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More Than Meets The Eye: Design in Disguise

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<p style="text-align:center">More Than Meets The Eye: Design in Disguise</p>

There is a simple observation that any person can make that carries with it great philosophical weight. The observation is apparent to anyone capable of making and it is simply that intelligent life exists. This statement is so powerful, that saying otherwise only serves as a self-refutation of the statement, since intelligent life is required to posit any kind of counter-statement in the first place. From this simple observation, stems the Anthropic Principle. The Anthropic Principle, which posits that a unique ability of humans to self-report on our observations of the world around us reflects the true nature of the universe, is a claim that rests primarily on the assumption that this ability is infallible. A secondary consequence of the Anthropic Principle is the implication that this infallible ability could not have arisen randomly and thus is an indicator of an intelligent designer. However, as observation selection biases will show, our self-reports are not always true and therefore the entire assumption that the Anthropic Principle hinges on is false, thus rendering it unusable in support of an intelligent design.

The Anthropic Principle (AP) was only recently developed in terms of its formalized definition, in addition to with its implications and adoption within the scientific community. To be clear, the statement that intelligent life exists is not the equivalency of the AP. In fact before we can even begin to examine the hidden design argument within the AP, we must first shift through a number of ambiguous definitions of the AP and

settle on the definition that is most pertinent to our argument. As of this writing, there are four main variations of the AP. They are the Weak, Participatory, Strong, and Final. We will begin the selection process with the Weak Anthropic Principle (WAP). The WAP essentially states that any physical or cosmological constants that humanity has observed up to this point in time, is a reflection of the fact that the universe is old enough for sites to exist that have evolved intelligent carbon-based life. This is not a very exciting or implicative statement and reveals why the WAP is appropriately called weak. The fact that humanity is able to posit such a statement, or really any statement for that matter regardless if it is deemed intelligible by logical standards, already shows that intelligent life has arisen. The WAP finds it justification in simply being able to be posited. Since it requires no validation outside of itself, it is simply a truism and since truisms are not arguments, the WAP cannot be countered and cannot be considered philosophically.

The Strong Anthropic Principle (SAP) is the next variation of the AP to be examined. It states that the universe *must* have particular properties that allow for life to develop within it at some point in its history. Unlike the former principle, the SAP does have some philosophical implications, as there is a key word in its articulation. The key word is *must*, because it forces us to ask the question, why must the universe have the properties that are now observable and reportable to us? Could the universe not have just as easily existed without life? A typical answer would be to say no, because humanity is already in existence and therefore evidence of it having to come to be this way is begging the question. But the SAP is not of great concern to us due to the fact that only life, and not intelligent life, is the requirement for it to be satisfied. For example,

if scientists could construct a self-contained mini-universe, and replicate the conditions necessary for the emergence of a single celled organism, or anything else that could meet the biological criteria for life, that would be enough to satisfy the SAP and make it true. This mini-universe would not have to give rise to intelligent life, only life in its most watered down form. The SAP fails to place enough emphasis on the importance intelligent life, because the greatest philosophical power, including the hidden design within the more general AP, can only be drawn out in a formation of the AP that includes intelligent life; therefore it is not worth considering any further.

The Final Anthropic Principle (FAP) is last variation of the AP that does not prove to be useful. It states that once intelligent information processing arises in the universe, it will never die out and will continue to remain for the duration of the universe's existence. This statement is also vague enough to have its requirements filled very easily. For example, any artifact that denotes some kind of information processing ability, most likely in the form of symbol manipulation, would be enough to say that intelligent information has not died out. The FAP is also inappropriate for more detailed discussion as it is more of a speculative state of the AP and is very optimistic. It rests upon the speculation that our human intelligence will somehow be encompassed in a way that goes beyond the mortality that is inherent with organic construction, either in the form of Artificial Intelligence, or some other kind of computing technology. But assuming this kind of technological marvel is even possible, the transference of intelligence out of a human body is in no way a full proof step in fulfilling the FAP. If humanity is somehow able to preserve its intellectual faculties before our inevitable extinction, the preservation of the new intellectual medium is not assured. Imagine

traveling the stars in robotic bodies only to be confronted with a plethora of new problems ranging from meteoroids, radiation, cosmic winds, lack of fuel supplies, etc. The critiques could continue for a while, but we will leave the FAP as no more than utopian propaganda and move onto the version of the AP that is the most pertinent to our argument and the one that contains the hidden design argument, the Participatory Anthropic Principle (PAP).

Easily stated, but highly convoluted, the PAP states "observers are necessary to bring the universe into being (Harris, p. 1)." The PAP was influenced greatly by the Copenhagen interpretation of quantum theory, which was initiated by physicist Niels Bohr, a founding father of the scientific field of quantum mechanics. His efforts and findings can be summarized in the following passage, "observation and measurement thus become prerequisites to the actuality of all determinate properties of quantum entities, without which they do not exist in reality but are merely potential" (Harris, pp. 6-7). In other words, observation is what is necessary to take an event from the realm of potential into the physically observable universe. To fully appreciate the viewpoint of quantum mechanics, a digression into epistemology and scientific history is required, starting with a now outdated view of a mechanistic universe.

