

Strabismus & The Trick

KISS 2020

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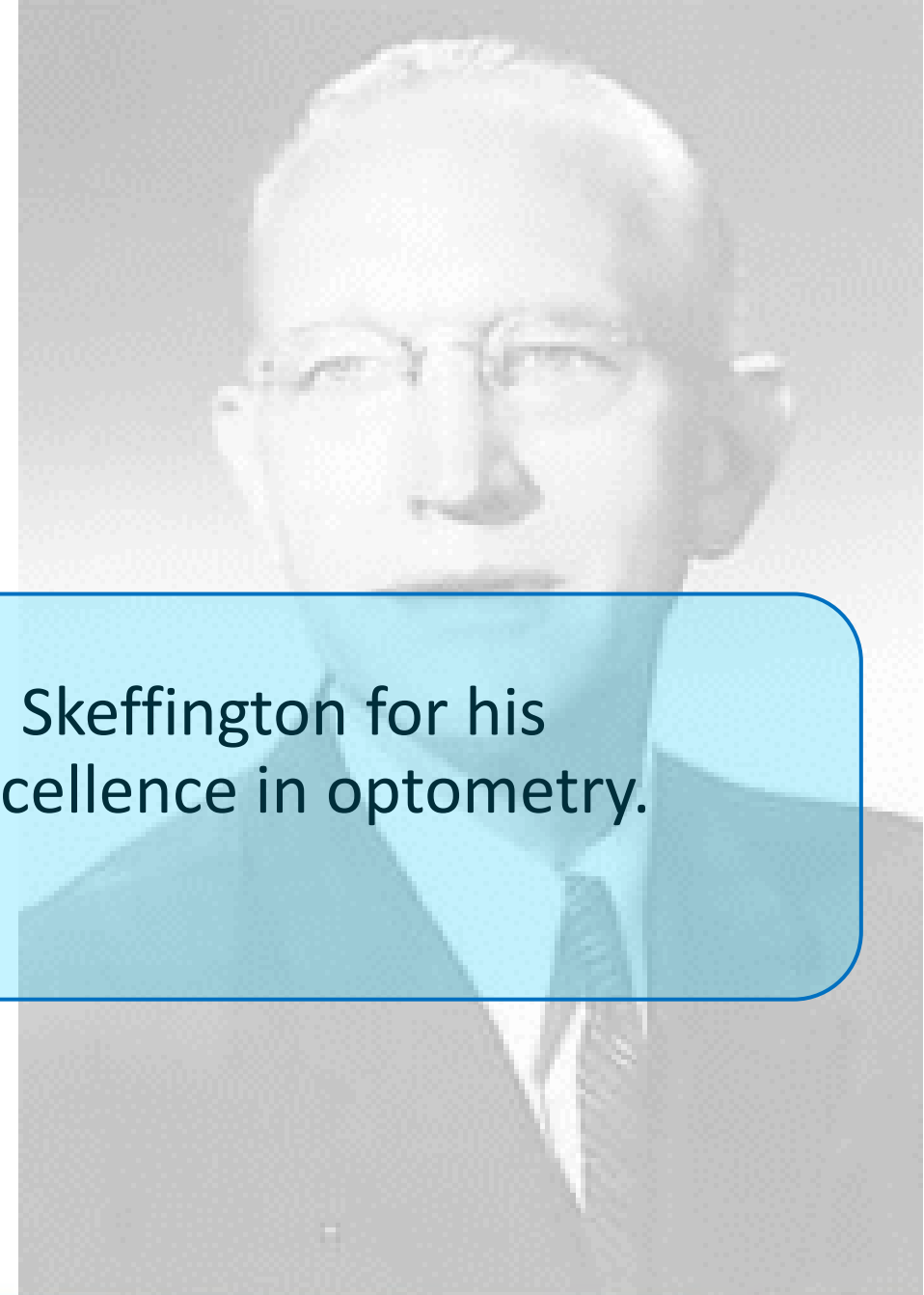
Thanks

We all owe a great debt of gratitude to the Kraskin family for a continuing heritage of excellence in optometry, including this meeting.



