

ABSTRACT

Neurological transitions occur when the patient's style of vision does not match the changes they are making through vision therapy/training programs. As patients realign vision coordinates with postural coordinates in VT, the stage is set for a transition. In the realignment of vision with postural coordinates, unresolved emotional conflicts may come to consciousness.

This was first described in the literature by Larry MacDonald, OD. During transitions, patients undergo three passages, which often involve physical, physiological, and cognitive/emotional changes. The changes common to transitions include headaches, brain fog, fatigue, and body tension. Bruce Wolff, OD, a pioneer behavioral optometrist, created visual training procedures that intentionally provided the patient opportunities to develop a matching or re-alignment of the visual and kinesthetic through the use of dissociating or doubling glasses. The personal experience of children and adults going through a transition is described.

Keywords: brain fog, critical empathy, cybernetic principles, hanging onto space, performance lenses, transition

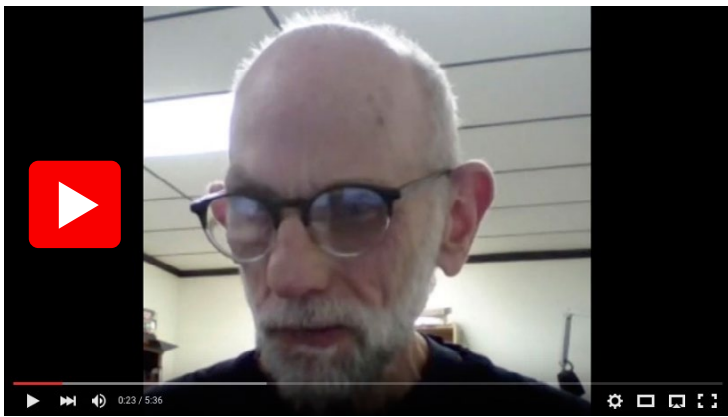
The following viewpoint is on neurological transitions or simply "transitions." This viewpoint is also based on my experience and conversations with Dr. Amiel Francke, as well as the late Dr. Antonia Orfield and her experiences in her unpublished book as a vision therapy patient of Dr. Francke's. In an optometric literature search, I found only two articles on either transitions or neurological transitions. One was written by Dr. Larry MacDonald, providing a wealth of information.¹

In my experience, patients who are using performance lenses, syntonics, and/or who are engaging in a visual training program develop new habitual behavior patterns. Performance, in many cases, significantly improves following the transition. It is my thinking that current neural pathways cannot incorporate all the changes, and new pathways or neural networks must be established.

Transitions have three passages, as have been described in psychological literature.² The

first passage is a marked life change: e.g., divorce, loss of job, death of a loved one, or serious illness. However, from a vision perspective, it would be a significant improvement in performance that initiates the transition. The second passage is a period of chaos characterized by disintegration or breakdown, disorientation, or distress and psychologically referred to as an "identity crisis."¹ It is a disturbing experience for the patient and can be a challenge for a family to deal with. Adult patients can feel especially vulnerable. Finally, the third passage is a new orientation. The patient behaves and feels like he or she is better fit in the world, has an enhanced comprehension of the world, and has a more productive interaction with it; one could say the organism has created a more functional space world to meet the demands of life.³

In a conversation with Amiel Francke on June 13, 2014, the following was his description of a transition:



Dr. Getzell talks about his findings about transitions in Visual Therapy.

Transitions are the cumulative effects of training having produced a situation where the existing style of vision is no longer acceptable to the patient, and the patient has to change. In order to change, which the visual training has directed, they have to change not only their vision but also their support systems, primarily posture. As the patient changes and gets vision information in a totally new way, their thinking changes to match the new, more effective vision system. The change in the vision system allows the patient to process more information, be better organized, and work at a lower cost of energy. Therefore, thinking becomes broader in scale and better organized. This is stressful for the body, so the patient may go through a variety of physical changes, including but not limited to needing more sleep, increased appetite, and critical empathy (the point in which the patient changes; e.g., uncontrollable crying or laughing are the obvious signs, but can be rare). Critical empathy is the key component, and once they are through the experience of crying and laughing, they are a different person.

Larry MacDonald wrote a paper published in the *Journal of the American Optometric Association*.¹ The following are his salient comments:

1. There is an optometric principle that a restriction of movement will be present with any vision dysfunction. The

restriction or limitation can be anywhere in the organism.

