

#### TOPIC 4

The traditional TOK diagram indicates four ways of knowing. Propose the inclusion of a fifth way of knowing selected from intuition, memory or imagination, and explore the knowledge issues it may raise in two areas of knowledge.

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Name: Stephanie Nunes (002136-076)  
School: Luther Burbank High School  
Words: 1259

"I felt that from over here!" I shouted. My relay teammate had just slammed her calf onto the deck of the pool while performing a flip turn. I felt her pain. Not because I had ever done the same thing but because I could imagine what it felt like. Two weeks later when I made the same mistake as my teammate, it felt exactly how I imagined it would. This highlights vital shortcomings in the traditional TOK Diagram. While the Diagrams ultimate goal is the inclusion of every type of tool a "knower" can use to attain knowledge, I was able to "know" what an experience felt like without "actually" experiencing it. Imagination must be added to the TOK Diagram because the exclusion of imagination overlooks and devalues knowledgeable experiences in every Area of Knowledge. Imagination, in this essay, is defined as visualization or an idea that is independent of logistical of logical reasoning. If imagination is given ample consideration in a variety of fields, why is it that it has yet to be acknowledged as a viable way of attaining knowledge in the TOK world?

In modern science, imagination is respected as a "way of knowing". During a TED talk V. S. Ramachandran, director of the Center for Brain and Cognition at the University of California, San Diego, lectured about the importance of Mirror Neurons.<sup>1</sup> These neurons fire the same way a Command Neuron fires. Command Neurons fire when you perform a task (running, jumping, walking, etc.) and Mirror Neurons fire simply by watching someone perform a task and even by imagining that you are the one doing the activity.<sup>2</sup>

This provides an explanation for my earlier experience at the pool. Ramachandra contends that I can imagine my friend's pain because the same part of my brain light up when I watched my friend hit her leg of the deck of the pool as it did when I encountered the same

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<sup>1</sup> "VS Ramachandran: The neurons that shaped civilization | Video on TED.com." TED: Ideas worth spreading. [http://www.ted.com/talks/vs\\_ramachandran\\_the\\_neurons\\_that\\_shaped\\_civilization.html](http://www.ted.com/talks/vs_ramachandran_the_neurons_that_shaped_civilization.html) (accessed June 4, 2013).

<sup>2</sup> Iacoboni M, Molnar-Szakacs I, Gallese V, Buccino G, Mazziotta JC, et al. (2005) Grasping the Intentions of Others with One's Own Mirror Neuron System. PLoS Biol 3(3): e79. doi:10.1371/journal.pbio.003007

situation. Command neurons fired the same way my mirror neurons fired previously. Reason ✓ would tell me that it was impossible to ever “know” what it was like to be in the same situation because at that point I had never “actually” experienced it firsthand. Emotion would allow empathizing with my friend but never actually having the same brain activity as my friend during the event. Imagination allowed me to experience the event in a way more intimate than looking at it through the filters of language, emotion or any of the other accepted Ways of Knowing. This is because the difference, at least on the biological level, when imagining or actually experiencing an event is minimal. This disproves the common belief that imagination is just aimless wandering of the mind. Imagination is in fact a way of knowing just as important and powerful as the traditional ways of knowing; Reason, emotion, sense perception and language.<sup>3</sup>

Prior to 21st century technology people relied on their imagination to discover new ways to fly, harness electricity, and manipulate the world around them. We still often create an item or service that is a manifestation or response to our imagination. For instance, when I was a child I was terrified of the dark. My imagination about what could be lurking in the dark got the best of me. I imagined that turning on the lights when I was feeling scared or threatened would scare off anything hiding in the dark. Today, however, I have an app on my phone that will turn the lights on in my house at the click of a button. It was created to pacify the very worries that my imagination had created years ago as a child. Without the ability to imagine new items and scenarios knowledge would never further. We would, as Einstein once famously said, be able to use “Logic will get you from A-B” but “imagination will get [us] everywhere”.<sup>4</sup> Once I was able to imagine something hiding in the dark that imagination pushed the boundaries of knowledge a step further. It has entered the realm of possibility

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<sup>3</sup> Van de Lagemaat, R. 2005, *Theory of Knowledge for IB Diploma*, Cambridge University Press, London.

<sup>4</sup> Clark, Jeff. "Philosophy, understanding and the consultation: a fusion of horizons." *The British Journal of General Practice* 58, no. 546 (2008): 58

because I am able to conceive of it. If no human is able to imagine a scenario there is no possibility for it to become reality.

However despite of all the advantages to adding imagination to the TOK Diagram the inclusion of imagination would raise a few issues. When does imagination become too idealistic and lose the potential to become reality? Idyllic concepts have become a common pitfall. Through history dictators of various countries have become victims of this faulty reasoning. The quest for a utopian society has lead to fatal mistakes. An example of this that impacted my life was the reason my grandparents left Romania. Cruel, North Korean inspired, communist dictator Nicolae Ceausescu imagined a utopian economy that consisted of every woman having five babies that would increase the workforce.<sup>5</sup> He then created policies to attempt to turn his imagination into reality. The Ceausescu regime outlawed abortions and contraception and instated monthly pregnancy checks to all women old enough to conceive. The result was millions of babies being born to parents that had no way to support them and hundreds of people (including my grandparents) fleeing Romania in fear of the merciless policies of the new regime. The economy suffered severely. During his quest to reach his idyllic imagination he caused the opposite effect; civil unrest until Ceausescu and his wife were executed.<sup>6</sup> While Ceausescu had a vivid imagination for his desired end result, he did not use any reasoning skills to ensure a safe and functional manifestation of his vision. ✓†

Imagination may be able to expand knowledge possibilities however the use of the other Ways of knowing play an irreplaceable role when attempting to cross over from imagination into the "real world".