Thanks

We also owe a deep debt of gratitude to A.M. Skeffington for his contributions to our continuing heritage of excellence in optometry.



*We shall not cease from exploration and the end of all our exploring
Will be to arrive where we started and know the place for the first time.*

T.S. Eliot Little Gidding 1955

The Problem

“I would like to successfully treat at least one strabismus or amblyopia case before I retire.”

This comment came from a well-trained and dedicated vision therapist.

The Problem

Even after taking great courses with experienced instructors, many people struggle to successfully treat those with strabismus.



The Problem

When a patient with developmental strabismus is being treated in my office, I expect the result to be:

- Nearly equal acuity
- Stereopsis
- Graceful Movement
- Avocational Reading

...and most of our patients get there.

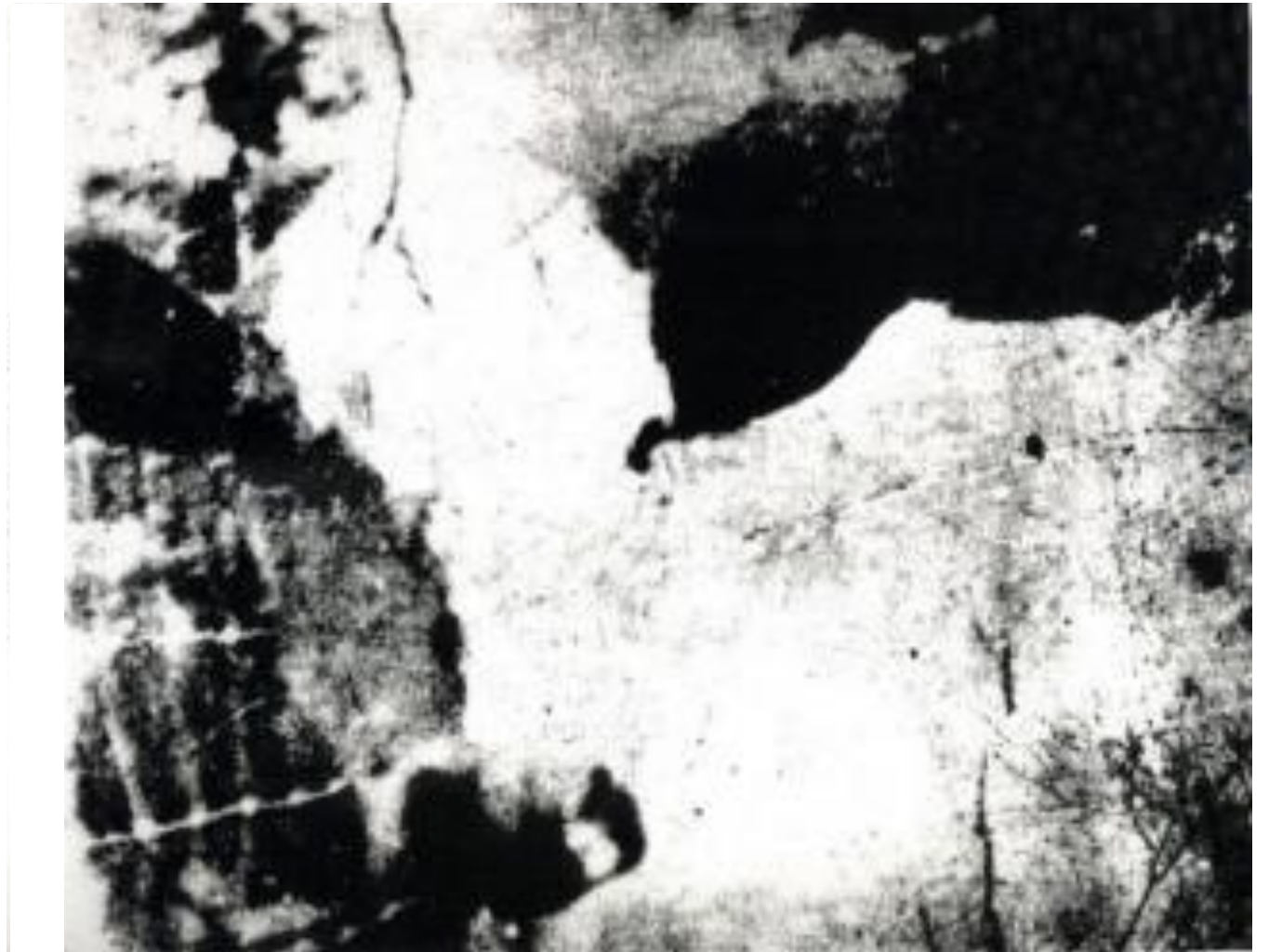


What is missing? What is the Trick?

The best evidence that many current approaches to strabismus are not satisfactory is that many practitioners want to set the patient with strabismus apart from others. It is as if these patients do not conform to the same visual principles that apply to the rest of humanity.

- A. It might be that our understanding of visual principles is inadequate.
- B. It might be that we are misinformed by our education.
- C. It might be that we are making this too complicated.
- D. All of the above?

- *Renshaw used to spring the [cow] on visitors to his Ohio State University lab and ask them to guess what it was.*
- *Nearly every adult got it wrong.*
- *In contrast, every small child Renshaw ever showed it to identified it immediately as a cow.*
- *...children don't have as many perceptive filters obstructing their view.*



Herman, Amy E.. Visual Intelligence: Sharpen Your Perception, Change Your Life (p. 56).

5C SHREVE ARCADES
Critical Period, Intractable Diplopia



Here Be ARC The Critical Period, Intractable Diplopia

When we are uncertain, afraid, or just don't know any better; we may spend far too much time watching out for dragons or other mythical beasts.

Brock on ARC

“Acceptance of the concept of abnormal retinal correspondence, provides a very real reason why strabismus, which exhibits this supposed form of seeing, cannot be cured.”



Brock, Fredrick; Lecture notes from which he taught.

What Did Bob Kraskin Have to Say?

- *Much has been written...much has been taught... Much has been said regarding the examination of the strabismic,...and most usually from the point of view of strabismus [as] a separate entity.*
