

5. How can we distinguish between good and bad interpretations? Discuss with reference to the arts and one other area of knowledge.

Word Count: 1600

Interpreting is the process of deriving meaning from a stimulus, whether a piece of art or data from a scientific experiment. The resulting conclusion is the *interpretation*. The descriptors *good* and *bad* in the prescribed title are open to interpretation. For this essay, “good” interpretations are defined to be preferable relative to “bad” ones. This essay will explore possible distinguishers of *good* and *bad* interpretations through the arts and the natural sciences. In particular, we will explore consensus, artistic intent, contradiction by data, the quantity of evidence and amount of bias as methods to make this distinction. We will find that no single method can distinguish between *good* and *bad* interpretations in all cases.

The prescribed title assumes that a distinction between good and bad interpretations *can* be made. However, interpretations in the arts are often thought to be subjective or based on arbitrary personal preferences. This position makes it challenging to argue that a good interpretation can necessarily be distinguished from a bad one.

Nonetheless, some subjective interpretations will be more common than others. Consequently, an interpretation that agrees with the consensus is often considered good. Consider the Impressionist art movement of the late 19th century which emphasised perception over reality (*Arts - Impressionism*). It was started by artists like Claude Monet, who were rejected by the conservative Paris Salon. The state-sponsored art exhibition preferred detailed, realistic art over the jarring brushstrokes and bold colours of Impressionism. At the time, the critical consensus was that impressionist art was poorly made. As a result, this was considered a good interpretation of Impressionist art by the public, adding to the consensus. Much of the public famously attended the first Impressionist exhibition only to make fun of the artwork (Beth). However, as society’s tastes changed with time, the general perception of well-made art changed. Impressionism gained support over the eight Impressionist exhibitions and the interpretation that Impressionist art is well-made became the consensus (*Arts - Impressionism*). Hence, it has become the preferred interpretation. Since then, the movement has been considered a pivotal event in art history, responsible for paving the way for other movements in modern art. Thus, in both these times, the consensus distinguished good interpretations from bad interpretations of Impressionist art. Consensus is also used in the natural sciences in peer review to ensure that published research is a good interpretation of the studied data.

However, consensus itself is dependent on many factors. For example, the authority of the Paris Salon or a general preference for prevailing interpretations may have affected the consensus on the interpretation of Impressionist art. Thus, these factors can indirectly determine what makes good or bad interpretations.

One factor often directly cited in the arts to consider an interpretation good is its accuracy to the artist's intention. *Blade Runner* is a 1982 science fiction movie directed by Ridley Scott set in a dystopian future where real humans coexist with synthetic humans (called *replicants*). Only a special test can distinguish *replicants* from humans. Since the release of this film, there has been an ongoing debate about whether or not the main character Deckard is himself a *replicant*. The film never directly states that Deckard is a *replicant*, but many interpretations claim it is implied. However, in 2000, director Ridley Scott confirmed in an interview with the British Broadcasting Corporation that Deckard "is a *replicant*" (*Blade Runner: Riddle Solved*). Since then, he has emphasised this in multiple other interviews and has even released another cut of the movie with changes that emphasise his intended interpretation to correct the audience's interpretations. Today, arguments for interpreting Deckard as a *replicant* often cite Ridley Scott's intention as a confirmation that the interpretation is good, as we can see on the popular literary analysis website Shmoop. As such, an interpretation's similarity to the artist's intent can be a method to distinguish whether it is good or bad.

However, an artist's intention may be impossible to obtain. This could be due to the artist's death or a refusal to state their intentions. Furthermore, artists may intend multiple interpretations such as in allegorical stories. Here, intention cannot be used to identify a single best interpretation. In fact, in the arts, multiple good interpretations can even co-exist and support each other.

In contrast, intention does not exist in the natural sciences, where the aim is to obtain a single interpretation that most accurately describes the natural world. The scientific method achieves this by conducting experiments to verify if reality matches a theory. A theory is an interpretation of empirical data. Theories inconsistent with experimental data are deemed incorrect and hence undesirable. They are then modified based on new data before being tested again. This cycle results in the evolution of interpretations.