Errol Harris in his book, *Cosmos and Anthropos: A Philosophical Interpretation of the Anthropic Cosmological Principle*, points out that the main assumption of science up until the late 20th century was that "observation [is] something that impinges on the physical world, as it were, from the outside, without interfering with it; and of the world itself a vast automation that runs according to its own intrinsic laws without relation to observers" (Harris, p. 2). That is, the universe was something that was believed to run

by a set of natural laws that functioned in a very mechanistic way, almost like a giant intricate and complex machine. This viewpoint of the universe was held throughout much of history by great historical figures like Rene Descartes, who gave voice to the philosophical problem of the mind body separation, and Sir Isaac Newton, who was able to conjure the mathematics necessary to provide some of the scientific backings for the mechanistic view of the universe. In fact his contribution was so significant this mechanistic viewpoint is often referred to as the Newtonian worldview. A consequence of the formalization of the mechanistic worldview via science, was the articulation of philosophical arguments that dealt with issues of designs, also known as teleological arguments.

In relation to the overall thesis, it is useful to examine how traditional design arguments are constructed and what kind of main arguments they employ in order to see why the PAP is actually a design argument in disguise. Clarification must be made here since the term design can have multiple meanings and design arguments are thus naturally ambiguous and also philosophically tricky. Design on the surface level can be defined as the identification of any discernable or recognizable arrangement of parts that usually reveals itself in a pattern. For example, we can speak of the design of a snowflake, but closer examination will reveal highly structured and patterned shapes within the makeup of any particular snowflake. However design in a philosophical sense usually references teleological designs, ones that have an end purpose or goal. For example, a boat is designed to cross a river or float down stream, much like a watch is designed to tell the time. The main point of contention with teleological design arguments is that they typically imply a designer, otherwise any design viewed would be

completely arbitrary, since designed objects have to serve a purpose for those who designed them.

Editor Louis Pojman, in his book, "Philosophy of Religion: An Anthology," includes the most prominent design arguments, including the author of the most recognizable argument in favor of intelligent design, William Paley. Paley's argument is an analogy that revolves around a watch and the implication of a watchmaker that it brings. In short, a person walking down the beach discovers upon his journey a watch lying in the sand. Upon closer examination, this person quickly recognizes a design, as evidenced by the interactions of watch's mechanical parts. Corresponding with seeing a watch is the realization that this particular watch could not have simply come to be on its own. The design is too complex to have come to be without some kind of intelligent designer, in this analogy a watchmaker, inputting his knowledge into the creation process.

To quote Paley directly, "we perceive that its [the watch] several parts are framed and put together for a purpose (Pojman, p. 29)." This is the main point of Paley's argument. We can concede that upon examination of the watch, a person will see various gears, motors, and springs. However, what is doubtful is to whether or not a layperson recognizes the mechanistic process of the watch part itself, at least not in the way that a specially trained watch repairperson does. What a person really sees when picking up the watch is the teleological end of the watch that of telling time. Figuring out that this particular thing on the beach is a watch requires that a person understands the purpose first and then the design of a watch. Paley himself subtly illustrates this point when he states that "this mechanism being observed (it requires indeed an examination

of the instrument, and perhaps some previous knowledge of the subject, to perceive is and understand it)" (Pojman, p. 30). This summarizes a primary critique about design arguments in general; that the recognition of a purpose must come before the recognition of a design.

One question that easily arises from Paley's analogy is what if the watch that is found on the beach is broken and not functioning properly? This is something Paley himself addresses with the argument that "it is not necessary that a machine be perfect, in order to show with what design it was made; still less necessary, where the only question is, whether it were made with any design at all" (Pojman, p.30). What he is saying is that if the watch that a person happened to come upon was not actually working properly, chances are that this person would still recognize it as a watch, and thus still be able to make out the inference of a designer. While it is true that a particular machine's functioning does not affect its design recognition in an observer, it does not do anything to subvert the fact that recognition of a purpose needs to come before recognition of design. For example, if we happen to come across a vending machine, and happen to not receive our desired thirst-quenching beverage, we still recognize that it is a vending machine, despite the machine not functioning with it's intended design to fulfill its pre-determined purpose. Whether a designed mechanism works or not has no affect on the recognition of a purpose.

We come to recognize a thing's purpose, and therefore its design, through previous experience with a representation of the purpose that any designed thing tries to emulate. Simply put, we can tell that this shiny thing lying in the sand is a watch as opposed to a vending machine, because we have experienced it before. The

recognition of a watch as something designed necessitates that the observer

understands the concept that is being captured within the design, in this particular case

time. The watch not only derives its observed recognition as a designed object from the

physical components that comprise it, but also from the observer's recognition of the

object's emulation of a teleological concept. "He knows enough for his argument: he

knows the utility of the end: he knows the subserviency and adaptation of the means to

an end" (Pojman, p. 31). Paley is saying here what has already been said, that the

recognition of the purpose, or in his words the utility of the end, is necessary to

recognize design and imply a designer, but here is where the analogy starts to fall apart.