- *Hours can be spent investigating the behavior of the strabismus, studying the angle of squint, anomalous projection, striving to differentiate types of squint based on numerous classifications,...*



From Kraskin VT in Action Series 3 No. 12 Visual Training and the Strabismic 1967

What Did Ward Ewalt Have to Say?

- *“When a patient having strabismus is brought into my office, there are always two things I want to know: (1) that the eye does turn in, and (2) that it is non-pathological insofar as muscle control is concerned.*
- *If these two factors exist, the patient is acceptable for vision training.”*



Ewalt, H. Ward, Quoted in Kraskin VT in Action Series 3 No. 12 Visual Training and the Strabismic 1967

What Did Bob Kraskin Have to Say?

- *Although the squint is but one aspect of the total visual problem...it is generally the primary concern of the patient or parents.*
- *...the primary patient goal will be straight eyes.*
- *The purpose of phase 1...is to teach the patient and have him discover and learn how to straighten his eyes. He must learn the “trick” of straightening his eyes.*

Where to begin

- When we see the patient seated in the waiting area, with the eye turned in or out, we already know the diagnosis.
- It remains for us to assure that the patient is healthy, and to design a lens prescription that puts straight eyes within reach, while retaining the maximum freedom of visual movement.
- If the patient's goals are in reasonable alignment with the help we will provide, and they are willing to use the lenses we prescribe in the ways we suggest, we can accept them into our therapy program with a reasonable expectation of success.

About Patient's Goals

- Patients tell us about their goals are in the best way they know how.
- Most VT patients cannot imagine the benefits of VT because they have not yet had the needed experience.
- This is especially true of a patient with strabismus.
- It can also be true of optometrists and therapists.



Easier Said Than Done

- Kraskin would spend up to 4 months working directly with his patient in order to help the patient be able to see with straight eyes.
- Usually this was one visit a week, but he could work up to 5 days a week if the patient could benefit from that level of effort.
- This means Kraskin could potentially invest many one-on-one therapy sessions with a strabismus patient to get them ready to begin phase 2 which was the curriculum of VT used by every VT patient in his office.

