

# DEVELOPING A NEW PARADIGM FOR STUTTERING

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There's a familiar brain teaser that involves a square comprised of nine dots made up of three rows of three dots each. Using only four straight lines, and without taking your pen from the paper, you are challenged to pass your pen through all nine dots.

I remember trying to solve this puzzle and my frustration at not finding the solution. After struggling for a while, it seemed there was no way it could be done, so I threw in the towel. But I just couldn't give up and a while later returned to the problem.

"What am I assuming?" I asked myself. "How am I limiting myself?"

I eventually figured it out. Like most people, I had assumed that my lines had to stay within the boundaries of the 9-dot square. Once I went beyond that self-imposed limitation, the answer was forthcoming.

The lessons of this story have applied directly to my own recovery from stuttering. As a person who has spent his professional life in a creative field (my position with the NSP is not a paid one), I've learned that whenever I struggle for a long time with a problem without making headway, I'm usually trying to solve the wrong problem. As someone who stuttered for 35 years and who has been fully recovered<sup>(1)</sup> for the last 20, I am also convinced that the paradigms traditionally used to characterize the chronic blocks of adult stuttering are not inclusive enough to fully describe the dynamics that drive the problem.

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(1) By "recovered" I don't mean that I am a controlled stutterer. I mean that not only has my stuttering disappeared, I no longer have the emotional responses of someone who stutters. Fear of speaking is not a consideration in my life; in fact, I enjoy virtually any opportunity to speak, such as talking on the telephone and addressing audiences.  
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In the following pages I would like to suggest a different paradigm, one that resonates with my evolution into a non-stutterer as well as with my 16 years experience in the National Stuttering Project.

But before we go on, a few words on my stuttering history. I was always aware that I had a "speech problem." At the age of four and a half I was sent for several months to the National Hospital for Speech and Hearing Disorders in New York. I later returned for several more months during the summer of my eighteenth year.

During my grammar and high school years and throughout college I underwent the painful and embarrassing experiences associated with chronic stuttering. My dysfluency took the form of a silent block and was situational. I generally had little trouble speaking

to my schoolmates, but if I had to recite in class, stop a stranger on the street or speak to an authority figure I would lock up. The fact that I didn't stutter in all situations made these dysfluent episodes all the more painful, since I inhabited that nether world of being neither normal nor abnormal.

Aside from the two brief episodes at the National Hospital, however, I had no formal speech therapy. I say "formal therapy" because I did spend many hours in my mid-20's carefully observing what I did when I stuttered, and over time, systematically brought into awareness the muscles and other behaviors involved in my speech blocks. I also moved to San Francisco and immersed myself in a plethora of personal growth programs that were just then being introduced in California.

## HOW MY STUTTERING DISAPPEARED

People frequently ask me, "When did you stop stuttering?"

I usually answer, "I stopped stuttering a long time before I stopped stuttering." This is not meant as a cryptic response, but simply to point out how the transformation took place.

Through the hundreds of hours that I participated in therapeutic and other group activities, I discovered that my "speech problem" was actually a constellation of problems. True, I did things with my lips, tongue, vocal cords and chest that were counterproductive to fluent speech, but that wasn't the only thing amiss. I lacked self-assertiveness. I was overly perfectionistic. I was concerned with pleasing others. I saw life as a performance. I didn't share what I felt. I didn't even know what I felt. I believed things about myself that weren't true, and blocked out things that were.

The deeper I delved into myself during these years of exploration, the more I was struck by how my various problems were not only interrelated, but dynamically present in my speech each time I blocked. It was as if each speech block, like a corner of a hologram, contained a complete view of my total self. It was during this period of self-discovery that my stuttering "disappeared"; not the behaviors, of course, which took longer to tail off, but my perception of what was really going on. I no longer identified what I was doing as "stuttering."

What makes stuttering such a contrary problem and so resistant to treatment is the limited way in which it is traditionally perceived. Stuttering is generally regarded as a speech problem. But stuttering can be more accurately understood as a system involving the entire person--an interactive system that's comprised of at least six essential components: behaviors emotions, perceptions, beliefs, intentions and physiological responses. This system can be visualized as a six-sided figure--in effect, a Stuttering Hexagon--with each point of the Hexagon connected to and affecting all the other points. It is the moment-by-moment dynamic interaction of these six components that maintains the system's homeostatic balance.

It is precisely because of the self-perpetuating nature of the system that it is so difficult to bring about permanent change at only one point. What usually happens is that after therapy most people who stutter slide back. This is because many therapy programs simply adopt a strategy of control in which only speech issues are addressed. Nothing is done to transform the system that supports the dysfluent speech. A strategy of disappearance, on the other hand, calls for breaking down the stuttering system into its

separate components and making changes concurrently at other points around the Stuttering Hexagon -- specifically addressing the individual's emotions, perceptions, beliefs and programming. Pursuing this global strategy can lead to a self-maintaining fluency system because not only are the speech blocks addressed but also those contributing factors which lead the person to block. It can also lead to a different perception of what stuttering is all about.

