

# The origin of gender and sexual reproduction

Brad Harrub and Bert Thompson

The origin of sexual reproduction is an evolutionary enigma, complicated by the fact that the maintenance of such a reproductive process is extremely costly, energetically speaking. In addition, sexual reproduction results in only half of a parent's genes being passed on to each of its progeny. Given the fact that this results in a 50% loss of genetic material from both the father and mother, a further enigma has to do with why there would be any advantage for animals to reproduce sexually. Evolutionists have yet to satisfactorily explain such an advantage. Purely philosophical theories regarding the evolution of sex are relatively simple. However, demonstrating how the necessary changes could have evolved on a macroscopic and microscopic level has yet to be accomplished. Evolution cannot explain the origination of egg cells and sperm cells, and how the two come together to form a living being. It also cannot explain the difference between animal sexuality and human sexual relations. In light of the intricate complexity involved in the human reproductive system, evolutionary theory does not provide sufficient answers. The only answer that provides both the 'how's' and 'why's' of sexual reproduction is an Intelligent Creator.

The occurrence of sexual reproduction is commonplace throughout the animal kingdom, and with humans as well. Yet evolutionists have not scientifically explained its existence. The Darwinian 'survival of the fittest' mantra does not compute with a sexual practice that selectively only passes one half of one's genes to successive progeny. Consider that sexual reproduction necessitates the existence of sexual chromosomes and an entirely new physiological method for cell division. Additionally, science has not satisfactorily explained the differences among various species, (e.g. why the male seahorse gives birth, when it is primarily the female in other species that gives birth) or the vast differences between animal and human sexuality (e.g. estrus cycle vs. menstrual cycle). Even within human kind, one must ask how and why male and female genders exist. The following material addresses these issues, focusing on evolutionary theory's

absence of a rational explanation for gender and sexual reproduction—a critical component to life.

## The 50% disadvantage

Suppose there is a new beneficial mutation in a female. A sexual female (or male) passes it on to only *half* its progeny, while an asexual organism passes it on to *all* of its progeny. In the Darwinian struggle to pass on beneficial genes to the next generation, sexual reproduction is only half as efficient. This is the well-known 50% disadvantage of sexual reproduction. Thus, while sexual reproduction requires two parents, and therefore is neither as rapid nor as efficient as asexual reproduction, it does possess certain advantages—not the least of which is the variability of mixing genetic material from two different parents.

But this variability comes at an extreme cost. Normal somatic cells divide by the process of mitosis. During sexual reproduction, organisms must produce haploid gametes (sperm or egg cells that contain half the diploid—the full complement—of chromosomes) in which a new form of division occurs (meiosis), in order to remove half of the genes. Then, when the gametes fuse (i.e. when the sperm fertilizes the egg), they produce a zygote—an amazing process that restores the diploid complement of chromosomes, with half coming from each parent.

In the end, sexual reproduction results in only *half* of a parent's genes being passed on to each of its progeny. British evolutionist Richard Dawkins of Oxford University described the process as follows: 'Sexual reproduction is analogous to a roulette game in which the player throws away half his chips at each spin. *The existence of sexual reproduction really is a huge paradox*' [emphasis added].<sup>1</sup> As Graham Bell pointed out:

'Sex ... does not merely reduce fitness, but halves it. If a reduction in fitness of a fraction of one percent can cripple a genotype, what will be the consequence of a reduction of 50 per cent? There can be only one answer: *sex will be powerfully selected against and rapidly eliminated wherever it appears. And yet this has not happened*' [emphasis added].<sup>2</sup>

Sexual reproduction has a 'selective disadvantage' of at least 50%—a disadvantage that will not budge! At conception, the zygote *receives* 50% of its genetic material from the father and 50% from the mother. However, by reproducing sexually, both the mother and father are required to *give up* 50% of their own genetic material. This leaves both parents at a disadvantage, because a full 50% of their own genetic material will not be passed on. But, as Harvard's Ernst Mayr has admitted: 'No matter what the selective advantage of sexual reproduction may be, *that it does have such an advantage in animals is clearly indicated by the consistent failure of all attempts to return to asexuality*' [emphasis added].<sup>3</sup> His point is simply this: evolutionists recognize the 50% rule, and hold fast to the

belief that sexual reproduction is the product of evolution; thus, there must be some benefit to the organism. While that attitude admits the obvious, it does not scientifically explain what that advantage might be.

