



for Evolutionary Misconceptions!

The Watchmaker Analogy & The Evolution of The Human Eye

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In this infographic, you will learn

- About the "watchmaker analogy" and why it is not a good argument against evolution
- How specialized organs like the eye can evolve

There is a story I have heard many times... about a man who was walking alone in a forest and saw a stone.

He wondered how the stone got there and thought...

"It's been there forever!"

"But what if I had found a watch on the ground? I wouldn't think that the watch had always been there."

After all, a watch is so sophisticated that it stops working if a single piece is out of place!



He concluded that the watch's creation was not the result of chance.



A Creator must have made the watch!

COLORED BOXES have definitions for underlined terms or phrases!

Watchmaker Analogy: The argument that only a Creator could design a highly complex or specialized thing.

This story is called the Watchmaker Analogy, and it is often applied to nature.

Every creature has remarkable adaptations and complex structures that might appear designed rather than formed by evolution.



One of these adaptations in humans is the eye.

Just like the watch, if you eliminate one piece, the whole thing stops working!

BUT HOW COULD SOMETHING LIKE THE EYE EVOLVE?

To understand the origins of the eye, we have to go back 550 million years

THE EVOLUTION OF THE EYE

Tiny, one-celled creatures had different genetic variations. One of these creature developed a new variation - an eyespot.



CHLAMYDOMONAS

is a type of algae that had an eyespot.

EYESPOT



The eyespot tells the creature if it is light or dark outside.

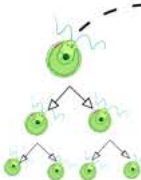
Why is that an advantage?

These creatures used a process called photosynthesis.

So, an eyespot helps the creature to find its food!



Photosynthesis: The use of energy from sunlight to make food



Because they could get more food, the creatures with an eyespot survived, and passed down their genes to their offspring.

Gene: A sequence of DNA that codes for a protein (which can lead to a trait such as an eyespot)

Natural Selection: Some genetic variations make an organism more likely to survive and reproduce.

Soon, all of the creatures had an eyespot! This process is called natural selection.

A PLANARIUM

is a type of flatworm with a curved eyespot.

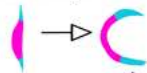


An ABALONE

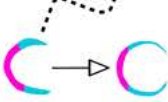
had this type of eye structure, a deep pit with a pinhole at the top.



Next, the eyespot curved to form a pit. The curve helps the creature to detect the direction of the light.



The pit continued to curl until there was only a little hole at the top.



WHAT HAPPENED NEXT?

The pit filled with fluid, and this increased light sensitivity.

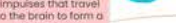
A transparent layer of cells covered the little hole (now known as the cornea) to protect the pit from the outside elements.

Then, a small structure called the lens developed behind the cornea and helped to focus the light onto the "eyespot." The eyespot is now known as the retina!

Cornea: A transparent covering that protects the eye and allows light to enter.

Lens: A transparent structure that focuses light on the retina.

Retina: The nerve layer in the back of the eye that senses light and triggers nerve impulses that travel to the brain to form a visual image.



As we have ~~seen~~ unlike the pocketwatch, the eye did not need a Creator because each evolutionary step in its development gave the organism an advantage.

THANKS FOR READING AND REMEMBER TO WATCH OUT FOR EVOLUTIONARY MISCONCEPTIONS!

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Path, deconstructed pocket watch, Chlamydomonas, Planaria, and Abalone images drawn by Alexis and Ellen.

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