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# Searching for the intelligent designer: a laboratory experiment

Guy Owen DeClerq<sup>1</sup>, Frederick J. Falloon<sup>1</sup>, and Abraham Miller<sup>1</sup>

1 - Discovery of Life Institute, Seattle, Wasington, USA

### **INTRODUCTION**

f you were to come across this paper in the archives of the Ronald Reagan Presidential Library, you would not think it evolved from years and years of random lettering and formatting (see Borel 1913, Elmo et al. 2002). Rather, you would accurately assess that it was designed by intelligent beings. The concept of intelligent design (ID) similarly follows this sound, scientific logic. The theory of ID posits that the organisms we see today are so complex and so intricately formed that they could only have been designed by some intelligent being or agent, contrary to the basic tenets of evolution, which claims random chance is the sole progenitor of the diversity of life. For example, when you are presented with a clock, you correctly assume that all the pieces that comprise the clock—such as the gears, rods, the hour and minute hands, and even the wind-up dial-were designed and fit together by some intelligent being, rather than multiple, random arrangements of clock parts that, over a long period of time, finally fit together to make a functional watch (i.e., evolution). Similar analogies have also been formulated for scaffolding (Cairns-Smith 1986), water-clocks (Cicero 45 BC), fashionable handbags (Hasselbeck 2008), statues (Dembski 2004, Hasselbeck 2008) and mousetraps (Behe 1996).

Despite this sound theoretical basis, ID is still criticized by scientists, and not labeled as a "science" (see Boudry et al. 2010). The consequences of this mischaracterization are apparent: ID is still not taught alongside evolution in grade school curricula and only 45% of Americans currently believe that humans were created by some intelligent designer (IDer). However, the most damaging ramification of these unsubstantiated critiques of ID is its influence on a recent court case that has ambiguously concluded that "ID is not science" (Jones 2005, p. 64). Clearly, in order for ID to progress as a science, it must be regarded as such, at least in the minds of conservative, high-ranking court officials.

One of the main contentions that ID is not a science is that it cannot be tested empirically (Jones 2005), a belief that we consider erroneous for several reasons. First, the lack of empirical testing has not hindered the progress of other established and highly regarded sciences, such as philosophy and astrology. Second, the belief that ID cannot be empirically tested is rooted in the idea that the IDer is thought to be supernatural. If so, the IDer becomes unobservable-a situation that directly conflicts with the scientific method which requires observations of a natural world. However, there have not been any peer-reviewed published papers that have proven the identity of the supposed IDer. Therefore the assumption that the IDer is supernatural is baseless and should not be used by scientists as an argument to remove the study of ID from the realm of natural science. Third, the fact that there are currently no empirical studies on ID does not necessarily mean that they cannot ever exist. Rather, it reflects the oppression of ID studies by the elitist scientific community as well as the fact that prominent ID scientists have focused on developing a sound theoretical foundation for ID before empirical testing. Like all good sciences, we wish to base our experiments on theory, as opposed to other scientists, who would prefer to, say, toss marine iguanas into the sea before having good reason to do so (Darwin 1839).

Because of the lack of ID-based empirical studies as well as the obvious benefits that these experiments would have on the progress of ID, our laboratory has conducted the first experiment related to ID theory: we wished to identify the actual IDer. We believe this research goal will serve two purposes: 1) if the IDer is found to be natural, this will anchor ID firmly within the natural confines of science and 2) if the IDer is found, we will be able to ask him/her/it various questions, such as how did you design all these animals?, or why did you program us to die?, which will undoubtedly further the advancement of our science. Our starting research questions were simply: 1) Is the IDer natural or supernatural, and 2) if natural, from which group of animals is the IDer most likely to be? Our hypothesis is that the IDer is an organism that may or may not have supernatural powers.