The conundrum of sexual reproduction leaves evolutionists baffled because the terms are permanently fixed and unyielding. Considering the possibility of potential mechanisms for reproduction, it remains to be determined why nature ever would ‘evolve’ sexual reproduction in the first place. In his book, *Sex and Evolution*, George C. Williams commented on this ‘50% disadvantage’.

‘The primary task for anyone wishing to show favorable selection of sex is to find a previously unsuspected 50% advantage to balance the 50% cost of meiosis. Anyone familiar with accepted evolutionary thought would realize what an unlikely sort of quest this is. We know that a net selective disadvantage of 1% would cause a gene to be lost rapidly in most populations, and [yet] sex has a known disadvantage of 50%. The problem has been examined by some of the most distinguished of evolutionary theorists, but they have either failed to find any reproductive advantage in sexual reproduction, or have merely showed the formal possibility of weak advantages that would probably not be adequate to balance even modest recombinational load. Nothing remotely approaching an advantage that could balance the cost of meiosis has been suggested. *The impossibility of sex being an immediate reproductive adaptation in higher organisms would seem to be as firmly established a conclusion as can be found in current evolutionary thought. Yet this conclusion must surely be wrong. All around us are plant and animal populations with both asexual and sexual reproduction*’ [emphasis added].<sup>4</sup>

While evolutionists admit that sex is disadvantageous to an individual (at a whopping 50% rate!), they nevertheless claim that it has some evolutionary advantage *to the entire species*. Therefore, they classify sex as an ‘altruistic’ trait because it operates at an expense *to the individual*, yet is beneficial to the entire community. This ‘benefit’ commonly is referred to as ‘diversity’ by many evolutionists.

But what is the benefit to the group? Since sexual reproduction creates genetic diversity, it was presumed that this is where the benefit lay. But what, then, is the benefit of genetic diversity? Early in the twentieth century, geneticists August Weismann, R.A. Fisher, and H.J. Muller elucidated the importance of diversity, stating: ‘Sex increases diversity, enabling a species to more rapidly adapt to changing environments and thereby avoid extinction’.<sup>5</sup> They believed this diversity allowed evolution to occur much more rapidly. At first, their idea appeared plausible and reasonable, and, in fact, was taught in an unchallenged fashion for several decades. Commenting on the altruism theory about the origin of sex, M.T. Ghiselin stated:

‘Weismann explicitly stated that sex exists for the good of the species, and even though Lloyd Morgan pointed out the fallacy (as early as 1890), this view remained the dominant one for nearly 80 years. Why this should have happened is something of a puzzle. The view does have certain intuitive appeal, but that does not explain why it was not subjected to more critical scrutiny.’<sup>6</sup>

However, by the mid 1960s this explanation had been ‘subjected to a more critical scrutiny’, and eventually the idea of group selection overriding individual selection was shown to be false and thus was discarded.

Additionally, it was believed that, despite the 50% disadvantage for individuals, that evolution of the species would be speeded up. This idea eventually was shown to be false and theorists soon realized that, from an evolutionary viewpoint, an organism’s ‘fitness’ was damaged, not improved, as a result of sexual reproduction. Further scientific findings have caused researchers to do a 180-degree turn-around in their explanation of the evolutionary purpose of sex. It now is claimed that sex is advantageous, *not because it hastens evolution, but rather, because it slows it down*. The necessity in this change in direction was lamented by Bell:

‘To save the situation, then we must perform a complete volte-face [about-face]: just as it was self-evident to Weismann, Fisher and Muller that a faster rate of evolution would benefit a population, so we must now contrive to believe in the self-evident desirability of evolving slowly.’<sup>7</sup>

Evolutionists have explained this 180-degree turn around as follows. An asexual species is both too specialized and too dependent on its particular niche. As the niche vanishes, the species goes extinct. Asexual species thus inadvertently ‘adapt themselves out of existence’ by refining a mode of life that is so restricted, it eventually disappears. Meanwhile, sexual species lag behind. Sex blunts the precision with which a species can adapt to a particular niche. Thus, according to evolutionists, sexual reproduction has *slowed down* evolution in order to prevent extinction. Considering the incredible difficulty involved in scientifically explaining a theory regarding origin of sex in the first place—and the vast smorgasbord of possible explanations available—it is no wonder that evolutionists often dispose of one theory, only to replace it almost instantaneously with another.

