstood what you have said, it is fair enough to go back and repeat the utterance again. But going back and repeating utterances in this way should be the exception rather than the rule. As noted above, luckily, non-avoidance of speech errors and normal disfluencies is a relatively easy habit to acquire, provided we are not perfectionists. In comparison, non-avoidance of *stuttering* is generally a much more difficult skill to master. So, in fact, there is a

strong argument that non-avoidance of speech errors and normal disfluencies should be the first goal of non-avoidance based therapies, and that non-avoidance of stuttering should come second.

Non-avoidance of situations, people, and topics

In addition to avoiding anticipated blocks, many people who stutter also develop the habit of avoiding situations, people, and topics in which they anticipate they will stutter[14]. Although such behavior may enable them to substantially reduce the number of stuttered disfluencies they produce, the consequences can be more socially disabling than stuttering itself, and there are many covert stutterers whose quality of life is seriously compromised as a result of these wider forms of avoidance. Such individuals often show more symptoms of social anxiety than of stuttering. Because their visible stuttering symptoms are often very mild, inexperienced therapists (and well-meaning friends and family) are likely to underestimate the extent to which stuttering is still a problem and may (wrongly) presume that all that such individuals need to do is to confront their fears and expose themselves to the people, situations, and topics they are afraid of. In my experience, "widening one's comfort zones" in this way can only be successful *after* affected individuals have mastered a way of continuing to get their message across quickly and effectively when they do block. Otherwise there is a risk that such exposure will lead to more severe overt stuttering which can reinforce their original fears. Indeed, many covert stutterers already have painful memories of having tried to widen their comfort zones and failed for exactly this reason. Such memories then discourage them from trying again. Also, bear in mind that avoidance is not always wrong. Indeed, it is wise to continue to avoid speaking in situations that are likely to result in traumatic experiences and to avoid speaking to people whose reactions are likely to be very negative or violent towards stuttering. It will not benefit you if, in your attempts to expand your comfort zones, you end up being traumatized. As far as I know, the relationship between stuttering and post-traumatic stress disorder (PTSD) has never been researched. However, I have met many stutterers who show many of the symptoms of PTSD, especially when exposed to situations that remind them of past situations where stuttering has led to traumatic experiences.

The use of fluency shaping techniques in avoidance reduction

Many stuttering therapists advocate the use of one or other *fluency-shaping techniques* in their therapy for stuttering. The best known examples of such techniques are *syllable-timed speech* (i.e. speaking rhythmically one syllable per beat), and *prolonged speech* (in which vowels and continuants are prolonged). Orchestral speech is also a form of fluency-shaping technique. If adhered to strictly, the fluency-enhancing effects of these techniques are usually powerful and instantaneous, even for the most severe stutterers. However, the fluency achieved only lasts for as long as the speaker continues to use the technique.

There is an ongoing debate among therapists over whether or not fluency shaping techniques are themselves a form of avoidance. Some therapists would argue that yes, they are, and that, in the long run, such techniques do more harm than good. To my mind, if these techniques are used preemptively, to avoid stuttering before it happens, then this argument holds some weight (but see my paragraph on "Appropriate avoidance" below). It is noteworthy that most fluency-shaping therapy programs encourage clients to use the techniques preemptively. However, if a speaker only uses a fluency shaping technique *after* he has first blocked on a word and, even then, only in cases where it is really necessary to repeat the word fluently in order to ensure that the listener has

understood it[e], then this cannot be considered to be avoidance. At least, it is not avoidance motivated by fear of blocking, so it should not do any harm. If used in such a way, fluency shaping techniques can be used within an avoidance reduction approach and can provide speakers with a fast and reliable way getting out of blocks without resorting to force.

Appropriate avoidance

Even if one is completely hostile to therapy based purely on fluency shaping, I believe it is important to nevertheless accept that is not always wrong to avoid stuttering. On the contrary, in order to be able to communicate optimally, occasionally, there are times when avoidance of stuttering is appropriate. The most common examples of such occasions are speaking situations where only fluent speech will get the message across, such as when speaking into speech-recognition software, or when conveying important information under time pressure. At such times, it is quite reasonable to use fluency shaping techniques in order to avoid blocking altogether. In my experience, the less frequently one uses such techniques, the better they work, although clearly one needs to have sufficient practical experience of using them in non-emergency situations in order to be able to know how to employ them and also to develop faith in their effectiveness should a real emergency arise. However, if one is already using such techniques from time to time to pull oneself out of blocks, then that will probably provide sufficient practice to ensure that one is skilled enough to be able to employ them effectively if they are ever needed in an emergency.

