

# Form Perception and Reproduction

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Bethesda, MD

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# Question(s)

In trying to prepare this presentation, I attempted to frame some questions, hoping that some of your thoughts might help me find better expressions of my own. So, the first one was...

- Is Form Perception a fundamental aspect of the visual process?

But as I played with that, I wondered about coming at it the other way around and it became...

- What would things be like if we could not perceive form?

# Question(s)

While those questions bang around in your head for a while, my next question was...

- Is there a role for activities aimed at developing Form Perception in VT?

And...

- Is this a limited role, in other words, only for a particular type of case, or something with a broader application?

# Question(s)

- Sitting in the background are a couple of questions which are always evolving in my understanding.
- How can we describe human behavior in visual terms?
- What are the visually related aspects of learning?

# Form Reproduction

- The way I approach the development of form perception is through an activity of form reproduction, specifically having the patient reproduce relatively simple shapes.
- Different from simple copy forms, the shapes are presented tachistoscopically and are to be reproduced to match the size, shape, and placement of the presented shape.

# “Tach” Procedures

- Such “tach” procedures are often described as related to, and used to “increase,” visual memory.
- It would be difficult to argue that memory is not involved, but this is not typically how I think about it.

# A Role for Form

- Movement is a given
- Direction of movement generates Form
- Relationships between Forms generate Meaning

# Same Size

- The shape is seen from one vantage point and then is reproduced from another, much closer, distance.
- How does the individual handle the size and distance relationships involved in this spatial transformation.



# Same Size

- The retinal array does not provide information about the absolute size of the presented form.
- The individual must provide an effective frame of reference to match the size of the presented shape.

# Same shape

- The memory aspect may seem most obvious if we view the challenge as simply producing a “realistic” copy of the template that was loaded into the individual’s “RAM.”
- However, I see it as an opportunity to observe the individual’s ability to direct movement and a glimpse of the individual’s understanding of elements of form.
- Making this understanding visible affords us the opportunity to manipulate elements of the task and provide a learning opportunity.

# Same Place

- What is involved in matching the location of the form within the empty field presented by the chalkboard?
- In Skeffington's 4 Circle sketch of Vision as an emergent, the Centering circle is often labeled the "Where is it?" circle. This is frequently followed by what seems to be a very natural comment that to know where "it" is, I have to know where I am? So, it becomes...

# Same Place

- “Where am I?” and
- “Where is it?”
- My question is how do we answer the first question?

# Where Am “I?”

- “...the axes of our egocentric frame of reference is determined by the spatial locations from which possible movements originate and the directions of the relevant movements. So, the axes are not determined simply by the space we occupy, but rather by the possibilities for action that we have, given the way we occupy that space. When I see an object as within reach and in front of me the axes are not determined simply by the position of my body, but rather by how I would move my body given the position of my body. The represented location is determined by the axes of this egocentric frame of reference.”
- <https://www.researchgate.net/publication/235955998> *Perceptual Experience and the Capacity to Act*➤

# Where Am “I?”

- So, where am I is about the physical extent of me as the origin of my movements, AND also by the movement possibilities available to me.
- Matching the location of the reproduction and the presented form challenges the individual to establish and develop this movement/action based frame of reference.

Kaleb

7 ½ years

Last form we did of test  
sequence.