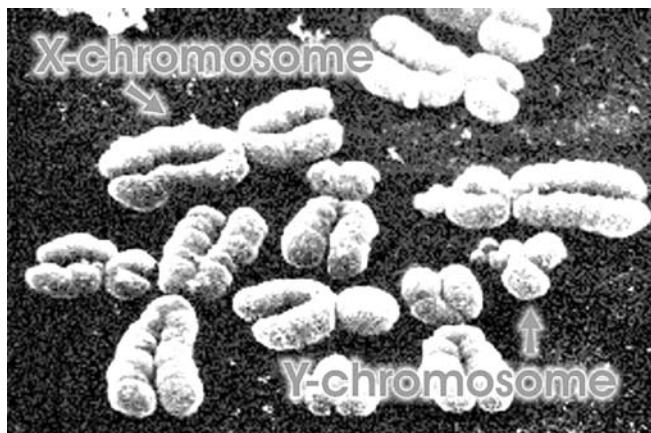
### Mars and Venus, or X and Y?

Modern self-help books suggest that men and women hail from ‘different planets’, so to speak. But what *really* separates them, we are told, are radically different chromosomes. These chromosomes contain the genetic material that differentiates males and females. In order for a change to occur from asexual reproduction to sexual reproduction,

two things (at the very least) had to occur: (1) a *single sex* first had to evolve from an asexual organism (which then would necessitate the evolution of a second sex—all the while retaining its ability to reproduce asexually); and (2) double homologous chromosomes also had to evolve.

But by what known method(s) could an *asexual* organism produce a *sexual* organism? And did you ever wonder: which of the two sexes (male and female) evolved *first*? Well, wonder no more. Evolutionists somehow have ‘divined’ the answer. As Jennifer Ackerman boldly put it: ‘*The female was the ancestral sex*, the first self-replicating organism; it gave rise to the male, a variant, and the two still share many characteristics’ [emphasis added].<sup>8</sup> Of course, Ms Ackerman offered not a shred of scientific evidence for her audacious assertion—because there isn’t any! Upon hearing her statement, we cannot help but be reminded of the now-famous comment made by R.E. Dickerson several years ago in a special issue of *Scientific American* on evolution. Dr Dickerson (who was addressing specifically the evolution of the intricate ‘genetic machinery’ of the cell) boasted that since ‘there are no laboratory models, one can speculate endlessly, *unfettered by inconvenient facts*’ [emphasis added].<sup>9</sup> That also applies to the subject of the origin of sex. There are no adequate laboratory models; hence, Ms Ackerman and her cohorts are free to ‘speculate endlessly, unfettered by inconvenient facts,’ and to claim without any satisfactory explanation that ‘the female was the ancestral sex’.

The second issue—the sudden appearance of double homologous chromosomes—presents no less of a problem.



**Figure 1.** Photomicrograph of X and Y chromosomes.

Why is this the case? Of the 46 human chromosomes, 44 are members of identical pairs, but two, the X and Y (generally referred to as the ‘sex chromosomes’), stand apart. Evolutionists thus are faced with the daunting challenge of explaining not only the origin of sex chromosomes themselves, but also the evolution of *two totally different sex chromosomes*—X and Y.

Human females possess two X chromosomes, while men possess one X and one Y. Some evolutionists (like

Ackerman, previously quoted) argue that the male Y chromosome somehow evolved from the female X chromosome. We now know the X chromosome is ‘home’ for thousands of genes, while the Y has only a few dozen. Of those, *only 19* are known to be shared by both X and Y. If the Y chromosome originally was identical to the X, as evolutionists claim, then they must explain the fact that of the 19 shared genes, the X chromosomes possesses all 19 on the tip of the short arm of the chromosome, whereas they are scattered across the entire length of the Y. Additionally, where did the other genes go and why did this drastic loss of genes not result in ultimate demise of humans? While both chromosomes do share certain genes, those genes are found in totally different places, indicating that the male Y chromosome is not simply an ‘evolved’ X chromosome.

### Differences among various species

In his book titled *Why Is Sex Fun?* evolutionist Jared Diamond posed the question as to why men do not breast-feed babies.