2. Primal therapy or bioenergetic medicine is founded on the belief that our muscles hold unresolved emotional conflicts.

A realigning or matching of the visual and postural coordinates through visual therapy may bring these unresolved emotional conflicts to the forefront. MacDonald views the emotional breakthroughs, experienced as crying, laughter, nausea, or disorientation, as a marker of the progress in the successful completion of a vision therapy program.

MacDonald credits Dr. Bruce Wolff with recognizing early on the significance of the transition. Dr. Wolff labeled the nausea and disorientation responses as critical empathy, marking the point where the vision system is more appropriately reorganized and realigned with the postural coordinates; a new space world has been created. Dr. Wolff created visual training procedures that intentionally provided the patient opportunities to develop a matching or re-alignment of the visual and kinesthetic systems through the use of dissociating or doubling glasses. The activities were founded on cybernetic principles: i.e., "goal seeking, self-directing and self-correcting."² The activities that Dr. Wolff created include Wolff Pursuits and Prism and Dowels. I believe that Dr. Wolff was saying that vision therapy allows the patient to develop awareness of space and self, providing the opportunity for the patient to direct self and to make more efficient responses. In my experience, this means allowing the patient the freedom to see and to experience through exploration rather than planting answers in the patient's head. This can be done by asking questions like: "What do you see? What changes did you notice? What were you more aware of today? What helped you make changes, or what did you do differently that led to an elevated level of performance? How is this different than last time?" The aforementioned allows the

patient to take an active role in reorganizing their visual process and space world; therefore, it is referred to as goal seeking, self-directing and self-correcting.

There are at least nine different pathways or neural networks carrying information from the retina, which is all brain tissue, to other areas of the brain. These areas include the following: arousal, visual orientation, spatial attention, visual-spatial ability, higher order control of body-centered action, recognition, language, memory, and emotions and personality.⁴ One could conclude from the pervasiveness of vision in the brain that vision plays a significant role in when and where we do things: e.g., hitting or catching a ball, forming and spacing letters and words, stepping on the gas or brake pedal, reading fluency and voice resonance, etc. In addition, it seems that speech and language are one-word-at-a-time, while vision is global. From my perspective, through the function of vision, we see beyond the word or words at which we are looking to visualize or to comprehend. We learn to see the bigger picture; to organize a lot of information simultaneously; to anticipate; and to learn to speak, to write, and to read coherently and with fluency. When a patient is experiencing a transition, all of the above examples and much more can be affected because of the pervasive presence of vision throughout the brain.

The following lists of transition signs have been assembled from over 40 years of experience working with patients in VT:

Signs of transitions for an adult:

1. Flu-like symptoms: body achiness and fatigue
2. Brain fog: i.e., mentally not feeling on top of things, feeling like when you don't sleep much and the day after you are in and out of a daze; you cannot think, someone asks you a question and it takes you forever to think about and answer the question; awareness in general is compromised

3. Unresolved emotional conflicts come to the forefront
4. Hunger
5. Headaches
6. Lethargy
7. Smaller functional visual field—more tunneled
8. Harder time starting activities and transitioning from one activity to another
9. Word retrieval issues
10. Loss of coordination—tripping, poor balance, bumping into things
11. Tendency to be startled (because of tunneling)
12. Visually: everything gets blurrier, peripheral vision is gone, so it feels as though one is looking through a tube, visual fields decrease greatly
13. Postural and body changes: less aware of body and posture, slouch—shoulders rounded, head is forward, sway back—belly forward
14. Emotionally: feel either completely numb or unresponsive, or could be very touchy-feely (uninhibited emotionally/demonstratively emotional) and everything makes you want to cry, very sensitive
15. Less of a sense of being calm and organized, more impulsive, not thinking ahead
16. Nausea

Signs of transition for a child:

1. Timing off: e.g., stuttering, reading with lack of fluency and proper voice inflection
2. Spaciness: e.g., forgetful of what one is doing
3. Behavior returns to a less mature level
4. Irritability
5. Hunger
6. Takes a long time to get going
7. Thinking slows down
8. Clumsiness
9. Tantrums

The following is one parent's description of her 9-year-old son going through a transition; his symptoms were aggravated during the transition:

My son, Patrick, has been seeing Dr. Getzell for almost 6 months of in-office Dynamic Vision Training, as well as carrying out a home program, which includes various exercises along with wearing of glasses as prescribed. Throughout the last six months, we have noticed an improvement of skills within various areas. Yet, there have been challenging times during these months where we have seen a regression in skills, which Dr. Getzell refers to as transitions, or periods of neurological growth.

