

The history of the teaching of human female inferiority in Darwinism

Jerry Bergman

A review of the most prominent late 19th century writings by biologists focusing on Charles Darwin reveals that a major plank of evolution theory was the belief that women were intellectually and physically inferior to men. Female inferiority was a logical conclusion of the natural selection world-view because men were exposed to far greater selective pressures than women, especially in war, competition for mates, food and clothing. Conversely, women were protected from evolutionary selection by norms which dictated that men were to provide for and protect women and children. Darwinists taught that as a result of this protection, natural selection operated far more actively on males, producing male superiority in virtually all skill areas. As a result, males evolved more than females. The female inferiority doctrine is an excellent example of the armchair logic that has often been more important in establishing evolutionary theory than fossil and other empirical evidence.

Introduction

The central mechanism of Darwinism is natural selection of the fittest, requiring differences in organisms from which nature can select. As a result of natural selection, inferior organisms are more likely to become extinct, and the superior groups are more likely to thrive and leave a greater number of offspring.¹

The biological racism of late 18th century Darwinism is now both well documented and widely publicised. Especially influential in the development of biological racism was the theory of eugenics developed by Charles Darwin's cousin, Sir Francis Galton.^{2,3}

Less widely known is that many evolutionists, including Darwin, taught that women were biologically and intellectually inferior to men. The intelligence gap that

Darwinists believed existed between males and females was not minor, but of a level that caused some evolutionists to classify the sexes as two distinct psychological species, males as *homo frontalis*, and females as *homo parietalis*.⁴ Darwin himself concluded that the differences between male and female humans were so enormous that he was amazed that '*such different beings belong to the same species*' and he was surprised that '*even greater differences still had not been evolved*'.⁵

Sexual selection was at the core of evolution, and female inferiority was its major proof and its chief witness. Darwin concluded that males were like animal breeders, shaping women to their liking by sexual selection.⁶ In contrast, war pruned weaker men, allowing only the strong to come home and reproduce. Men were also the hunting specialists, an activity that pruned weaker men. Women by contrast, '*specialised in the "gathering" part of the primitive economy*'.⁷

Male superiority was so critical for evolution that George stated:

*'The male rivalry component of sexual selection was "the key", Darwin believed, to the evolution of man: of all the causes which have led to the differences ... between the races of man ... sexual selection has been the most efficient.'*⁸

Natural selection struggles existed between groups, but were '*even more intense among members of the same species, which have similar needs and rely upon the same territory to provide them with food and mates*'.⁹ For years, evolution theorists commonly taught that the intense struggle for mates within the same species was a major factor in producing male superiority.

Darwin's ideas, as elucidated in his writings, had a major impact on society and science. Richards concluded that Darwin's views about women followed from evolutionary theory, '*thereby nourishing several generations of scientific sexism*'.¹⁰ Morgan added that Darwin inspired scientists to use biology, ethnology, and primatology to support the theories of women's '*manifestly inferior and irreversibly subordinate*' status.¹¹

The reasons justifying the belief in the biological inferiority of women are complex, but Darwinism was a major factor, especially Darwin's natural and sexual selection ideas. The extent of the doctrine's effect can be gauged by the fact that the inferiority-of-women conclusion has heavily influenced theorists from Sigmund Freud to Havelock Ellis, who have had a major role in shaping our generation.¹² As eloquently argued by Durant, both racism and sexism were central to evolution:

'Darwin introduced his discussion of psychology in the Descent by reasserting his commitment to the principle of continuity ... [and] ... Darwin rested his case upon a judicious blend of zoomorphic and anthropomorphic arguments. Savages, who were said to possess smaller brains and more prehensile limbs than the higher races, and whose lives were said to be dominated more by

instinct and less by reason ... were placed in an intermediate position between nature and man; and Darwin extended this placement by analogy to include not only children and congenital idiots but also women, some of whose powers of intuition, of rapid perception, and perhaps of imitation were "characteristic of the lower races, and therefore of a past and lower state of civilization" (Descent 1871:326–327).¹³

Darwin's personal life

Darwin's theory may have reflected his personal attitudes toward women and non-Caucasian races. When Darwin was concerned that his son Erasmus might marry a young lady named Martineau, he wrote that if Erasmus married her he would not be:

'... much better than her "nigger". — Imagine poor Erasmus a nigger to so philosophical and energetic a lady Martineau had just returned from ... America, and was full of married women's property rights Perfect equality of rights is part of her doctrine We must pray for our poor "nigger" ... Martineau didn't become a Darwin.'¹⁴