One of the most cited arguments against the validity of evolution concerns the eye (Behe 1996, Wiker and Witt 2006). The human eye is an amazingly complex morphological feature that processes light into visual images interpretable by the brain. Because evidence of evolution requires the presence of intermediate forms, intermediate eye forms must exist. However, such intermediate forms are difficult to predict (i.e., what would their function be? To act as some kind of photoreceptor that senses changes in the direction and intensity of a light source?), and are likely to be maladaptive (i.e., compare the fitness of a wolf with fully developed eyes to a wolf with intermediate eyes). Therefore, the presence of a fully developed human eye is evidence of an IDer that created an eye in its fully functional state. Thus, in order to plausibly be an IDer, any entity, either natural or supernatural, must be able to build a fully functional eye. We tested the ability of several groups of animals, as well as several supernatural entities to create design a functional eye when given the appropriate materials.

#### **METHODS**

We acquired several eye models (from Anatomical Chart Company, Skokie, Illinois) and completely disassembled them. Before presenting the eye parts to the target animals and entities, we first tested that the parts could indeed be put back together to form the eye. However, since we were not explicitly testing our own abilities to be the IDer we cannot conclude that we are the IDer (plus, we had the instructions).

The eye parts were presented to seven animal groups (ordered here from most primitive to most advanced, evolutionarily):

- Bacteria A culture of *Escherichia coli* was grown in a giant petri dish (1 m diameter) on a TSA medium. A large petri dish was needed due to the large size of the eye model.
- Insecta The fruit fly (*Drosophila melanogaster*) was chosen as our experimental organism due to its close association with classic evolutionary studies. Eye parts were placed in a *Drosophila* incubator room containing 100 individuals of both white and red eyes, exhibiting harmonious Mendelian inheritance.
- Fish Eye parts were placed in a 180 L glass aquarium containing 5 adult largemouth bass (*Micropterus salmoides*) approximately 40 cm long.
- Herpetofauna Eye parts were presented to one large yellow anaconda (*Eunectes noteaus*) housed in a 24 m<sup>2</sup> terrarium at the Woodland Park Zoo in Seattle, WA.
- Birds The common raven (*Corvus corax*) was selected as the bird group representative because of their supposed intelligence, especially their cognitive abilities in solving complex string-pulling problems (Heinrich and Bugnyar 2007). Eye parts were presented to ravens in outdoor cages (6 m by 6 m by 10 m).
- Mammals The gorilla (Gorilla gorilla gorilla) was selected due to the assertion that they are one of the most closely related species to modern humans. We selected five gorillas from the Woodland Park Zoo.
- Humans We selected five humans (*Homo sapiens*) randomly from a phone book. They included: 1) an ophthalmologist, 2) a zookeeper at the Woodland Park Zoo, 3) a janitor at the Discovery of Life Institue, 4) a microbiologist studying *E. coli*, and 5) an evolutionary geneticist studying *D. melanogaster*. Names are withheld from this paper for fear of immense fame and spiritual demand, if, in fact, they are declared the IDer.

Eye parts were also placed in three "supernatural" places: haunted houses, graveyards, and churches. All locations were selected within the Seattle metropolitan area.

For every trial, we presented the raw materials of the eye to the organisms or entities, issued a verbal command ("Make an eye", or, for the gorillas, "ook ook ook eye") and then returned 24 hours later to assess the final eye construction. Five trials were done for each organism/entity. To quantify eye construction, we established a complexity score (CS). A zero indicated absolutely no movement of any of the parts. A negative 100 indicates complete destruction of the materials, while a positive 100 indicates a satisfactory, fully functioning eye. Points were deducted from the CS for either ingestion of or defecation on any of the eye parts.

### RESULTS

Figure 1 shows the results for every animal group and supernatural location.

#### Animal groups

- Bacteria The petri dish of *E. coli* eventually developed a fully functional eyeball that blinked, dilated when exposed to bright lights, and produced tears subsequent to an autoclave of the petri dish. From what we can discern, this eyeball was produced after thousands of generations of mutation and natural selection. However, since neither the initial culture of *E. coli* nor its ancestors moved any part of the eye model, this group received a CS of 0.
- Insecta Similar to the Bacteria, the fruit flies

were not able to move any part of the eye, and thus received a CS of 0. The F2 generation of flies did, however, produce a 1:2:1 ratio of red:pink:white eyes (or a 1000:2000:1000:1 ratio of red:pink:white:blue eyes if you include the eye model).