In general, my husband and I find that transitions are marked by an intense magnification of the very behaviors and concerns that brought us to seek out vision therapy for Patrick: in particular, extreme anxiety, lack of focus, egocentric perspective of the world, hyperactivity, mindless chatter, and poor reading and comprehension.

Here are some of the red flags that indicate that Patrick may be going through a transition:

- 1. Patrick will jump out of bed, not paying attention to anyone else in the house. He will stomp through his bedroom, slamming his closet doors and drawers as he is getting dressed. He will throw his pillows and stuffed animals from across the room as he makes his bed, all the while not realizing the rest of the house is still asleep or that he just woke everyone up.*
- 2. Patrick will be shouting, singing, or talking very loudly to himself, not paying attention to anything else around him.*
- 3. His morning routine becomes very disorganized and slow. He will need multiple reminders and prompts as to what he needs to do next. He will spend*

long periods of time staring off into his closet as he is supposed to be getting dressed. He will have a hard time finding his belongings and will ask where things are, even when they are right in front of him.

- 4. Patrick will skip, hum, sing, dance, or be silly, or he will be talking constantly or asking questions, often times interrupting others, and looking for his needs to be met immediately.*
- 5. Patrick will pose questions that he knows the answers to, or that have obvious answers. We call it "lazy brain." He asks a question, looking for someone else to answer or cue him through the activity/information rather than try to process the information or problem-solve on his own. He is seeking immediate gratification and dependency.*
- 6. His constant conversation is filled with anxiety and fear. He will be stuck on the "what ifs" of the world. His anxiety is so significant that everything is questioned or feared. Even things that have such a minute probability of occurring are brought up.*
- 7. Patrick looks for reassurance from others to comfort his thoughts, feelings, and actions rather than independently evaluating them.*
- 8. Along with his anxiety, he becomes incredibly emotional and sensitive. If others around him are not empathetic towards his concerns, he will get his feelings hurt, become frustrated, or start crying. He becomes hypersensitive to others' body language, facial expressions, or tone of voice.*
- 9. All of his academic, gross motor, fine motor, and social-emotional skills regress. His teachers have commented that he becomes more disruptive, lacks focus, appears confused, won't follow the rules of*

the classroom, loses sight of daily routines, and will ask obvious questions.

- 10. At home, Patrick will behave in one of two extremes: "spaced out," confused, flat, and fatigued; or hyper and in mindless motion.*
- 11. Depending on the duration and intensity of the transition, Patrick's feelings of anxiety move to depressive thoughts, feelings of inadequacy, insecurity, and lack of sense of belonging. His perception of himself is unrealistic and doesn't match what others see in him. Again, he will seek out reassurance and input from others to help him find his own self-worth. He will take on the words and feelings of others as his own.*
- 12. Finally, his temper is short. He becomes angry, irritated, and frustrated much quicker, and in turn will react in less than appropriate ways to seek resolution.*

After Patrick moves through a transition, he shows maturity in many areas. He becomes more aware of others around him, more empathetic, and has less tendency towards wanting to be the center of attention. He interacts more reciprocally when socializing and may even ask how your day was, and then he listens and cares about the answer. He is more relaxed and seems more at peace within his body. He has an increased ability to access his own performance and/or efforts within an activity. He relies less on outside sources to help guide him towards an answer, and he appears more confident with his own feelings and choices. Patrick requires less prompting while doing things. Additionally, he will do things when asked the first time, and he spends less time in what we call "Patrick World," or in a state of mindlessness. Overall, with each transition, Patrick gains ability to act and interact in a more thoughtful, efficient, and planned-out manner.

The following is a report from the parents of a 5-year-old and their experience with her transitions:

Rebecca is a 5-year-old girl who started vision therapy almost a year ago. Prior to her receiving therapy, her parents noticed that she was afraid of her environment and was very socially reserved; she also had a speech delay. For instance, she would hold on to her parents when walking on the sidewalk, afraid of all the sights and sounds. In preschool, she would not participate in most of the activities and mostly would stare off into space. It was very hard to drop her off to school because she would cry continuously, afraid of being left alone.