Among the more telling indications of Darwin's attitudes toward women were the statements he penned as a young man, which listed what he saw as the advantages of marriage, including children and a

*'... constant companion, (friend in old age) who will feel interested in one, **object to be beloved and played with — better than a dog anyhow** — Home, and someone to take care of house — Charms of music and female chit-chat. These things good for one's health (emphasis mine).'¹⁵*

Conflicts that Darwin perceived marriage would cause him included: *'how should I manage all my business if I were obligated to go every day walking with my wife — Eheu!'* He added that as a married man he would be a *'poor slave ... worse than a negro'* but then reminisced that *'One cannot live this solitary life, with groggy old age, friendless and cold and childless staring one in one's face ...'* Darwin concluded his evaluation on the philosophical note: *'There is many a happy slave'* and shortly thereafter, in 1839, he married his cousin, Emma Wedgwood.¹⁶

To Brent, Darwin's comments revealed a low opinion of women: *'It would be hard to conceive of a more self-indulgent, almost contemptuous, view of the subservience of women to men.'*¹⁷ Richards' analysis of Darwin's thoughts was as follows:

'From the onset he [Darwin] embarked on the married state with clearly defined opinions on women's intellectual inferiority and her subservient status. A wife did not aspire to be her husband's intellectual companion, but rather to amuse his leisure hours and look after his

person and his house, freeing and refreshing him for more important things. These views are encapsulated in the notes the then young and ambitious naturalist jotted not long before he found his "nice soft wife on a sofa" ... (although throughout their life together it was Charles who monopolized the sofa, not Emma).'¹⁸

The major intellectual justification Darwin offered for his conclusions about female inferiority was found in *The Descent of Man*. In this work, Darwin argued that the *'adult female'* in most species resembled the young of both sexes, and also that *'males are more evolutionarily advanced than females'*.¹⁹ Since female evolution progressed slower than male evolution, a woman was *'in essence, a stunted man'*.²⁰ This view of women rapidly spread to Darwin's scientific and academic contemporaries.

Darwin's contemporary anthropologist, Allan McGrigor, concluded that women are less evolved than men and *'... physically, mentally and morally, woman is a kind of adult child ... it is doubtful if women have contributed one profound original idea of the slightest permanent value to the world'*.²¹ Carl Vogt, professor of natural history at the University of Geneva, also accepted many of *'the conclusions of England's great modern naturalist, Charles Darwin'*.

Vogt argued that *'the child, the female, and the senile White'* all had the intellectual features and personality of the *'grown up Negro'*, and that in intellect and personality the female was similar to both infants and the *'lower'* races.²² Vogt concluded that human females were closer to the lower animals than males and had *'a greater'* resemblance to apes than men.²³ He believed that the gap between males and females became greater as civilisations progressed, and was greatest in the advanced societies of Europe.²⁴ Darwin was *'impressed by Vogt's work and proud to number him among his advocates'*.²⁵

Sexual selection

Darwin taught that the differences between men and women were due partly, or even largely, to sexual selection. A male must prove himself physically and intellectually superior to other males in the competition for females to pass his genes on, whereas a woman must only be superior in sexual attraction. Darwin also concluded that *'sexual selection depended on two different intraspecific activities: the male struggle with males for possession of females; and female choice of a mate'*.²⁶ In Darwin's words, evolution depended on *'a struggle of individuals of one sex, generally males, for the possession of the other sex'*.²⁷

To support this conclusion, Darwin used the example of Australian *'savage'* women who were the *'constant cause of war both between members of the same tribe and distinct tribes,'* producing sexual selection due to sexual

competition.²⁸ Darwin also cited the North American Indian custom, which required the men to wrestle male competitors in order to retain their wives, to support his conclusion that *'the strongest party always carries off the prize'*.²⁹ Darwin concluded that as a result, a weaker man was *'seldom permitted to keep a wife that a stronger man thinks worth his notice'*.²⁹

Darwin used other examples to illustrate the evolutionary forces which he believed produced men of superior physical and intellectual strength on the one hand, and sexually coy, docile women on the other. Since humans evolved from animals, and *'no one disputes that the bull differs in disposition from the cow, the wild-boar from the sow, the stallion from the mare, and, as is well known to the keepers of menageries, the males of the larger apes from the females'*, Darwin argued similar differences existed among humans.³⁰ Consequently, the result was that man is *'more courageous, pugnacious and energetic than woman, and has more inventive genius'*.³¹

