

## Third Place, Prose, Grades 10-12, Malachi Gross

### Against all Odds

Consider a game of darts. One might contemplate the odds of hitting a particular point on the dartboard, say dead-center bullseye. It's no challenge to imagine a moment, one singular moment, lining up the dart, cocking back your arm, and watching the dart fly in a perfect parabola, seeking out its target like a homing missile. At first thought, this seems like a completely plausible reality. And yet, seemingly contrary to logical reasoning, the probability of hitting any specific point on the board is exactly zero. Not approximately zero. Zero. A single dot on an infinite board of probabilities. Faced with the ultimate expanse of infinity, it may be comforting to find solace in the idea that in an endless amount of time, an infinite number of events will occur. If one were to throw an infinite number of darts over an infinite amount of time, any specific dot would eventually be hit. As exemplified in the Infinite Monkey Theory, given an infinite number of monkeys with typewriters, they will eventually complete all the works of William Shakespeare with enough time. And yet, this remains a fallacy, as infinite time or opportunity does not necessitate or guarantee the passage of every action—or any action at all; most infinities are devoid of anything at all. But when all is said and done, the natural state of the universe is randomness and disorder, and even the vast expansion of uncountable infinities cannot account for the sheer existence of randomness.

The average human life expectancy is seventy-three years. On the global scale of the cosmos, seventy-three years is a grain of sand tossed into the ocean, lost to the waves forever. Seventy-three years to live on this planet; seventy-three years to meet new people; seventy-three years to find the ones you love; seventy-three years to slowly lose those around you. Yet, contemplate the existence of the immortal jellyfish. A biologically immortal jellyfish, these invertebrates are immortal to the natural causes of death. In the face of aging, sickness, or

life-threatening physical assault, these organisms simply revert back to their earliest stages of life, blooming anew like a flower in spring. Like an evergreen tree watching its living surroundings dying in the dead of winter, the life of this jellyfish eclipses all other life on this Earth. The oldest jellyfish found was 500 million years old. In just 0.04% of its lifespan, all of human history was experienced. Wars were fought, mighty civilizations formed, and those same civilizations turned to dust, all while this jellyfish lurked in the deep unknown of the vast ocean. From the perspective of the jellyfish, the life of any single human is essentially nonexistent.

13.7 billion years ago, the universe was formed. In just 3.6% of the universe's lifetime, the entire life of that jellyfish came and went. Star Trek said that space is the final frontier. However, I don't entirely think this grasps the enormity and scale of the universe. The physical size taken up by this universe is incomprehensible to the human mind; it is so large that there is a physical boundary eternally running away from us that even light is not fast enough to traverse. A literal "unobservable universe" exists that will never be possible to see; even attempting to do so would be as impossible as trying to catch a shadow. On the other hand, the time scale of the universe is so enormous that it, too, is impossible to imagine. One average human lifetime is so imperceptibly small in the vast scale of the cosmos that, expressed as a percent of the history of the universe, it is a percent with a decimal point followed by seven zeroes. Less than one ten-millionth the age of the universe. If the entire history of the Earth were expressed as a 24-hour day, humans would have existed for 77 seconds. Not even two minutes. Thus, one human moment, one experience, is nonexistent when compared with the grandeur of the universe. It doesn't exist. Its probabilistic approximation is zero. And yet, every human that ever lived has existed against all odds of the universe. A speck on an immeasurable scale of nothingness. Random human dots searching for meaning in a silent and unresponsive universe.

Every moment of human existence, while maintaining to be a probabilistic impossibility, has come to pass.