## BUILDING A SYSTEM MENTALITY

To understand how a different system paradigm can change your perception, consider this analogy. Let's say you're about to demonstrate to two interested spectators the operation of a new remote controlled car--the kind you can buy at Radio Shack for under \$50. One spectator is a 2-year-old boy. The other is a mechanical engineer.

The 2-year-old sees the car as a single living object. It seemingly has a will of its own, at one moment darting forward, then stopping, turning, exploring; a capricious little life form. The engineer, on the other hand, has a totally different experience. He sees the car, not as a thing, but as a system comprised of interacting parts. He inspects the motor, examines the electronics, perhaps even looks over the schematic. He develops an understanding of the parts and how they interrelate.

This analogy is not dissimilar from the differences between how I used to see stuttering and how I see it today. As a teenager, I experienced stuttering as a thing, a life form whose behavior I could not predict from day to day. Today, having "popped the hood" and looked inside, I understand that this "thing" I called stuttering is actually a collection of components in a particular kind of relationship.

But hold on. We have a problem, because at this moment you don't know for sure what I mean by "stuttering." Am I talking about the kind of stumbling that 8-year-old Johnny does when you surprise him with his hand in the cookie jar? Or am I talking about Johnny's struggle to say his name when I introduce him to you. How can we continue this discussion when we may not even be talking about the same problem?

To aid in this process, there's something we first need to do: we need to replace the word "stuttering." In a letter to the editor in the "Journal of Fluency Disorders" ("How to Rid Yourself of Stuttering in under 60 Seconds." John C. Harrison, J. Fluency Disord., 16 (1991) 327-333) I argued how the word "stuttering" promotes confusion by being too vague and unspecific. I observed that the easy disfluencies that many people experience in emotional situations are manifestly different from the struggle behavior characteristic of a full-fledged stuttering block. One is a reflex triggered by emotions and probably influenced by genetic factors. The other is a learned strategy, a set of behaviors designed to break through or wait out a speech block. They are, in short, not simply points on a continuum but entirely different phenomena. By using a common name, we imply relationships and similarities that may not in fact exist, and it only creates endless confusion to call them by the same name-- "stuttering"--even if we distinguish one as "primary" and the other as "secondary."

For this reason, I propose that we give up the word "stuttering" (except in the broadest of discussions) and differentiate each of five different behaviors by assigning to it its own separate and unique terminology.

-- The dysfluencies related to primary pathology such as cerebral insult or intellectual

deficit we'll call PATHOLOGICAL DYSFLUENCY

-- The disfluencies that surface as the young child struggles to master the intricacies of speech we'll call DEVELOPMENTAL DYSFLUENCY. This has a developmental model all its own which is separate and distinct from the developmental model of adult blocking behavior. Developmental disfluency often disappears on its own as the child matures. It is also highly receptive to therapeutic intervention, so much so that when treated early enough, most children attain normal speech without any need to exercise controls. (Note: Both pathological dysfluency and developmental disfluency are subjects that will not be addressed in this paper, since we are limiting our discussion to chronic blocking.)

-- For the easy and unselfconscious disfluency characteristic of those who are temporarily upset or discombobulated we'll need to make up a word, since one does not exist. We'll call this kind of disfluency BOBULATING. Almost everyone bobulates under certain stressful conditions. However, this is usually not a chronic problem, and even if it were, the person is generally unaware of his behavior and is, therefore, unlikely to have negative feelings toward it.

-- The struggled, choked speech block that comes about when someone obstructs his air flow and constricts his muscles we'll call BLOCKING because the person is blocking something from his awareness (such uncomfortable emotions or self-perceptions) or blocking something from happening that may have negative repercussions. This is the chronic disfluency that most people think of when they speak of "stuttering" behavior that extends into adulthood. Unlike developmental disfluency and bobulating, blocking is a strategy designed to protect the speaker from unpleasant consequences.

-- Finally, there is a fifth kind of dysfluency related to blocking that occurs when the person continues to repeat a word or syllable because he has a fear that he will block on the following word or syllable. Since he is just buying time until he feels ready to say the feared word, we'll call this kind of dysfluency STALLING. Because stalling is an alternate strategy to the overt struggle behavior associated with speech blocks, the two must be considered in the same vein.

I know that many readers will bridle at the thought of not using "stuttering" as common currency in all situations. But since developmental disfluency, bobulating, blocking and stalling can look identical to the untrained eye (and, unfortunately, to some trained eyes as well), calling them all "stuttering" can substantially help to obfuscate the problem (2) (3).

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(2) I'm not the first to feel that the word "stuttering" has vast deficiencies as an accurate descriptor. An article in the Journal of Fluency Disorders in December 1989 by R.M. Boehmler and S.I. Boehmler addresses this same issue:

From the synopsis: "There is a consensus among speech-language pathologists that the cause of stuttering is unknown. This lack of understanding is not due to the lack of research effort, but it may be due to asking an unanswerable question. We may already know the causes of many of those behaviors that make up the general concept, stuttering, if we would ask more specific questions."