Throughout his life, Darwin held these *male supremacist* views, which he believed were a critical expectation of evolution.³² Darwin stated shortly before his death that he agreed with Galton's conclusion that *'education and environment produce only a small effect'* on the mind of most women because *'most of our qualities are innate'*.³³ In short, Darwin believed, as do some sociobiologists today, that biology rather than the environment was the primary source of behaviour, morals and all mental qualities.³⁴ Obviously, Darwin almost totally ignored the critical influence of culture, family environment, constraining social roles, and the fact that, in Darwin's day, relatively few occupational and intellectual opportunities existed for women.³⁵

Darwin attributed most female traits to male sexual selection. Traits he concluded were due to sexual selection included human torso-shape, limb hairlessness, and the numerous other secondary sexual characteristics that differentiate humans from all other animals. What remained unanswered was why males or females would select certain traits in a mate when they had been successfully mating with hair covered mates for aeons, and no non-human primate preferred these *human* traits? In this case Darwin *'looked for a single cause to explain all the*

facts'.³⁶ If sexual selection caused the development of a male beard and its lack on females, why do women often prefer clean-shaven males? Obviously, cultural norms were critical in determining what was considered sexually attractive, and these standards change, precluding the long-term sexual selection required to biologically develop them.^{37,38}

Proponents of this argument for women's inferiority used evidence such as the fact that a higher percentage of *both* the mentally deficient and mentally gifted were males. They reasoned that since selection operated to a greater degree on men, the weaker males would be more rigorously eliminated than weaker females, raising the level of males. The critics argued that sex-linked diseases, as well as social factors, were major influences in producing the higher number of males judged feeble minded. Furthermore, the weaker females would be preserved by the almost universal norms that protected them.

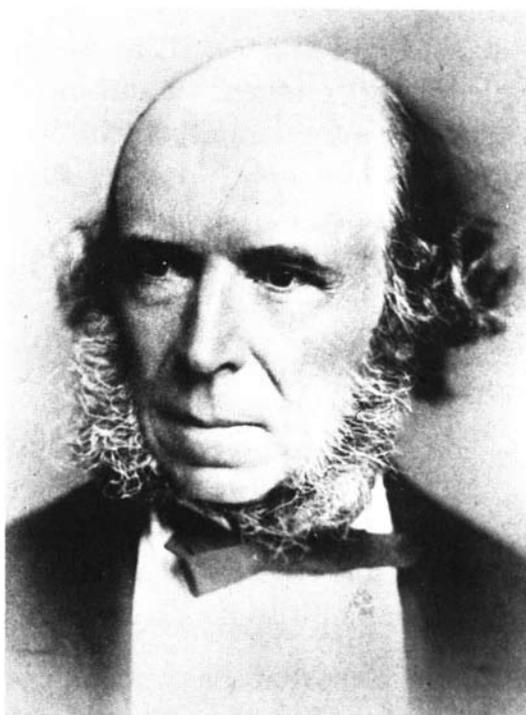
A major reason so few women were defined as eminent was because their social role often confined them to housekeeping and child rearing. Also, constraints on the education and employment of women, by both law and custom, rendered comparisons between males and females of little value in determining innate abilities. Consequently, measures of intelligence, feeble-mindedness, eminence and occupational success should not have been related to biology without factoring out these critical factors.

The arguments for women's inferiority, which once seemed well supported (and consequent-

ly were accepted by most theorists), were later shown to be invalid as illustrated by the changes in western society that occurred in the last generation.³⁹ Hollingworth's¹⁰³ 1914 work was especially important in discrediting the variability hypothesis. She found that the female role as homemaker enabled feeble-minded women to *better* survive outside an institutional setting, and this is why institutional surveys located fewer female inmates.

The influence of Darwin on society

The theory of the natural and sexual selection origin of both the body and mind had major consequences on society soon after Darwin completed his first major work on evolution in 1859. In Shields' words, *'the leitmotiv*



Herbert Spencer (1820–1903), a British political philosopher and 'social scientist' who believed that human social order was the result of evolution.

of evolutionary theory as it came to be applied to the social sciences was the evolutionary supremacy of the Caucasian male'.⁴⁰

One of the then leading evolutionists, Joseph Le Conte, even concluded that differences between male and female resulting from organic evolution must also apply to distinct societal roles for each sex.⁴¹ Consequently, Le Conte opposed women's suffrage because evolution made women 'incapable of dealing rationally with political and other problems which required emotional detachment and clear logic'.⁴²

Their innate belief in the inferiority of females was strongly supported by biological determinism and the primacy of nature over nurture doctrine. After reviewing the once widely accepted *tabula rasa* theory, in which the environment was taught to be responsible for personality, Fisher noted that Darwinism caused a radical change in society:

'...the year in which Darwin finished the first unpublished version of his theory of natural selection [1842], Herbert Spencer began to publish essays on human nature. Spencer was a British political philosopher and social scientist who believed that human social order was the result of evolution. The mechanism by which social order arose was "survival of the fittest", a term he, not Darwin, introduced. In 1850, Spencer wrote "Social Statistics", a treatise in which he ... opposed welfare systems, compulsory sanitation, free public schools, mandatory vaccinations, and any form of "poor law". Why? Because social order had evolved by survival of the fittest. The rich were rich because they were more fit; certain nations dominated others because these peoples were naturally superior; certain racial types subjugated others because they were smarter. Evolution, another word he popularized, had produced superior classes, nations, and races.'⁴³

Fisher added that the early evolutionist's teaching included not only ideas of superior race but also *superior sex*; conclusions that the male sex dominated and controlled females due to evolution. Darwin taught that a major reason for male superiority was that males fought and died to protect both themselves and their females.⁴⁴ As a consequence, males were subjected to a greater selection pressure than females because they had to fight for survival in such dangerous, male-orientated activities as war and hunting.

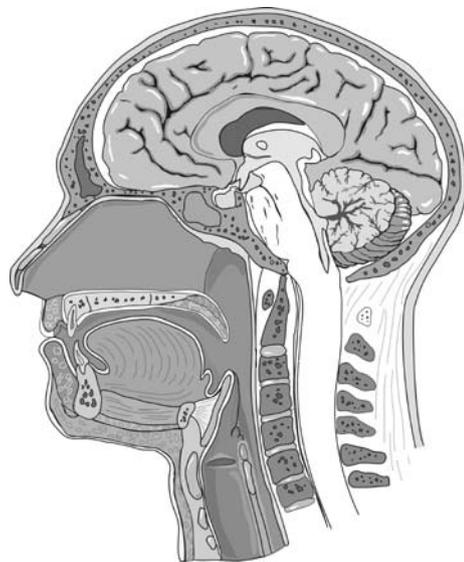
In the late 1800's, the inferiority-of-women doctrine was taken for granted by most scientists to be a major proof of evolution by natural selection. Gould claimed that 'almost all scientists' then believed that Blacks, women and other groups were intellectually inferior, and biologically closer to the lower animals.⁴⁵ Nor were these scientists simply repeating their cultural prejudices. They attempted to support their belief of female inferiority with supposedly empirical research as well as evolutionary speculation.

Female brain capacity believed inferior

One approach seized upon, to scientifically demonstrate that females were generally inferior to males, was to *prove* that their *brain capacity* was smaller. Researchers first endeavoured to demonstrate smaller female cranial capacity by skull measurements, and then tried to prove that brain capacity was causally related to intelligence — a far more difficult task.⁴⁶ Darwin justified this approach for proving female inferiority by explaining:

'As the various mental faculties gradually developed themselves, the brain would almost certainly become larger. ... the large proportion which the size of man's brain bears to his body, compared to the same proportion in the gorilla or orang, is closely connected with his higher mental powers that there exists in man some close relation between the size of the brain and the development of the intellectual faculties is supported by the comparison of the skulls of savage and civilized races, of ancient and modern people, and by the analogy of the whole vertebrate series.'⁴⁷

One of the most eminent of the numerous early researchers who used craniology to 'prove' intellectual inferiority of women was Paul Broca (1824–1880), a professor of surgery at the Paris Faculty of Medicine. He was a leader in the development of physical anthropology as a science, and one of Europe's most esteemed anthropologists. In 1859, he founded the prestigious *Anthropological Society*.⁴⁸ A major preoccupation of this society was measuring various human traits, including skulls, to 'delineate human groups and assess their relative worth'.⁴⁹ Broca concluded that in humans, the brain is larger in



Early researchers used craniology to 'prove' intellectual inferiority of women. Recent studies have now disproved this belief.^{50,54,55}

*'... men than in women, in eminent men than in men of mediocre talent, in superior races than in inferior races'⁵⁰ ... Other things equal, there is a remarkable relationship between the development of intelligence and the volume of the brain.'*⁵¹

In an extensive review of Broca's work, Gould concluded that Broca's conclusions only reflected *'the shared assumptions of most successful white males during his time — themselves on top ... and women, Blacks, and poor people below'*.⁵² How did Broca arrive at these conclusions? Gould responded that *'his facts were reliable ... but they were gathered selectively and then manipulated unconsciously in the service of prior conclusions'*. One would have been that women were intellectually and otherwise demonstratively inferior to men as evolution predicted. Broca's own further research and the changing social climate later caused him to modify his views, concluding that culture was more important than he had first assumed.⁵³

