Intentional design documented

Your Designed Body

Steve Laufmann and Howard Glicksman

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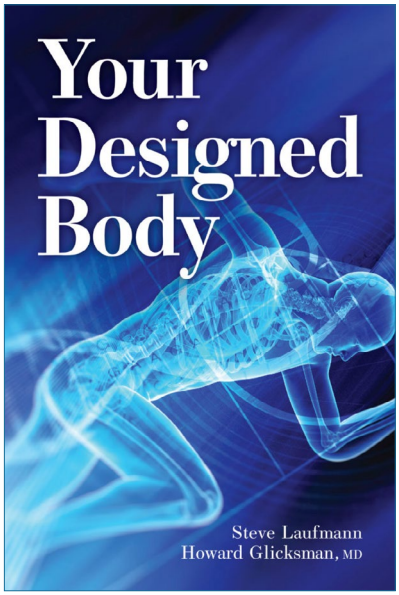

Jerry Bergman

Your Designed Body has two goals. The first half of the book is a survey of the human body's major systems that serve the specific purpose of maintaining a healthy body. This goal involves explaining human anatomy and physiology (A&P), then documenting the corresponding evidence for both design and irreducible complexity. Pages 51 to 260 are essentially an introduction to college anatomy and physiology, explained in a similar way to the coverage in high school A&P books, so that the average lay reader can follow the text. As such, it would be an excellent basic introductory A&P text for both high school and college students.

The second goal is to document that the human body is impressive evidence for intelligent design and to refute the common claims of 'poor design' and 'useless organs' that evolutionists use in an attempt to discredit teleology. The book also argues for intentional design and responds to the claim that all types of living beings are the result of random accidents (including mutations), and natural selection as evolution teaches.

The authors, Steve Laufmann, an engineer, and Howard Glickman, a medical doctor, are an ideal combination to produce an A&P book. I have never seen this combination of authors in the two dozen A&P texts I either used in teaching (or reviewed to consider using), when teaching college A&P. This engineer/medical doctor combination focuses on the body's design from an engineering-design perspective. This approach is ideal in view of the intelligent design focus of the book. Laufmann focuses on the design aspects, and Glickman, using medical examples, illustrates the physiology and what can go wrong. Both concentrated perspectives are enlightening and would significantly improve secular A&P textbooks. Most of what is being described by Laufmann and Glicksman (cognition, vision, breath, blood flow, digestion, injury repair, etc.) happens to the reader while reading and cogitating about the exquisite engineering of the human body.

Life requires designed chemical elements

For life to be alive, the chemical elements required must themselves be designed in order to function in a supportive role in life. These elements include hydrogen, carbon, nitrogen, and oxygen that collectively make up 99% of the human protoplasm mass. The other elements required for life in smaller amounts include calcium, phosphorus, sulfur, potassium, and magnesium. Last are the trace elements, comprising boron, chlorine, iron, manganese, zinc, copper, molybdenum, chromium, iodine, nickel, selenium, silicon, tin, vanadium, and over 30 others. In short, the authors show that these elements were all designed to support life.

The biological requirement for the chemical elements is also a powerful argument for design. Humans lacking necessary concentrations of molybdenum, chromium, or iodine will eventually suffer disease or death. If no molybdenum existed, presumably humans would not exist because molybdenum is an essential component of the coenzymes that are necessary for the xanthine oxidase, sulfite oxidase, and aldehyde oxidase enzymes. All these enzymes are required for human life. Molybdenum deficiency causes intellectual disability, seizures, opisthotonos (backward arching of the spine), tachycardia (irregular fast heartbeat), tachypnea (abnormally rapid breathing), headache, nausea, vomiting, lens dislocation, and coma. Before the creation of life, molybdenum needed to have been created—or another means of producing enzymes that performed the functions of xanthine oxidase, sulfite oxidase, and aldehyde oxidase was required. This sort of thing is true of the other elements necessary for life as well.

