\sim THE FINGERPRINTS OF THE UNIVERSE \sim

Annemarie
Seventeen years old – Senior High Division

Pennsylvania

Homeschooled

The Fingerprints of the Universe

"I believe in Godthe Father Almighty, Creator of heavenand earth." This short little phrase, spoken in prayer thousands of times a day, tells us so much and uncovers an entire world of meaning. On earth, where God seemsto be always pushed aside, forgotten, and not believed in by many, the truth is always right around the corner. Actually, it is everywhere! Lookaround you! Everything you see is a result of God's love. However, there are those who would look around and say, "it's just all matter; made up of atoms and is a result of their formation." These two views promote a general argument which has been the topic of widespread discussion between those who believe in God and those who do not. The atoms that make up the universe are a result of God's love and almightiness too! In addition to faith, God can be logically proven by reason through all things, including the teeny-tiny and hidden things, such as atoms, which are all too often taken for granted.

The long run clash between scientists who believe in God versus those who do not has been going on consistently for two centuries. Unfortunately, these differences often lead to antagonism, distrust and sometimes even dislike as well as being prone to research, experiments, life-long discussion and heated debates. The ever plodding on God-believers have and are working hard in hopes to bring the true light to non-believers. It is hard work for those who dedicate their life to it; for them and several others, it is simply a matter of faith to see the extreme reality of the existence of God. But for others, there is no faith – just blindnessin a world where the light does not show. Sadly, the world has, for the most part, obliterated the things of supernatural; so now our God-believingheroes must go a step further in order to prove God naturally.

Trying to prove a supernatural fact in a natural light is not an easytask, but it is, however, quite possible. There are several different ways of proving in a variety of fields; some of these being psychology, morality, biology, geology and more. A prevalent choice is geology, proving God's existence

through the layers, formation and age of the earth, etc. Others do it through dinosaurs, the Flood, the layout of the land or the solar system. These are all rather large and grand fields, though. Have you ever thought that God's existence could be logically proven through even the smallest of things? The little things that are often taken for granted are so exceedingly important to life – the almost "magical" balance of atoms, the intelligence and computation of DNA; without them, life would not exist as we know it. And something so significant to life must have a tie-in with God and His existence. But here I am getting ahead of myself, let us back up to the very beginning: once upon a time there was a man named Democritus. . .

Around the year 400 B.C., Greekphilosopher Democritus had the "crazy" idea that "all matter is made of tiny particles" (EncyclopaediaBritannica). In the years to come, many, including the well-known Plato and Dimitri Mendeleev (Father of the Periodic Table of elements), did not believe in that "crazy" idea. Despite the disagreements, the theory was completed by British chemist John Dalton. After subsequently publishing his Four Atomic Postulates on the matter and more experimentation, the finalized theory was then accepted and scientifically proven (Encyclopaedia Britannica). These teeny-tiny particles are what make up every single thing on earth; visible and invisible matter, plants, animals, food, your house, your car, this paper – everything! A crazybut true thought, right?! And their size is an even more amazingthing. More than five hundred thousand atoms make up the thickness of this "thin" sheet of paper (EncyclopaediaBritannica)! This extremely miniscule sized particle plays the biggest role in life and non-life by simply making it up and causing it to function accordingly. The atoms that make up our trillions of cells and other cellular organisms spurthe work which they perform. Without the work of our cells, we would cease to live; without atoms, our cells would not exist. That is a ton of responsibility on one little thing! Their existence is immeasurably paramount and the work that they do makes them so believable, as Dimitri Mendeleev later realized. From this we can draw a parallel with God. Robert McMinn said it best. He said: "[i]ust as the existence of invisible atoms can be proved by their effects on 2022-sr-hi-2nd-the-fingerprints-of-the-universe-annemarie.pdf

what is visible, so can the existence of an invisible God be proved by the characteristics of the visible universe" (McMinn). What, then, are the effects of God on the universe? One of the most obvious is the order of it all – the perfect balance. Lookat the balance of the atom – its charged sub-particles protons and electrons balance out so that their chargescancel and neutrality is achieved (Wile 71). Imagine seeing a fence with a long board laid crosswiseon the top and levelly balanced. You would automatically know that someonewould have placed it there and that it would not have been a random happening of nature. This is exactly the same with atoms; such utter perfection in its balance cannot be without design.