A modern study by Van Valen, which Jensen concluded was the *'most thorough and methodologically sophisticated recent review of all the evidence relative to human brain size and intelligence,'* found that the best estimate of the within-sex correlation between brain size and I.Q. *'may be as high as 0.3'*.^{54,55} A correlation of 0.3 accounts for only 9% of the variance between the sexes, a difference that may be more evidence for test bias and culture than biological inferiority. Schluter showed that claimed racial and sexual differences in brain size *'are accounted for by a simple artefact of the statistical methods employed'*.⁵⁶

Overturing the inferiority-of-women doctrine

Although some contemporary critics of Darwin effectively argued against his conclusions, the inferiority-of-women doctrine and the subordinate position of women was long believed. Only in the 1970s was the doctrine increasingly scientifically investigated as never before.^{57,58} Modern critics of Darwinism were often motivated by the women's movement to challenge especially Darwin's conclusion that evolution has produced males and females who were considerably different, and men who *'were superior to women both physically and mentally'*.⁵⁹ Their critiques demonstrated major flaws in the evidence used to prove female inferiority and, as a result, identified fallacies in major aspects of Darwinism itself.⁶⁰ For example, Fisher argued that the whole theory of natural selection was questionable, and quoted Chomsky, who said that the process by which the human mind achieved its present state of complexity was

*'a total mystery It is perfectly safe to attribute this development to "natural selection", so long as we realize that there is no substance to this assertion, that it amounts to nothing more than a belief that there is some naturalistic explanation for these phenomena.'*⁶¹

She also argued that modern genetic research has undermined several major aspects of Darwin's hypothesis — especially his sexual selection theory. In contrast to the requirement for Darwinism, in reality, even if natural selection were to operate differentially on males and females, males would pass on many of their superior genes to *both* their sons and daughters because most *'genes are not inherited along sexual lines'*. Aside from the genes which are on the Y chromosome, *'a male offspring receives genes from both mother and father'*.⁶²

Darwin and his contemporaries had little knowledge of genetics, but this did not prevent them from making sweeping conclusions about evolution. Darwin even made the claim that the characteristics acquired by sexual selection are usually confined to one sex.⁶³ Yet, Darwin elsewhere recognised that women could *'transmit most of their characteristics, including some beauty, to their offspring of both sexes'*, a fact he ignored in much of his writing.⁶⁴ Darwin even claimed that many traits, including genius and the higher powers of imagination and reason, are *'transmitted more fully to the male than to the female offspring'*.⁶⁵

The contribution of Darwin to sexism

Even though Darwin's theory advanced biologically based racism and sexism, some argue that he would not approve of, and could not be faulted for, the results of his theory. Many researchers went far beyond Darwin. Darwin's cousin, Galton, for instance, concluded from his life-long study on the topic, that *'women tend in all their capacities to be inferior to men (emphasis mine)'*.⁶⁶ Richards concluded that recent studies emphasised *'the central role played by economic and political factors in the reception of evolutionary theory'*, but Darwinism also provided *'the intellectual underpinnings of imperialism, war, monopoly, capitalism, militant eugenics and racism and sexism'*, and therefore *'Darwin's own part in this was not insignificant, as has been so often asserted'*.⁶⁷

After noting that Darwin believed that the now infamous social-Darwinist, Spencer, was *'by far the greatest living philosopher in England'*, Fisher concluded that the evidence for the negative effects of evolutionary teaching on history were unassailable:

*'Europeans were spreading out to Africa, Asia, and America, gobbling up land, subduing the natives and even massacring them. But any guilt they harbored now vanished. Spencer's evolutionary theories vindicated them Darwin's Origin of Species, published in 1859, delivered the coup de grace. Not only racial, class, and national differences but every single human emotion was the adaptive end product of evolution, selection, and survival of the fittest.'*⁶⁸

These Darwinian conclusions of biology about females

*'... squared with other mainstream scholarly conclusions of the day. From anthropology to neurology, science had demonstrated that the female Victorian virtues of passivity, domesticity, and greater morality (... less sexual activity) were rooted in female biology.'*⁶⁹

Consequently, many people concluded that: *'evolutionary history has endowed women with domestic and nurturing genes and men with professional ones'*.⁷⁰

The conclusion of the evolutionary inferiority of women is so ingrained in biology that Morgan concludes that researchers tended to avoid *'the whole subject of biology and origins'*, hoping that this embarrassing history will be ignored and scientists can *'concentrate on ensuring that in the future things will be different'*.⁷¹ Even evolutionary women scientists largely ignore the Darwinian inferiority theory.^{72,73}

Morgan stresses that we simply cannot ignore evolutionary biology because the belief of the *'jungle heritage and the evolution of man as a hunting carnivore has taken root in man's mind as firmly as Genesis ever did'*. Males have *'built a beautiful theoretical construction, with himself on top of it, buttressed with a formidable array of scientifically authenticated facts'*. She argues that these 'facts' must be re-evaluated because scientists have *'sometimes gone astray'* due to prejudice and philosophical proscriptions.⁷⁴ Morgan states that the prominent evolutionary view of women as biologically inferior to men must still be challenged, even though scores of researchers have adroitly overturned this Darwinian theory.