The article goes on to say that, "The term stuttering is used to refer to a wide variety of behaviors, feelings, or phenomena. The term is used as a label for an abstract concept.

Use of such abstract terms in research questions may make the question unanswerable by the standards of scientific methodology. One cannot get concrete, scientific answers to abstract, vague questions. Instead of asking, 'What causes stuttering,' it might be more productive to separate questions about dysfluencies from questions about blocks.... We might instead ask, 'What causes elemental repetitions?' or 'What causes blocks?' It has been clinically productive to go further and formulate causal hypotheses about specific types of blocks and subcategories of traditional dysfluency types. A...glottal block, does not necessarily have the same cause as ...a lingual block. Not all elemental repetitions would logically have the same etiology.

..."Directing our causal hypotheses around the collective group of behaviors we call 'stuttering' has not proven to be fruitful. Liebetrau et al. (1981) point out 'stuttering is not a unitary disorder, but rather a generic label for a wide range of related disorders.' ...Our research efforts may be more productive and our intervention more effective if we focus on very specific behaviors rather than on a collection of related behaviors.

"It is our belief that the 'cause' of 'stuttering' is knowable, and perhaps already known to a great extent, using current data, if the question is asked in an answerable form." The Cause of Stuttering: What's the Question? R.M. Boehmler and S. I. Boehmler, J. Fluency Disord., 14 (1989), 447- 450.

(3) Dr. Eugene B. Cooper also shares these same sentiments. In an interview printed in The Clinical Connection, Vol. 4, No. 1, pp. 1-4, he opines that "with our increased understanding of the complexity of fluency disorders, the term stuttering, like the term cancer, simply does not convey sufficient information to be very useful in our discussions of the problem. In fact, the continued use of the term as a definitive diagnostic label is counter-productive. Its use as a diagnostic label suggests there is only one type of stuttering disorder and that the disorder's single determining characteristic is disfluent behavior when in fact clinical stuttering is composed of affective and cognitive components as well as behavioral components."

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## THE COMMONALITY OF SYSTEMS

Several years ago at the National Stuttering Project's Seventh Annual Convention in Dallas I was conducting a mini-seminar on the Stuttering Hexagon.

"How many people have ever wrestled with a weight problem?" I asked. As expected, more than half the people raised their hands.

I walked over to the flip chart. "As you probably know, studies indicate that over 85% of all people who go on a diet eventually regain the weight they've lost. So let's make a list of some of the reasons why diets don't work. What's hard about staying on a diet?"

People began calling out their reasons. "No fun," somebody volunteered. "I'm rebellious," called another. "Easy to procrastinate," somebody else said. "I go on automatic when I'm stressed," offered a fourth. In a few minutes I had written a list of some thirty to forty reasons why diets traditionally fail.

"Okay, watch this," I said. "We're going to do a little sleight of hand."

Up to this point I had left the chart untitled. I then wrote the title: "Why people have problems with speech therapy."

You could have heard a pin drop as people contemplated the chart. Remarkably, the reasons why diets by themselves are ineffective were almost identical to why over 85% of those undergoing speech therapy lose ground in the ensuing months.

Successfully giving up weight and successfully recovering from chronic stuttering (blocking) are both system problems to which the hexagon paradigm applies.

To better understand this, let us expand our analogy and develop in parallel the ways that the Hexagon paradigm applies equally to blocking and to losing weight.

#### THE SIX POINTS OF THE HEXAGON

**PHYSIOLOGICAL RESPONSES.** Some people have a predisposition to being overweight. They're born with a greater concentration of cellulite, a sluggish metabolism, a problematic thyroid. Similarly, people react differently to stress. If a car backfires loudly, one person's autonomic nervous system may go into overload while another's may hardly react at all. As we know, stress can induce disfluency by interfering with an individual's fine-motor performance. The physiological component might be explained by personal differences in muscle latencies, neurotransmitters, nervous system thresholds, respirator/speech-motor systems coordination, and/or speech-motor processing, planning and execution. But whether an individual's disfluency turns into debilitating blocks or a simple disruption in the smooth flow of speech (bobulations) depends on many other factors. Most discussions on whether "stuttering" is or is not genetic fail to distinguish between the physiological responses associated with bobulating, blocking or stalling. This leads to endless confusion because the involved parties are not in agreement on exactly what is meant by "stuttering."

**BEHAVIORS.** Are certain behaviors counterproductive to losing weight? Of course. They're described as "bringing the fork to the mouth," "dipping into the cookie jar," "licking the ice cream cone." It's obvious that if you could curtail the behavior, you could remove the weight problem. Similarly, we know that there are specific behaviors--holding the breath, pursing the lips, locking the vocal cords--that are counterproductive to fluent speech. We also know that if the person curtails these behaviors, fluency is possible.

**EMOTIONS.** If you've ever been to a party where you found yourself uncomfortable, you probably remember how hard it was to curb your appetite when the hors d'oeuvre tray came around. People eat when they're anxious, another example of how emotions drive behavior. But behavior (overeating) also leads to obesity which leads to more emotion (self-hate, embarrassment, etc.), which leads to more eating. This closed loop demonstrates how certain behaviors become self-perpetuating.

