Yet another definition submitted via e-mail

DYSLEXIA: A NATURAL PHENOMENON

Abstract

Social institutions and their rules often originated from capricious decisions. For education, western text book design has never been questioned as to its possible bias against some children's perceptual organizational strategies. Text book design with its "Z" encoding often conflicts with the *a priori* "S" encoding and decoding paradigms found in natural perception. Orthography is another flawed social tool replete with anachronistic distractions. These factors results in social and perceptual rule conflicts inhibiting children's (or adult's) attempts to decode and encode English alphanumeric signs and symbols. These conflicts are often misinterpreted or ridiculed by the educational culture leading to the child's impaired performance (but not learning) sometimes termed *dyslexia* denoting a class of impaired people without reading and writing skills due to some brain disorder. Experts often refer to the reversal of numbers and letters as indicators of dyslexia. However, reversals are part of natural perception and we deal with them everyday, and ignore them as part of our perceptual background. This paper suggests that persistent reversals are aligned with confusing perceptual, pedagogic and orthographic rules rather than brain impaired reading and writing skills. What is troublesome is that many labeled *dyslexics* become "cured," often on their own, and end up becoming authors, scholars, scientists, etc. This suggests that environmental forces such as negative reinforcement found within the educational community are factors delaying lexic development.

Dyslexia Redefined

Dyslexia is buzz word with intolerable ambiguity*.* Among others, *dyslexia* is generally defined as the reversal of letters and numbers due to some brain disorder. However, in this paper *dyslexia* is defined as the left-to-right reversal of letters and numbers due to confusing perceptual codifying rules in conflict with arbitrary textbook designs further complicated by English orthography and dysfunctional institutional behaviors. It should become clear that the left-to-right reversal of alphanumeric symbols is a natural, evolutionary, rule-governed form of perception. By *dysfunctional institutional behavior*, I maintain that the confused left-to-right reversal process is often reinforced by emotional trauma, shame, negative attitudes, unfounded beliefs, low self-esteem, etc., tacitly or overtly given off by the school culture that places the student in a state of perpetual confusion. I will also suggest that the child's traumatized state of confusion could itself limit the development of his brain's functionality. By *orthography*, I mean the present state of English spelling that is the very essence of sociodyslexia because of the chaos in phonemic and graphemic rules. The dysfunctional state of English orthography is a deficit transferred to the student. It is indefensible to hold that there is an intuitive connection in such examples as the long **i**: *tie, by, bye, high*, and *hi* to name a few. Only etymologists understand their origins and interconnectedness. Words are tools of communication, and like any tool, they need to be adapted to their user or be discarded. No one in their right mind would use bent hammers or ancient computers and be efficient and effective in today's world, yet we refuse to change our awkward

orthographic tools opting for spell checkers and wasted dictionary time, all the while insisting our children should adapt to these anachronisms rather than making the tool adapt to the user's needs. Texts that indiscriminately mix orthographic variations without proper historical linguistic training produce a stumbling phonetic interpretation in dyslexic (rule confused) children and adults. A child's attention span cannot handle the drudgery and repeated failures and quickly turns her attention to more important things such as daydreaming. An adult can handle it, and this is a possible explanation for sudden recovery of lexic ability. Clearly, such a person is ideal for designing dyslexic's text books. By *natural*, I mean preexisting organic processes and their rules that are the referents to our observations and their symbolic expressions.

The Unity of Perception

Before examining my premise in detail, there are some general points that must be understood by the reader that helps explain my point of view. First, if you examine your own perceptions and their general operations, you take for granted the veracity of their organization and content. Your perceptions are organized for you in a stable way. Provided you are not on LSD, mentally ill, or wearing prisms for glasses, percepts of things and people are not just floating around, upside down, backwards or transposed in some psychotic Alice-in-Wonderland nightmare. Yet, children are treated as dysfunctional or different by the educational culture when they inconsistently invert reproductions of number and letters. This has a profound impact on the child’s self-esteem and his future academic performance. The combination of dyslexia (rule confusion), low self-esteem, and English orthography is a toxic brew that affects mind, body and soul; in effect, the child’s personality begins to shut down. However, the child’s only failure is to thrive in a hostile, competitive environment.