Thus, in the scientific method of the natural sciences, interpretations contradicted by empirical data are bad, while interpretations not contradicted are good. Before Thomas Young's interference experiment, light was believed to be composed of particles (Glenn). In the mid-nineteenth century, Young showed that shining light through two slits results in many bright and dark fringes instead of two bright fringes corresponding to the slits. The particle interpretation of light could not account for this and thus was contradicted by this new data. Young instead interpreted these fringes as evidence that light is a wave that can interfere with itself (Glenn). This interpretation accounted for new as well as existing data. Consequently, the particle interpretation of light became considered a bad interpretation and the wave interpretation became the preferred theory of light. This changed in the early twentieth century. Einstein interpreted the photoelectric effect, which the wave theory could not explain, as new evidence supporting the particle behaviour of light. However, Young's experiment would have contradicted a conclusion that light was a particle. As neither the wave nor the particle theory fully accounted for all data, Einstein suggested that light behaves as both a wave and particle (Glenn). No data contradicted this interpretation. Today, wave-particle duality remains the preferred interpretation of light as it still has not been contradicted by any new empirical data. Thus, good and bad interpretations in the natural sciences can be distinguished based on whether or not they contradict data.

However, falsified theories are sometimes still used. Experiments have shown that, like light, matter exhibits wave-particle duality. Despite this, the classical particle interpretations of matter are still preferred in many situations. This is because classical physics is significantly easier to use and sufficiently accurate for most practical applications. Hence, the ease of use of an interpretation may outweigh accuracy when deciding which interpretation is good.

In other cases, there may be multiple competing unfalsified theories. Here, good interpretations can be distinguished from bad ones based on the quantity of evidence available to substantiate the interpretation. For example, when Alfred Wegener first suggested the continental drift hypothesis, the main evidence he cited was how South America fit into Africa and the numerous fossils of the same species found on different continents (*The Emergence and Evolution of Plate Tectonics*). Scientists who believed the continents were fixed considered this too little evidence and rejected the hypothesis. They also interpreted the fossils as evidence for a land bridge that

had sunken into the ocean. However, more evidence was found over time that supported Wegener's interpretation but not the 'fixist' interpretation. Ridges were discovered in the Atlantic ocean, magnetic anomalies suggested some continents were once previously closer together, and seismic imaging revealed cracks in the oceanic crust (*The Emergence and Evolution of Plate Tectonics*). There was insurmountable evidence in favour of Wegener. Ultimately, the theory of plate tectonics slowly replaced the idea of fixed continents. Thus, in the natural sciences, the quantity of evidence used to substantiate an interpretation can distinguish whether it is good or bad.

However, biases can affect the interpretation of evidence. We see this above with how 'fixists' interpreted the fossils to confirm their theory. As the natural sciences aim to be objective, biased interpretations are bad. The Discovery Institute is a think-tank claiming to conduct scientific research in biology. However, their mission "is to advance the understanding that human beings and nature are the result of intelligent design" (*About*). This shows a bias towards "intelligent design", a theory that opposes evolutionary biology. Due to this, their research is considered undesirable pseudoscience by the larger scientific community. Bias also affects interpretation in the arts. In her essay "Against Interpretation", Susan Sontag argues that the worst interpretations force a subtext on the artwork. In her view, good interpretations are unbiased and let us experience "things being what they are." Therefore, the presence of bias can distinguish good and bad interpretations in both areas of knowledge.

However, artwork is often deliberately interpreted through lenses like feminism or marxism. Even the International Baccalaureate English course suggests interpreting texts based on "Identity" and "Culture" among other topics. Furthermore, bias in the natural sciences is not always as obvious as above.

In conclusion, no method can definitively distinguish between good and bad interpretations in all contexts. It must be noted that this essay stands on the definition that good interpretations are preferred over bad ones. As seen above, preferences can change with time as tastes change or new data is collected. Thus, one limitation of these methods and the conclusion is that they only apply when comparing interpretations at a particular point in time. With this in mind, the method that should be used can depend on the area of knowledge, as factors in the arts like authorial

intent do not exist in the natural sciences. It can even be a combination of several methods, including ones not covered above. For example, good interpretations in the natural sciences should be peer-reviewed, well-substantiated and not demonstrably false. These methods can also have varying importance in different situations.

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