    If the teleological purpose of a thing cannot be recognized, then neither can the

design, and the weak inference of a designer cannot be made either. Later on in the

watchmaker analogy when Paley's line of logic extends from the examination of

watches implying watchmakers to actual physical humans beings implying god (or more

generally an intelligent designer), he fails to recognize that the purpose of a human

being is not clearly defined. The purpose of a watch and the accompanying concept of

time are agreed upon by the majority of people throughout the world. This is useful to

our thesis since it shows that people posses the ability to come to a consensus, and

even more so now that the scientific methodology of knowledge verification has been

refined, so that a consensus is not solely based on whatever the popular group

consensus of the time may be. But while the purpose of time can be agreed upon and

scientifically verified to a degree, the purpose of a human life cannot be. This is

because the purpose of a human life is self-assigned by a human. The teleological

purpose of a human does not exist in nature, or in any other realm for that matter, and

as such the purpose of a human life has always been dynamically shifting throughout the course of history and is prone to cultural beliefs and biases. This is important because if the purpose of a human being cannot be recognized, then the inference of a designer has no solid argumentative ground upon which to stand.

The watchmaker analogy goes to show that analogies are commonly used in design arguments, but as philosopher David Hume address in his "Critique of the Design Argument," analogies are weak if not completely useless tools in support of design arguments. This is because analogies are better suited for clarification rather than explanation. By definition, an analogy is a similarity between like features of two things, on which a comparison may be based. This is how analogies draw their great literary strength in forms such as poetry and prose, because one familiar thing may be used in conjecture via an analogy to explain another perhaps less familiar thing (it could not be completely unfamiliar otherwise the analogy could not proceed). In other words, the effectiveness of an analogy is completely based of the degree of similarity between two objects. This is where an analogy gets its greatest strength but also its greatest weakness which Hume highlights, "whenever you depart, in the least, from the similarity of the cases, you diminish proportionably the evidence" (Pojman, p. 32). In other words, the more dissimilar two objects are, the less sense it makes for the two of them to be used in an analogy for explanatory purposes.

To elaborate further on the matter, take the concept of blood circulation. It's fine to infer via analogy that the blood flow in a human being named Dave is strikingly similar, if not the same, in another human being named Ramona. This is due to the degree of the similarity between Dave and Ramona, because they are both humans. If

we continue to take the analogy's starting point of Dave's blood, but instead analogize it to the blood flow of a furry feline named Karloff, we already see that the analogy begins to lose a bit of its strength. We could still make a weak inference between the blood blow of Dave and the blood flow of Karloff, but because Dave is a human being and Karloff is a cat, the dissimilarity causes the analogy to degrade, even if only slightly. If we were to stretch the analogy further and analogize the blood flow of Dave, to a tree, the dissimilarity between the two items of comparison would now be too great to render any kind of causal inference via analogy as utterly non-explanatory. What happens is just as Hume says, "the dissimilitude is so striking that the utmost you can here pretend to is a guess, a conjecture, a presumption concerning a similar cause" (Pojman, p. 32). A guess or conjecture is certainly not something that can be put towards an argument of an intelligent designer.

In addition to critiquing the functionality of analogies, Hume also explained the a posteriori knowledge base, or knowledge that is gained after an experience has taken place, "when two species of objects have always been observed to be conjoined together, I can infer, by custom, the existence of one wherever I see the existence of the other; and this I call an argument from experience" (Pojman, p. 35). A posteriori examples include how we come to know that smoke indicates fire, thunder follows lighting, etc. What the watchmaker analogy also does is erroneously take the a posteriori formula and says that human intelligence accompanies a designer.

Paley's analogy works fine in implying the presence of a watchmaker with watches, not only because it utilizes things with which almost anybody has had experience, but because both of those things that are being used occur in almost the

exact same time and place. The two things here are the watchmaker and the watcher and at the very first moment of preliminary creation, the watch and the watchmaker are metaphysically inseparable. They are closely tied together in both time and space during the designing process and are only separated after the watch is complete. So the time that passes in between the completion of a watch and its subsequent discovery by a wandering beach traveler does not matter in a possible refutation of the a priori knowledge base.

A posteriori knowledge claims not only rely on two things occurring closely in both space and time, but also on the observable nature of the two items being conjoined. For example we could physically see the process of a watch being built, but this is not a necessary condition because with the use our advanced intelligence, we could come to learn of the association of a watchmaker and watch through another medium other than sight, like a book, film, or a riveting lecture on the joys of watch making. Any of the above examples are simply recordings of a conjoining that still retains the possibility of actually occurring. The pertinent point is that for a posteriori knowledge claims to work, both things must be observed together and be capable of being observed. The problem occurs when the very thing that allows the conjoining to occur is the thing that is looking to be conjoined.

What's wrong with Paley's thinking is that intelligence and a designer of said intelligence can never be observed as conjoined because the intelligence that is supposed to be posited from the watchmaker analogy is an abstract concept, something that is incapable of being observed and therefore in capable of being conjoined and used in any line of a posteriori reasoning.