When Rebecca is in transition (and there have been multiple transitions) it is extremely taxing for her. She begins to whine much more and has almost incessant bouts of crying. Her speech becomes much more stammered, and during her birthday a few months ago, she stuttered so much that her face grimaced and contorted just to get the words out properly. This stuttering was particularly unnerving because we were unaware about how long it would last. It was very difficult for her to communicate, and the transition was very difficult. This lasted for about 2 weeks. During her usual transitions, Rebecca has very little patience and is not placated by what she wants. For instance, if she wants to play with a toy and it is given to her, there is something still wrong with it or how she is interacting with it, so she still is whining and usually crying about some aspect of it. During this time, it is best not to reason with her because she cannot process this, and the best thing to do is to embrace and love her and make her feel secure. Sometimes, she might cry and whine for the majority of the day. What helps in general is taking her outside and letting her enjoy the sunshine and freedom of movement; usually, she seems to calm down

and is a bit more fluid when she is outdoors and not confined to the indoors. The hardest part of the day when she is in transition is the bedtime routine. Usually, her equilibrium is not wanting to go to bed, so when you superimpose a transition onto that fact, we usually get a very prolonged and protracted bedtime routine that is punctuated by resistance, whining, and crying.

After her transitions, Rebecca usually gains some aspect of her personality that was previously not seen before. For instance, after her incredibly difficult stuttering transition, where her face contorted, her sentence structure became more complex, and she had more fluid speech. After another transition, she became more empathetic and expressed more love toward her parents. We feel that with each transition, Rebecca is gaining some aspect of her personality, but they are incredibly difficult to deal with, and the randomness of them has not diminished.

The following recommendations are made when patients, both adults and children, are going through a transition:

1. Get plenty of rest.
2. Limit or avoid reading, writing, and computer work or near hobby/craft activities.
3. Walk a lot and work on “hanging onto space” (simultaneously be aware of the space around you as you center on a distant target) to integrate the new changes.
4. Suspend home training.
5. Unresolved emotional issues often come to the forefront during transitions. Please arrange to talk with a friend or partner. The person you choose to speak with needs to be a good listener, or please request that they really listen to you. Through your own speaking, you will be able to see a bigger picture and work out the unresolved emotional issue.

6. Please inform the doctor when you are experiencing a transition so he/she can guide you through it. A progress report may need to be scheduled following transitions because lens changes may be necessary to support all the visual changes being made.
7. When overwhelmed, listen to whatever music you find soothing.

During office VT, patients undergoing a transition can find that their performance can vary widely. Some patients can do quite well, while others will struggle. The following is the experience of an adult VT patient following a transition:

After the big transitions, I've noticed a relief and an ease come back to me. But when some transitions are over, the only thing I realize is that the symptoms are gone—headaches disappear, I regain a bigger visual field, etc. During training, I notice things are easier. I remember one week one pair of dissociating or doubling glasses were so much easier than the other, and after or during the transition, the other pair were easier. Coordinating the many things together in training gets easier—breathing, being in control of my body, feeling the effects of wearing the glasses, etc. In general, I'm continuing to notice and be appreciative of 3 dimensional space—for example, snow storms or walking down a street where the trees are budding in spring bring much more depth and beauty.

Another adult patient reported the following after a transition:

- Feel sharper mentally
- Energy levels go higher
- Feel more motivated
- Feel more grounded and balanced
- Visual fields open up a lot more

Here are the above patient's further comments:

Transitions for me come in two forms: I can be emotionally numb, apathetic, non-responsive, and slow-processing, or I can become more emotionally sensitive than usual, meaning I feel emotions intensely: compassion, empathy, hurt. I wouldn't say that particular unresolved emotional conflicts come up; if anything, I am more sensitive to whatever is happening at the time of the transition.

In my experience in practicing behavioral optometry, transitions come about when patients use performance lenses, and/or are treated with syntonics or VT. Performance lenses in my practice are reduced powers with or without low-power prisms, tints, or binasal occluders for patients normally wearing compensating lenses. For patients not requiring compensating lenses, low-power lenses with or without low-power prisms, tints, or binasal occluders are prescribed. Initially, these latter patients wear their lenses full-time and then for classroom and at home for near-point activities, including computer tasks. The patients utilizing compensating lenses continue using them for driving if necessary, and the rest of the time they wear their performance lenses.

