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Quantum mechanics is often regarded as one of the most baffling theories in physics, where long-standing techniques for studying classical mechanics break down, and the models that best describe quantum behaviour contradict our understanding of the world through classical mechanics. However, quantum mechanics is not the only mystery of life - children, specifically, excited campers aged 7 - 9 years old at the Ontario Science Centre Summer Camps share similar behaviour to quantum theory and are just as confusing, if not more.

Heisenberg's uncertainty principle states that it is impossible to definitively know both a particle's position and momentum at the same time. Surprisingly, this principle applies to campers as well - the precision to which their position is known is inversely proportional to the likelihood that they will run out of line. When campers are in a line or otherwise standing still, it is not uncommon for them to spontaneously run out of the line for no apparent reason. As such, supervisors must constantly be on the lookout for campers who might spontaneously sprint after a bright and flashy light in the distance, but the process in which supervisors determine if a camper will run out of line is purely guesswork. To determine if a camper will run out of line, a supervisor must move to be closer to an individual camper. However, being close to a single camper signals to other campers that it is now easier to run out of line since the supervisor is distracted by one camper. As a supervisor moves closer to one camper, they know more about the likelihood that the camper will run away, but in turn know less about the position of all the campers, similar to Heisenberg's uncertainty principle.

One year prior to Heisenberg formulating his uncertainty principle, Schrodinger formulated his equation to describe both the wave function of a quantum state and the probability density of a particle being found at a point in space. Likewise, when exploring exhibits, the density of campers across the exhibit is not uniform. Rather, campers are more likely to be around areas with interactive material and bright, flashing lights and less likely to be around dark or not visually attractive areas. This weighted distribution across the exhibit mirrors the wavefunction that Schrodinger's equation describes, with interactive areas corresponding to the greatest values yielded by the square of the absolute value of his equation.

Perhaps one of the most perplexing aspects of quantum mechanics is that simply observing a quantum state fundamentally changes the phenomenon under study, often because the techniques used to observe the system are "like using a bowling ball to determine aspects of a ping pong ball". Similarly, the simple act of observing campers fundamentally changes their behaviour, despite any efforts to be discreet. This phenomenon is often noted when campers engage in "undesirable behaviour" when unsupervised, such as insulting another camper. However, when campers are around supervisors, they alter their behaviour to be more fitting of an encouraging and positive environment, a direct result of being supervised. Moreover, the method in which supervisors learn about a camper's "undesirable behaviours" are through another camper's recount of a dispute, which often conflicts with the other camper's recount, creating a modified story from the truth that supervisors have to decipher to understand what happened. The supervisors' observation affected the campers' stories in a similar manner to the way observing quantum states results in changing the state such that the wave function of that state collapses to a single point, likewise, pressing the campers about the dispute between forces them to choose a story that most closely aligns with their perception of the dispute.

Although the comparisons in this paper break down like classical mechanics when applied to more complex quantum theory, the analogies between the psychology of campers aged 7 to 9 years old at the Ontario Science Center Summer Camps and quantum mechanics can help to deepen an understanding of some quantum phenomena, and possibly even the rationale behind some of the things children do.