Individuals from various professions have become very keen on a recent proposal that seeks to reunite the two fields of theology and science. The long-standing classical mechanics blamed for breaching them has been succeeded by a more accurate physical theory, quantum mechanics. Some believe that this new quantum theory allows for and explains the theological concept of divine action, the belief that God acts in the world to carry out his purposes, something which was impossible with classical mechanics. Many professionals disagree with such proposals on terms of scientific technicalities that determine whether or not quantum mechanics provides the physical conditions on which these proposals rely. Such technicalities, however, are at risk of changing with new discoveries and give an unstable base for attacking proposals of quantum mechanical divine action. Therefore, arguments for God’s action through quantum mechanics are not inherently wrong because of confictions with the theory’s scientific details; on the contrary, these proposals are dangerous because of their attempt to define God and religion with the limited scientific views of quantum mechanics, as manifest in their proposals and conflicts over their proposals, which leads to the degradation of both religion and science.

As Carl Helrich suggests in his paper “Quantum Physics and Understanding God,” in order to understand these debates over whether or not it is possible to explain divine action with quantum mechanics, one must start with explaining classical mechanics and then compare it with quantum mechanics (489). A “physical system” is the thing we choose to focus our attention on, be it a car, a planet, an atom, an electron, a light bulb, or anything that exists within our universe. Everything that is not the “system,” but that surrounds the “system” is called the “system’s environment.” In order to fully describe a system, certain of its properties have to be determined, specifically its position, momentum, and magnetic moment (Helrich 491). It is the objective of classical mechanics to obtain explanations of how these properties of the system change overtime by analyzing the measurements of the system’s properties to recognize patterns and then to generalize these
patterns. These patterns become rules or explanations that often take the form of mathematical equations. If an individual identifies the initial states of the properties of the system through measurement and is acquainted with the equation that governs the change of these properties, he or she should be able to find out what the measurement of the properties will be after so much time had elapsed after the first measurement. The accuracy of their prediction would depend on the accuracy of their measuring device (Helrich 494). This ability to accurately predict or determine the future states of the system is called determinism. Hence, classical mechanics is often classified as a deterministic theory.

In quantum mechanics, we also deal with physical systems. These systems are much smaller than those dealt with at the classical level. They include photons, atoms, and electrons. The states of properties of these systems can be determined by measuring the properties or observables, as they are called in quantum mechanics. Quantum system observables include position and momentum similar to the properties used in classical mechanics as well as others such as spin and polarization. Unlike classical mechanics, we can only know the state of one observable at a time. One observable at time though is inadequate if we need to describe the system completely. Yet if we try to measure and determine more than one observable at a given time, we receive hazy or uncertain answers for the observables we seek. What we can obtain in place of clear cut answers are probabilities of what the observables might be, the probabilities of the possible states the observables may be in. These probabilities, representing our best description of the system, are written as mathematical formulas called wavefunctions. As the system changes over time these wavefunctions with their respective probabilities will change over time as well. This evolution is dictated by the Schrödinger equation, which is much like the rules that we came up with in Newtonian physics (“Quantum Mechanics”). The Schrödinger equation will tell us precisely what the wavefunction of the system will be after so much time. That is not to say that this equation will give us a precise description of the system with definite values for all of its observables as the equations of classical mechanics did. We will still have probabilities, but they will be the new probabilities that have arisen through the evolution of the system. Thus, quantum mechanics is deterministic in that we can predict with complete accuracy the future wavefunction of the system using the deterministic Schrödinger equation (Saunders 525).
When we actually measure one particular observable of a quantum system, we obtain an actual, clear-cut value within the range of the several possibilities given us by the wavefunction. Before the measurement is made though, we have no clue as to which possibility was correct whereas in classical mechanics we can have a very good idea of what the system’s observable will be using the rules that govern its change. Why doesn’t quantum mechanics have such rules? Well, it does, but such rules apply only on larger scales. The rules and mathematical equations of quantum mechanics work only for “the statistical behavior of large groups of particles” or quantum systems (Hodgson 508). It is much like flipping a coin. With one flip it is impossible to determine whether heads or tails will face up. Although we theoretically know the probability is 50/50, probabilities tell us nothing with only one flip. If, however, we flip the coin a thousand times, the probability of 50/50 tells us that about half of the flips will result in heads up while the other half will result in tails up. When we have a large number of quantum systems, we can know overall about how many will take on one particular possibility when measured. However, we have no way of knowing which possibility an individual quantum system will take on. These instances where we cannot predict the measurements of observables of a single quantum system are called indeterminacies. It is these indeterminacies that many people have seen as tools for an explanation of divine action through quantum mechanics.

Indeterminacies are attractive for those seeking to reunite science and theology because of the random nature of indeterminacies. Because we cannot determine the specific future values of observables before measurement, God determines what values they will be. Owing to His knowledge of the workings of science, He chooses from the possibilities of measurements the one possibility He knows will result in events He wants to happen. Although this is just the basics of the position held by advocates of quantum mechanical divine action, it is a clear attempt to define God.