The traditional TOK diagram, and the prescribed topic, is based on the assumption that you can only acquire knowledge through your personal experiences or the described

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<sup>5</sup> Hord, Charlotte, Henry P. David, France Donnay, and Merrill Wolf. "Reproductive health in Romania: reversing the Ceausescu legacy." *Studies in family planning* 22, no. 4 (1991): 231-240.

<sup>6</sup> Siani-Davies, Peter. *The Romanian Revolution of December 1989*. Cornell University Press, 2007

personal experiences of others; never though imagination. This is not true. The four traditional Ways of Knowing can also provide extensive knowledge on what has already been discovered. The use of the traditional TOK diagram alone is insufficient because it does not advance knowledge or promote the validity of imagination. If the TOK world wishes to mend the insufficiencies of the tradition diagram it must expand to include imagination. Failing to incorporate imagination into the TOK diagram inhibits the natural evolution and advancement of knowledge.

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(accessed June 4, 2013).

| TOK Essay Rubric   | 0                        | 1/2  | 3/4   | 5/6   | 7/8   | 9/10  |
|--|--------------------------|--|---|---|---|---|
| <b>Criterion A</b><br><i>Understanding of Knowledge Issues</i>       | Level 1 is not achieved. | The essay includes very little treatment of knowledge issues that are relevant to the prescribed title and demonstrates little understanding of them. If present, areas of knowledge and/or ways of knowing are merely mentioned.  | The essay includes some treatment of knowledge issues that are relevant to the prescribed title and demonstrates a rudimentary understanding of them. Some links to areas of knowledge and/or ways of knowing have been attempted but they are largely ineffective.   | For the most part the essay treats knowledge issues that are relevant to the prescribed title, and demonstrates some understanding of them. Some effective links are drawn between areas of knowledge and/or ways of knowing.   | The essay consistently maintains as its focus knowledge issues that are relevant to the prescribed title. Effective links and some comparisons between areas of knowledge and/or ways of knowing are drawn, so that the essay demonstrates a good understanding of the knowledge issues under consideration.  | The essay consistently maintains as its focus knowledge issues that are relevant to the prescribed title. Effective links and comparisons between areas of knowledge and/or ways of knowing are elaborated, so that the essay demonstrates a sophisticated understanding of the knowledge issues under consideration.   |
| <b>Criterion B</b><br><i>Knower's Perspective</i>                    | Level 1 is not achieved. | The essay shows no evidence of independent thinking about the knowledge issues related to the prescribed title. There is limited personal engagement with the knowledge issues and no attempt to acknowledge or explore different perspectives. There are no appropriate examples. | The essay shows very little evidence of independent thinking about the knowledge issues related to the prescribed title. There is some personal engagement with the knowledge issues. Different perspectives may be mentioned but there is no attempt to explore them. Examples chosen are sometimes appropriate. | The essay shows some evidence of independent thinking about the knowledge issues related to the prescribed title. The student has shaped the essay in a way that shows personal engagement with the knowledge issues. There is an awareness that different perspectives may exist, although there may be little attempt to explore these. Examples chosen are appropriate, although there may be little variety in their sources. | The essay shows adequate evidence of independent thinking about the knowledge issues related to the prescribed title. The student has shaped the essay in a way that shows thoughtful, personal engagement with the knowledge issues and some self-awareness as a knower. There is an acknowledgment of different perspectives and some attempt to explore these. Examples chosen are effective, with some variety. | The essay shows much evidence of independent thinking about the knowledge issues related to the prescribed title. The student has shaped the essay in a way that shows both a personal, reflective exploration of the knowledge issues and significant self-awareness as a knower. There is serious consideration of different perspectives. Examples chosen are varied and effectively used. |
| <b>Criterion C</b><br><i>Quality of Analysis of Knowledge Issues</i> | Level 1 is not achieved. | There is no inquiry into knowledge issues, only description. There are very few attempts at justifying the main points of the essay. There is very little evidence of any awareness of counterclaims.  | The inquiry partly explores, but largely describes, knowledge issues. There is some justification of main points and some coherent argument. Counterclaims are implicitly identified.   | The inquiry explores knowledge issues. Most points are justified; most arguments are coherent. Some counterclaims are considered.   | The inquiry explores with some insight, in some depth and/or detail, knowledge issues. All, or nearly all, main points are justified and arguments are coherent. Counterclaims are explored. Implications of the essay's argument are identified.   | The inquiry explores with a high degree of insight, in considerable depth and/or detail, knowledge issues. All main points are justified and arguments are coherent and compelling. Counterclaims are explored and evaluated. Implications and underlying assumptions of the essay's argument are identified.   |