Performance lenses and syntonics, in my experience, can have an immediate, dramatic, positive impact on behavior, resulting in a transition. I find that performance lenses can immediately reorganize cognition, posture, balance, and movement, as well as timing in general. Syntonics in balancing the autonomic nervous system can quickly set the patient up for a transition. Vision therapy, on the other hand, produces changes more slowly, and it takes longer to integrate all the changes the patient is making. However, it is with vision therapy that I see the greatest number of patients reporting transitions.

Again in my experience, (Dr. Orfield referred to my vision therapy program as a “motor based program”) both children and adults

employ movement throughout the program. I work with patients primarily in real space with limited use of instruments (overhead projector) or two-dimensional spaces (chalkboard or dry-erase board). I think the combination of emphasizing movement throughout the program and working in real space with lenses and prisms creates transitions.

A former visual training patient of mine, Dr. Richard Harris, a Chicago psychiatrist, wrote the following about psychotherapy and visual training:

Freud was initially a neurologist. He noticed patients with unusual symptoms—blindness, paralysis—later called hysterical blindness or paralysis. The idea is that certain emotional intensities manifest in the body as apparent neurological symptoms. The process of psychoanalysis is a form of regression. In other words, the environment is set up to induce regressive functioning for the purpose of healthier reorganization. Just from the perspective of the patient lying on the couch without any eye contact with the doctor, the experience is a form of sensory deprivation, akin to a sensory deprivation tank. Such deprivation opens up other channels of experience. The idea of regression is also seen in the first homework assignment I had from you—creeping. So psychoanalysis and vision training could be seen as a form of planned disorganization for the ultimate goal of reorganization.⁵

In vision therapy, optometrists create a mismatch or disorganization with yoked prisms, and the patient's mismatches (disorganization/misalignment) are revealed to them through dissociating glasses. Many years ago, I was working with a patient on the Prism & Stick activity. The patient is wearing vertical doubling glasses and looking back and forth from a near target to a distant target in a space 8-15 feet long and 5-10 feet wide. Ideally, the patient eventually appreciates the

whole space changing as a unit as he or she looks back and forth. When the patient I was working with all of a sudden became aware of the height changes, she started crying and lied down on the floor, assuming a fetal position. The patient reported that becoming aware of the space above her brought memories back of the difficult relationship with her father. This same patient had remarked to me at an earlier session during another activity, "Don't the walls move when I move?" Obviously, this patient was tunneling and ignoring the periphery, leading to real confusion in her life. The crying and moving into a fetal position is a critical empathy response. The patient is acknowledging and feeling or commiserating with their own pain, which up to now had been stored or locked in their muscles.

Patients and families in my practice have reported that transitions can occur at any time during the treatment process and can last a few days to a week. Occasionally, transitions can go on for longer periods, and patients can have multiple transitions. I have found that older teenagers or adult patients who struggle with self-examination will often have longer and more numerous transitions. The same occurs with children with longstanding vision dysfunctions. Additionally, in my experience, patients with longstanding vision dysfunctions often develop secondary emotional adaptations, e.g., avoidance or procrastination with near point activities, difficulty with moving from one activity to another, avoiding group situations, etc. I find that following the completion of visual training, it can take up to a year for all the changes made to integrate into patient behavior. Transitions can occur during this period as well.

Because patients can experience challenging transitions, it is obligatory to discuss transitions with adult patients and the parents of child patients at the start of therapy or even when performance lenses or syntonics are first begun. In my experience, it is only occasionally that patients need to be referred for psycho-

therapy. However, the example of the patient who had the critical empathy response was one I did refer. Over many years, I can only remember referring out two patients because the transitions the patients were experiencing required more help than I could offer.

I have found that if a progress evaluation is done while the patient is in the midst of a transition, the findings will be unstable. It is best to wait a week or two and then re-evaluate.

In summary, transitions are routinely seen in my practice and are indicative of developing a more effective functioning vision process. Transitions are typically brought on by a realignment of visual and postural coordinates. In vision therapy/training, yoked prisms and dissociating glasses are primary tools in bringing transitions about. A transition is often an emotionally trying experience for patients and families, but it is a stepping-stone to remarkable changes.

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