Don Schuman

When a student at Pacific, I was looking over my upcoming roster of VT patients.

One was an exotropia. I said, *“That one will be easy, I should have them straight in a couple of months.”*

My advisor and mentor, Don Schuman, hearing this, agreed that I could probably do that, but then he asked me something that has guided and informed me throughout my career as an optometrist.



“How are you going to make that good for anything?”

J. L. Kraskin

- *“Once the individual understands and can perform the motor planning act of two eyed convergence, they can begin to relate to the feeling of the effort required to converge compared to the feeling of release -- looking out or divergence.*
- *At that point they can discover (with direction of the optometrist/therapist) the point at which they are maintaining the team and present cosmetic straight eyes.*
- *Once that is achieved then the individual begins to explore and develop the integration of binocular stability.”*

“Our sole purpose in visual training is to posture an individual adequately, and when that has been accomplished the rest comes easy.”



Brock, Fredrick; Lecture notes from which he taught.

“Brock attempted to obtain binocular posture right at the onset of training and then strengthened this ability to the point that it became automatic under virtually all circumstances.”



Binocular posture is the ability to maintain such relative eye positions in anticipation of a certain visual task that both eyes directly fixate a single object of special regard:



Brock, Fredrick; Lecture notes from which he taught.

What Did Bob Kraskin Have to Say?

- *The emphasis of any technique used must be on awareness...*
- *The secret to success...is communication between the patient and optometrist.*

...the optometrist assumes the role of the control tower ...guiding in an airplane...

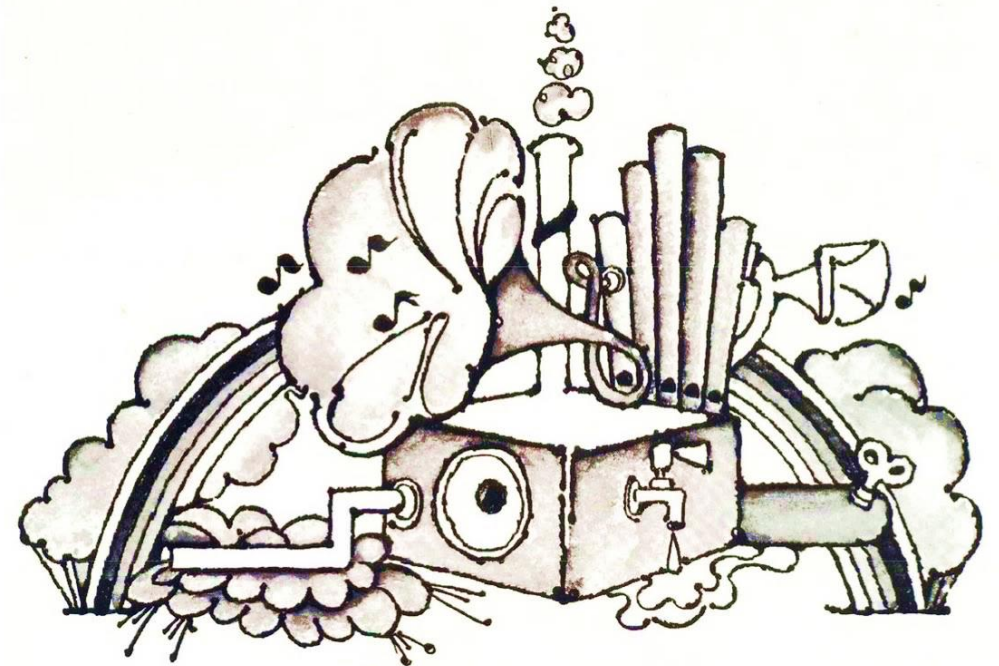
What Did Bob Kraskin Have to Say?