‘Yes, it’s true that no male mammal has ever become pregnant, and that the great majority of male mammals normally don’t lactate. But one has to go further and ask why mammals evolved genes specifying that only females, not males, would develop the necessary anatomical equipment, the priming experience of pregnancy, and the necessary hormones. Both male and female pigeons secrete crop “milk” to nurse their squab; why not men as well as women? Among seahorses it’s the male rather than the female that becomes pregnant; why is that not also true for humans?’<sup>10</sup>

Common ancestry would point to common reproductive practices, with an occasional branch as new practices evolved. And yet there remain vast differences in the sexual reproductive practices among animals. We also do not question the fact that humans generally prefer to participate in sexual relations in private, whereas animals are indifferent to the presence of other animals or humans. Also of interest is the fact that most human women experience a complete shutdown of fertility somewhere between the ages of forty and fifty-five, whereas men do not. (Many animals do not experience a shutdown of their reproductive facilities—even at advanced ages.) We frequently do not question certain practices—simply because they are commonplace and because we are accustomed to seeing things performed a certain way. But the questions remain: (1) ‘How did something get that way in the first place?’ and, (2) ‘Why is it that way?’

What causes some animals to breed, and then spend years caring for their young, while others leave their young to fend for themselves almost immediately after birth? The method and nature of reproduction, and the degree of parental care, varies widely among living organisms. Consider, for example, the dizzying array of samaras, pomes, nuts,

pips, and just plain fluff produced by trees. Some of the seed designs are absolutely ingenious, and, truth be told, dwarf mankind’s attempts at engineering. Considering the odds of actual germination, it is no wonder we find that, in a bumper-crop year, the average oak can produce thousands of acorns, while an elm tree can produce tens of thousands of samaras (a dry, ‘winged’ seed). Among plant species, however, problems occur that simply cannot be explained by normal evolutionary theory. While most of the higher plants are hermaphrodites (i.e. they bear both pollen and eggs), there are those species in which pollen and eggs exist in separate plants. Indeed, the suggestion that dioecy (the condition in which female and male flowers are borne on separate plants) allegedly has ‘evolved’ from hermaphroditism (where both female and male reproductive organs are found on the same flower) is a central problem in evolutionary biology.<sup>11</sup>

Probably the most elaborate and showy courtship rituals belong to the bird family. Before mating season, many male birds grow colorful plumage that they use to ‘show-off’ while attempting to attract a mate. Courtship among reptiles frequently involves fighting among rival males during breeding season. Many produce loud noises, display vivid colors, or secrete pheromones (special scents) in an effort to communicate with and attract members of the opposite sex. Salmon, on the other hand, migrate to special spawning grounds during the breeding season. Often, these spawning grounds are located a great distance from normal feeding grounds because the young fish have different feeding requirements, compared to the adults. European eels also are known to travel great distances during their breeding periods to special spawning grounds in the Sargasso Sea. The reproductive habits of social insects revolve around a tightly knit colony that centers on a queen.

Other ‘sexual oddities’ can be observed amidst the animal kingdom. Take, for example, two types of seals. Using the lineage provided by evolutionists, it would appear that these two species are quite similar, and thus could be expected to reproduce in a comparable fashion. However, harbor seals are monogamous, whereas male elephant seals may inseminate as many as 100 females during their lifetimes. But this is only the tip of the proverbial iceberg. Figure 2 demonstrates only a few of the reproductive differences observed in just four common farm animals.

	Cow	Ewe	Sow	Mare
Age at puberty	12 months	6 months	7 months	15 months
Length of estrus cycle	20-21 days	17 days	20-21 days	21 days
Duration of estrus	18 hours	30 hours	2-3 days	5-6 days
Time of ovulation	12-16 hours after end of estrus	end of estrus	40-44 hours after beginning of estrus	24-48 hours before end of estrus
Gestation length	283 days	148 days	114 days	336 days

Figure 2. Some reproductive differences in common farm animals.

The evolutionary ‘tree of life’ does not demonstrate how these animals came to have gestation periods of different lengths, or varying estrus cycles, even though they allegedly have descended from the same ‘branch’ (i.e. the mammals). Add to this mix the marsupial group (from the Latin *marsupium*—meaning ‘pouch’—since most of the marsupials, like the kangaroo, are endowed with some sort of pouch in which their prenatal young develop, thereby shortening the required gestation period), and evolutionists find themselves with a bewildering hodgepodge of complexity that is so incredibly puzzling, the simple lines and branches of their numerous hypotheses and theories have trouble scientifically explaining the history of sexual reproduction in living organisms.