# Kaleb – Test sequence

**BOARD TACH** 11/28/18 **TACHISTOSCOPE** NU

Rx w/o Rx

①

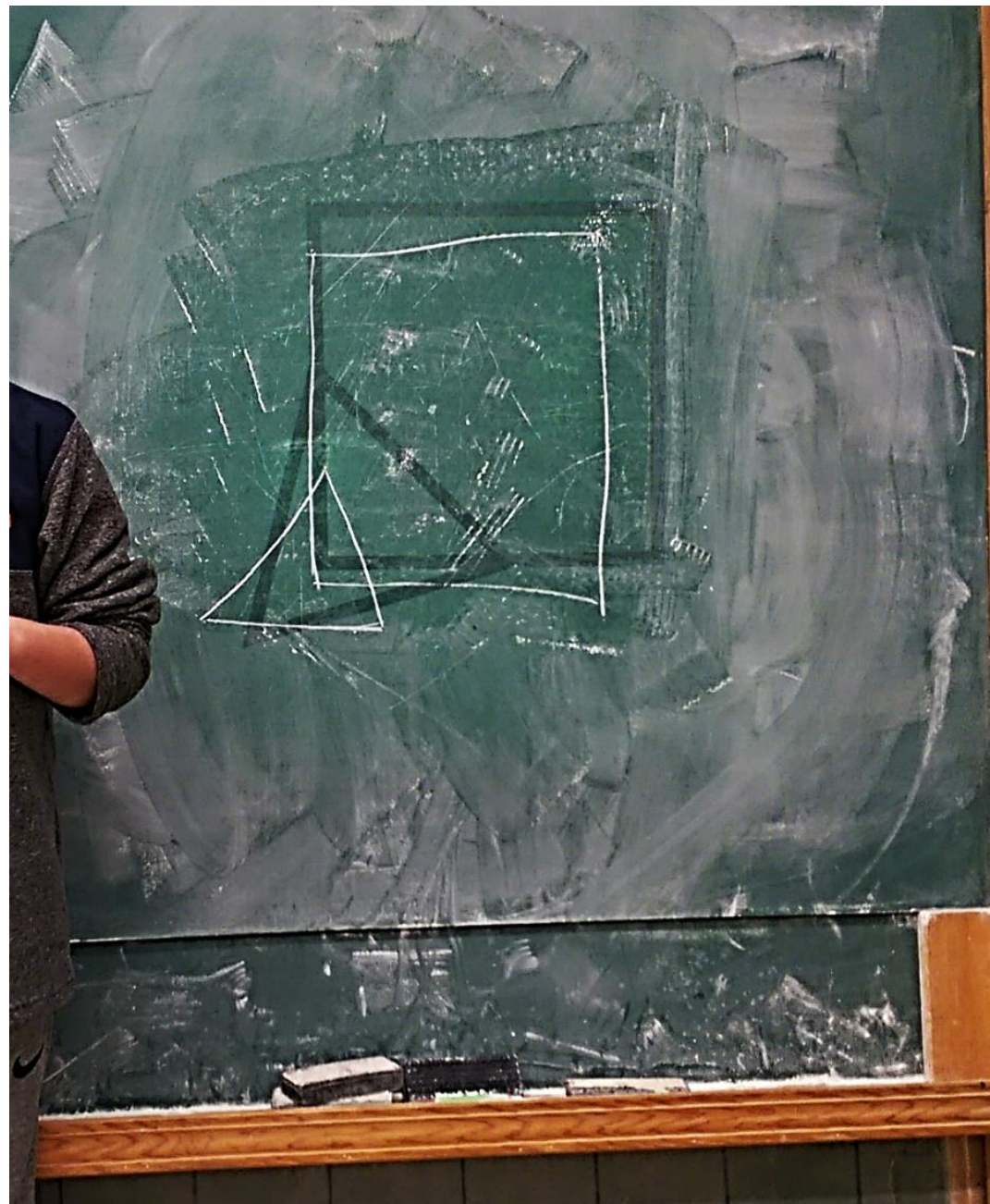
	x		x
x		x	
x			x
			x

②



Garrett

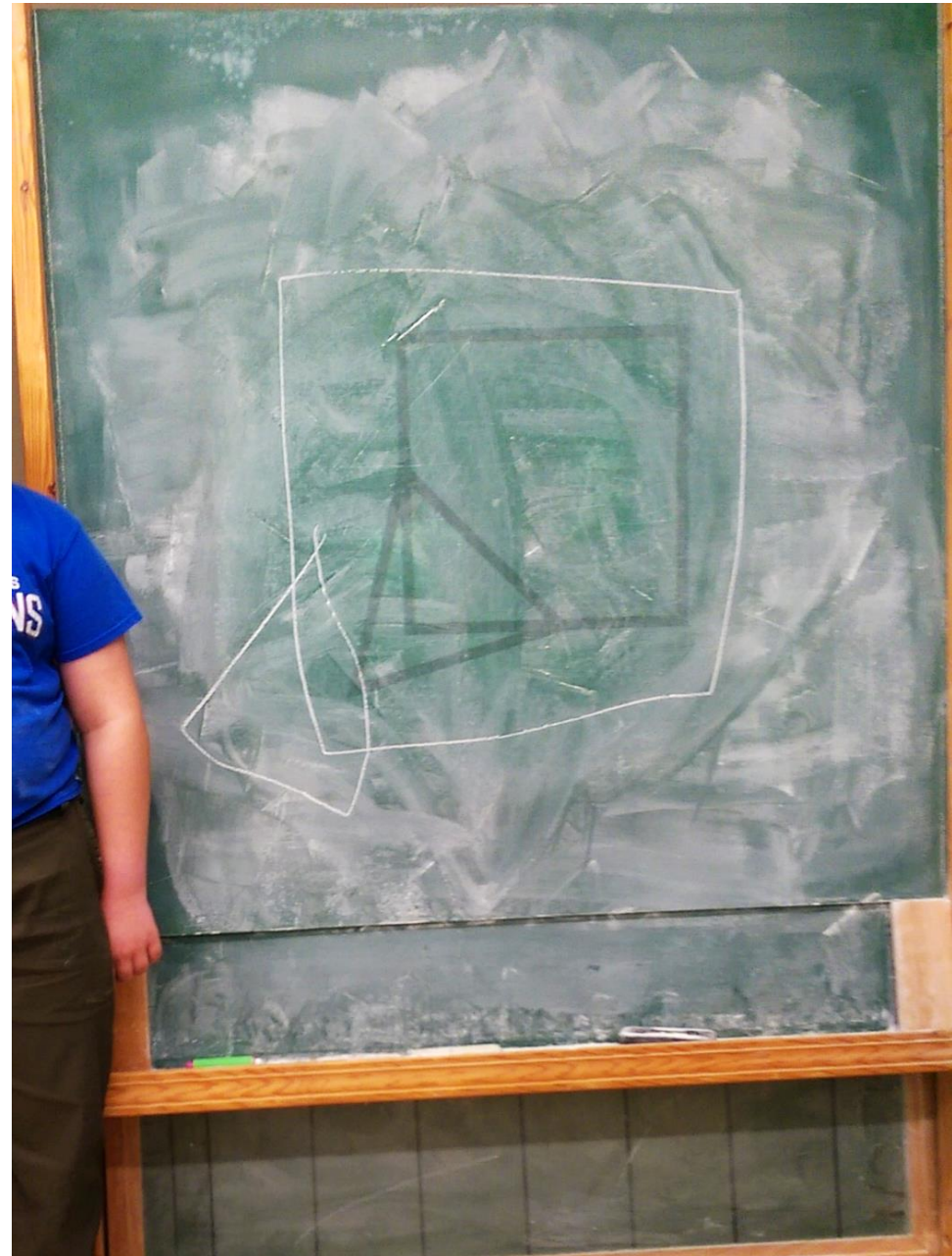
9 ½ years





Julian

9 years

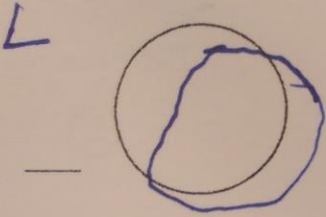


# Julian – Test Sequence

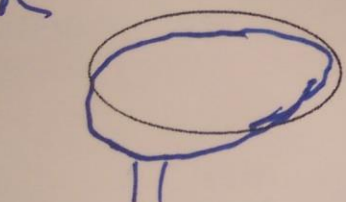
**BOARD TACH**

Rx    w/o Rx

**L**

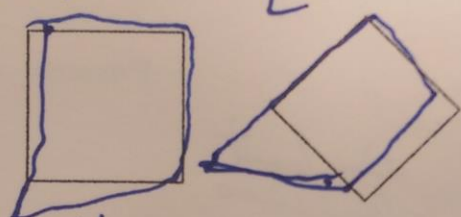


**R**




**TACHISTOSCOPE**

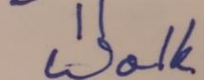
**L**



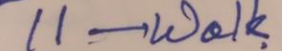
**R**




**Walk**



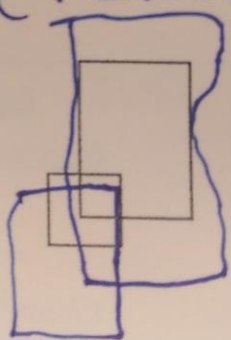
**Walk**



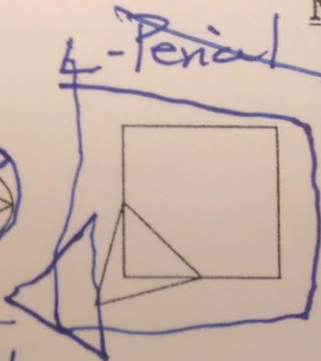
**R → L**



**R Penial**



**L-Penial**



	x	x
①	x	x
	x	x
	x	x
②	x	
	x	x

1 2 3 4 5

Lucas

5 ½ years



# Lucas – Test Sequence

**BOARD TACH**  
Rx w/o Rx

Moved him to middle

Chalk up to sight line

Nomes all  
1 2 3 4 5

**TACHISTOSCOPE**

L-R

L-R

①	x	x
	x	
	x	
②	x	x
	x	

# Progress?

- Is making progress simply a matter of having the individual repeat the task some number of times, or
- Do we provide some direction so that rather than just happening upon a better performance by chance, we can improve the probability of progress?

## Structuring the Field

The pair of slanted parallel lines are an attractor.





# Structuring the Field

- In what ways can we structure the field to allow different performances to emerge?
- How can we help the individual recognize/appreciate that the structure they impose on the field affects what they see and how they perform?

# VT as a Learning Enterprise

- Fundamentally, what we are doing in VT is helping the individual use the enormous potential of the visual process to actualize learning.
- Learning is a self-initiated process of restructuring the field, yielding a stable and more or less permanent change in the *Umwelt* (the World as lived).

# Attention

- "Attention is no longer a form that more or less lights up an immutable field, but rather a restructuring power, one that makes the components of the landscape that did not exist reappear phenomenally. Thus, instead of a clarification of pre-existing details, a *transformation of the object* occurs. This new interpretation acknowledges, first, the child's drawing is an initial manner of structuring things and, second, the movement from childhood drawing to adult drawing is another structuration." (CFF 415)

## Luke's Loop

As a child's drawing, what do you make of Luke's rather elegant solution to the task of reproducing this shape.



The End

