

Zeno's Arrow

Concept

Zeno was a disciple of the first philosopher Parmenides. Parmenides used logic to deny the possibility of change, describing the universe as a uniform ball with no real differences. Applying Parmenidean logic to real life, Zeno devised several scenarios proving that even the most dynamic events were in fact illusion. His eponymous Arrow argument concludes that even a flying arrow can't possibly be moving. Why? Because it can never reach its destination. The reasoning relies on arithmetic and the concept of infinity. Here is the chain of reason. When an arrow leaves a bow, it must travel half the distance before it traverses the whole distance to the target. Most people would accept that statement. However, before it travels half the distance, it must first travel half the distance to the halfway mark. Again that makes sense. Zeno keeps going. To get to the quarter mark, it must first travel an eighth of the distance. No problem. Zeno then asks, "Where does this end?" No matter how small the distance is toward the target, we always must travel halfway. But every distance is divisible, so the actual distance to any target is infinite. Since nothing can travel an infinite distance, motion is a logical impossibility, and it must therefore be an illusion of our senses.

Script

A says to B. You can't shoot me. In fact you can't even touch me. In fact you can't even move. In fact change is an illusion. A puts tab of blotter on a B's tongue. B pulls out gun. Shoots. Composite of bullet flying. A's voice, distorted, says, the bullet never arrives. At each stage, we see the bullet travel less and less distance as the image fractures across the screen. A drones while the bullet covers less and less distance. To arrive it has to get halfway here. To get halfway here it has to get halfway to halfway here. To get halfway to halfway, it has to traverse half the distance. And guess what the bullet has to travel half that distance. Have you ever heard of infinity?