If one atom is the perfectly created unit of all matter and elements, then what is the perfectly created unit of life? Deoxyribonucleicacid - otherwise and better known as DNA. In relation to the size of an atom, DNAis a monstrosity in comparison although it is still invisible to the human eye. Justasthe atom is the building block of all the elements, DNAis the building block of life. Without it, cells would not be able to form or reproduce or anything for that matter! DNAis defined as "a molecule that contains the instructions an organism needs to develop, live and reproduce" (Rettner). After DNAwas first discovered in 1869 by Friedrich Miescher, a Swissphysiological chemist (Pray), several more studies and experiments were performed regarding the newly discovered biomolecule. In 1953, the well-known duo JamesWatson and Francis Crick discovered the double helical structure (Pray), solving many unanswered questions and paving the way for modern studies. Now, DNAis considered and accepted as one of the most "fundamental concepts of science" (Lennox 100). The role that DNA plays in our day to day lives is so considerable that to think about it can be overwhelming. Our DNA replicates to make and replace cells, it forms into chromosomes which define and decide every one of our traits, it codes for ribonucleic acid (RNA)and protein formation which then overseesall of our daily cellular functions. DNA is the commander, strategist and overseer of all the work our bodies do: circulation, respiration, immunity, digestion, transportation, reproduction, movement, stability, balance, sense, control and 2022-sr-hi-2nd-the-fingerprints-of-the-universe-annemarie.pdf

response. This is the work of trillions of cells, all following the orders of their individual DNA. Now that is a lot of DNA! In each specific cellular DNA, it is estimated to have around three billion bases (Rettner)! Each of the four nitrogenous basespair up to only one other base (adenine to thymine and cytosine to guanine) - and after vast combinations of those patterns, "words" are created which command the rest of human functions. Four simple letters decide that much! This is very similar to a typical computer's binary code. All of the functions of a computer rely on the sequenceof zeros and ones. Think about the knowledge a computer holds; it seems to hold an infinite amount of data! But guesswhat? A single strand of a human's DNAholds much more information than even that! How many minds did it take to invent a computer? Thousands. Scientistsoften say that nothing created DNA; well, if it is comparable to a computer, then why not compare its manufacturers? The founder of Microsoft Bill Gatessaid, "DNA is like a computer program, but far, far more advanced than any software we've ever created" (Lennox 174). "Such processors and programs, on the basis of all we know from computer science, cannot be explained, even in principle, without the involvement of a mind" (Lennox174). For something as complex as DNA to spontaneously come out of nothing, or to "run into" other molecules to eventually form after millions of years is a naïve and silly idea. Someoneor something must have initially formed or created DNA.A living organism could not have done it becausethey already require DNA to live and it would be impossible for a non-living object. Only a Supreme Being could have fashioned something so complex and ordered. "When looking at the DNAstructure within the human body, we cannot escape the presence of intelligent (incredibly intelligent) design" (EveryStudent.com). The Designer knew what He was doing, for He created the most perfect macromolecule necessaryfor life. There was no chance in the orderliness of its creation. It all goesaccording to a plan – a divine plan.

If there is a plan, then there must be a Planner – basiclogic supports that. If there is a program, there is a programmer, if there is movement, then there is a mover, and so on. Scienceknows that there is order in the universe, for it talks of "physical, chemical, biological laws; and every one of these laws is 2022-sr-hi-2nd-the-fingerprints-of-the-universe-annemarie.pdf