### Differences in animal and human sexuality

Humans, unlike animals, do not copulate merely for reproductive purposes. Human females ovulate at only one point during their monthly cycle, but their bodies remain receptive throughout the entire month. This means that mating at all other times (i.e. outside of the ovulation period) has no procreative function. Thus, sexual relations in humans frequently are performed not for reproduction, but rather for enjoyment and pleasure. During sexual activity, the bodies of human males and females experience certain modifications and physiological changes that are not found in animals. Many of these represent modifications that account for the heightened stimulation and pleasure that occurs during copulation. If humans are indeed a product of evolution, why, then, are females receptive to copulation almost all of the time, whereas animals employing an estrus cycle are not? Additionally, why do female humans experience menopause (the cessation of ovulation, and thus fertility) as a regular phenomenon, which is not the norm for most wild animals? These are questions that evolutionists have not scientifically explained.

The menstrual cycle of human females is divided into two main phases: the follicular (or proliferative) phase, and the luteal (or secretory) phase. The follicular phase (during which estrogen levels rise) is characterized first by menstruation, and then by proliferation of the endometrial tissue. The ovarian cycle in female primates, however, consists of four stages: proestrus, estrus, matestrus, and diestrus. It is only in the second stage (estrus) that the female animal experiences a swelling of the vulva, during which various uterine processes occur that result in receptivity to copulation. Physically, a female primate is not able to receive a male unless she is in estrus. (The term ‘estrus’ comes from the Greek meaning mad or frenetic desire, and generally is observed when female animals are ‘in heat’.) Thus, the period of

sexual receptivity of the female monkey or ape is much more restricted than that of a human female.

The numerous differences that have been documented between estrus and menstrual cycles have caused evolutionists to formulate an attempted explanation for the human menstrual cycle. In 1993, Margie Profet, a self-taught evolutionary biologist, wrote a paper titled 'Menstruation as a Defense Against Pathogens Transported by Sperm'. Profet claimed that various microbial infections—caused by pathogen-toting spermatozoa—applied the adaptive pressure needed to cause menstruation. Simply put, she believed the male sperm cells carried disease-causing microorganisms that ultimately made it necessary for the female to slough off the walls of the uterus as a means of self-defense. While other theories had existed prior to Profet's work, hers was the first to gain widespread scientific and public recognition. Three years later, anthropologist Beverly Strassmann, of the University of Michigan in Ann Arbor, submitted a critical review of Profet's anti-pathogen hypothesis, and then proposed an alternative theory. She claimed that the reason the uterine endometrium is shed/reabsorbed in the cycle of regression and renewal is because it is energetically less costly than maintenance of the endometrium in an implantation state.

Neither of these theories explains how or why the human female normally ovulates a single egg cell, instead of, say, five, six, seven, or more. Also, evolutionists have not satisfactorily explained why human females routinely are sexually receptive, while animals are not. Anatomically speaking, how did humans 'evolve' an anatomy that receives pleasure from sexual activity? *And why haven't we 'evolved' enjoyment from the variety of other activities that evolutionists say were passed down from our ape-like ancestors, such as bipedal modality?*

Whereas God placed sexual relations only inside the marriage relationship (Hebrews 13:4), society has concluded that marriage and love are not prerequisites for sexual activity in humans. However, it should be noted when comparing human reproduction to that of animals, humans—married or unmarried—spend vast amounts of time, money, and energy in courtship and bonding prior to sexual relations. Can we observe animals courting members of the opposite sex for months or even years prior to having sexual relations? Commenting on the multiple facets that sex takes among humans, John Langone wrote:

'Sex is normal human behavior, a powerful drive that we are all born with, as natural as hunger and thirst. It enables us to bring new life into the world, and at the same time it is pleasurable. One cannot deny that we are often first attracted sexually to the one we decide to spend a good deal of time with, even our entire lifetime. Sex, also, is closely tied to our very vitality, our physical and mental vigor, our capacity to grow and create and act.'<sup>12</sup>

Are we to believe, as many evolutionists espouse, that the differences observed in human sexual relations are

merely a product of culture and upbringing? If this is true, then why do we find similar courting rituals in so-called 'lost' civilizations that are protected from outside contact? Did humans 'evolve' the ability to date, fall in love, and desire to be married to one individual for life?

