

## ***Thought Experiments Rethought- and Reperceived***

Psychological evidence supporting his main thesis :  
contemplation can lead to new knowledge about  
contingent features of the natural world (i.e. The  
novelty and justification of beliefs derived from T.E.)

Two crucial questions:

- 1- Are those beliefs formed as a result of inference from known premises?
- 2- To the extent that they are not, are they justified?

## ***Gendler vs. Norton/Brown***

Norton's response: 1-yes. 2- No.

Brown's response: 1- No. 2- yes.

Gendler's response: 1- yes. 2- yes.

The kind of new knowledge about the world that is derived from a T.E. Is neither *quasi-observational* nor *argumentative*. It is a (fallible but yet reliable) psychological mechanism that is distinctly non-argumentative.

## ***Crucial Features in the Performance of a Scientific Thought Experiment***

- a- reasoning about a particular set of circumstances that are described more specifically than the conclusion
- b- imagination (as opposed to observation) mode of reasoning
- c- its purpose is confirming or disconfirming a theory
- \*d- that theory is about the physical world.

## ***Norton vs. Brown***

They disagree on their understanding of (a) and (d)  
(d) is a metaphysical point about the kind of things  
laws of nature are:

Brown thinks they are abstract laws that  
necessitate patterns

Norton thinks they are contingent

(a) is an epistemological point about which mental  
activities have justificatory force:

Brown: The particularity of the scenario plays a  
justificatory role

Norton: The particularity of the scenario is not of  
much importance

## ***Gendler's position***

He sides with Norton on the *metaphysical* question and with Brown on the *epistemic* question:

Particularity of the scenario in a T.E. Has some justificatory force, and the regularities that the T.E. Reveals are contingent.

## ***The Elephant constraint***

Your beliefs are *new* because they are  
-neither as immediate as recalling  
-nor as simple as calculation or deduction

Your beliefs are justified because the reasoning  
process you used was  
-neither lucky guesses  
-nor wishful thinking  
-nor hunch  
-but rather an act presenting to yourself a mental  
image, and manipulating it

**This involves imagining having a kind of  
experience (which is phenomenologically different  
from doing deduction or induction)**

## ***The Psychological Data***

Three examples of psychological research:

- 1- Roger Sheppard on judgements about topological similarity (we use quasi-perceptual reasoning rather than deductive reasoning)
- 2- Antonio Damasio on our emotional responses: they are encoded in “somatic markers” on which our intuitive judgements are based. Only imaginative rehearsals have access to these somatic markers.
- 3- Daniel Reisenberg on Limitations on mental imagery and Gestalt Shift : if the task of “mentally rotating an image” is replaced by “the task of thinking of the left hand side of the shape as being its top”, results change dramatically

## *The Conclusion of the Psychological Data*

These findings suggest that **the kind of information-processing required for imaginative rehearsal** is different from **the kind of information-processing required for purely hypothetical unengaged reasoning (deductive or inductive reasoning from known premises)**

## ***Discussion Questions***

Is it possible to grade the justificatory force of these mechanisms? What would our criteria be for that grading?

Compare the case of scientific T.E. With other kinds of thought experiments: what would Gendler say about Gettier cases?

Compare their justificatory force

Is there a principled way of drawing a distinction between imaginative and hypothetical (unengaged) mode of reasoning? Which properties can be understood using the first mode? Which properties can be understood using the second mode?

## ***Discussion Questions***

Even if there is a principled way, what do these epistemic considerations tell us about metaphysical commitments?