a formula which expresses the constant, uniform order and regularity of objects and processes in the world" (Glenn 25). The order is so apparent that it is often taken for granted. The scientific word for the entire universe is "macrocosm," deriving from the ancient Greekword cosmoswhich means wellordered. Coincidence? No, plan. The plan of regularity is clear when studying atoms and DNA. Order concludes a lot. It decides the code of DNA sequencing which then oversees every function of cells and organisms. Wherever there is an A, there is a T, and wherever there is a G, there is a C- such computation is beyond chance. Information specialist Perry Marshall said regarding this: "[t]here has never existed a . . . program that wasn't designed . . . [whether it is] a code, or a program, or a message given through a language, there is always an intelligent mind behind it" (EveryStudent.com). The "intelligence" goesbeyond science, it explains what science cannot. "Science offers a set of powerful tools for answering what' and how' questions about the natural world, but it does not have the tools to answer the big 'why' questions. . ." (Sethupathy). Nobel Prize winner Erwin Schrödinger, famous for his research and discoveries in physics, said that science "gives a lot of factual information ... but ... it cannot tell us a word about physical pain and physical delight, knows nothing of beautiful and ugly, good or bad, God and eternity" (Schaefer8). Sciencetends to explain everything in terms of physics, mathematics, biology and other such branches of science, but it cannot explain the mind, truth, pride, humility and how the mind can decipher and discern such feelings. Several discussions and debates have included the "scientific explanation" of feelings as above, but it comes acrossmore or less, like the explanation of an animal's instincts and behaviors. However, animals do not feel pride or quilt or anything along those lines. This shows that the human mind and its feelings are something more special; there is something else that makes us unique. Has science explained it? No. Is it natural? Yes. Is it supernatural? Yes. This mix of supernatural and natural is what makes us so unique. We were made out of the dust of the earth, but God breathed the life into us (Genesis). Science is all-natural, which is why natural explanations still changetoday, "that's just how sciencemoves: one tiny, shuffling footstep at a

time" (Harris). Science's studies and research have uncovered worlds of discoveries and wonders. We can look through a telescope into the universe beyond our earth or look through a microscope to see the world that goeson unseen. Often it is these "unseen" things that teach us so much. Thesewonders of the world are heroes in disguise which tell us so much about Creation and our Creator. They serve as blueprints, making copies of the perfection of creation (and Creator) and fulfilling the order for which it was created.

We have learned so much from these amazing molecules, even more than what science has related, and it goes to show you that the universe is not simply a "freak of nature", but a mapped-out system of intelligence and order. St. Paul summarized this two thousand years ago in his epistle to the Romans: "for the invisible things of Him, from the creation of the world, are clearly seen, being understood by the things that are made" (Romans 1, 20).

Works Cited

The Bible (Douay Rheims Version)

- "Discovery of Atoms and the Instruments Used to SeeThem." EncyclopaediaBritannica.

 https://www.britannica.com/video/187021/discovery-atoms-instruments-scientists-particles
- Glenn, Rt. Rev. Msgr. Paul J. Apologetics: A Philosophic Defense and Explanation of the Catholic Religion.

 Rockford, Illinois: Tan Books and Publishers, Inc., 1980.
- Harris, Lissa. "The Ongoing Mystery of How DNAAffects Intelligence." OneZero,Mar. 4, 2019. https://onezero.medium.com/the-ongoing-mystery-of-how-dna-affects-intelligence-722efb1a7918>
- "Is God Real?". EveryStudent.com.

 https://www.everystudent.com/wires/is-god-real.html
- Lennox, John C. SevenDays That Divide the World: The Beginning According to Genesisand Science.

 Michigan: Zondervan, 2011.
- McMinn, Robert. "Atoms and the Existenceof God." Tomorrow's World, July 13, 2010

 https://www.tomorrowsworld.org/commentary/atoms-and-the-existence-of-god
- Pray, Leslie A. "Discovery of DNAStructure and Function: Watson and Crick." Nature Education

 https://www.nature.com/scitable/topicpage/discovery-of-dna-structure-and-function-watson-397/#>
- Rettner, Rachel. "What Is DNA?" LiveScience, Mar. 25, 2021. https://www.livescience.com/37247-dna.html
- 2022-sr-hi-2nd-the-fingerprints-of-the-universe-annemarie.pdf

"Richard Dawkins vs John Lennox | Has Science Buried God? Debate." YouTube, uploaded by Fixed Point Foundation, June 1, 2017.

<https://www.youtube.come/watch?v=OVEuQgMglw>

Schaefer, Henry F. Scienceand Christianity: Conflict or Coherence?.2nd ed. Athens, Georgia: The University of Georgia, Apr., 2016.

Sethupathy, Praveen. "Am I More Than My Genes? Faith, Identity, and DNA." The Veritas Forum.

Dec. 2, 2019.

<http://www.veritas.org/faith-identity-dna/>

Wile, Dr. JayL. Discovery Design With Chemistry. Muncie, Indiana: Berean Builders, 2015.