### The complexity of the human reproductive system

Consider just how sophisticated the human reproductive cycle must be in order to function correctly. During early juvenile years, humans experience a delayed sexual development phase in which reproduction does not occur. Is it by mere chance that our bodies are not able to reproduce at such a young age? Once this juvenile period is over, changes occur throughout the body, requiring simultaneous coordination of further development in many different types of tissues. Additionally, the production and regulation of gametes must be timed just right. Females also must endure a monthly ovulation cycle which allows for fertilization—a cycle that was not present during adolescence. Once fertilization takes place, the female body then must prepare itself for the many changes that occur during pregnancy. Are these carefully orchestrated processes mere happenstance?

While the male reproductive system may appear fairly simple, the true mechanics actually are quite complex. Unlike with other cells in the body, the production of sperm cells (spermatogenesis) does not occur at a temperature of 98.6°F/37°C (normal body temperature). Instead, it occurs at a somewhat reduced temperature. To facilitate this, the sperm-producing organs, or testes, are located outside the body cavity in the scrotum, allowing them to remain about 3°C cooler than the rest of the body. This special location allows for the production of millions of sperm cells, which are stored according to maturity and then delivered during sexual intercourse. Additionally, males possess a cremaster muscle, which involuntarily raises or lowers the scrotal sac (depending on environmental conditions) in order to maintain a constant testicular temperature. Are such things as the precise location and temperature regulation of the male testes just a fortuitous occurrence—or the product of an intelligent Creator?

Likewise, the female body has been designed in such a manner as to be receptive to sperm, while at the same time being able to protect the abdominal area from microorganisms in the environment. In addition, after producing eggs, the female reproductive system provides an environment in which a fertilized embryo can grow (keep in mind that the embryo does not possess its own individual blood supply, and therefore must obtain its oxygen and nutrients from the mother's uterine wall). The uterus itself must be able to expand and hold the weight of an infant, plus the placenta and amniotic fluid—roughly 7 kg—which is no small task. (Imagine a structure roughly the size of an orange able to expand and carry three, five-pound bags of sugar!)

After the child is born, the uterus returns to approximately its pre-pregnancy size, and then, amazingly, must be able to repeat this entire process all over again in one or more future pregnancies—again, no small feat. The female body likewise must orchestrate the production of suitable milk for the infant, in conjunction with the newborn's arrival. While we take many of these admittedly amazing feats for granted, science has yet to succeed in designing a machine that even comes close to mimicking actual biological reproduction.

Reproductive hormones also play a critical role in the orchestrated process of sexual development and reproduction. While certain hormones can be found in both males and females, their actions and target organs are totally different between the two sexes. Additionally, females possess reproductive hormones not found in males. Did these hormones also 'just evolve?' The following represents a summary of the different hormones (found in males or females) that are required in order for human beings to be able to reproduce.

#### Males

- *Follicle-stimulating hormone*—stimulates spermatogenesis.
- *Luteinizing hormone*—stimulates the secretion of testosterone.
- *Testosterone*—stimulates the development and maintenance of male secondary sexual characteristics.

#### Females

- *Follicle-stimulating hormone*—stimulates growth of ovarian follicle.
- *Luteinizing hormone*—stimulates conversion of ovarian follicles into corpus luteum; stimulates secretion of estrogen.
- *Estrogen*—stimulates development and maintenance of female secondary sexual characteristics; prompts monthly preparation of uterus for pregnancy.
- *Progesterone*—completes preparation of uterus for pregnancy; helps maintain female secondary sexual characteristics.
- *Oxytocin*—stimulates contraction of uterus; initiates milk release.
- *Prolactin*—stimulates milk production.

The levels and production of these various hormones must be maintained carefully, and must be regulated on a daily basis. Is this complex, internal feedback mechanism—which is carried out primarily by the brain—purely a trait that was passed on from our alleged early sea-dwelling ancestors? If so, why is it, then, that those sea-dwelling organisms do not possess the same hormones? The complexity of the human reproductive system is practically incomprehensible. While scientists may try to 'play God' in their attempts to create living humans in a laboratory setting,

they still are far from creating egg and sperm cells and all of the necessary components associated with them.

