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TOK Essay

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Present personal knowledge is knowledge gained through a way of knowing in the moment. When it is possible for people to reach a consensus on a current, objective idea in an area of knowledge, that is present shared knowledge. Past knowledge is, of course, knowledge stored in the past. When one's past personal knowledge figure into how a person gains knowledge in the present, present knowledge is wholly dependent on the past. For example, interpretation of art is based on one's personal experiences; that is, the knowledge gained in the present by examining art is based on the past. Knowledge in the arts can mean either the artist's production of artwork or the interpretation of that artwork by viewers. However, knowledge in mathematics is purely axiomatic and based on absolute objectivity—not subjectivity, and not one's experiences. That is, the process of creating mathematical knowledge can be based on past knowledge such as other mathematical knowledge, but mathematical knowledge itself cannot be based on past knowledge.

Interpretation of art is always based on past personal knowledge. For example, a controversial painting by Mark Rothko, titled "Orange, Red, Yellow", features a simple gradient of orange, red, and yellow. It was sold for record-setting $88.9 million dollars, which is more money than any other post-war contemporary painting has been sold for. After receiving criticism for its simplicity, in defense, Rothko stated that people who only observe the color relationships in the painting are missing the point; he was hoping people would see the expression of three big emotions in the painting: tragedy, ecstasy, and doom[1]. Although artists

may have intentions in their artistic expressions, they cannot impose ideas on viewers; whether or not a viewer chooses appreciates a work of art in the same way as the artist is entirely based on what emotions the ark evokes, which specific to that person. Thus, artists must try to craft their works to 'suggest' emotions.

But when it is said that music or art is an emotion (e.g. cheerful or melancholy), how can that be since only humans can have these kinds of qualities? The artist certainly could have been joyful or sad, but the art itself cannot. When an artist tries to express an emotion through artwork, that emotion must somehow be embodied in the artwork. In visual arts, it is simple to understand how genre and scenic artworks could embody an emotion; an artist must simply depict a scene which a person would react to like they would in reality. But in contemporary and modern arts, it is more difficult to understand how artwork could embody or evoke specific emotions in a viewer. Perhaps, in musical arts, to evoke an emotion in listeners, music must simply have qualities similar to that of the vocal expression of an emotion. For example, when the tempo is lower and the music is soft—similarly to how people's voice would be when they are sad—most listeners would likely characterize the music as melancholy.

Additionally, is what makes artwork art the fact that the artist had intention, or is it that the viewer had an interpretation? And, Rothko's simple painting makes me wonder, where do we draw the line between artistic expression and reality? A person without any skill or purpose could have easily painted a gradient of red to yellow. If what brought life into the artwork was an artist's emotional intention or a person's viewing experience, could one just claim that reality, or anything, is art, simply because he or she has intentions, a purpose, or an interpretation? One person cannot truly know another person's thoughts, so how do we know if Rothko really had

any intentions? It could just as likely be that Rothko has no imagination and creativity and that he was simply painting a pretty gradient on a canvas. So if what makes artwork art is the artist's intentions, then is it not true that that artwork is only art to the artist?

Creation of art is harder to generalize on than interpretation of art; in some cases, creation is based on past experiences, and in other cases, it is not. Some artists pour their emotions from years of agony into their artwork. For example, a 19th century German composer, Johannes Brahms, claimed to have spent 21 years on Symphony No. 1 in C minor, Op. 68, pouring his will and pain into his work over the years as it built up[2]. He stated that the process of developing the symphony was "long and difficult" and that the music reflected his life in that it was "not exactly charming". This negativity is a common theme in music and art. Why do we desire to emotionally engage with works of art when the artist's intent is often to evoke negative emotions? What draws us to art that brings us pain?

There are also artists who strive to avoid creating works based on past experiences and simply pour their emotions in the moment into their work as opposed to pain built over time. For example, an American alternative rap artist, Barrington DeVaughn Hendricks (known professionally as JPEGMAFIA), who usually writes songs in less than a day, stated in an interview that he intentionally keeps all of his music original and not based in any way on other works by putting himself out of his comfort zone and only producing while naked[3]. He then tries to make sense of himself and his thoughts—he transcribes his emotions using original, unique sounds and instruments. That is, he makes an effort to not base his music off of past experiences. So, it is possible for the creation of works of art to be or not to be based on the past, but interpretation of artworks is strictly dependent on past knowledge.

Despite common belief, and unlike knowledge in the arts, knowledge in mathematics is never dependent on past knowledge. Although some might argue in response that math curriculum is based on building off of past mathematical knowledge, that is simply missing the point. It is important to understand the distinction between the process by which one can obtain mathematical knowledge, mathematical knowledge itself, and applications of mathematical knowledge. The purpose of math education is to learn the language of mathematics. Over time, students begin to learn more complex methods to create mathematical knowledge. However, knowledge in mathematics is axiomatic and timeless. Mathematical truths exist whether or not a student discovers them, and regardless of when he or she discovers them. That is, it is the process of learning methods of obtaining mathematical knowledge that is based on past knowledge.

Another possible counterexample is that of written and stored mathematical proofs, as many theories are built off of past proofs. But why do we write and publish proofs in the first place? We write proofs because we want to show that some mathematical knowledge is true. That knowledge is true regardless of whether or not it is proven; the purpose of the proof is only to communicate that it is true. Part of the process of applying mathematical knowledge to human purposes is to verify and show that that theory is true. So, the applications of mathematical knowledge may be based on past knowledge, but not knowledge itself.

A good counterexample is the Fibonacci sequence, a sequence in which every number is simply the sum of the previous two numbers in the sequence. In order to know one number in the sequence, one must first know the previous two numbers. The mathematical knowledge of the Fibonacci sequence exists without regard to time. Although the process of discovering what one number in the sequence is does depend on past knowledge (i.e. it is self-dependent), the fact that

$F_n=F_{n-1}+F_{n-2}$ is true regardless. The knowledge is the theory, not the usage or application. If mathematical knowledge is true without regard to time, it is interesting to consider what knowledge even is. We know that mathematical knowledge is simply true theories and logic, but does that mean that it does not require a person to 'know' it to be knowledge? The Fibonacci sequence exists and is true and valid regardless of whether or not a person knows of its existence. Its applications also still exist. We cannot create mathematical knowledge, only discover it. Mathematical knowledge exists without regard to time or thought.

Mathematical knowledge and knowledge in the arts differ in this way; although mathematical knowledge does exist without regard to time or thought, knowledge in the arts requires a person to be present to interpret works. It is not axiomatic like mathematical knowledge, and it certainly cannot exist without a person. Mathematics and arts also differ in that the knowledge in the arts can be based on usage or applications (i.e. the viewing experience) whereas mathematics is not. And, knowledge in the arts can be the process of creating work, but knowledge in mathematics can only be the product of a process. It is interesting to me that all mathematics knowledge is timeless. It begs the question: are there other areas of knowledge in which there can be timeless knowledge?

Bibliography

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