These elements are assembled to form proteins, fats, and carbohydrates which produce the cell organelles, including the nucleolus and the mitochondria. The exquisite design of a single eukaryotic cell and the molecular machines inside of it is then detailed. The cell requires certain parts to function, including the nucleus, nucleolus, mitochondria, rough endoplasmic reticulum, smooth endoplasmic reticulum, centrosomes, lysosomes, ribosomes, Golgi complex, cell membrane, nuclear envelope, and

cytoskeleton. The over 200 specialized cell types also require additional parts. For example, nerve cells require dendrites and axons, the tip of which enlarges to form the synaptic end bulb. The cell families include pluripotent stem cells, blood cells, muscle cells, fat cells, skin cells, nerve cells, and endothelial cells. Next, specific cell types including photoreceptor cells in the eye and osteocytes in bones are covered by the authors.

These cell types are grouped into tissues, including connective, epithelial, muscle, and nervous tissue. The next level includes organs, such as the kidney, and the ten organ systems including the reproductive and respiratory systems. Organs likewise require a minimum number of parts to function. For example, the human kidney requires the kidney capsule (renal capsule, once called Bowman's capsule) which consists of three connective tissue layers that cover it. Also required are the glomeruli, the renal artery, the renal cortex, the renal medulla, the renal papilla, the renal pelvis, and renal vein.

Likewise, all 78 organs in the human body contain many specialized parts. These multiple organs are grouped into ten organ systems (the skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems). Lastly, an organism is produced. A theme which seemed often implied but unstated was the irreducible complexity of the organelles, cells, tissues, organs, organ systems, and of the entire organism itself. The discussion of the organ systems documents their design, but does not directly attempt to refute their evolution. One reason is because no viable attempts, not even just-so stories, have been proposed by evolutionists to document the evolution of any human organ system (p. 400).

For many of the sections outlined above, Glicksman discusses how lacking a certain structure, or its functional equivalent, would result in disease or death. In addition, malfunctions in one system can damage other systems. For example, the main cause of kidney damage is high blood pressure. In turn, some forms of kidney problems can cause high blood pressure, damaging other organs. Excess alcohol consumption damages the pancreas. The pancreas manufactures the enzyme amylase that breaks down complex carbohydrates into glucose; it also makes trypsin and chymotrypsin to digest proteins; and lipase to break down fats. The result of pancreatic malfunction can be acute pancreatitis, which can be both very painful and life-threatening, as these digestive enzymes start to 'digest' the organ itself.

Complete androgen insensitivity syndrome

The authors also cover sexual function issues of both males and females. These discussions refute the current fad of persons born males who conclude they inhabit the wrong body and, for this reason, decide to 'transition' into a female, and vice versa. So-called transitioning is actually 'cosmetic' surgery which changes physical traits and not the DNA in the cells that determines biological sex.

However, some genetic conditions, although very rare, can cause physical sexual abnormalities.

An example is partial androgen insensitivity syndrome (AIS), in which a chromosomal male (XY) with male sex organs nonetheless has the body of a female. This is because their body does not respond fully to the male sex hormones known as *androgens* (the name means 'male-generating', and the best-known androgen is testosterone). About one in 99,000 male infants are born with this partial androgen insensitivity syndrome.

About two to five per 100,000 are born with *complete* androgen insensitivity syndrome. They are males (XY) but do not develop male external genitals because their bodies are unable to respond to male sex hormones. Such 'XY females' are the result of an abnormal X-linked gene that the mother passes to her child. The gene can't produce androgen receptors that allow the body to respond to androgens such as testosterone. The person has male sex chromosomes (one X and one Y chromosome) but a female body, including female genitals.

For the first several weeks in normal embryonic development, the embryo remains sexually undifferentiated. The gonads will become ovaries and will begin making estrogen unless testis-determining factor (TDF) is present. If TDF is present, the gonads will become testes and the body will be set down the path of becoming a male. The genetic trigger for producing testis-determining factor is on the Y chromosome. Each testis produces several other enzymes to convert cholesterol into testosterone which triggers maleness. The result is the development of the prostate gland, the penis, the testes, the scrotum, and the other male reproductive organs (p. 267).