The designer in Paley's argument is primarily used as a reference to god, but in the interest of brevity and to avoid the repercussions from invoking such a term, we will restrict the investigation to the broader concept of an intelligent designer in general. Since an intelligent designer is an abstract concept, the a posteriori method cannot apply to it. If it were able to, the intelligent designer would have to be an observable thing, but it is an abstract concept and the essence of an abstract concept is simply that, abstractness, not existing in physical reality. This is because abstract concepts originate from general human intelligence. Thus what Paley's analogy is actually doing is attempting to conjoin human intelligence with the concept of an intelligent designer, which comes from the intelligence in the first place, so he is trying to conjoin human intelligence with itself! Certainly one cannot conjoin something with itself and call it sound a posteriori reasoning.

Hume goes on to critique two more portions of the watchmaker argument, that of intelligence, and the designer himself. "What peculiar privilege has this little agitation of the brain which we call 'thought,' that we must thus make it the model of our whole universe?" (Pojman, p. 34). Hume is addressing the treatment of the human intelligence (which is not only conscious but also self-reflective) as a phenomenon that is so extraordinary that it must reveal a key insight about the world in which we find ourselves. While it is all too easy to think that our intelligence reveals something about the universe, Hume thinks that "thought, design, intelligence, such as we discover in mean and other animals, is no more than one of the springs and principles of the universe, as well as heat or cold, attraction or repulsion, and a hundred other which fall under daily observation" (Pojman, p. 34). In other words, intelligence should not be

treated as the framework from which we view all the others elements of the universe from deriving, because intelligence itself is contained within the universe as a whole, just as arterial circulation, or gravity, or heat, is it is therefore ill-suited to be the basis for the foundation of the universe.

Design arguments often employ the strategy of taking a smaller part of a whole (in this case the entirety of physical reality) to be indicative of the whole. To use an analogy for clarification purposes, since Hume has already shown us that explanatory purposes are ill-conceived, having a blind man try to describe an elephant to a person by only holding the trunk would be a rather pointless task and no sane person would accept the definition of elephant based upon a description given by a blind man. The blind man only has access to one part of the whole, in this case the trunk of the elephant. Likewise, intelligence is an aspect of the universe that we as humans have access to, granted we do have others like opposable thumbs or immune systems but this one seems to grab our attention the most, that we use to explain the necessity of a designer for this universe. Intelligence is merely our trunk on the elephant of the universe.

The final pertinent point that Hume makes in his writing that is related to the watchmaker analogy's is his view on aided versus unaided creation. Paley's analogy sublimely posits that past a certain level of complexity, certain things we encounter in the world can only have come to be with the aid of an intervening hand. This is known as aided creation and can be easily applied to many human creations such as nuclear bombs, motorcycles, and movie soundtracks. Things that lie below this level complexity are thought of as being able to come into existence without any aid and are by-products

of random chance. But as Harris points out, "any process that is directed towards a final state or condition, such as the ontogenetic development of an embryo or the growth of a plant, may be regarded as teleological without presuming any conscious purpose or deliberate intent" (Harris, p. 163). In other words, a design need not indicate a designer. Hume too realizes this when he states "what surprise must we feel when we find him [the ship maker] a stupid mechanic who imitated others, and copied an art which, through a long succession of ages, after multiplied trials, mistakes, corrections, deliberations, and controversies had been gradually improving?" (Projam, p. 37). If this sounds familiar it is because it is extremely similar to Darwin's theory of natural selection, the nail in the coffin for design arguments.

Proponents of an intelligent designer often fail to understand that things that may seem complex and thus should be indicative of an intelligent designer are improved reproductions, rather than complete and total designs. A jumbo jet, watch, or even a human eye, is a product of a self-replicating process, although with regards to the jet and watch, the reproduction process may seem like aided creation. What happens is that each successive generation makes modifications upon the last one, resulting in designed that can be taken as having been complexly designed in one-shot. The word improvement is purposefully removed here since improvements can imply an ultimate end state, otherwise why would there be a need for improvements? Modifications take the form of improvements in human creations, we can easily say that in the last 200 years transcontinental transportation has improved from wooden sailing ships to jumbo jets, but improvements are often mistakenly labeled to non-human created phenomena. The reason for this is that the process of natural selection unfolds at a pace that is not

readily noticeable within an individual human's lifetime, so most people easily forget that the complex thing they see before them is the temporary champion of a random trail and error process that has decimated so many other variations of a supposedly intelligently designed complexity. Unlike humanity, nature does not often have the luxury of being able to record its previous achievements and most are hidden far behind the veil of history.