The influence of culture on the Darwinists' view of women

Culture was of major importance in shaping Darwin's theory.⁷⁵ Victorian middle-class views about men were blatant in *The Descent of Man* and other evolutionists' writings. The Darwinian concept of male superiority served to increase the secularisation of society, and made more palatable the acceptance of the evolutionary naturalist view that humans were created by natural law rather than by divine direction.⁷⁶ Naturalism was also critically important in developing the women-inferiority doctrine, as emphasised by Richards:

'Darwin's consideration of human sexual differences in The Descent was not motivated by the contemporary wave of anti-feminism ... but was central to his naturalistic explanation of human evolution. It was his theoretically directed contention that human mental and moral characteristics had arisen by natural evolutionary processes which predisposed him to ground these characteristics in nature rather than nurture — to

*insist on the biological basis of mental and moral differences ...'*⁷⁷

A major method used to attack the evolutionary conclusion of female inferiority was to critique the evidence for Darwinism itself. Fisher, for example, noted that it was difficult to postulate theories about human origins on the actual brain organisation

*'... of our presumed fossil ancestors, with only a few limestone impregnated skulls — most of them bashed, shattered, and otherwise altered by the passage of millions of years ... [and to arrive at any valid conclusions on the basis of this] evidence, would seem to be astronomical.'*⁷⁸

Hubbard added that *'Darwin's sexual stereotypes'* were still commonly found

*'... in the contemporary literature on human evolution. This is a field in which facts are few and specimens are separated by hundreds of thousands of years, so that maximum leeway exists for investigator bias.'*⁷⁹

She then discussed our *'overwhelming ignorance'* about human evolution and the fact that much which is currently accepted is pure speculation. Many past attempts to disprove the evolutionary view that women were intellectually inferior, similarly attacked the core of evolutionary theory itself. A belief in female inferiority is inexorably bound up with human group



A Darwinian belief was that evolutionary history had endowed women with domestic and nurturing genes.

inferiority, which must first exist for natural selection to operate. Evaluations of the female inferiority theory have produced incisive, well-reasoned critiques of both sexual and natural selection and also Darwinism as a whole.⁸⁰

Evolution can be used to argue for male superiority, but it can also be used to build a case for the opposite. The evolutionary evidence leaves so many areas for 'individual interpretation' that some feminist authors, and others, have read the data as proving the evolutionary superiority of women by using 'the same evolutionary story to draw precisely the opposite conclusion'.⁸¹ One notable, early example is Montagu's classic 1952 book: *The Natural Superiority of Women*. Some female biologists have even argued for a *gynaecocentric* theory of evolution, concluding that women are the trunk of evolution history, and men are but a branch, a grafted scion.⁸² Others have tried to integrate reformed 'Darwinist evolutionary "knowledge" with contemporary feminist ideals'.⁸³

Hapgood even concludes that evolution demonstrates that males exist to serve females, arguing that 'masculinity did not evolve in a vacuum' but because it was selected. He notes many animal species live without males, and the fact that they do live genderlessly or sexlessly shows that 'males are unnecessary' in certain environments.⁸⁴ It is the woman that reproduces, and evolution teaches that survival is important only to the degree that it promotes reproduction. So Hapgood argues that evolution theory should conclude that males evolved only to serve females in all aspects of child bearing and nurturing. This includes both to ensure that the female becomes pregnant and that her progeny are taken care of.

Another revisionist theory is that women are not only superior, but society was once primarily matriarchal. These revisionists argue that patriarchal domination was caused by factors that occurred relatively recently.⁸⁵ Of course, the theories that postulate the evolutionary inferiority of males suffer from many of the same problems as those that postulate women's inferiority.