- Fish Most *M. salmoides* individuals ingested, but then promptly egested the eye parts. One individual ingested two eye parts sequentially. Examination of feces revealed that the two parts were assembled correctly, giving the largemouth bass an overall positive CS score.
- Herpetofauna For the majority of the time, the *E. notaeus* individual ignored the eye parts. After we sprinkled some calcium powder on the eye parts, the individual compressed and broke some of the eye parts. Because the refund policy of the Anatomical Chart Company precludes damaged items, we gave Herpetofauna a negative CS score.
- Birds Unfortunately, one of us (FJF) forgot to place a roof over the raven exclosure, allowing all of the ravens to fly away before they could attempt to assemble the eye. For now, the CS of *C. corax* is left at N/A.
- Mammals All gorillas actively handled and manipulated the eye parts. Two individuals used the





concave portion of the eye model as a cup to scoop water from a tank and into their mouths. Two other individuals placed portions of the eye over their actual eyes during periods of bright sunlight. One individual fully assembled the eye and placed a piece of banana inside. Upon closer examination, we observed that this banana became cooked, presumably from the concentration of sunlight by the lens of the model. Because the function performed by this particular eye model did not match the intended function (i.e., to see), only half credit was given to this individual.

• Humans – All individuals were able to satisfactorily construct the full eye model. Unlike the gorillas, no human used the eye model for a noneye-like function (We asked each individual what the function of the model was. They all correctly replied, "It's an eye", or some variant of that phrase.).

#### Supernatural groups

- Haunted houses Many parts of the eye in the haunted house were thrown asunder or askew, or sometimes asunder and askew (this house received our lowest complexity score of –100). Undoubtedly, this is the work of evil spirits that form ranks within the devil's minion and wish to affect the results of our study. Unfortunately for them, their efforts resulted in the lowest complexity score, thus proving that good spirits always overcome evil ones.
- Church In several churches, the eye model was fully assembled, or close to completion. We currently do not know how the eye parts got assembled. We can safely rule out actions by church attendees, however, because we placed a "Do Not Touch" sign on the eye parts, and the trustworthiness of church attendees is near-perfect.
- Cemetery When we returned to the cemeteries to collect the eye models, all parts of the eye were missing. Because we don't know if they were first assembled correctly and then vanished, or vanished without assembly, we decided to not enter any data for the cemetery.

#### **DISCUSSION**

From our empirical research, we are able to scientifically determine that the IDer is likely to come from the human animal group, as this was the only group to have successfully assembled the eye model. However, because eye parts left in the church were partly assembled, we cannot rule out the influence of religion, and that the IDer may be some sort of combination of humans and religion. Future studies on the identity of the IDer should concentrate on humans that are also religious. Our lab is now focusing our efforts in sampling priests, bishops and popes (N=2) in our enduring quest to find the intelligent designer.

Interestingly, the only two groups that gave negative complexity scores were Herpetofauna (which includes snakes) and haunted houses (i.e., devil's minions). This supports the previously established link between serpents and evil (Genesis 3:1).

The poor performance of gorillas on our complexity scale has some implications on the validity of evolution. The gorilla is thought to be one of human's closest evolutionary relatives, yet the CS of humans was much greater than that of gorillas. This suggests that humans may not be as closely related to primates as previously thought. One would expect that, being so closely related, gorillas and humans would be equally proficient in forming an eye (after all, both species have eyes). However, this was not the case, and, in fact, the CS score of gorillas were closer to that of the largemouth bass. When interpreted in an evolutionary context, this would erroneously suggest that gorillas and fish are closely related! Thus, our results add to the growing list of studies that have disproven evolution.

In this paper, we have conducted the first empirical experiment that tests the concepts and principles of ID. Furthermore, we provide evidence that the IDer might be of natural origin, thus dispelling the notion that ID deals only with the supernatural. With future, scientifically-based studies and the recognition of ID as a science, we are likely to make further progress on discovering the true identity of the IDer.

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