What if this trail and error process that can eventually lead to the facade of complex design, is actually itself something that is intelligently designed? This is what Richard Swinburne proposes in his work, "The Argument from Design." If the objection to design arguments, that complex things can and do arise from simple things, is itself a process that is intelligently designed, then the focus of design arguments could still hold. "The laws of nature are such as, under certain circumstances, to give rise to striking examples of spatial order similar to the machines which men make. Nature, that is, is a machine-making machine. In the 20th century men make not only machines, but machine-making machines. They may therefore naturally infer from nature which produces animals [and] plants, to a creator of nature similar to men who make machine-making machines" (Pojman, p. 40). This statement falls victim to the mistake of taking a portion as indicative of the whole. The fact that man is a machine-making machine (in terms of biological input and output functioning) is the exception rather than the rule. A quick cosmological overview of the universe will reveal to us that nature is in no way a machine-producing machine. Evidence visible to us in the forms of biological life is scarce at best. We are the exception to the Swinburne's supposed rule of nature. If

nature really was a machine producing machine, we would see far greater evidence of machines within the universe, not just ourselves.

Swinburne also states that, "the laws of their behavior can be set out by relatively simple formulate which men can understand and by means of which they can successfully predict the universe" (Pojman, p. 40). What he is referring to here is that things that come under our observation, the chemical and physical processes of circulation for example, are simple. This statement reeks of ignorance and fails to consider the fact that working order of the universe is anything but simple. It may be simple in the areas in which we can occupy and observe, but the most far down level of our understanding of the universe, quantum physics, says that the universe is fundamentally a chaotic place, not subject to predictability. Even things within our realm of existence, like the weather, are still fairly unpredictable, and if something is unpredictable, according to Swinburne's logic, it cannot really be reflective of the machine-producing machine nature of the universe.

The same laws that Swinburne is so fond of also reveals that humanity occupies an infinitesimal corner of the universe. Plus the laws that posit formulaic knowledge and predictability only work with things that can be included to be formulaic and predictability. But this works when you consider a reason that Swinburne may posit this view in order to support another viewpoint. "If creatures are going consciously to extend their control of the world, they will need to know how to do so. There will need to be some procedures which they can find out, such that if they follow those procedures, certain events will occur. This entails the existence of temporal order. There can only be such procedures if the world is orderly, and, I should add, there can only be such

procedures ascertainable by men if the order of the world is such as to be discernible by men" (Projam, p. 45).

In other words, the world has to be governed by laws of nature that are discernable by agents within nature, if agents are consciously to extend their control of it. This statement is true and could be used in support for design arguments if it were not for the fact the discernibly of the laws of nature are open to interpretation because the agents describing them (humans) impose order in an attempt to make sense of the chaotic nature of the universe.

Here a discussion of epistemology, or the study of knowledge, is an essential piece to our thesis, both to the formation of the PAP and to critiques of design arguments as well. To speak of it without addressing the background content that promoted its formation would be to take for granted assumptions that could potentially undermine its entire structure. While full of many sub-theories, epistemology can be split into two main camps that have two opposing viewpoints. The first holds that the world is faithfully represented by our mental representations and ordinary language. The second and opposing branch holds that the world is radically different from our perception of it. Examining which camp is valid will also reveal the validly of an author's statement since epistemology cannot be completely separated from design arguments and since the PAP is an ontological (design) claim, there is a sublime epistemological claim that comes along with it.

In his review of the historical development of epistemology, Roland Omnes notes that the epistemology first began within the first branch mentioned above and focused heavily on the notion of innateness. A popular viewpoint held by Socrates was the

notion that the soul was immortal; therefore all knowledge had already been acquired, and learning was simply a matter of recollecting knowledge that already lay innate within a person. In the Platonic dialogue of *Meno*, Socrates gets a slave boy to both understand and perform complex geometry exercises, without any previous formal instruction, thus lending supposed support to the innate view point of knowledge.

The innateness of knowledge viewpoint was advanced further in the 17th century by John Locke with the positing of empiricism. Empiricism holds that, "all ideas come either from the five senses or from reflective consciousness. It is the concrete objects perceived by our senses that are at the origin of ideas, that is, of the presence, inside us, of their faithful image" (Omnes, p. 66). Locke's viewpoint was also investigated by famous child specialist psychologist, Jean Piaget in his discovery of innate ideas within children. His findings however emphasize a different kind of knowledge, not semantic or fact based knowledge, but more procedural or muscle memory based knowledge. Certain reflexes are present in newborns like hand grasping, underwater breath holding, crying at the sound of other babies crying, etc. These innate abilities are in all human children, regardless of culture or geographic location. But this kind of innateness is not the kind that Socrates was addressing. Children do not have immediate access to language, and therefore do not have direct access to concept formation and exchange, the basis of semantic based knowledge.

It wasn't until recent developments in neuroscience, that the first base camp of knowledge was really shown to be incorrect. Vision is a process that was assumed to relay information directly, almost like a camera, except the eye is the lens, and the mind is the film (or to use a more modern analogy relevant to today's society, the LCD

screen). Recent findings indicate that vision works more by breaking down the external environment and sending different bunches of data to the brain where it can be reassembled. This leads into an observation that Omnes himself has made "our mental representations, even, if they originate from the world around us, are reconstructions. They are far from being simple or obvious. Their validity is most questionable when science takes us to unfamiliar surroundings, among electrons or the universe as a whole for example" (Omnes, p. 69). Since vision seems to be the support beam of mental representations (think about the commonly used term mind's eye), the significance of finding that the physical process is one that breaks down and then reconstructs leads us to believe that the same processes holds true for mental representations, for if vision is the key to building mental representations, it wouldn't follow that vision is a chunky process, while mental representation is not.