Similarly, in the development of chronic stuttering, early emotional upsets can lead to bobulating. If this, in turn, leads to overcontrolled speech and chronic blocking, then the inability to speak at the appropriate moment will engender emotional upsets such as frustration, fear, embarrassment, dejection, helplessness, which, in turn, can trigger

more struggle that leads to more speech blocks.

**PERCEPTIONS.** Our perceptions are influenced by our beliefs, expectations and our state of mind. For example, the anorexic person may be thin as a rail, but her perception that she's actually overweight may lead her to starve herself. Similarly, a person who believes he's an oddity because of how he talks will constantly project his own agenda into the reactions of others, creating a world of stress in which blocking and stalling behaviors flourish.

**BELIEFS.** Our beliefs are created by everything we're taught, especially by those whose credibility is so high (such as our parents) that we take what they say at face value. Beliefs are also built from our life experiences and from what we have come to expect about the world. Unlike perceptions, which can be easily modified by how we feel, beliefs remain relatively constant from moment to moment. Negative beliefs, in particular, can keep us in a one-down position and make it difficult for us to change. We may believe that we can never be thin. We may believe that good-looking girls (or guys) will never want to go out with us. We may believe it's wrong to be assertive. We may believe that we're different from other people because we stutter. Once our beliefs are formed, they cause us to shape the world to fit our expectations. In effect, our beliefs become windows that color the way we see and experience.

**INTENTIONS.** We also develop behavioral programs to help us manage our daily encounters with life. These programs (or "games", as psychiatrist Eric Berne labeled them), can end up working against us. For example, if we are rebellious toward authority, we may perceive any friendly request as a demand, which then motivates us to find subtle ways to undermine the person's authority. If the request is for us to lose weight, we may instead head for the refrigerator. If the request is to undergo speech therapy, and if we are harboring hidden anger and rebellion, it may lead us to initiate strategies that undermine the therapy and cause it to fail, thereby proving the authority wrong (and us right!) Similarly, in a speech block, our apparent intention may be to speak the word, while our equally powerful hidden intention may be to hold back out of fear of revealing ourselves, our imperfections, etc. When our intentions pull us in opposite directions, we experience ourselves as blocked and unable to move.

#### A SELF-MAINTAINING SYSTEM

What makes the Hexagon able to support itself is that, functionally, **\*\*all points interact with all other points\*\***. This interaction is happening moment by moment, in real time. For example, it's not just that our beliefs that have a bearing on our perceptions. Our perceptions are also affected by our emotions, behaviors, hidden games and even our genetically-induced responses. Any changes made at one point are felt at all the other points we well. This principle holds true for every point on the Hexagon.

It's important to keep this interconnection in mind whenever we're working to effect a change with an individual's speech. Let's say a person undergoes a successful program of speech therapy. He (or she) achieves a high level of fluency. But in the weeks and months that follow the person does nothing to modify (1) his negative emotional responses; (2) his negative perceptions; (3) what he negatively believes to be possible, and that includes every belief he holds about who and what he is; and (4) the negative psychological programming or patterned behavior that leads him to react in self-defeating ways.

What is likely to happen?

His blocking will return (or in the case of weight, the pounds will reappear.) This is because each of these points is continually exerting a negative influence on the only positive point in the system (Point #2: fluent speech), and over time the person's speech will gradually slip back into the old familiar dysfluency. In short, the original system will re-establish itself.

The Hexagon dynamic also explains why some people go through speech therapy (or diets) and are able to maintain their gains. They've already been making significant changes at the other points on the Hexagon, so the Hexagon is structured to support a more liberated, expressive, confident way of speaking.

#### MOVING TO A FUNCTIONAL LEVEL

So far in our discussion of the Stuttering Hexagon I've been describing the system from a broad perspective. I've proposed that there are at least six factors involved in blocking, and these are the six components of the Stuttering Hexagon: genetics, emotions, perceptions, beliefs, behaviors and intentions. I've suggested that each component is constantly affecting, and being affected by, all other components. Now I'd like to demonstrate the Hexagon on a functional level and show how it affects our speech on a word-by-word basis....how, in fact, it creates the stuttering block itself.

I work on a Macintosh computer, and one of the programs I can't live without is the interactive spell checker. As I type each word, the computer compares it to the correctly spelled word stored in a dictionary deep in RAM memory. If the word is not spelled correctly, the computer beeps. The beep generally comes just a few hundredths of a second after I finish typing the word. Under any circumstance, this is fast. But it's not as fast as the human mind, as this next account will demonstrate.

One evening a dozen years ago I was listening to a new talk show host on KCBS radio in San Francisco. The host was discussing advancement opportunities for women when he made a Freudian slip that he caught and corrected in the shortest instance I'd ever experienced. (This was during the time when the women's movement was pressing forward on all fronts.) He said something like, "When it comes to climbing the corporate ladder, I think girls I can't believe I said that I think women deserve equal opportunity..." and he went on with his rap.