Analogous Experiences

There is another aspect of perception that the reader might consider. Many readers have driven cars in Europe or Europeans in the US. The experience is to drive in the opposite lane with an opposite steering wheel, yet we quickly adapt to the situation. Our perceptual operations take over and very little instruction or mediation is required once we have oriented ourselves with the rules. When we make an error, are we dyslexic? By my definition, the answer is affirmative. We have simply confused one set of rules with another. If any reader has backed-up a trailer with the aid of mirrors, the operation is relatively simple if one keeps the rules for reversing in mind. If one does this often, then the process becomes automatic.

Left-to-Right and Right-to-Left Processing

The final observation is crucial. Clearly, dyslexia has something to do with the confusion of left and right. This has something to do with the mechanics of reading and writing and the way our culture expects books and their alphanumeric symbols to be organized and presented to an authority figure. There is a natural basis that overlaps this process. As you realize, your perception of a vista is to scan it back and forth. This scanning operation is generally made in a winding pattern. Above all, we do not often process in a typewriter fashion going from left-to-right then returning to the left automatically. This is unnatural because it is perceptually inefficient and even dangerous to our very survival. The left-to-right processing prejudice is grossly inefficient and defies our perceptual

operations. However, the western culture has perpetuated the idea that we must read and write from left to right in a "Z" pattern, and that this is the only way to decode or encode symbols. Yet other cultures go from right to left, top to bottom, etc, and the pattern is clearly relative to that society.

Perceptual Rules

Allow me to show you that you are dyslexic in your decoding and encoding of English linguistic symbols. By *encoding*, I mean writing and by *decoding* I mean reading. Have someone dictate a passage to you and write down what you hear. But, rather than process your writing in the left-to-right prejudice, continue writing on the next line backwards from right-to-left in an inverted "s" style. At this point, you should become dyslexic in a confusion of rules. (Note, you must do the exercise to grasp the point.) Which way do you go? How should the letters and numbers face? To clear things up, I have a sample of each form:

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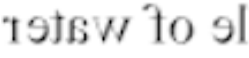
(Left-to-Right) Jack and Jill went up the hill



(Right-to-Left)

(See AVKO's note at the end.)

The question is *Why can't you continue in this way?* You are encoding in reverse. You have discovered that there are clear rules and you applied them. The answer is *social bias* prevents us from adopting reversing. We decode in reverse all the time. We can decode everything from cards, signs, faces, phrases, etc. With practice, it becomes easier to both encode and decode. Because some people are better at it is no reason to discriminate against them. In short, you can read and write in reverse much like backing up a trailer using a mirror. Moreover, it is natural and rule-governed. The problem arises when one does not realize this and inconsistently applies the two sets of rules. The problem becomes compounded in children while they are establishing encoding and decoding operations, they are simultaneously confronted with English orthography. In dyslexic (rule confused) children, this is truly an Alice-in-Wonderland experience.

Negative Reinforcement

Finally, everyone understands the positive power of the *Pygmalion Effect*, but there is its opposite I term the *Dyslexia Effect* whereby educational institutions view the dyslexic child as *different* or worse. It is shocking when the child realizes that he is *impaired* or in playground terms, a *retard*. But is the child really defective or is the culture that views the child as such projecting its voodoo upon these children. It has long been documented that suggestions of impending doom on naive individuals often resulted in death. If some suggestion can result in powerful physical events, positive or negative, it is plausible that a child can be traumatized. This experience often shapes the outlook and esteem of the child in negative ways that are continually reinforced by the system and the parent's knee-jerk reactions to the judgments of others regarding their child's awkward performance. Institutions often refer to brain scan technology to make their case that one

subnormal brain is structurally different from another *normal* brain. I suggest that the images are often misinterpreted. Are the *dyslexic* brain images the cause or the residue of academic treatment of the child? Many children change overnight once they learn they are *different.* And what is the norm? The bland educational performances of Einstein, Darwin, et. al., or the judgments of their forgotten teachers? The issue is no longer one of nature, but nurture. Let me be clear: I am suggesting that the effect is *immediate* and *enduring*. It is an educational lobotomy that radically and immediately results in an impaired learner. It is acquired dyslexia. Why is this? Because the child is now on his own, intellectually and socially isolated, with strategies that no longer work, devoid of inroads into the academic culture, without a compass or map, and forced to reinvent himself if he is to thrive. And this takes time. It is no accident that these children exhibit similar survival traits. Like a computer programming loop, their neurological pathways could well be in a transfixed spin while they look for new successful strategies. Meanwhile, as pedagogic inflexibility marches on, they fall down, or are left behind, or pushed aside.

