

KISS

Keep It Simple Stupid?

Kiss 2020 Goodbye?

Geoffrey A Heddle, O.D.

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The relationship
of eye
muscles and
visual system
performance
during
baseball

Using
infrared
technology to
measure
muscle
activity

Using
computer
technology to
analyze
visual
performance



OPTOMETRIC
EXTENSION
PROGRAM

Dominant For What?

- Sports is a passion of mine. Taught that 'Dominant Eye' was VERY important for the athlete because it 'meant' something.

Dominant for WHAT??

This was the question I would receive in response to questions I would pose to Bob Hohendorf, O.D.

Spatial Organization? – my preferred position on the ice

Leading Eye? – cross dominance in baseball

Getting signals to the brain faster? – hemispheric dominance

Maybe I get a clue during Vergence Testing?

By Vergence Testing, I am referring to Duction Probes:

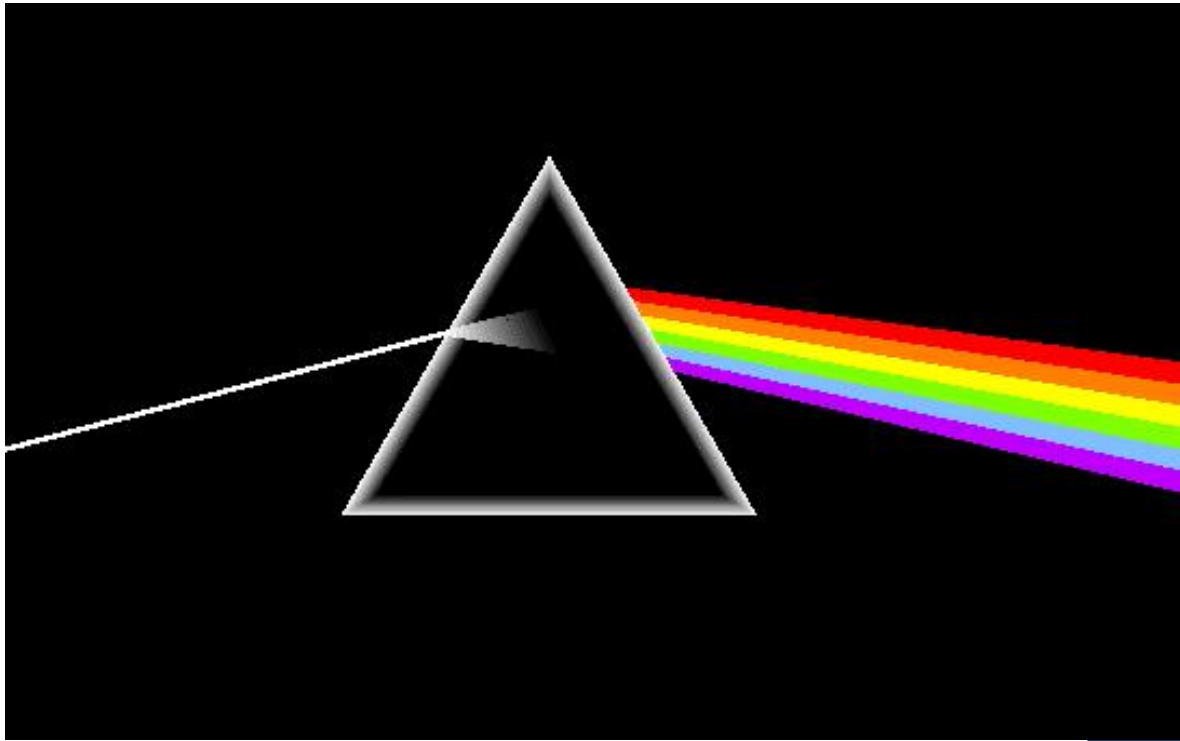
- Base out and Base In Probes at Distance and Near
- Order follows OEP Analytical
- Distance first 9/10 followed directly by 11
- Near 16 A/B followed directly by 17 A/B

During Duction Probing I ask my patients to report to me any observation they see or feel, as they see or feel it.



Left or Right?

Right?



Thought about a Visual Training procedure where one uses prisms to help a patient develop a greater sense of proprioception for which direction their eye is moving.

Prism
Opposites?

Let's see if there is a correlation!

After a patient reported any “left” or “right” responses, I would do a probe to assess their dominant eye for ‘distance’ viewing.



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My Assessment of Dominant Eye!

- Extend your arms.
- Fingers together, thumb to side.
- Overlap hands so that there is a hole.
- Keep hands down by your waist.
- Look at my eye (I would point to my OS)
- When I say, "Go". I want you to raise your hands up until you can see my eye through the hole. Do not wink, close an eye or look at your hands.



Grading the response??



Is there a gradient response to this probe? Should there be?



I would see a myriad of responses



Some patients would come up to the middle of their forehead.



