

Review: Professor Stuart Burgess, *The Design and Origin of Man: Evidence for Special Creation and Purposeful Over-Design*, Day One Publishers, Leominster, UK, 2004 (2016 edn.)

Pages: 170

Puts Paid to Evolution's Tall Tales

When confronted with an engineering's perspective on the body, slow and gradual evolutionary steps as Charles Darwin posited quickly break down. Across ten major characteristics, Professor Stuart Burgess deftly shows how evolution is incapable of producing the design features of the body, which include upright stature, skilful hands, and language and speech.

This has a 'medium'-level of content; just enough depth to disprove evolution, yet sufficient for bolstering the reader's confidence in Creation.

**“I will praise thee; for I am fearfully and wonderfully made:
marvellous are thy works; and that my soul knoweth right well.”**

Psalm 139.14, Authorized Version

Introduction (pp. 7-10)

The ten major characteristics discussed include: upright stature; skilful hands; fine skin; facial expressions; language and speech; unique childhood; unique reproduction; unique genome; unique brain; and spiritual being.

Evolutionist [Professor Stephen Jones] say, “evolution does its job as well as in needs to and no more”.

I) The Similarity of Man (pp. 11-22)

Evolutionists claim homologies as proof of common descent.

The main ape species are gibbons, orangutans, gorillas, and chimpanzees. Humans are said to be closer to apes as they have no tails and apes are more intelligent than monkeys.

Darwin’s only evidence for evolution was similarity.

Items such as nuts and bolts have similar features.

Human designers must balance the goals of optimum design, convenient maintenance, and aesthetics.

Structural beams for example are similar between varied structures such as buildings and railway tracks.

Both humans and apes have shoulder, elbow, and wrist joints in the arms, including the upper-arm *humerus* and forearm’s *radius* and *ulna*. In the legs they also have the upper-leg *femur* and lower leg *tibia* and *fibula* bones.

The arm is designed to reach as many positions as possible. The triple-jointed arm design fulfils this requirement perfectly. Without an elbow joint the hand could not be brought to the mouth and if no wrist the hand could not vary from the arm’s position.

Mechanical diggers, robot arms and spacecraft machines all use this triple-hinge design fro arm mechanisms.

The arm's design (radius and ulna bones in the forearm) also allows the hand to twist as one bone rolls over the other.

The leg is also triple-jointed.

Vets are familiar with common animal symptoms because animals share similar body plans.

Virtually all creatures have a head, face, body and limbs.

Birds have triple-hinged wings with two bones in the lower wing. This enables them to fold them during the upstroke when resting and the lower bones also create four-bar parallelogram enabling elbow joint-to-shoulder movement.

II) The Unique Design of Man (pp. 23-37)

The arched foot is a precision masterpiece; it actually has three arches or contact points with the ground (heel centre, big-toe ball of the foot, and the little-toe ball of the foot. This means that there are always three well-defined contact points with the ground at any one time and one-legged stances are possible (i.e. the centre of gravity is within the three points).

The foot has twenty-six bones, some of which are wedge-shaped so as to form a string arch.

Upright stature means a straight back, upright knee joints and upright hip joints.

Out of thousands of land animal species, humans are the only bipedal creations.

The arch structure is irreducibly complex as it must be a minimum height before it is capable of supporting any load.

Strong toes are required for walking, however the ape has a flexible one akin to a thumb which is designed for gripping branches.

An ape's legs are about a third of its body length whereas a human's is one-half. Leg and arm length ratios are inversely related, and any ape beginning to develop long legs would struggle to walk on either two or four legs.

The human knee is extendable and locks allowing for comfortable standing.

Human femur bones are angled inwards so that the centre of gravity aligns with the feet, however, apes' ones are vertical making for their awkward gait.

Ape hip joints are not fully extendable (both extendable hip joint *and* extendable knee joints are required at the same time for upright locomotion).

The ape spine has a 'C' shape, while the human is 'S' to cushion the compression load of bipedalism. The 'C' shape indicates knuckle-walking.

The spine enters the skull via the *foramen magnum*. Apes have this in the back of their skull which directs their head down vision field more narrow.

The inner ear utilises three semicircular fluid-filled canals which are sensitive to movement and gravity to give a sense of space. Two large ones are in the vertical plane and a small one in the horizontal, whereas in apes all three are small and in the horizontal.

Apes can only stand for a couple of minutes being getting tired and cannot stand on their toes.

Man is the only creation that can walk and carry over long distances and climb.

III) Skilful Hands (pp. 38-47)

The thumb is fully opposable and hands exhibit fine motor control (like typing).

Basic farming and hunting do not require such fine skills.

The hand has thirty-five muscles with about half in the forearm and half in the palm. Tendons transmit the muscle forces.

Each finger can *adduct* and *abduct*.

Muscles are made up of smaller muscle units containing nerves. Thighs have about 100 fibres per unit and fingers 10.

A quarter of the brain motor cortex is dedicated to hand movement, not so with apes.

The brain must know the exact number of combinations of hand muscle movements to order the main skills of gesturing, power grips, and precision skills.

Apes do not make hand gestures neither can they orient their thumbs.

Combinatorics shows there are thirty-one ways in which the digits of one hand can be pressed down.