- *The emphasis of any technique used must be on awareness...*
- *The secret to success...is communication between the patient and optometrist.*
- *The procedures used must ...emphasize conscious awareness and feeling on the part of the patient.*
- *What he sees and how he sees...will be different when eyes are straight as opposed to turned because he is computing differently.*

From Kraskin VT in Action Series 3 No. 12 Visual Training and the Strabismic 1967

The better we understand visual principles, the less likely we are to look to appliances or procedures as if they are visual solutions.

- *VT is not a mechanical procedure – the instrument won't do the job; the patient must do something – He must participate*
- *...likewise the optometrist [or therapist] must participate.*
- *– Active participation, the major phase being communication [is key]*



HO HUM
Another major breakthrough

- If we are going to help guide the patient towards improved visual skill, we must first believe that the skill or ability is there.
- For most people with healthy eyes and eye muscles, visual alignment is what we expect as an outcome of development.
- If the patient can move each eye over the full range of movement, it follows that the muscles are intact, and it is just as possible to move the eyes into alignment as it is to move them into a convergent posture.



According to Jes...

*You must help the person
discover the ability that
already exists within them.*

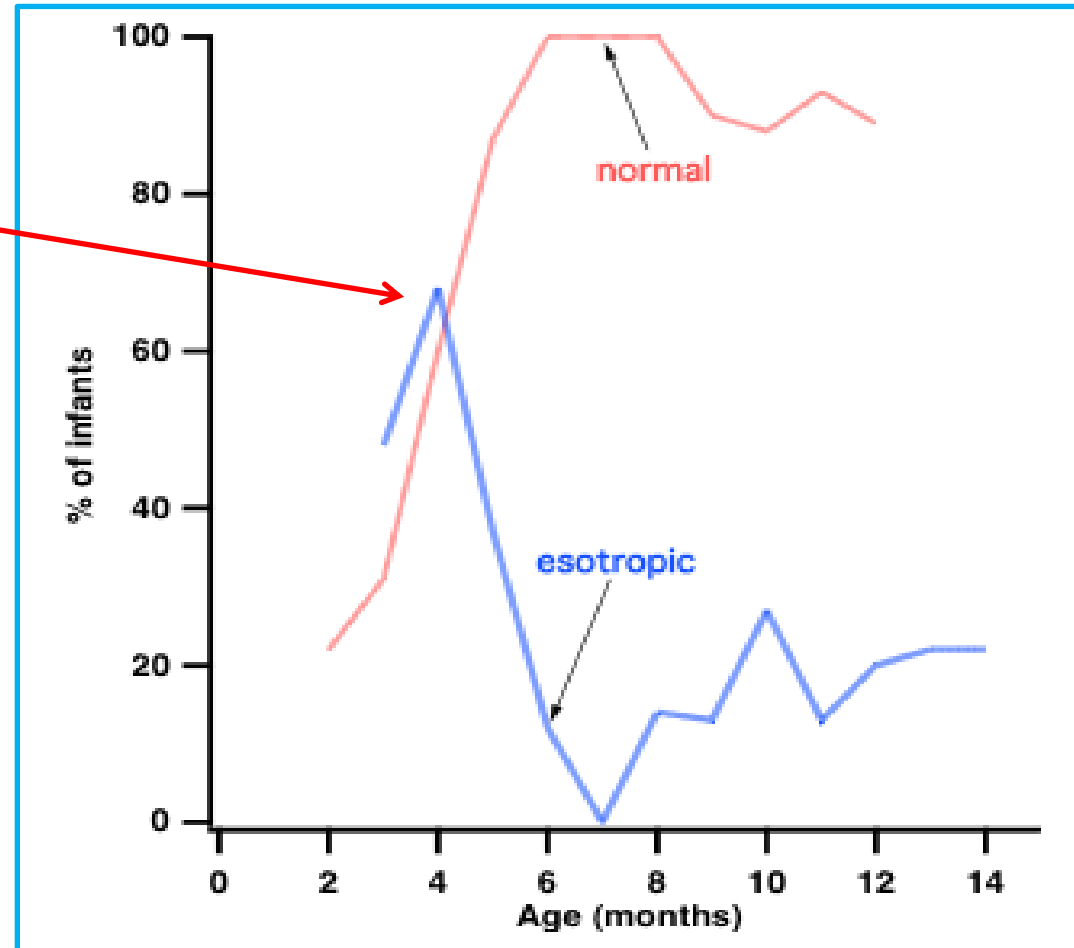


What we have to believe.