A final blow to the innate based epistemological viewpoint comes from the realm of quantum mechanics. A basic assumption in the field known as Pauli's principle rejects the classical thinking notion that two objects should always be distinguishable by some feature. "Two objects (two substances) should always be distinguishable by some feature in classical thinking. Quantum physics gave up this notion of inherence also in one of its most basic principles (Pauli's principle)" (Omnes, p. 76). Since various repeated experiments have shown this to be the case, the details of which are beyond the scope of this argument, this means that the external world and our internal mental representations cannot be equivalent. For if our knowledge of the world is to be derived from sensory experience, and the world contains instances where sensory experience cannot accurately distinguish differences, then what we see is not what we get and

there must be something more beyond the veil. Thus, the first epistemological viewpoint is rendered invalid.

This is important because the view of a mechanistic universe was also entwined with a view of innateness. Most historical design arguments were reflective of the assumption of a mechanistic universe, but notions like Darwinian natural selection could explain the existence of things that were supposedly were influenced teleologicaly, thus removing the designer aspect of arguments. However just because the notion of a mechanistic universe is not fully adopted by modern science, does not mean design arguments have disappeared entirely. With a new view of the universe comes a redefinition of the design argument.

This redefinition first begins in the realm of sense-data theories. Sense-data theories are a general collection of statements within Empiricism that declare all knowledge is derived from the senses. In other words, what a person perceives is reflective of the external natural world. But problems arise very quickly with the theories, a main critique being that "if it were true it could not be known, and if it is known it cannot be true" (Harris, p. 122). Harris is speaking of the philosophic problem on how we can report on our perceptions, or how the causal chain of turning physical objects into mental representations occurs. A person is not self-aware of how mental processes come to be, only that he or she has certain mental representations and that there are physical objects in the world that correspond to those representations. There is clearly a gap and any self-reporting on the casual chain is bound to be false.

Another problem that arises with sense-datum theories is a classical critique, but one that Harris uses as support for the PAP as design argument. The critique is that of

false perceptions. It should appear obvious that people can have many false perceptions of the world around them, either due to an altered state of consciousness, or a misinterpretation of something in the world. A person may think a snake is ready to strike, when really it is just a garden hose lying in the corner. Harris acknowledges this short-coming of sense-data theories but twists it around by positing that this weakness is actually a sign of a greater strength. "In perceiving we become aware of far more than we can possibly sense immediately in any single apprehension, and to the equally important problem of how what one can directly sense is related to what one thereby comes to know in the actual perception" (Harris, p. 124).

What he is saying in the above passage is that sensing and perceiving are not equivalent and if they are not equivalent, then knowledge cannot be directly related to sensation. Also we are aware, and therefore experiencing, of only a fraction of the total amount data the world can send to us at a single moment. When a person perceives something via sensory experience, there is an organizational process going on inside the mind. Past experiences combine with mental representations to provide a more complete picture of the current situation than. The mind adds something extra to the sensory data to make perception possible. "Knowledge is organized experience, and that primitive sentience is below the level of organization essential to cognition, without which there can be no perception. All perception is knowledge and none is mere sensation; it is the awareness that a recognizable object, however simple, is being sensed-that some identifiable object is present to the senses" (Harris, p. 127). In perceiving the presence of a cat, a person is also aware of that perception. This organizational structure that the mind employs in order to fully generate something that

can be perceived can also be found within the natural structure of the universe and it in is the comparison between the organizational principle of mind and universe that the hidden design argument reveals itself.

"The subject is nothing less than the universal principle of wholeness that has been immanent throughout the process of nature, and is intrinsic to the organic unity now come to consciousness through the sentience of the organism" (Harris, p. 131). Harris is saying a lot in the above passage, to begin, the term organic unity is used. From a plainly descriptive point, organic unity can simply mean that all living organic things are united on some base level, most likely at the chemicals within DNA. A step further would be to say that all organic entities are united via a shared elemental composition that is found throughout the entire universe. The statement draws this conclusion based upon the fact that elements with life can also be found within non-organic things like stars and planets.

But as Harris also points out, "no whole can be complete unless brought to consciousness, the universal principle of structure comes to self-awareness in the consciousness of a cognizant subject, through the natural process that issues in human experience of a perceived world" (Harris, p. 132). What he is saying is that the concept of organic unity, the basis for the wholeness of the universe, is only possible when there is some kind of conscious agent that can perceive this unity. Thus the universe is whole only when through its own organizing intrinsic organizing principle has it given rise to a being (presumably humans) that can then in turn use the same organizing principle endowed by the universe, to organize the organizing principle.

This statement is precisely a kind of teleological design the Harris attempts to refute earlier in his book and it also echoes the PAP. Having the universe organize itself via a conscious agent's perception of this organizing principle, in order to be a whole is undeniably a goal oriented process. This kind of design doesn't require the need for an intelligent designer, since the conscious agents are contained within the universe itself. We don't reside outside of the universe and aren't looking outside in. We are inside looking around. As the astronomer Carl Sagan says, "we are a way for the universe to experience itself.