The host had made an embarrassing faux pas. He had called women "girls." But what was startling was how fast he corrected himself. He said the word "girls", his ear processed the sound, his mind processed the word, caught the slip, searched the stored memory for the appropriate word, delivered the word to the voice mechanism which spoke the corrected word, \*\*all without missing a beat\*\*. There was literally no perceived time between the slip and the correction. His original statement and his correction were spoken as a run-on sentence with no discernible pause. Mind you, this fellow was not a slow talker. Like many radio personalities, he was racing along at maybe 130 words a minute, so each step in the process I just described had to have been measured in milliseconds. That's how fast the mind works.

I'm suggesting that, as the person with a chronic blocking problem approaches each word, his mind acts like the forward-looking radar on a high performance fighter flying just a few hundred feet off the ground. The radar looks ahead for hazards, sees a hill or



tall building, sends the information back to the aircraft where the on-board computer evaluates this data and sends the appropriate commands to the ailerons and other aircraft controls that cause the plane to move higher and avoid the danger.

In the case of blocking, the danger may be a feared block on a particular word, or a feared situation in which the emotions associated with the freely spoken word represent a danger. Because the mind is capable of working so quickly, it has abundant time to look ahead, process each word for safety by accessing the mind's vast memory banks, and if a threat is perceived, plan and initiate a defensive strategy...a strategy that calls for holding oneself back until the danger has passed.

I'm suggesting that, instead of having to blame speech blocks on some mysterious genetic glitch or the confluence of unknown factors, we can make sense of them with information already at hand. We can satisfactorily explain speech blocks as an incredibly rapid series of events in which the lightening-like processing of the mind references the emotions, perceptions, beliefs and intentions, and as the result of the perceived danger, executes defensive strategies on a word-by-word basis.

In short, what I'm suggesting is that the Stuttering Hexagon is both a conceptual framework and a real-time data processing model that describes how the mind and body work together to process experience and take remedial action.

#### HOW THE HEXAGON OPERATES

To see this process in action, we'll create a scenario in which Bob, a shy young man, is building up enough nerve to make a pass at an attractive girl in a cocktail lounge (always an emotionally loaded situation). What he wants to say is, "Hi, my name is Bob. I just flew in from San Francisco. Can I buy you a drink?"

Let's step back and look at his Stuttering Hexagon. Bob perceives that Sally, the young woman, is attractive; he is drawn to her. However, since Bob does not perceive himself as her equal, he automatically gives her power over him, specifically, the power to validate him. Thus, his perceptions have a negative bias.

Because Bob tends to automatically put himself in a one-down position, he believes that Sally will not be interested in him. She'll reject his offer. So his beliefs also have a negative bias...even more so since experience already leads him to believe that he will have difficulty saying his name.

But Bob is really attracted to Sally, so he persists. However, his perceptions and beliefs have triggered a medley of negative emotions: fear (of being rejected), hurt (anticipated, because of the rejection), and anger (anticipated, as a reaction to being hurt). This gives his emotions a negative bias.

Now let's move in closer and look at the words he wants to say. His genetic make-up is such that he's quick to react under stress, and his stress reaction is heightened as he approaches the moment when he must give his name. Saying his name is particularly difficult because he perceives that people expect him to say it without hesitation (after all, he should know what his own name is without having to think), and this pumps up his fear level.

Consequently, his adrenaline level skyrockets as his body marshals itself for fight or flight. His heartbeat increases. His blood pressure soars. Blood rushes away from his stomach and toward his muscles. His anal sphincter closes. All of this is a genetically driven response to prepare for danger. He's now in a stress reaction, ready to meet the threat. But this is not a physical danger, as the body believes. It's a social danger. No matter. The body doesn't perceive the difference. So here is Bob, trying to look relaxed and casual, while his body is marshalling its defenses for physical attack. Does all this help to build his confidence? It does not, because his physiological response to danger is creating additional insecurity and discomfort.

Bob has also conflicting intentions. On one hand, he wants to communicate with Sally; on the other hand, he is afraid of letting go and investing himself totally in the moment and perhaps be rejected. So his hidden intentions are negative as well.

If Bob says his name assertively, he'd be acting outside his comfort zone, reaching beyond what his self-image says is credible. Thus, as he goes to say the word "Bob," two overpowering fears surface: (1) the fear that he may block, and/or (2) the fear that he may come off as too aggressive.

What does he do? He retreats into his comfort zone and holds back.

But at the same time, he also tries to speak.

If his will to speak and not speak are of equal strength, he'll find himself blocked, unable to move in either direction. The block in turn will generate a sense of panic which will render him "unconscious." He will lose contact with his experience and with the other person. In desperation, he may try to forcefully break out of the block by trying to say the word any way he can. In so doing, he will execute a Valsalva maneuver, a strategy identified with performing acts of strenuous physical effort. ("Stuttering and the Valsalva Mechanism: A Hypothesis in Need of Investigation." William D. Parry, *J. Fluency Disord.*, 10 (1985) 317-324.) This calls for further locking of the throat, tightening of the abdominal muscles and building up of air pressure in the chest as he tries to push the words out. (As an alternative strategy, he may also stall by repeating the word "is" until he feels ready to say the word "Bob") He will continue to be blocked until the intensity of his panic begins to drop, at which point his muscles will begin to relax, and he will suddenly find himself able to continue on with the sentence. As we can see, then, his habitual behaviors are also a negative. So all the negatives reinforce each other, creating a self-supporting, negatively biased system.