- In all but the rarest cases, binocularity is innate.
- The visual process is pervasive aspect of human behavior.
- Visual skill may be acquired, enhanced, and/or developed at any stage of life.
- If not the best way, one of the most effective ways of improving human performance is the development of visual skill.

Binocularity is Innate

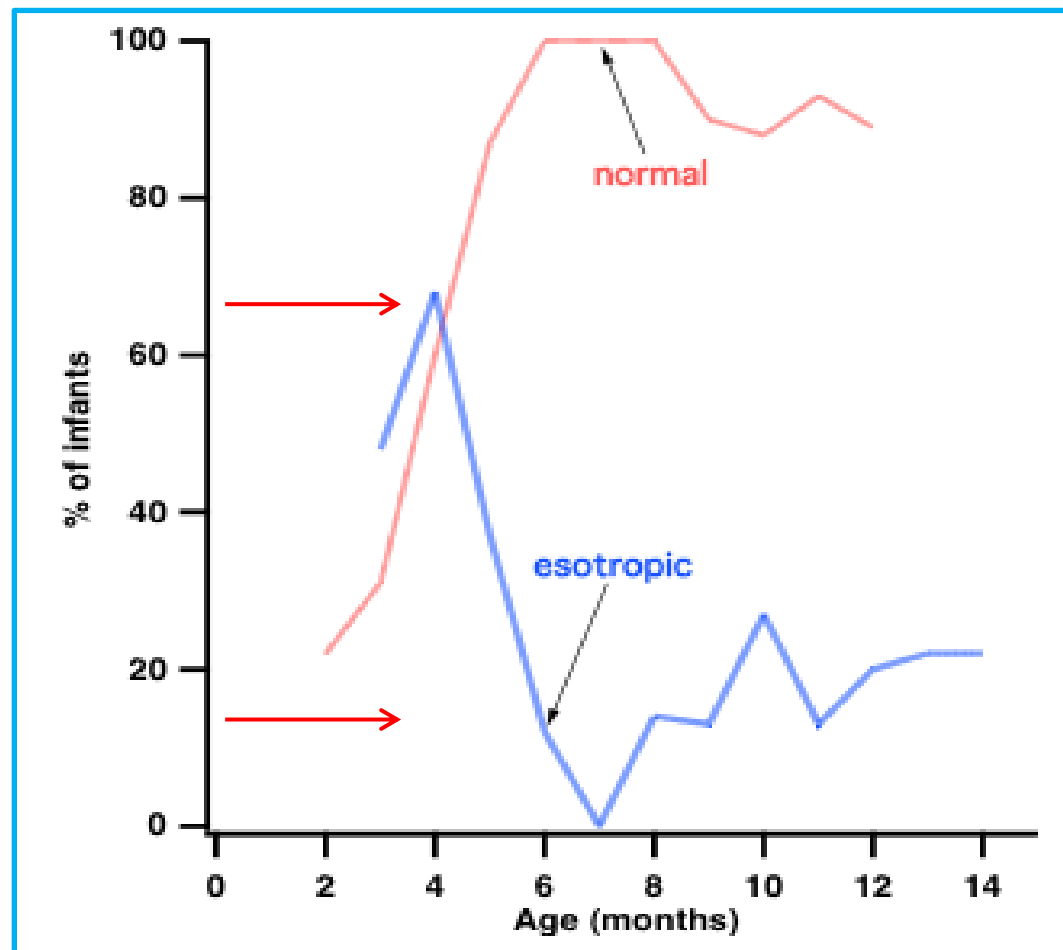
It appears that esotropes exhibit stereopsis at about the same time as those who develop normal binocular vision.



Binocularity is Innate

The children with strabismus had stereopsis and gave it up.

The brain is wired for stereo from the beginning.