One of the prominent contenders that God acts at indeterminacies is Nancey Murphy, Associate Professor of Christian Philosophy at Fuller Theological Seminary. She argues that “if God is to be active in all events, then God must be involved in the most basic of natural events” (Murphy 326). Because current scientific views tell us that the most basic events occur at the quantum level, she suggests that indeterminacies are where God acts (Murphy 339). Because quantum events are indeterminate and “random” to us, God can act
without our being able to detect his actions (Murphy 340). Other notable contributors to the debate such as
Thomas Tracy and Keith Ward would argue that God influences the world only through select indeterminacies
and not all indeterminacies, as Murphy suggests. Tracy argues further that God does not simply have to control
things at the quantum level, but that there are other opportunities for God to act as well (Saunders 533-534).
Despite which of various proposals we take, each forces us to believe certain things. We are forced into
believing in a God whose purpose it is to decide what may seem to one be insignificant realities, such as the
momentum, position, or spin of some electron or photon which can be neither seen or easily visualized in a
person’s mind. Further, that electron or photon is but one of an innumerable amount of electrons and photons
that compose our universe. Some individuals may believe in such a manner, but a good many of Christians may
very well not want to accept such ideas. Nonetheless, advocates of quantum mechanical divine action tell us
that scientific experiments have told us that quantum measurements are indeed indeterminate. Due to the
“infallibility” of science, we must accept that the Christian God is a God that works through microscopic means
to bring about his purposes.

Proposals for explaining divine action using indeterminacies have met much controversy which further
reflects the usage the discoveries of quantum mechanics to define God and religion. One issue that is debated is
how determining quantum measurements at the microscopic level can cause events at the macroscopic level or
events that clearly impact humanity. These might range from more familiar things such as earthquakes, cars
skidding on roads, or illnesses to miracles such as the parting of the Red Sea, healings of injuries, or turning
water into wine. This particular controversy, in and of itself, questions God’s abilities. Can he or can he not
influence the macroscopic world? Christianity is clear that he is perfectly capable of doing so, but since science
tells us that linking the microscopic to the macroscopic is questionable, we must doubt the omnipotence of God.
Although advocates of quantum mechanical divine action have tried to resolve this problem through chaos
theory, they are again putting religious beliefs at the mercy of scientific knowledge.

The frequency of indeterminacies has also been troubling for advocates of quantum mechanical divine
action. Some would argue that indeterminacies occur only when measurements are made on quantum systems in
the laboratory while others would claim that indeterminacies occur anytime two quantum systems interact
While there have been few laboratory measurements made of quantum systems, there have been innumerable interactions between quantum systems. In consequence, depending on which view of indeterminacies scientific experimentation ends up supporting, we will end up with two very different total counts for the indeterminacies, and thus also opportunities for God’s action. Many have turned to further scientific investigations, specifically a study called quantum decoherence, to decide when God is allowed to act and when he is not allowed to act (Tracy 897).

Why is it incorrect for Christians to use scientific discovery to define their religious beliefs? The answer is that science and religion are not comparable in certain respects. The history of our world bears witness to the fact that science is always changing. Even since the birth of Christ we have gone from the physical philosophies of Aristotle, to the three laws of Isaac Newton or classical mechanics, to the special and general laws of relativity of Albert Einstein, and finally to the quantum mechanics of today. In each transition, flaws were found with the old theories which were corrected by the new theories. With each theory man may have had a portion of the truth, but never the whole truth. Many of the transitions in physical theories have been caused by an increase in the size and scope of what man could observe. The more one can see, the more one can understand. We particularly see this with the transition between classical mechanics and quantum mechanics. The development of quantum mechanics came from the ability to observe the very small parts of our universe such as entities at the atomic level. This ability was acquired through the enhancement of microscopes and other means of measurement. What was observed violated the explanations of classical mechanics (Newton’s three laws) which forced scientists to develop new and more encompassing theories.

According to Christian belief, God is omniscient or has the whole scope. His view spans the entirety of the universe and the entirety of time. Because He sees all, He comprehends all. As knowledge is power, He controls all through his infinite understanding of how things really work. Men and women of this world are His children, yet their senses and their scope are significantly limited as they will always be until they become as God. Until then, mankind will never reach an ultimate theory. They may get closer as they find ways to broaden their scope and learn more, but they will never reach an ending point where corrections to our theories will no longer be required.
Religion is strikingly different from science. That is, religion is based in absolute truth with principles and laws that never change. Thus in trying to explain divine action, an unchanging religious concept, with the indeterminacies of quantum mechanics, which are a product of transient human scientific understanding, is to make ones religious beliefs dependent on quantum mechanics being absolutely true which history has shown us to be highly unlikely.

In addition, saying that quantum mechanics is the ultimate theory leads to problems in science itself. In the middle ages, the Roman Catholic Church made the physical philosophies of Aristotle a means of explaining parts of their religion and thus made these philosophies “absolute truth.” To question the truth of these philosophies was considered heresy. Men and women like Galileo were prevented from improving our world with their more accurate theories because of persecution. Some might contend that this could not happen in the today’s world of freedom and democracy. However, one of the founders of quantum mechanics, Niels Bohr, declared that quantum mechanics is “the last, the final, the never-to-be-surpassed revolution in physics” (qtd. In Hodgson 507). Bohr thought quantum mechanics to be the ultimate theory and absolute truth. Peter Hodgson, Head of the Nuclear Physics Theoretical Group at the University of Oxford, speaks of the discouragement that claims such as those made by Bohr have had on physics in his paper “God’s Action in the World: The Relevance of Quantum Mechanics.” Hodgson says “Declaring that no further advance is possible and that certain questions must not be asked prevents all further progress” (513). Hodgson also provides the example of how Ernest Rutherford “abandoned” his ideas about the structure of the nucleus because Bohr believed that the nucleus had no structure. Rutherford’s acceptance of Bohr views as absolute truth prevented him from discovering more about the nucleus (Hodgson 513-514).

From its beginnings in the early twentieth century, the theory of quantum mechanics has been the subject to much theological speculation. The conclusions reached by many have consisted of a God acting at the indeterminacies that quantum theory features. These conclusions both have relied on the scientific achievements of men. All arguments made over whether or not divine action can be explained using quantum mechanics try to define Christian beliefs of the nature of God which is both irreligious and scientifically disastrous.