This is, of course, not the only circumstance under which Bob may block, but hopefully, it is a convincing demonstration of how the parts of the Hexagon work together to immobilize his ability to speak.

To recapitulate, the blocking system operates like a forward-looking radar that anticipates problems before they happen on a situation-by-situation and word-by-word basis. Every word has its individual Hexagon, which can contain negatively or positively biased data. The information contained in the Stuttering Hexagon is scanned by the mind which, like a forward-looking radar, is constantly searching ahead for danger. If the information in the Hexagon constitutes a threat, the word will feel "loaded", and Bob's survival system will chart a course to avoid the danger by holding back until the danger has passed. Thus, on bad days when his self-esteem is low, most words may feel threatening, while on days when he's feeling good, the same words will be easier to say.

However, some words will probably maintain their negative or positive bias, no matter what kind of day it is. Loaded words like "stuttering" may continue to be stumbling blocks, even when things are going well.

#### CHANGING THE SCENARIO

-- His perceptions are shifted from negative to positive. Previously, he felt unacknowledged; now he's been validated and feels the heady confidence that goes with it.

-- His new self-perceptions affect his beliefs. Previously, he had no confidence as a starving writer. Why should a beautiful woman go out with him? What could he offer her? But as a writer whose skills have been acknowledged, he now feels worthy. He's now somebody who has the right to speak up and assert himself.

-- Positive perceptions and beliefs lead to positive emotions. And of course, positive emotions lead to more upbeat perceptions and beliefs.

-- The negative intentions to hold back and hide that normally would have kicked in when he was trying to say the word "Bob" are no longer operating, because they don't fit with the new, positive Hexagon. The name "Bob" now means something he's proud of.

-- Because he is no longer relying on Sally for acceptance--that is, because he no longer needs her to make him whole--there's less riding on the experience. Without the same feeling of impending disaster, Bob's sympathetic nervous system does not push him into a fight-or-flight response. He's not caught in a do-or-die scenario. Emotionally he remains confident and collected, so he does not fall into the physiological response--panic--that led to the previous crisis.

-- Within this positive system Bob no longer feels the need to hold back. Quite the opposite, Bob wants to let go and share his good feelings with everyone he meets. He expects a positive reaction, so he puts out positive feelings which the young woman responds to, causing an even greater surge of confidence.

Until experience brings about more lasting changes, the Hexagon will be vulnerable to whatever life serves up--anything from the publication of a book to the off-handed remark of a co-worker. And each change on the Hexagon will be reflected in the individual's speech. In Bob's case, he's probably not aware of why he's finding it easier to talk. All he knows is that, speech-wise, he's having a good day.<sup>7</sup>

#### SOLVING SOME AGE-OLD RIDDLES

What I like about the Hexagon paradigm is that it provides credible answers for virtually every question I've ever had about stuttering. Let's look at several of the more common questions and see how the Hexagon goes about answering them.

QUESTION: Why does chronic stuttering seem to run in families? Doesn't this prove that it's genetic?

ANSWER: Not at all. What people don't take into account is that, not only negative

genes, but negative emotions, perceptions, beliefs and psychological games are also passed along from one generation to another. For example, it's not by accident that Dan Greenberg's book, *How to Be A Jewish Mother* resonated with Jewish readers over different generations. Attitudes, values and behaviors are good "time travellers" within cultures and within families. When the components of the Stuttering Hexagon exist within a family, it is only a matter of time until circumstances bring these components together in the life of one individual in a way that causes them go "critical" -- to borrow a term from nuclear physics. Once the components organize themselves into a self-supporting system, you have the first appearance of speech blocks.

QUESTION: Of the children who are disfluent at an early age, why do most of them not develop a chronic stuttering problem?

ANSWER: Children who are disfluent at an early age are usually either bobulating or struggling with developmental disfluency. It takes time to build the emotions, perceptions, beliefs and psychological games that comprise a chronic speech block. If the youngster is in a supportive environment free of underlying stresses where pressures to perform do not affect his speech, then the struggle and avoidance behaviors that lead to blocking never take place. In other words, the Stuttering Hexagon is never given an opportunity to form.

QUESTION: Why can someone talk to children without difficulty and minutes later totally choke when asked to address an adult?

ANSWER: To explain this, let's create an example. Let's look at Jean, a young woman who teaches kindergarten and see how she perceives herself in two different situations.

In the classroom Jean clearly perceives herself as the boss, and her emotions vis-a-vis the children are parental and supportive. Her word is law, and with no one to challenge her knowledge or authority, her intentions are always clear. Thus, there is no ambiguity around issues of control. Nor does she ever feel judged, because there is no one in the classroom who is capable of judging her. In this unthreatening environment her beliefs about herself closely parallel what is true. Consequently, when she goes to speak, there is no reason to hold back, and the words come out easily and fluently.