The PAP works by first listing off a multitude of reasons for why the presence of life in the universe is a highly improbable occurrence, but obviously it is not impossibility, because otherwise nothing could be said about anything, since there would be no one around to even be able to begin to formulate such a statement. While the universe does seem to display a slight hostility to the presence of life within it, that does not mean that the improbable fine-tuned character of the universe should be taken as empirical evidence of either a design, purpose, or deliberate intent. It has already been shown that designs can be the result of chance and do not have to come about only by necessity or with assistance from some other intervening agent.

A purpose is really a conjecture between two concretely observable events and has to have some kind of benefit from its formation. The question could be asked then is the emergence of life beneficial in anyway to the universe? The answers to this thought experiment cannot begin to be examined until one considers that even by asking it, we are implying that the universe has some kind of agency, which touches upon the final implication of the fine-tuned character of the universe, deliberate intent.

Of course deliberate intent is coincident with intelligence and is therefore inseparable from it as well but serves to show us how the PAP is a design argument in disguise. The PAP implicitly states that improbability of life being present anywhere within the universe should indicate that life itself has inherent value. With specific regards to what that value is and how we should act in its presence is unknown and frankly irrelevant. However a further aspect of the hidden design argument of the PAP is revealed when one considers that when anything is deemed valuable, an axiological judgment is taking place. Agents that possess the ability to arbitrarily label something as valuable can only do this kind of judgment process. In this case that value labeling ability is a consequence of the possession of intelligence, but the capacity of intelligence itself is not inherently valuable. It is not valuable to be able to say what is valuable because what we deem to be valuable does not have any inherent essence otherwise it would not need to be labeled as such. The value labeling ability that stems from intelligence is better defined as practical in that it serves no other function than to identify what is in our best interests and will suit our needs. But because what is in our best interests or what will suit or needs will not is not static, there is no inherentness to whatever that particular practical need may be at the time. Therefore the claim that life is in someway valuable and thereby indicative of an intelligent designer via design, purpose, or deliberate intent does not hold philosophical weight.

While it is true that at this point in time science cannot explain the beginning of the universe, for scientific inquiry relies on precedent events to fully explain something, it does not make sense to say that if no scientific explanation can provide a causal account of the beginning of the universe, then the explanation must be personal in

nature and framed in terms of the intentional action of a rational, supernatural agent. This is because of the notion that if something occurs that is not explained, it is more likely that what occurs will be simple rather than complex, does not hold. The reason is that when one appeals to an intelligent designer via the PAP, certain expectations about the universe follow from that appeal: the universe displays order, is comprehensible, and favors the existence of beings that can comprehend it, which is already presumed within the PAP itself. The favoring of beings portion is what the various versions of the Anthropic Principal is all about and has already been addressed, so the key here really lies in the comprehensibility assumption. At our current point we have a fairly detailed explanation of the workings of the universe, not complete, but impressive nonetheless. So if we can understand and explain the complex, then we should certainly be more than capable of comprehending the simple. This defeats the position of design supporters who say that the ultra-simplistic nature of an intelligent designer excludes it from explanation. It simply does not make sense to say that we cannot explain the complex but not the simple, from which the complex is supposed to originate.

The final point of consideration in rejecting any and all teleological implications from the PAP derives from the nature of observation itself. The kind of observation essential to both science and philosophy cannot simply be equated with physiological vision, despite the fact that vision is the primary means in which observation can take place. Although other senses like hearing do contribute to the overall observational process, they do so to a lesser degree and aren't of primary concern. This because observation is really a two-part combination of both the physical process of seeing and the mental process of interpretation, not simply seeing alone. It is the ladder part of this

particular combination that is of greater consequence to our thesis, but it should not be addressed without first elaborating further on sight itself.

Sight itself is actually a narrowly limited physical and involuntary observational apparatus. Barring any physical blockage or damage of eyesight, it is safe to say that no one can consciously control the photochemical excitation process that occurs with the retinas when they are hit by photons bouncing off an object like an x-ray film. So one would be correct in saying that when two perfectly normally functioning human beings see a cancerous x-ray film via sight, they both are actually seeing the same thing, in the sense that the electric signals that are transmitted to each individual's brains are the same. The question now arises as to how either of the two people can tell that the x-ray film they are seeing is also indicative of the presence of cancer? Now if we were to learn that one of these individual's were actually a trained radiologist, then it would be all too easy to simply reference to his or her training as the reasoning for the ability to observe the cancer on the film, but since we have already established that the two people are seeing the same thing based strictly off of sensory input, we have to conclude that the differences in observation between the two people occurs at another level. That is the level of interpretation.

The other component of observation, interpretation, is more of a mental process than a physical one because it invokes mental apparatuses to impose meaning onto the physical data that is collected from seeing, mainly concepts and memories of past experiences. However it must be acknowledged that these mental apparatuses do indeed have a symbiotic relationship with physical inputs. Defined rather simply, a concept can be taken to be a symbolic representation that resides within the mental

realm. If viewed this way it is easy to see how a concept cannot even begin to take on symbolic qualities without first having a connection to a physical world in which there are things that are capable of being represented. So because the primarily mental construct of interpretation is somewhat dependent on physical inputs, it can therefore be subjected to fluctuations in physical states.