### Anatomical differences between human males and females

Any second-grade child could easily identify anatomical differences between the male and female species. However, these represent only *external* features. There also exist numerous *internal* differences. If we are to believe that sexual reproduction somehow evolved from asexual reproduction, this means that the gametes also evolved. Anatomically speaking, what is the probability of a female evolving an egg large enough to accept the genetic material from the male (so that the conceived embryo has an opportunity to grow), yet small enough that it can fit through her own fallopian tubes? Furthermore, the egg also must possess the capability of creating a protective barrier once that single sperm has penetrated the egg's cell wall, so that no other sperm can penetrate and add still more genetic material. And exactly how long in the 'evolutionary scheme of things' did it take for a sperm cell to become small enough to actually be able to *fertilize* the egg, yet motile enough so that it could *reach* the egg?

Presented with all these anatomical differences, we must remember that each one also represents an entirely different type of cell that may or may not be present in the opposite sex. Yet evolutionists contend that all of this is merely a 'historical accident'. Furthermore, the expense of producing *two* separate genders via such an accident would be extremely costly for the species. Consider, for example, the fact that males and females exist in approximately equal numbers. Scientifically speaking, it requires only a few fertile males to keep a species alive and thriving. From an evolutionary point of view, the expense of producing so many males would appear not only unnecessary, but also counterproductive. Steve Jones noted:

'Biologists have an adolescent fascination with sex. Like teenagers, they are embarrassed by the subject because of their ignorance. *What sex is, why it evolved and how it works are the biggest unsolved problems in biology.* Sex must be important, as it is so expensive. If some creatures can manage with just females so that every individual produces copies of herself, why do so many bother with males? A female who gave them up might be able to produce twice as many daughters as before; and they would carry all of her genes. Instead, a sexual female wastes time, first in finding a mate and then in producing sons who carry only half of her inheritance. *We are still not certain why males exist;* and why, if we must have them at all, nature needs so many. Surely, one or two would be enough to impregnate all the females but, with few

exceptions, the ratio of males to females remains stubbornly equal throughout the living world? [emphasis added].<sup>13</sup>

But what is this great expense to which biologists refer? The anatomical differences observed in males and females go far beyond the external differences observed by the hypothetical second grader we mentioned earlier. Yet scientists admittedly are reluctant to examine these differences in light of evolutionary theory. The chart below presents a comparison of some of the anatomical differences between males and females, along with their primary functions.

Remember that each of these anatomical structures requires its own arterial and venous blood supply, as well as processes of nerve innervation that are not always ap-

parent in the opposite sex. Additionally, many of these structures have their own specific lymphatic drainage. *How could the vascular and nervous tissues that support the male prostate have evolved from a female equivalent, since females do not even possess a prostate?* Did human beings continue to evolve in order to accommodate *all* the sexual and reproductive organs?

### Cellular differences

The human sperm cell and egg cell have been optimized in totally different ways. The egg is nonmotile, covered by a protective coating, and carries a large nutrient supply for growth and development. Sperm cells, by contrast, are extremely motile, built solely for fertilization, and have been streamlined for delivering DNA to the egg. Evolutionists would have us believe that these differences resulted from millions of years of trial and error. However, in the case of reproduction, sperm and egg cells that are not fully functional do not result in fertilization—*thus the species would not be able to reproduce and therefore would become extinct*. How many generations of ‘error’ would it take in this trial-and-error period before all sexually reproducing animals would die? Are we to believe that these two totally different types of cells happened ‘overnight’ merely by chance? Take a closer look at these two cells to determine if they are the products of chance, or the product of intelligent design.

Sperm cells are unlike any other cells in the body. They have been ‘stripped down’ of everything unnecessary for fertilization—thus they are not encumbered with things like ribosomes, an endoplasmic reticulum, or a Golgi apparatus. However, the mitochondria (or power houses of the cell) have been strategically arranged in the center of the sperm cell where they can most efficiently propel the flagellum. This long, motile flagellum is driven by dynein motor proteins, that use the energy of ATP (provided by all those mitochondria) to slide the microtubules inside the flagellum, thus bending certain portions of it. The head (or cap) of the sperm contains a specialized acrosomal vesicle, which contains hydrolytic enzymes that help the sperm penetrate the egg’s outer coating. Without this special vesicle, the sperm cell would be unable to penetrate the coating of the egg cell. Upon contact with the egg, the contents of the acrosomal vesicle are released and the sperm cell then is bound tightly to the egg so that the genetic material can be transferred.<sup>14</sup> Production of these incredible cells occurs throughout life. In a man, it takes about 24 days for a spermatocyte to complete meiosis in order to become a spermatid, and then another 5 weeks for a spermatid to develop into a mature motile sperm. Does this sound like something that occurred randomly overnight?