Reversal and Genus

Mozart conversed in reverse and played music upside down, if the movie is correct. Leonardo wrote in reverse. We all recognize the genius in these activities. Police and scientists think in reverse to solve the mysteries of crime or the universe and this is considered the apex of intelligence (to think from effect to cause) because it is difficult. At times, we drive, walk, think and perceive in reverse. We reverse our VCRs, records, games and it is, at most, annoying. Above all, we don't fall apart in a confused state of bewilderment. We understand exactly what is going on. But, when some children seem to not care which way they encode or decode alphanumeric symbols, we look to brain scan technology, special remedial programs, psychologists, neurologists, new drugs, brain waves, and so on, in a desperate search to repair the damaged child. So, is it genius or idiocy? Because most people cannot reverse these symbols or refuse to do so, is it then a failure of the child or of the culture to recognize and deal with a natural event and quite possibly an indicator of genus? This is not to say that some severe forms of organic displacement are or will be better explained though brain scans or some methodology yet to come, but I am skeptical of these tools in determining the potentials of students with the labels such as *different*. This is unregulated social engineering involved in another experiment on defenseless children with negative results. What may be more important to the success of these children rest not with different colored glasses, missing genes, brain scans, new drugs, etc., but the special attention and support they are now receiving.

Teacher Fluency

Teachers must become fluent or comfortable in the right-to-left phonemic-graphemic process and begin to see it as an *a priori* component of perception. In this way, a social stigma is not transferred onto the child. We deal with reversals everyday yet we do not believe ourselves dyslexic. Think of it like this: ancient Arab mapmakers represented their world *opposite* that of Western mapmakers. To interpret their maps, westerners must turn them over because of our habitual orientation of viewing the world with north on top. Westerners would be considered dyslexic cartographers in their culture. In fact there is no correct orientation, just the force of our habits solidifying into prejudices of "right" or "wrong." Children can be taught to identify which direction they are processing

from, i.e., right-left or left-right style and learn not to mix them. Children and parents can then appreciate the fact that *reversing is a natural event in everyone*, but there are rules to keep in mind. Various reversing games can be constructed around guidelines. Therein, orthography *must* be managed to avoid confusion and historical linguistics presented to explain English orthography's dyslexic mysteries. Teachers should avoid diphthongs, triphthongs, and opt for isomorphic forms during this critical period.

Upside Down

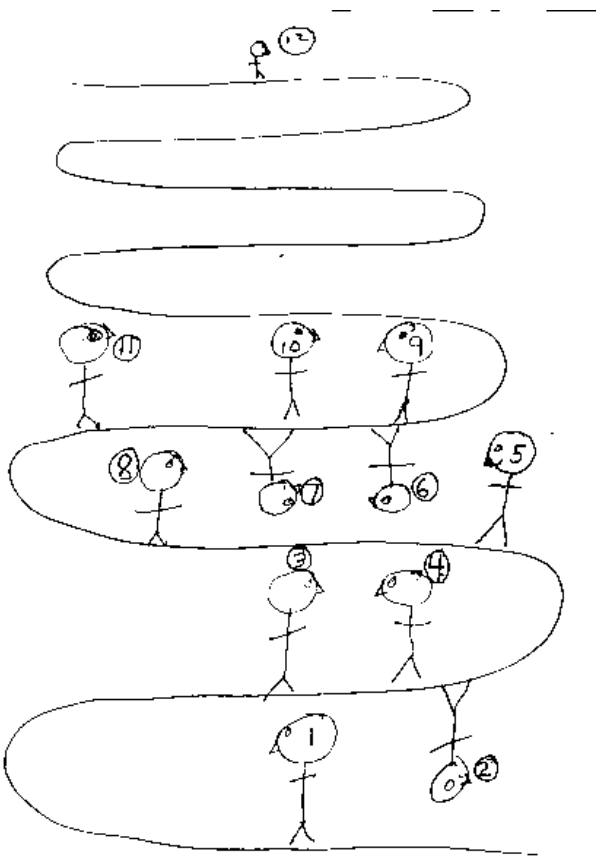
A more difficult "error" to explain, if it even exists, is the encoding of alphanumeric symbols upside-down and backwards. However, there is a rule guiding this process and it is in itself another natural phenomenon. Again, the reader might adopt the *epoche* of phenomenology, suspending judgment, and imagine the open architecture of the child's mind. In this exercise, simply write the words in the same fashion as above. Instead of going to the next line, write on the *bottom* of the line.