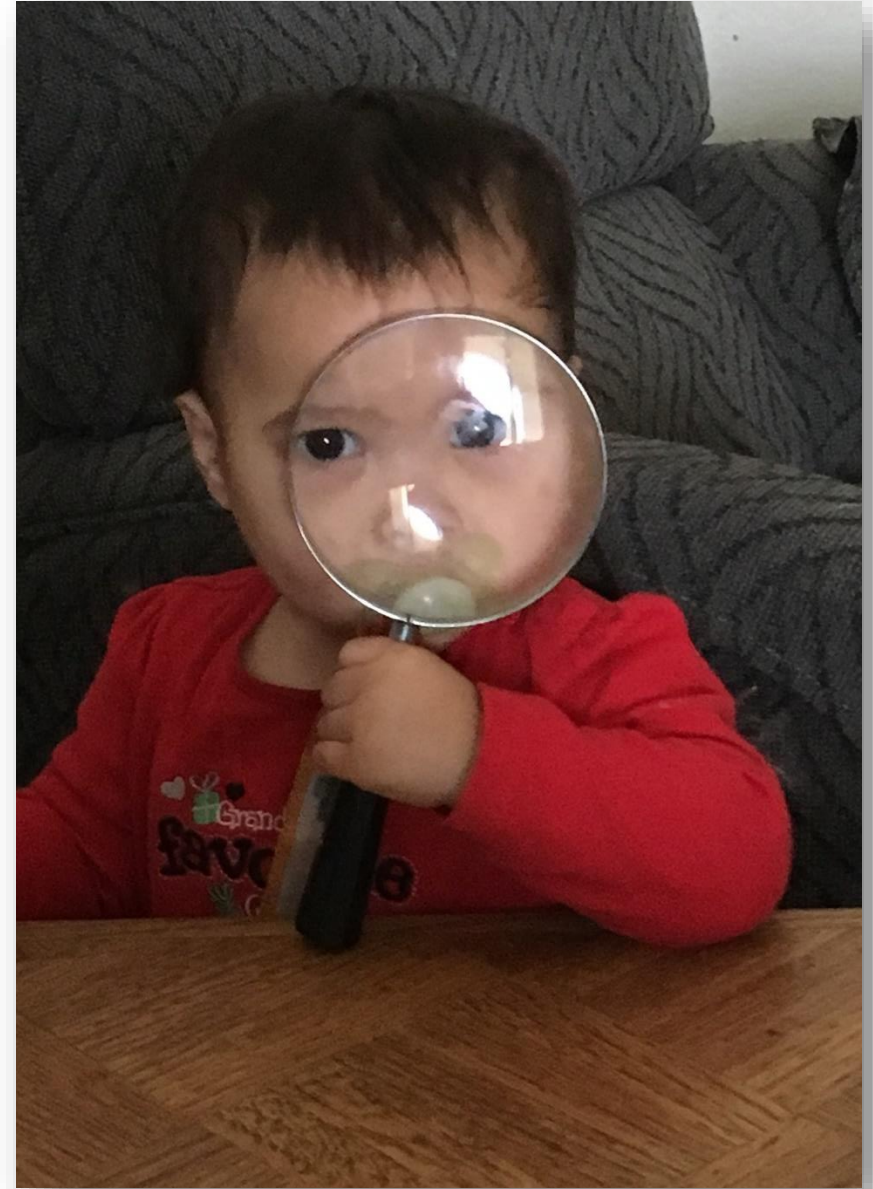


- *...the onset of functional binocular interaction in human visual cortex normally occurs between 10 and 16 weeks of age.*
- *Measures of sensitivity to binocular correlation and to disparity agree closely, and behavioural and visual evoked potential measures on the same infant show onset of binocularity within about a 2 week range.*
- *Beyond the initial onset, the maximum disparity to which infants are sensitive increases steadily and stereoacuity is found to increase very rapidly.*
- *The initial development of binocularity does not appear to be a consequence of improving alignment of the eyes and occurs even in the presence of strabismus.*

OLIVER BRADDICK

Binocularity is Innate

We are born with a binocular brain and we have to learn how to use it.