Egg cells, on the other hand, proliferate only in the fetus. These special cells enter meiosis before birth, but then can remain in an ‘arrested’ state for up to 50 years. So while sperm cells are produced throughout a man’s

Male	
Organ	Primary Functions
Penis	Erectile organ of copulation and urinary excretion
Testicle	Production of male sex hormones and sperm
Seminal Vesicles	Provide an alkaline fluid containing nutrients and prostaglandins
Ductus Deferens	Convey sperm to ejaculatory ducts
Prostate	Secretes alkaline fluid that helps neutralize acidic seminal fluid, and enhances motility of sperm
Epididymides	Storage and maturation of spermatozoa
Scrotum	Encloses and protects the testes
Female	
Organ	Primary Functions
Vagina	Organ of copulation, and passageway for fetus during parturition
Labia Major and Minor	Elongate vaginal canal and protect external genitalia
Clitoris	Erectile organ associated with feelings of pleasure during sexual stimulation
Ovary	Egg production and female sex hormones
Uterus	(Womb)-site of implantation; sustains life of the embryo
Uterine Tube	Convey egg or embryo toward uterus; common site of fertilization
Mammary glands	Produce and secrete milk for nourishment of infant

**Figure 3.** Anatomical differences between human males and females.

life, egg cells are produced only during fetal development (no more are made after the female baby is born). During this fetal production stage, enough eggs are produced to last an adult woman throughout her life. The yolk, or egg cytoplasm, in these egg cells is rich in lipids, proteins, and polysaccharides. Egg cells also contain specialized secretory vesicles (located under the plasma membrane) that possess cortical granules. These granules alter the egg coat upon fertilization in order to prevent more than one sperm from fusing with the egg.<sup>15</sup> Additionally, egg cell development occurs in timed stages after menses begins. A developing egg is called an oocyte. Interestingly, while the general stages of oocyte development are similar, we know today that this process varies from species to species. How does a ‘random overnight chance occurrence’ explain these extremely complex cellular characteristics, and the differences seen among species? Jacobson addressed such problems when he stated:

‘Directions for the reproduction of plans, for energy and the extraction of parts from the current environment, for the growth sequence, and for the effector mechanism translating instructions into growth—all had to be simultaneously present at that moment. This combination of events has seemed an incredibly unlikely happenstance, and has often been ascribed to divine intervention.’<sup>16</sup>

### Conclusion

Human reproduction was designed and created by God. He commanded Adam and Eve to ‘... be fruitful, and multiply, and replenish the earth, and subdue it; and have dominion over the fish of the sea, and over the birds of the heavens, and over every living thing that moveth upon the earth’ (Genesis 1:28). This command came from the God who spoke life into man, and who designed humans and their means of reproduction completely apart from the animals. Man and woman not only have the ability to choose a mate, but they also possess the ability to enjoy sexual relations throughout their relationship. Sexual reproduction is not merely the product of millions of years of organic evolution, it is the product of an Intelligent Creator.

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- \* This material can be obtained in an unabridged form in the book *The Truth About Human Origins*, Apologetics Press: Montgomery; coauthored by Brad Harrub and Bert Thompson.
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**Brad Harrub** is a graduate of Kentucky Wesleyan College, where he earned a B.S. degree in biology. He also earned a Ph.D. in neurobiology and anatomy from the College of Medicine at the University of Tennessee in Memphis. He is a member of the Society for Neuroscience, and was listed in the 2001–2002 edition of *Who’s Who Among Scientists and Researchers*. He was an invited speaker to the 2003 International Conference on Creationism. He currently serves as the Director of Scientific Information at Apologetics Press, and as associate editor of *Reason & Revelation*.

**Bert Thompson** is a graduate of Abilene Christian University, where he earned a B.S. degree in biology. He also is a graduate of Texas A&M University, where he earned both M.S. and Ph.D. degrees in microbiology. Dr Thompson is a former professor in the College of Veterinary Medicine at Texas A&M, where he taught for several years. While at Texas A&M, he served as Coordinator of the Cooperative Education Program in Biomedical Science. Currently, Dr Thompson is the Executive Director of Apologetics Press and editor of *Reason & Revelation*.