The use of Darwinism to justify behaviour in conflict with Christianity

Some argue that many of the views Darwin developed should be perpetuated again, to produce a moral system based on the theory of evolution.⁸⁶ For example, Ford concluded that the idea of eliminating sexism is erroneous:

*'... the much-attacked gender differentiation we see in our societies is actually ... a necessary consequence of the constraints exerted by our evolution. There are clear factors which really do make men the more aggressive sex, for instance'*⁸⁷

After concluding that natural selection resulted in female inferiority, it was often implied that what

natural selection produced was natural, and thus proper. It at least gave a 'certain dignity' to behaviours that we might 'otherwise consider aberrant or animalistic'.⁸⁸ For example, evolutionary success was defined as leaving more offspring, and consequently promiscuity in human males was a selected trait.

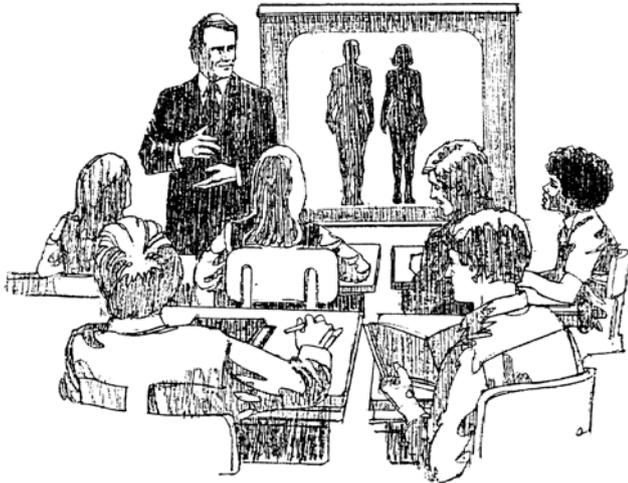
This explanation is used to justify both male promiscuity and irresponsibility, and argues that trying to change 'nature's grand design' is futile.⁸⁹ Fox even argues that the high pregnancy rate among unmarried teenage girls today is due to our 'evolutionary legacy', which 'drives' young girls to get pregnant.⁹⁰ Consequently, the authors conclude that cultural and religious prohibitions against unmarried teen pregnancy are doomed to fail.

Eberhard notes that the physical aggressiveness of males is justified by sexual selection, and that: 'males are more aggressive than females in the sexual activities preceding mating (discussed at length by Darwin 1871 and confirmed many times since ...)'.⁹¹ Further, the conclusion 'now widely accepted ... that males of most species are less selective and coy in courtship because they make smaller investments in offspring' is used to justify male sexual promiscuity.⁹² Male promiscuity is, in other words, genetically determined and thus is natural or normal because 'males profit, evolutionarily speaking, from frequent mating, and females do not'. The more females a male mates with, the more offspring he produces, whereas a female needs to mate only with one male to become pregnant.⁹³ Evolution can progress only if females select the fittest male as predicted by Darwin's theory of sexual selection. Males for this reason have 'an indiscriminating eagerness' to mate whereas females have 'a discriminating passivity'.⁹³

Conclusions and implications

The Darwinian conclusion that women are inferior has had major unfortunate social consequences. Darwin hypothesised that sexual selection was important in evolution, and along with the data he and his followers gathered to support their inferiority-of-women view, it provided a major support for natural selection.⁹⁴ Therefore, the disproof of women's inferiority means that a major mechanism that was originally hypothesised to account for evolutionary advancement is wrong. Today, radically different conclusions are accepted about the intelligence of women, despite using data more complete but similar to that used by Darwin to develop his theory. This vividly demonstrates how important both preconceived ideas and theory are in interpreting data. The women's evolutionary inferiority conclusion developed partly because:

'Measurement was glorified as the essential basis of science: both anatomists and psychologists wanted above everything else to be "scientific", Earlier psychological theory had been



Man and woman were specific creations of God, made not to dominate but to complement each other.

*concerned with those mental operations common to the human race: the men of the nineteenth century were more concerned to describe human differences.*⁹⁵

These human differences were not researched to understand and help society but to justify a theory postulated to support both naturalism and a specific set of social beliefs. The implications of Darwinism cannot be ignored today because the results of this belief were tragic, especially in the area of racism:

*'... it makes for poor history of science to ignore the role of such baggage in Darwin's science. The time-worn image of the detached and objective observer and theoretician of Down House, remote from the social and political concerns of his fellow Victorians who misappropriated his scientific concepts to rationalize their imperialism, laissez-faire economics, racism and sexism, must now give way before the emerging historical man, whose writings were in many ways so congruent with his social and cultural milieu.'*⁹⁶