For example, if the physical sensory input from sight is alerted before interpretation can take place, then the subsequent interpretation is highly subject to error. An easy example is the ever dreaded "beer goggle" phenomena present throughout the country's many universities and bars. A simple chemical ingestion of alcohol can alter physical sight as to render decisions, which are easily said to be a consequence of interpretation, to be of a regrettable nature. What this seemingly trivial occurrence goes to show that is that the state of an observer can affect the way in which observation takes place.

The importance of the state an observer is not simply limited to the time in which a particular observation is taking place. A single occurrence of observation can have long lasting effects and consequences, depending on the intensity of the observers state, and subsequently influence further acts of observation. Since the physical state an observer is in will lead to concept formation, the basis of which is need for interpretation, observation cannot occur in isolation from conceptualization. Experiences from physical inputs color our conceptual formation, but in time our concepts turn around and color our experiences in such a way that they render the possibility of objective observation impossible. This is essentially an alteration of philosopher of science Norman Hanson's theory-ladeness of observation.

Evidence that observation is theory-laden and influenced by conceptual formation comes from research gathered by psychologist's studies into the phenomena known as the confirmation bias. Simply put, this bias is the strong tendency for humans to favor information, which confirms beliefs and avoids contradictory evidence and opinions. As a result, evidence is gathered from memory selectively and interpreted in a biased way. The confirmation bias is more strongly seen in emotionally significant issues and for established beliefs. So in science, hypothesizes are generally worked towards being true rather than being proven false.

Since observation involves both physical and mental components, Hanson's implications for the physical part deserve our initial attention, especially since much of data used in support of the PAP is not directly observable in our everyday experience. It has already been shown that human sight can easily become suspect at a moment's notice and is a limited capacity. Man's general understanding of this assertion is easily seen when the historical unfolding of technological development is taken into consideration. Devices like the telescope, microscope, fMRI, etc. have all increased man's observational capacity, but by increasing his ability to physically see, they have also increased the need to interpret and thus strengthened the conformational biases. These instruments are supposed to have gotten us closer to a more objective reality, but really all they have done is increased the amount of data available in need of interpretation. While there has been obvious utilitarian benefit to the development of these technologies, it has made the process of interpretation longer and more complex, but despite these advances there is no guarantee that they come closer to a true description of reality.

The measuring apparatuses run into the same problem that befuddles the direct line of sight observation of a human being. Whereas humans typically succumb to psychological errors, machines succumb to mechanical errors. A machine can be miscalibrated and thus skew the data collection before interpretation even begins. They fall victim to "machine beer goggles." This may seem obvious, but the consequence of this supports theory-ladeness in the fact that human observers are the ones who have to recalibrate the machines. The process itself presupposes a reference back to a concept of how the machine is supposed to work, mainly with regards to its level of precision.

For our purposes this desired level of precision is an extension of the process of referring back to a concept that is inherent within any act of observation. For example, a scale that is used for personal weight loss is acceptable within that particular sphere of operation, but insufficient in capturing the mass of atomic compositions. This level of precision is reflected in the determination of "good evidence," a process which itself is a kind of observation, and goes to show that any phenomena could be potentially be used as good evidence for any desired hypothesis. In an attempt to restrict anything from supporting anything and inflating the confirmation bias to galactic proportions, restrictions have to be made on acceptable kinds of evidence, but the nature of these restrictions have to be arbitrary, because how can we impose a kind of objective measurement on what we would be attempting to show being objective in the first place? Even Israel Scheffler, an opponent of theory-ladeness touches upon this, "accepting a hypothesis tends to restrict our view to certain of our categories, that is, to those which accord with the hypothesis itself" (p. 47, Boersema).

It must be noted that advocating the theory ladeness of observation is close to but not the same thing as advocating the philosophical view of idealism. The more important consequence of Hanson's point is the dismissal of the notion that the universe has any kind of knowable objective characteristic. Objectivity implies uniformity amongst conceptual formations and there would be no different interpretations if objectivity were accessible to then human experience. Since there are clearly differences in interpretations then the universe is either entirely without objectivity, or it is instilled with objectivity that is inaccessible and the kind of objectivity that is being debated here is actually something that is imposed on the universe by observers in an idealistic fashion. With the removal of objectivity also comes the removal of any kind of teleological implications, of which the PAP is a primary example.

The interpretation of any given observation is dependent upon the conceptual resources of the observer. In the case of the PAP, the conceptual resource in question is actually observation itself. All of the evidence gathered in favor of the PAP stems from a physical events in the real world that all point back to a conceptual resource of conceptual resources themselves. To try and form a conceptual resource within itself is not possible without access to objectivity, and since observation is necessary for conceptual formation in the first place, the whole starting premises falls apart, and thus the PAP fails to be nothing more than a design argument in disguise.