Visual skill may be acquired, enhanced, and/or developed at any stage of life.

- A critical aspect of providing effective vision care is understanding that the visual process is a process of continual development and learning throughout life.
- This is not an abstract statement of philosophy.
 - It is how the biology of the visual process works within each of us.
 - It is how learning takes place.

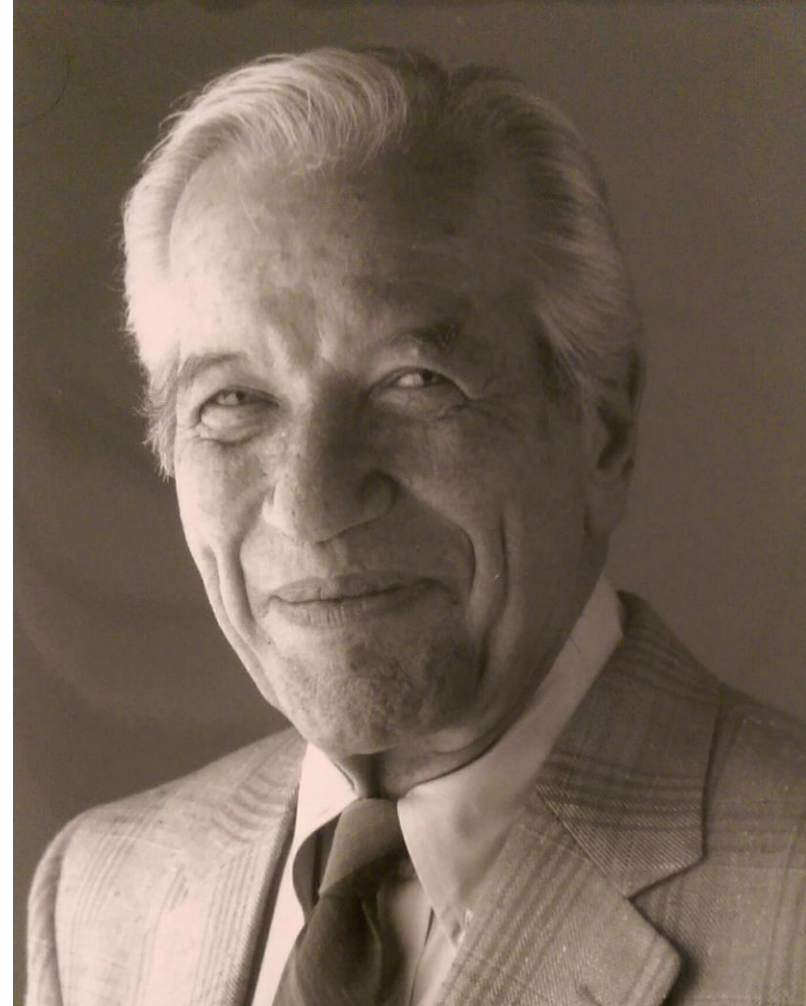
The visual process is pervasive aspect of human behavior.

- Do we believe there must be a diagnosis of a defect for VT to be an effective route to personal development?
- It is easy to be distracted by perceived defects or arbitrary classifications and lose track of the patient's needs and goals.
- While it may appear that VT and lenses are supplied to remediate a defect; VT and lenses are provided to help a person develop, learn, and live the best way they can.

Bruce Wolff

...the visual problem which he presents to me...is a stress-distorted visual space world and this is the thing he expects me to remedy...

...whatever the characteristics of the visual problem that these people present to me, these are capable of modification through training.



Bruce Wolff 1958 NW Congress of Optometry

One of the most effective ways of improving human performance is the development of visual skill.



... still looking for the person who would not benefit from an appropriately prescribed nearpoint lens.

One of the most effective ways of improving human performance is the development of visual skill.



How many of us are directly involved in VT?

- As therapists?
- As Patients?

The Light of Mind

- We know that optometrist means one who measures light.
- The light of day and the light of mind entwine within to call forth vision.
- The light of mind is hard to measure, but is ours to shape, nevertheless.