IV) Fine Skin (pp. 48-56)

Each square centimetre of skin has ten oil glands , a hundred sweat glands, and thousands of intricate sensors supplied constantly by blood.

Naked skin enables a very quick cool down.

Humans supposedly lost all their fur over four million years and have a unique subcutaneous layer of fat.

The skin is 1.5m² and has both oil and water glands. The palms are the thickest at 2mm and the eyelids thinnest at 0.5mm.

Layers are the subcutaneous, dermis, and epidermis.

Hair follicles act as cold and fear responses, also detect crawling insects.

The epidermis self-replaces every month.

The sweat glands secrete about a litre of water each day.

Mesissner and Pacinian touch sensors detect pressure onset, but Ruffini and Merkel's continuous contact.

Hair is useful on the head to prevent heat lost, and unlike apes their is no real selective pressures to account for only having a head of hair!

Eyebrows keep perspiration out of the eyes.

Skin can detect a weight range of a million times with a depth of only 10 microns. Such precision allows technologies like Braille.

V) Facial Expressions (pp. 57-63)

Humans have fifty facial muscles, half for essential tasks like eating, and half for making facial expressions.

Smiling uses about six muscles but frowning twenty.

Gorillas only have thirty facial muscles, and apes one enormous muscle for their cheeks.

Eye whites allow detection of the person's gaze.

Blushing increases blood flow to facial muscles by about fifty times.

Apes can only make a handful of facial features.

VI) Language and Speech (pp. 64-70)

There are over 5,000 different languages.

Speech requires a deep throat, agile tongue, delicate muscles, and special speech processing areas.

Human language and speech is not needed for simple activities like hunting.

The human larynx (voice box) produces over fifty different sounds. It sits on top of the trachea (the tube between the lungs and pharynx [throat]). It works by producing sound waves from air disturbances passing over the vocal cords acting as resonators.

Apes have a shallow throat.

Vocal control requires coordination of over a hundred muscles.

Language processing mostly occurs in the left hemisphere; talking sends signals to the Broca and Wernicke's areas.

The English language has over a million words.

A six-year chimpanzee study in the 1950s only yielded four words: "mamma", "papa", "cup", and "up".

VII) Unique Childhood (pp. 71-75)

While humans have a very long childhood for learning, animals' are short without mental learning requirements.

The brain is the fastest growing organ during the first five years of childhood, and during the first two years 4,000 brain cells are added per second. Since each new cell has 1,000 connections, by the end of childhood the brain has created around 100×10^9 connections!

VIII) Unique Reproduction (pp. 76-79)

The human skull is designed to reduce during birth, which can last up to 24-hours.

Female apes have a much larger birth canal.

Neither apes nor monkeys have a hymen.

An ape's penis is half the length of a mans.

IX) Unique Genome (pp. 80-90)

The human genome has around three billion units of information, and a single copy can fit into three billionths of a cubic centimetre.

Nucleotide base order along the DNA molecule defines genetic information.

Chromosome banding can be used to observe abnormalities such as Down's syndrome.

Reproductive cells only contain 23 chromosomes.

Information variation within an individual genome is usually 100 to 1,000s of base pairs.

Apes and monkeys have 24 chromosome pairs.

Mules are sterile since a horse has 32 chromosome pairs while a donkey only 31, giving the creature 63 which is not an even number to enable meiosis.

The DNA molecular chain is only two millionths of 1mm in diameter and a 1mm-diameter tube could contain 200 billion strands. Its efficiency lies in the fact that it is a 3D structure.

X) Unique Brain (pp. 91-99)

The brain has 100 billion cells and 100,000 billion connections.

The outer grey matter of nerve cells is 2-4mm thick, covering the inner white matter.

The right hemisphere controls the left side of the body and vice versa.

The human brain weighs about 1.4kg, or ~1.8% of body weight. A gorilla's brain is about 0.5kg and the weight ratio is only 0.333%.

The brain can reorganise billion of connections precisely, and can perform 10^{18} calculations per second.

XI) Spiritual Being (pp. 100-109)

Evolution cannot explain why beauty is necessary.

Instinctive behaviour creates predictability.

Animals never cry for emotional reasons.

XII) The Unique Beauty of Man (pp. 110-122)

Beauty is a combination of an object's proportion, contrast, smoothness, curves, symmetry, distinctiveness, fineness, colour, and harmony.

Blue and green eyes are caused by a lack of pigment which does not scatter as much (longer-wave) light.

$D(\text{nose-to-mouth})=D(\text{nose-to-ear})$

$D(\text{fingertip-to-fingertip})=\text{Height}$

$\text{Height}/D(\text{navel-to-feet})=1.68$ (the golden ratio)

XIII) Archaeological Evidence (pp. 123-133)

The wheel, agriculture and horse domestication go back about 10,000 years.

Evolutionists believe it took 100,000 years to discover the wheel!

The Italian Lavagnone plough is about 4,000 years old (it was preserved in a peat bog).

Pottery is glazed by lightly heating the finished product.

XIV) Fossil Evidence (pp. 134-144)

Ramapithecus is an admitted error and Lucy didn't have arched feet, plus her toes were curved.

XV) Two Worldviews (pp. 146-160)

Evolution justifies crime by blaming it on "primitive urges".

XVI) The Unique Glory of Man (pp. 161-170)