But when the class ends and she goes to the teachers meeting where she is scheduled to make an oral report, she moves into a radically different environment, and this, in turn, initiates a dramatically different hexagon.

In meeting with her peers, Jean's beliefs about having to perform to high standards now come into play. She perceives the others to be her judges, especially the principal whom she sees as an authority figure. This, in turn, elicits emotions such as fear and anger, feelings that she may not only find difficult to express, but even to acknowledge. Sensing that others may judge her, Jean is threatened, and her body/mind, not distinguishing between physical and social threat, initiates the familiar genetic responses associated with fight or flight.

In this threatening environment, her intentions become split. On one hand she wants to give her report; on the other, she does not want to put herself at risk. The ensuing approach-avoidance struggle becomes visible in her halting and fragmented speech.

The previous example is not a universal explanation for why all people do or don't block, but it does demonstrate how changes around the hexagon can affect the individual in significant ways, and how such changes build a reality that has a concomitant effect on the person's speech.

QUESTION: Why does chronic blocking and/or stalling sometimes disappear or significantly reduce as people get older?

ANSWER: As people live out their lives, they continue to make concurrent changes around the Stuttering Hexagon. Building personal skills, rethinking values, establishing support systems, and broadening one's perspective on life can create a Hexagon that supports honesty, self-love, freedom of expression and letting go. This, in turn, can lead to greater fluency.

The Hexagon also provides a foundation for the concept of Chronic Perseverative Stuttering (CPS) Syndrome as advanced by Dr. Eugene B. Cooper in a presentation at the 1986 convention of the American Speech- Language-Hearing Association in Detroit.

Dr. Cooper describes CPS Syndrome as "an adolescent and adult disorder in the fluency of speech resulting from multiple coexisting physiological, psychological and environmental factors, distinguished by (a) recurrence following periods of remission, (b) characteristic cognitive, affective and behavioral response patterns and (c) susceptibility to alleviation but, given the present state of the healing arts, not to eradication."

The Stuttering Hexagon would explain CPS Syndrome this way. The individual presenting CPS Syndrome is unwilling or incapable of making all the necessary changes around the Hexagon needed to build a foundation for total and lasting fluency. For example, the person may have emotions that he may not be ready to deal with. He may be locked in relationships that pressure him to perceive the world in a particular way. This, in turn, makes him unwilling to challenge basic beliefs about himself. In such cases speech therapy, by itself, will not be able to disable the system that supports blocked speech, and there will always be a tendency to hold back.

What the Stuttering Hexagon can do is help to identify those areas where improvement will have the greatest impact on his speech. Thus, if he changes his perceptions in ways that allow him to reduce his level of stress by 25%....and allows 25% more emotions to come through...and reduces his need to be perfect by 25%...and becomes 25% more assertive...and reduces his self-defeating games by 25%...and if he combines this with fluency training, then he is able to develop a Hexagon that is 25% more supportive of fluent speech. True, his speech won't in all likelihood be completely fluent, but it may attain a level that serves his needs.

In short, the Stuttering Hexagon can show where his areas of weakness lie. And it can broaden the focus of both therapist and client, so they don't become obsessively focused on speech to the exclusion of those other factors that need to be addressed.

#### SOME PROBLEMS CANNOT BE SOLVED

A word about "cures." We keep thinking that we can solve stuttering as if it were some kind of math problem. True, you can seem to make a behavior disappear by focusing on

not doing it, as is suggested in fluency shaping programs. But unless you carry this process one step further to where you also dissolve the "glue" that holds the stuttering system together, the behavior will almost always return.

Why?

The great irony is that the harder you try to solve a stuttering problem, the more you reinforce its presence, because in order to have something to solve, you must continually recreate it.

Does that mean that problems can't be solved? Not at all. You can figure out that tricky algebra problem. You can come up with a solution on how to reorganize the corporation or where to vacation next year. That's because you're not trying to make the algebra problem, the corporation or your vacation disappear. But when you want something to disappear, such as stuttering, you have to take a different approach. To "disappear" something you don't solve it. You dissolve it. This is not just playing with words; there is a world of difference between the two approaches.

When you solve a problem, the subject continues to exist, although its form may be altered or disguised. On the other hand, when you dissolve it, the subject disappears because you have dismantled it (rather like you did as a child when you took apart the car you made with your Leggo set and put the parts back in the box.) You have disconnected the parts so they no longer interact. You have removed the problem by destroying its structure.

Let's say that 10-year-olds Tom, Dick and Harry comprise an unruly gang whose activities you'd like to curtail. If you deal with them as a gang, you may only enjoy limited success, because the more you address the gang directly, the more you confirm its identity. But if you induce the three boys to join a youth group and assign each of them to a different activity, the gang becomes dissolved into a larger setting. The structure that defines their gang no longer prevails, because the "parts" have become disassembled and incorporated into other structures. In effect, the gang and your problems have all but disappeared.