However, for testosterone to stimulate those male characteristics, the relevant cells must have functioning receptors. Lacking androgen receptors has profound effects on numerous body organs. This small genetic defect causes the loss of certain receptors which causes numerous large body changes, and illustrates the fact that minor changes can cascade into significant design alterations. This is one of the countless examples of interwoven complexity that evolutionists struggle to explain.

This recognized genetic condition is not the cause of the concern related to the transitioning issue much talked about today. Transitioning involves a normal male or female, i.e. with no genetic abnormalities, suffering from *gender dysphoria*; a mental

condition that would seem to require a psychiatrist, not a surgeon. The transitioning issue is based on the erroneous belief that some persons are born in the wrong body.

The 'unintelligent' and 'poor design' claims

In chapter 23, the authors respond to the rash of books and articles claiming that the human body illustrates unintelligent and poor design.[1] All of the claims made in these books claiming poor design have been carefully refuted.[2] Chapter 23 focuses on the basic claims, ranging from the 'poor-design' argument to the 'no-intentional-design' claim (p. 414). One example covered in detail by Laufmann and Glicksman is the allegedly poor design claim of the human pharynx (pp. 414–422). The authors noted that many such claims are trivial, such as reading *War and Peace* and looking for less-than-perfect grammatical constructions, and missing the point and genius of the novel (p. 423).

Refuting Darwinism

The current prevailing view in science is Charles Darwin's theory that the evolution of all life occurs as a result of random changes in the genetic material (DNA) over millions of years. Some of these changes result in an organism better able to survive in the environment they live in. The result is that these organisms leave more offspring. Their offspring will eventually become more common, displacing the older design in the species. One predicted result of this process is less-than-optimal design or even poor design. As long as the organism is better able to survive and leaves more offspring than its peers, these organisms will evolve.

Laufmann and Glickman effectively challenge this Darwinian assumption alleging poor design by including the discoveries related to genetics and the finely tuned complexities of living organisms, especially in the human body. The authors argue their case both from medical insights into the workings of the human body, and from the engineering perspective that actually documents well-designed functioning systems. They stress that health and safety of humans depend on doctors knowing in detail how the body works.

Summary

Laufmann and Glickman discuss the fundamental machines that are required to produce a human body. This includes cells that are assembled into both familiar and unfamiliar structures with corresponding functions. Thirty to sixty trillion cells work together in a body that can walk, run, talk, think, and build airplanes. These organs and systems are explained by Laufmann and Glickman using examples and analogies taken from solutions to everyday problems, with a minimum of technical language. Occasional technical terms used were defined with plain English and illustrative graphics. The remainder of the book addresses the intention and purpose of the structures discussed.

The authors document that the body is not the outcome of random events, but intentionally designed. Given this, which is more likely: a blind and unintentional series of accidents, or a planned, intentional process of design and execution? Darwin first identified a mechanism for change in living organisms. He also anticipated evidence that could falsify his theory. This would include clues indicating intention, purpose, and the finely tuned properties that support life. The theological implications of *Your Designed Body* are obvious, but the identification of the designer is left open for the reader.

References

1. Examples include: Rubicondior, R., *The Malevolent Designer: Why nature's god is not Good*, 2020; Rubicondior, R., *The Unintelligent Designer: Refuting the intelligent design hoax*, 2018; Ingman, N. and Ingman, M., *Not Very Intelligent Design: On the origin, creation and evolution of the theory of intelligent design*, Palaceno House, 2018; and Hafer, A., *The Not-So-Intelligent Designer: Why evolution explains the human body and intelligent design does not*, Cascade Books, 2015.
2. See Bergman, J., *Poor Design: An invalid argument against intelligent design*, Bartlett Publishing, Tulsa, OK, 2019. Bergman, J., *Useless Organs: The rise and fall of a central claim of evolution,* Bartlett Publishing, Tulsa, OK, 2019.