Perhaps, instead of considering complete non-avoidance as a goal to work towards, a more realistic and pragmatic goal is what might be called "*intelligent avoidance*". This might involve weighing up the relative costs and benefits of non-avoidance in the speaking situations in which we find ourselves and responding accordingly. On the one hand, intelligent avoidance requires a readiness to accept that there are limitations to our speaking abilities, and that there may be some situations that it would sometimes be sensible to avoid. On the other hand, because our speech and language production abilities are constantly changing, intelligent avoidance also requires us to keep testing the boundaries and exploring beyond our comfort zones. Intelligent avoidance means, when we need to speak, always attempting to say the appropriate words once, irrespective of whether or not we anticipate difficulty saying them. But it also means being happy to quickly move on and to let go of any words we find ourselves unable to say.

Summary

Although some aspects of Johnson's Diagnosogenic theory have not been supported by recent research findings, the central tenets of the theory – that stuttering is an evaluation disorder, and that stuttering is what we do trying to avoid stuttering (and trying to avoid speech errors and normal non-fluencies) – all remain highly plausible. The important point that Johnson's theory highlights is that our attempts to avoid these things increase our tendency to stutter and, in particular, increase our tendency to produce stuttering blocks. To reduce this tendency to block, we need to reduce our avoidance of not only stuttering, but also of speech errors and normal disfluencies. But for such avoidance-reduction to be possible, we also need to find ways of continuing to quickly and efficiently

[e] For example when, for one reason or another, The Jump has not worked.

get our messages across when we do block, without resorting to the use of force and without producing abnormal secondary symptoms. It is important to remain pragmatic and flexible when employing such techniques, and to recognize that there are some (rare) occasions where avoidance of stuttering is still the most appropriate thing to do.

References

1. Johnson, W., *Desirable Objectives and Procedures For an Adult Stutterer*, in *To the Stutterer (Stuttering Foundation of America Publication, No. 9)*, M. Fraser, Editor. 1972, Stuttering Foundation of America. p. 22.
2. Johnson, W., *People in Quandaries.* . 1946, New York: Harper & Brothers.
3. Johnson, W., *A study of the onset and development of stuttering.* Journal of Speech and Hearing Disorders, 1942. **7**(3): p. 251.
4. Van Riper, C., *The nature of stuttering, 2nd edn. Englewood Cliff*. 1982, NJ: Prentice-Hall, Inc.
5. Yairi, E., *The onset of stuttering in two-and three-year-old children: A preliminary report.* Journal of Speech and Hearing Disorders, 1983. **48**: p. 171-177.
6. Kloth, S.A.M., et al., *Communicative behavior of mothers of stuttering and nonstuttering high-risk children prior to the onset of stuttering.* Journal of Fluency Disorders, 1995. **20**(4): p. 365-377.
7. Brocklehurst, P.H., R.J. Lickley, and M. Corley, *The influence of anticipation of word misrecognition on the likelihood of stuttering.* Journal of communication disorders, 2012. **45**(3): p. 147–160.
8. Brocklehurst, P.H., R.J. Lickley, and M. Corley, *Revisiting Bloodstein's Anticipatory Struggle Hypothesis from a psycholinguistic perspective: A Variable Release Threshold Hypothesis of stuttering.* Journal of communication disorders, 2013. **46**(3): p. 217-237.
9. Arenas, R.M., *The role of anticipation and an adaptive monitoring system in stuttering: a theoretical and experimental investigation*. 2012, University of Iowa: Iowa, IL.
10. Sheehan, V., P. Shanks, and S. Mereu, *Easy Stuttering: Avoidance-Reduction Therapy*. 2005, Sheehan Stuttering Center: Santa Monica, CA.
11. Sheehan, J. and V. Sheehan, *Avoidance-reduction therapy: A response suppression hypothesis*, in *Stuttering disorders*, W.H. Perkins, Editor. 1984, Thieme-Stratton.: New York
12. Van Riper, C., *The treatment of stuttering*. 1973: Prentice-Hall Englewood Cliffs, NJ.
13. Brocklehurst, P.H. and M. Corley, *Investigating the inner speech of people who stutter: Evidence for (and against) the Covert Repair Hypothesis.* Journal of Communication Disorders, 2011. **44**: p. 246-260.
14. Sheehan, J., *Stuttering: Research and therapy*. 1970, Oxford, England: Harper & Row.