Title 6: Are we too quick to assume that the most recent evidence is inevitably the strongest? Discuss with reference to the natural sciences and one other area of knowledge.

Word Count- 1599

In our fast-paced world, we are often drawn to what is new and cutting-edge. Every day, we see new breakthroughs and discoveries but the question is, do we jump to conclusions too quickly by thinking that the latest evidence is always the most powerful? This issue pertaining with evidence can only be answered fairly by also looking into the source of evidence. This essay will look into our tendency to favour the most recent evidence in the context of Natural Sciences and Human Sciences. To dive deeper, 'strongest' in this context would imply the most reliable, credible and consistent evidence as reviewed and accepted by experts. It is true that sometimes knowledge seekers fall prey to recency bias and instantly give higher acceptability and acknowledgement to the most recent finding are too while at times hierarchical evidence is stronger as it has a trail of methods and development stages that brought knowledge to its current state. With passage of time, an older evidence may not hold true anymore and thus it is reasonable to accept recent evidence without hesitation in that light.

In the field of natural science, there's a process for evidence to be considered, known as the falsification theory. The primary concept of falsification theory is that a theory or hypothesis cannot be regarded as scientific unless it can be experimentally observed or tested and maybe proved false (Saul Mcleod). In Natural Sciences evidence could be data, observation or measurement which has been justified with experimentation and fulfill the prediction made in the hypothesis. Advancements in technology have enabled scientists to collect increasingly accurate and comprehensive data, strengthening the strength of evidence. With the help of

cutting-edge tools like DNA sequencing and advanced imaging techniques, scientists are now able to gain a more profound insight into the mysteries of the natural world. Yet, it is important to be cautious about assuming that the latest evidence is always the most compelling. Although advancements in technology improve accuracy, they do not automatically ensure the reliability of interpretations. Scientific knowledge is built upon previous understandings, highlighting the significance of *a cumulative approach* rather than quickly favouring the latest evidence (David Zeigler). Striking a balance between the progress of technology and careful analysis guarantees a strong basis in science.

The recent discovery of gravitational waves, predicted by Einstein's theory of general relativity a hundred years ago, offers strong evidence in support of the presence of these waves in the fabric of spacetime. (*Gravitational waves detected 100 years after Einstein's prediction*). Einstein's theory of relativity was quickly accepted. Einstein was considered a genius in the year 1905 when he published his fourth scientific article. He later won the Nobel Prize in the year 1921 for discovering relativity. (*The nobel prize in physics 1921*). It initially took some time for people to accept his theory, but since it accounted for previously unexplained phenomena, it got accepted. To a certain extent, authoritative bias also played a role in the acceptance of this theory. Years later, modern instruments such as LIGO and Virgo have successfully detected these unattainable waves, which are caused by massive cosmic events, by measuring tiny distortions in space (Emily Velasco). This evidence is incredibly precise and provides direct confirmation of a crucial aspect of Einstein's theory. At that point of time, we considered it to be the strongest, due to the lack of knowledge in that forte. This just goes to show that what appears to be the strongest belief today can easily be surpassed tomorrow. The model was supported by early observations of celestial bodies & also Biblical cosmology that accepts the earth in the centre of the universe thus aligning with religious and philosophical

beliefs of that era. Although the gravitational wave finding is noteworthy, further development is necessary as science advances. Likewise, an atom was first explained by the John Dalton Model, which got improved in JJ Thompsons plum pudding model & then by Rutherford with his famous gold foil experiment. Bohr's model further improved pre-existent models and was quickly accepted as he won the Nobel Prize in Physics(1922) unraveling descriptions of atoms and molecules building on all pre-existent studies to form the basis of all mechanics. However, with further research in quantum physics and mechanics, the same model was quickly replaced but not forgotten. (Andy Brunning).