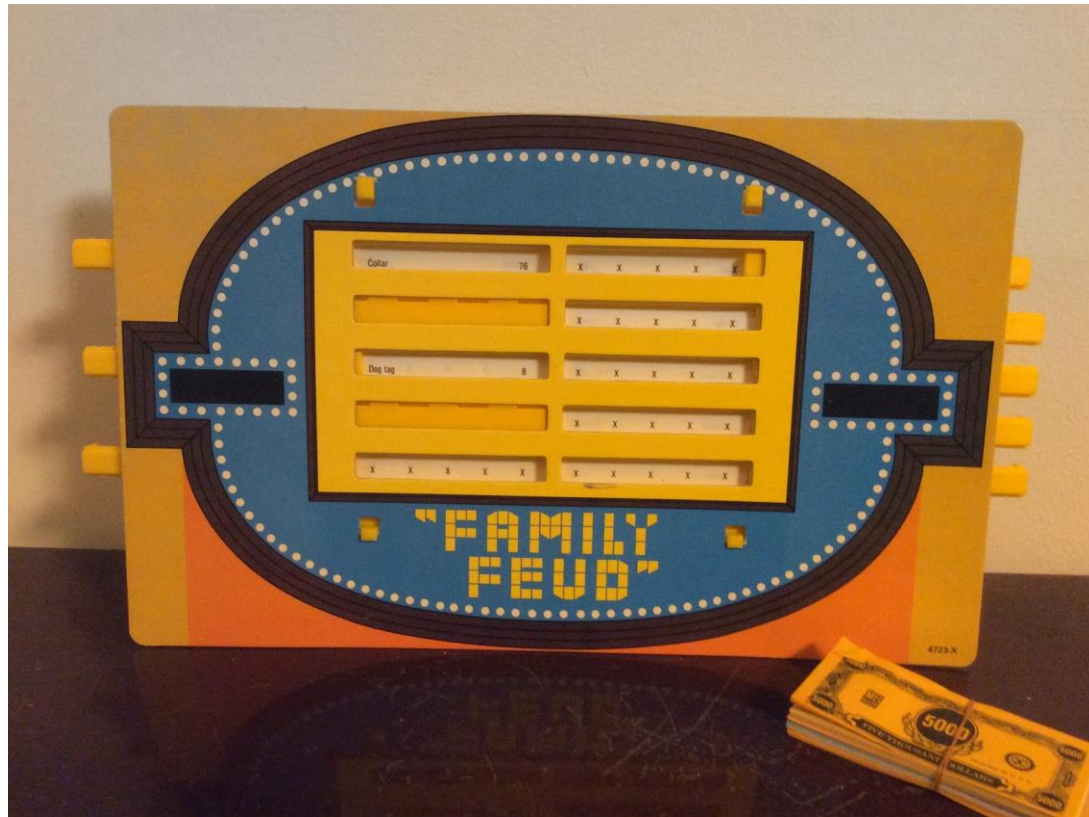
Some would go directly to one of their eyes.



Some were somewhere in between.

Patient	Response	Eye Dominance	Match?
16 YOF	Right – BO @ D (OS) Left – BI @ D (OS)	NONE!?	For a Fire? YES?
35 YOF	Left – BO @ D (OS)	None to Grade 1 OD	NO
46 YOM	Left – BO @ D (OD)	Grade 1 OD	YES
38 YOM	Left – BO @ D (OS)	Grade 3 OD	NO
71 YOM	Right – BO @ D (OS)	Grade 3 OD	NO
51 YOM	Right – BO @ D & N' (OS) Left – BI @ D & N' (OS)	Grade 2 OS	YES

Survey Says.....



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HEADS fraction	TAILS fraction	Which one is GREATER?	HEADS amount	TAILS amount	Which one is GREATER?
4 7	3 7	heads	\$.65	\$.36	heads

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Binocular Continuum

- Synergy
- Integration
- Interaction #
- Interference #
- Alternation
- Single sided – Constant Strabismic

Interaction



“...the degree to which both channels are used together varies from moment to moment.”

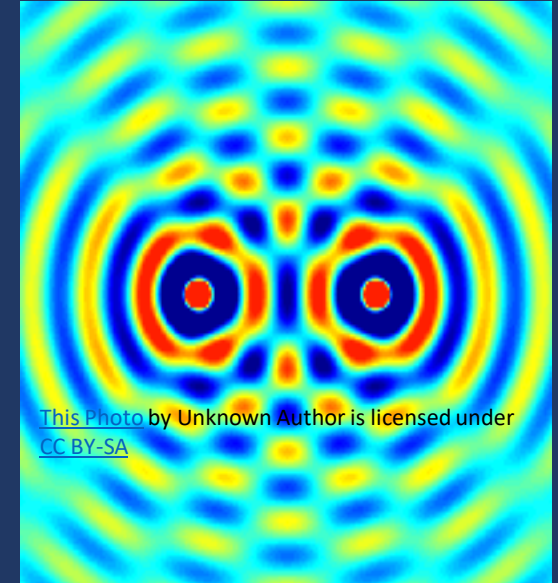


“At times, one channel more than the other may dominate the information flow the person uses to build their internal representation of reality from which to direct action.”



“Thus, at times some suppression may be measured and at thither times they may be seen to be functioning at fairly high levels of binocularity.”

- “Where interference is occurring between the channels, the flow from the secondary channel is creating noise on the line of the primary flow. This may cause misjudgments in localization and orientation that may be present intermittently.”



Interference

Back to the Drawing Board

- No Match to dominant eye
- Is it an indication of the patient's 'level' of binocularity at that moment?
- Or is it still, "Dominant for what?"