Summary

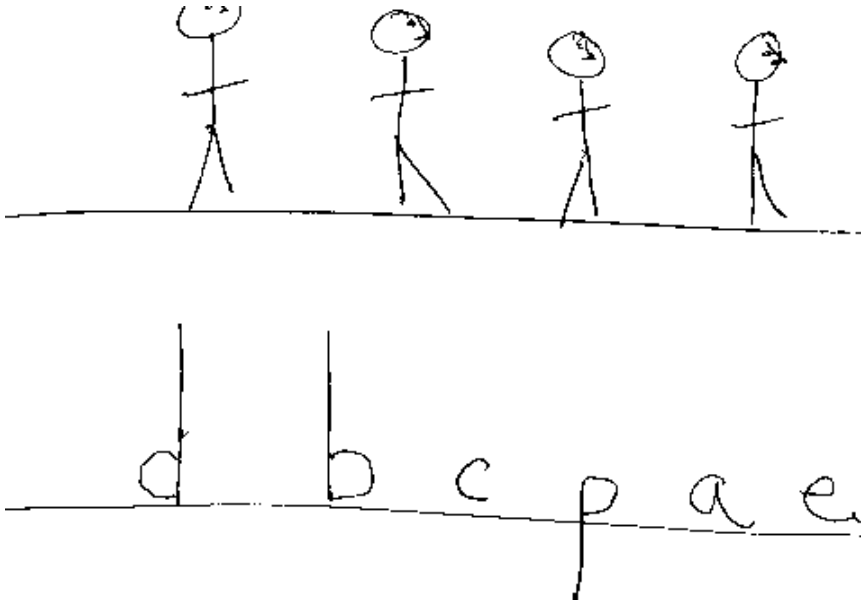
If you imagine writing on an endless straight line, your perspective would be beyond imagination to view the line in its entirety. Therefore, we must delimit our written symbolic communications in the forms of books, screens, etc. The choice of how to delimit lines is an accidental one, yet the child does fully not realize it. The child's imagination can fold the lines in any number of weaves and so too the symbols encoded on it. Perception has no preference. Imagination does not care. Intelligence can decode it. Every time the line folds, rules are generated. The child has an open imagination about such matters. Only the society takes a position on the *correctness* of the decoder's or encoder's perceptual orientation.

The Perceptual Origins of Rule Confusion

Books are designed to be read in a zigzag or continual "Z" eye movement. Writing follows the same format. The zigzag was a convention adopted long ago, but is it a natural component to optimal decoding perceptions? Confirm this for yourself: perform zigzag eye movements for a time and test your capacity to decode your environment under this paradigm. It gives me a great headache and nausea. So, we realize that all is not optimal with texts, but children do not. Children follow natural perceptual paradigms and the closest to texts are those of the horizon or trails, paths, roads, etc. These do not follow the zigzag, but the continual "S" pattern. Viewed from the perspective of the horizon, the line does not go straight into space, but falls off in the mist, or if the person turns around, the line forms some continuum that must meet where one began the view. This point is assumed to continually exist as the person turns. Abstractly stated, we are dealing with a line that forms a circle with the child in the center. (The inner figures are reflections as on water.) The western zigzag is formed by the boundary of the texts, and the natural analogy is might be to view exposed layers in the side of a hill cut in half where the eye meets space and returns to the edge to view the next layer. The "S" or snake motion is more common and essential to human survival as in following something descending a trail or road. Obviously, the child is acutely aware of facial details and their subtle changes. In this case, the face indicates the direction the person (and reflection) is traveling. The perceptual paradigm for the trail is the winding "S" from top to bottom while the "Z" forms the text book from top to bottom:



It is perceptually correct to see people facing opposite directions yet traveling in the same direction, namely, up or down. This is where Western logic locks into an immediate contradiction in that *objects moving in opposite directions on the same line* cannot be moving in the same direction without stipulating post facto caveats to explain the phenomenon away. Axiological judgments as to the correctness or incorrectness become issues. Organic necessity or logic simply twists the line or tube as in the intestines, and things move along. Nature does not care about our social fixations of "right" or "wrong," rather, what is *effective*. The "Z" is that of right and wrong, while the "S" is effective. These rules are often in conflict. It seems that boys and men more are adept at spatial orientation than some girls and women, and this would go with essential survival skills in hunting, tracking, and finding one's way over the past 500,000 years. The details encountered in social skills clearly favor female epistemology. The transference of details from faces to letters is an ontogenetic step away:



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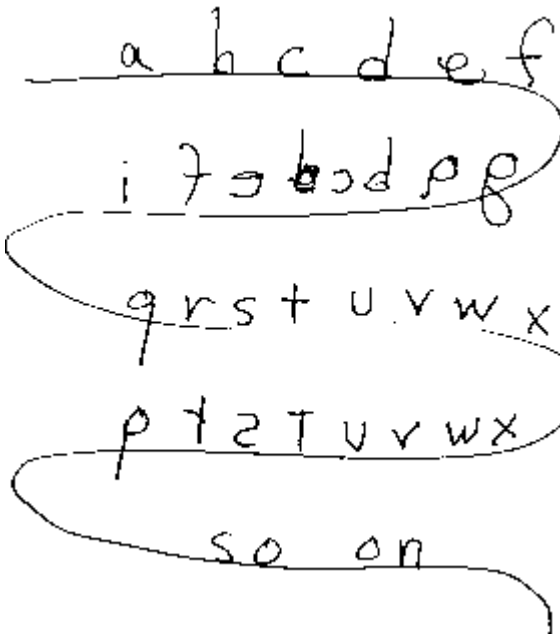
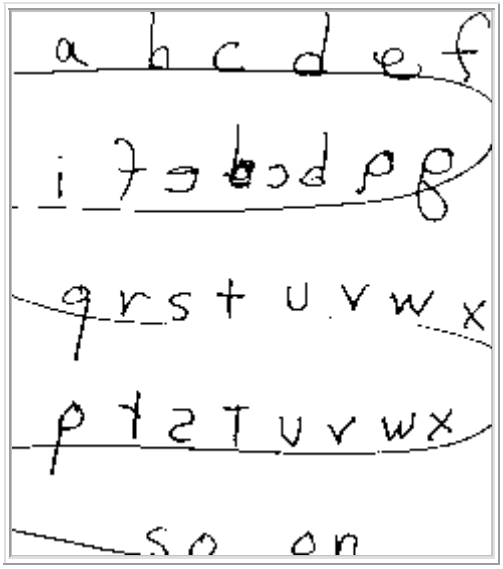
Again, the feminine epistemology would favor this transition while spatial orientation would favor the boys. The "dyslexic" problem is socially generated when the entire structure comes into view:



The child is simply following the logic of the twisting trail. On his pad, the trail has no curved lines, so the encoding looks like this to the authority figure:



This is not to say that the child can start at any direction in the process or hold onto a pattern for awhile for it a social preference to start at the top left line. Again, the text book or written paper is in a descent like that of a descending trail.

Confirmation

Confirmation of this perceptual model should be found in children who continue to write on the back of the page whereby they follow the line to the end, turn the page over, and continue to write. This would correspond to the downward trail that continues on (behind the hill) rather than winds down. At this point the child exhibits mediation: the anticipation that something will emerge at a later time is established. Since the pressure is on the child to perform, so the child simply continues, not by changing his perspective, but by turning the imaginative mountain. I have no idea if this behavior exists, but if it does, I believe it confirms this model.

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Editor's note: Did you notice the **misspelling** of "pail" as ***pale*** when you read:

(Left-to-Right) Jack and Jill went up the hill

to fetch a pale of water (Right-to-Left) ¬
Even experts in dyslexia can misspell!