The recent scientific proof of black holes provides an indication that supports a theory that has been around since Einstein's formulation of general relativity. Recent evidence from instruments like the Event Horizon Telescope has provided compelling observations, revealing the outline of a black hole located at the center of the galaxy M87. These observations provide further evidence for the well-established predictions regarding the presence of black holes, which greatly support the theoretical framework. (Prof. Dr. Rose et.al). We barely have information about the black hole so automatically, absence of other evidence also gives reliability to the most recent evidence in the case of a novel discovery or invention. However, even recent evidence is only accepted after rigorous testing, validation, and peer review by the scientific community and in that literal sense, it seems unlikely that any recent evidence will be accepted in its raw form. This is the heuristic effect when our brain takes a short cut to arrive to a conclusion (Raeburn Green). When there is no supporting evidence, we tend to favor recent evidence, although historical timelines show that standards of proof change as knowledge advances. Thus, within the AOK of the Natural Sciences, though there have been various instances of a recency bias towards acceptability of evidence, yet the scientific community continues to question, reexamine and develop their understanding further.

In the field of Human Sciences, the progress of technology has had a significant impact on the way evidence is understood, affecting both potential biases and the level of reliability. The advancement of technology in areas such as psychology and sociology has allowed for more advanced data collection and analysis, seemingly offering a more solid perspective (The Behavioral and Social Sciences). For example, innovative brain imaging techniques provide valuable insights into cognitive processes, which helps to decrease the need for relying solely on subjective self-reporting. However, it's important to be cautious about assuming that the latest technological evidence is automatically the most reliable. The presence of bias in the design, interpretation, or application of technology is an important factor to consider. Unintentional biases can arise from algorithmic coding, participant selection, or researcher expectations (Lee et.al). In addition, the fast rate at which technology is advancing could potentially surpass the ethical and methodological frameworks in place, which could have an impact on the reliability of research findings. An extensive assessment of evidence should thus consider the progress in technology and carefully examine any possible biases to ensure the trustworthiness of data in the ever-changing field of Human Sciences.

Let's explore the use of artificial intelligence in predicting human behavior, specifically in the realm of marketing. Although algorithms powered by AI can analyze extensive datasets and make predictions about consumer preferences and decision-making, it is important to consider whether we should be too quick to assume that these predictions are always accurate. Recent evidence suggests that marketing strategies driven by advanced technology have proven to be highly effective. By modifying advertisements to individual preferences and interests, businesses have experienced significant improvements in customer engagement and conversion rates (Leachman et.al). Nevertheless, the rapid advancement of AI technologies

necessitates a thoughtful examination of the possible constraints and prejudices embedded within the algorithms. Recent evidence, although showing promise, requires examination to avoid jumping to unfounded conclusions. The use of insights generated by technology raises concerns about the ethical use of data, potential biases in algorithms, and the importance of ongoing examination. Therefore, it is important to approach the evidence supporting the effectiveness of AI in predicting human behavior with caution, so as not to overestimate its accuracy and implications (Pandarinath Siddineni).

Take into consideration the recent use of social media data analysis in psychology research, a widely recognized application that has become increasingly important in comprehending human behavior and mental health patterns. There is growing evidence that suggests mining social media platforms can offer valuable insights into people's emotions, social interactions, and mental health patterns. Examining extensive datasets can reveal connections and trends that are valuable for psychological studies (Viktor Schønning et.al). However, the reliability of this evidence depends on various factors, such as the accuracy of the sample, potential biases in how people present themselves online, and the constantly shifting environment of social media platforms. One might question if we are too quick in assuming the reliability of conclusions derived from this data. Although researchers now have access to huge quantities of social data thanks to recent technological advancements, it is crucial to thoroughly evaluate the validity of assumptions made about human behavior based on these platforms. Additionally, it is important to address ethical considerations in a responsible manner.

In conclusion, our investigation into Natural Sciences and Human Sciences highlights the complex relationship between recent evidence and the pursuit of knowledge, and the idea that the most recent evidence is always the most compelling. Finding the right balance between

embracing innovation and critically evaluating evidence is crucial. As we delve into the depths of understanding, the power of evidence is not only determined by how recent it is, but also by its trustworthiness and adherence to ethical principles. This thoughtful approach guarantees a strong basis as we get around the constantly changing environments of scientific investigation and human comprehension. Acceptability of an evidence if it is recent does depend on whether it convolutes, distorts, or builds existing evidence, the source of evidence. At times, if recent evidence is backed by an authority, they are more likely to be accepted quicky. As at times, if there's consensus in a particular direction towards evidence, we should be more aware while considering whether its inevitably the strongest. True strength, as demonstrated by the natural sciences and human sciences, is in the synthesis and proof of multiple viewpoints over time, even though the most recent evidence can be considered valuable.

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