Similarly, focusing on chronic stuttering (which, unfortunately, many therapy programs do) only serves to entrench it within the individual's psyche, whereas disassembling it into a six-sided system not only destroys its form but automatically gives you six issues to address instead of one. From my own experience, it was a lot more productive to stop obsessing on my speech and focus on the six parts of the stuttering system.

## THE ROLE OF THE SPEECH-LANGUAGE PATHOLOGIST

What of the role of the therapist in this new paradigm? Does it need to change?

A while back, I conducted several seminars on the Stuttering Hexagon at the Tenth Annual Convention of the National Stuttering Project, held in Washington D.C. On the way to the airport a fellow who had attended one of my workshops popped a familiar question: "Isn't it unrealistic to expect the speech therapist to play so many different roles." It is a question that has been echoed by Dr. Don Mowrer of Arizona State University in our discussions over the Internet.

As Mowrer points out, it is unlikely that the speech-language pathologist would also be a psychologist as well as be qualified to teach assertiveness and a full range of cognitive and behavioral skills. But then, neither do I expect my internist to be a qualified podiatrist, urologist, cardiologist, dermatologist and every other "ist" that I might need. My internist is most valuable as a skilled diagnostician. He may have a specialty of his own, but he is most invaluable in his understanding of how my system goes together.

Similarly, a good speech therapist needs to be an expert in speech pathology as well as be able to recognize the other factors that may be impacting the client's speech. Then, just like my internist, the therapist should be able to diagnose the problem and, if he or she does not have the requisite skills, be prepared to direct the client to the appropriate therapeutic resources when such qualified help is called for. But to do this, the therapist must possess an understanding of the entire stuttering system and not focus so narrowly on just the mechanics of speech.

## SUMMARY

For years people have searched for the genetic "glitch" that produces the stuttering block. What I'm proposing is that the speech block, is actually the product of an interactive system comprising a person's physiological responses, behaviors, emotions, perceptions, beliefs and intentions. This system is not static; rather it is a system that ebbs and flows, depending on the circumstances. And it works along the following lines:

1. All the system components of the Hexagon are in a dynamic relationship. If most of these elements are negative, they will create more negativity. Thus, even if one part of the system has become positive, such as speech that has improved after therapy, it will be under pressure by the rest of the system to drift back to its previous negative state to support the integrity of a negative system. On the other hand, if the points of the Hexagon are mostly positive, they'll create a positive system that will support any positive changes such as more expressive and fluent speech.
2. During good speech periods, the Hexagon will be positively biased and support a state of physical and emotional well-being. Conversely, a failed enterprise, broken relationship or other unfortunate happenstance can cause negative changes all around the Hexagon, and those changes will be reflected in more dysfluent speech.
3. Each individual word is capable of having its own Hexagon, depending on what we associate with it and the context in which it is being used. If a person is uncomfortable with the negative feelings associated with a particular word, he may hold them back, blocking on the word to insulate himself from having to experience the associated feelings.
4. As we speak, the mind operates like a forward-looking radar. It searches ahead for threatening words and situations, processes this information in milliseconds on a word-by-word basis, and takes "corrective" action in the form of a speech block. On a pre-conscious level, the speech block is perceived as necessary to protect the individual from harm -- emotional, physical, or social.
5. Certain situations may always seem to be biased one way or the other. For example, to understand why someone may regularly have difficulty saying his name, we must look at his perceptions, beliefs, emotions and intentions as they relate to his name.
6. One effective way to block feelings is to block the primary vehicle through which emotion is expressed -- speech. Holding one's breath and/or tightening speech-

- related muscles is an efficient way to bring about a speech block.
7. Executing a Valsalva Maneuver while trying to speak will also cause a blockage of speech.
  8. Stalling is yet another way to avoid experiencing unwanted feelings. Stalling occurs when the person continues to repeat a word or syllable because he has a fear that he will block on the following word or syllable.
  9. Developmental disfluency, bobulating and blocking/stalling are all driven by different dynamics. They are not simply points on the same continuum. Thus, they require separate terminology.
  10. Making positive life changes will affect one's life Hexagon in a positive way. These changes will often be reflected in easier, more expressive speech.
  11. The more points you change around the Hexagon, the greater chance you have to build a positive, self-sustaining system that leads to greater expressiveness and fluency.

Like the remote-controlled toy car we mentioned earlier, the speech block has always been perceived as a "thing", an impetuous, unpredictable life-form with a mind of its own. My own recovery from chronic stuttering truly took hold when I challenged this concept, when I "popped the hood", peered inside, and began to recognize that I was looking at a system. My physiology shaped the parts. My emotions fueled the engine. My beliefs turned the gears. My programming wired the parts together. My perceptions set the path. And my behaviors drove it to move this way and that.

As I identified the parts and how they worked, my perception of the speech block changed, and as I made progress at each of the points, the system changed, until over time, the stuttering simply dissolved.

I don't suggest for a moment that everyone can make their speech blocks totally disappear, but by correctly recognizing the essential nature of the problem, it is possible to maximize whatever efforts are made in improving one's ability to speak.

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