Hubbard went further and charged Darwin guilty of '*blatant sexism*'. She placed a major responsibility for scientific sexism, and its mate social Darwinism, squarely at Darwin's door.⁹⁷ Advancing knowledge has shown many of Darwin's ideas were not only wrong but also harmful. Many still adversely affect society today. Hubbard concluded that Darwin '*provided the theoretical framework within which anthropologists and biologists have ever since been able to endorse the social inequality of the sexes*'.⁹⁸ Consequently, '*it is important to expose Darwin's androcentricism, and not only for historical reasons, but because it remains an integral and unquestioned part of contemporary biological theories*'.⁹⁹

Male superiority is critical for evolution. George states that:

'... the male rivalry component of sexual

*selection was the key, Darwin believed, to the evolution of man; of all the causes which have led to the differences in external appearance between the races of man, and to a certain extent between man and the lower animals, sexual selection has been the most efficient.'*¹⁰⁰

A critical reason for Darwin's conclusion was his rejection of the biblical account, which taught that man and woman were specific creations of God, made not to dominate but to complement each other. Darwin believed the human races '*were the equivalent of the varieties of plants and animals which formed the materials of evolution in the organic world generally*', and the means that formed the sexes and races were the same struggles that Darwin concluded animals underwent to both survive and mate.¹⁰¹ Having disregarded the biblical view, Darwin needed to replace it with another one, and the one he selected — the struggle of males for possession of females and food — resulted in males competing against other males. He concluded that evolution favoured the most vigorous and sexually aggressive males and caused these traits to be selected because those with these traits usually left more progeny.¹⁰²

Darwin's theory of female inferiority was not the result of personal conflicts with women but from his efforts to explain evolution without an intelligent creator. In general, a person's attitude towards the opposite sex results from poor experiences with that sex. From the available information, this does not appear to have been the situation in Darwin's case. His marriage was exemplary. The only major difference between Darwin and his wife was in the area of religion, and this caused only minor problems: their devotion to each other is classic in the history of famous people. Further, as far as is known, he had an excellent relationship with all of the other women in his life: his mother and his daughters. Much of Darwin's hostility to religion and God is attributed to the death of his mother when he was young and to the death of his oldest daughter in 1851, at the age of ten.

Summary

The Christian teaching of the equality of the sexes before God (Gal. 3:28), and the lack of support for the female biological inferiority position, is in considerable contrast to the conclusions derived by evolutionary biology in the middle and late 1800s. In my judgment, the history of these teachings is a clear illustration of the negative impact of social Darwinism.

References

1. Darwin, C., *The Descent of Man and Selection in Relation to Sex*, D. Appleton and Company, New York, 1871, 1896 edition.
2. Bergman, J., Eugenics and the Development of Nazi Race Policy, *Perspectives on Science and Christian Faith*, 44(2):109–123, June, 1992:

- Darwinism and the Nazi race Holocaust, *CEN Tech. J.* **13**(2):101–111, 1999.
3. Stein, G.J., Biological Science and the Roots of Nazism, *American Scientists*, Jan–Feb, **76**:50–58, 1988.
 4. Love, R., *Darwinism and Feminism: The 'Women Question' in the Life and Work of Olive Schreiner and Charlotte Perkins Gilman*; in: Oldroyd and Langham, *The Wider Domain of Evolutionary Thought*, D Reidel, Holland, pp. 113–131, 1983.
 5. Rosser S.V., *Biology and Feminism: A Dynamic Interaction*, Twayne Pub., New York, p. 59, 1992.
 6. Richards, E., *Darwin and the Descent of Women*, pp. 78, 57–111; in: Oldroyd, D. and Langham, I. (eds), *The Wider Domain of Evolutionary Thought*, D. Reidel, Holland, 1983.
 7. Dyer, G., *War*, Crown Publishers, Inc., New York, p. 122, 1985.
 8. George, W., *Darwin*, Fontana Paperbacks, London, p. 136, 1982.
 9. Reed, E., *Woman's Evolution: From Matriarchal Clan to Patriarchal Family*, Pathfinder Press, New York, p. 45, 1975.
 10. Richards, E., Will the real Charles Darwin please stand up? *New Scientist* **100**:884–887, 1983.
 11. Morgan, E., *The Descent of Woman*, Stein and Day, New York, p. 1, 1972.
 12. Shields, S.A., Functionalism, Darwinism, and the psychology of women; a study in social myth, *American Psychologist* **30**(1):739–754, 1975.
 13. Durant, J.R., The Ascent of Nature; in: Darwin's *Descent of Man*; in: *The Darwinian Heritage*, Kohn, D. (ed.), Princeton University Press, NJ, p. 295, 1985.
 14. Desmond, A. and Moore, J., *Darwin*, Warner Books, New York, p. 201, 1991.
 15. Darwin, C., *The Autobiography of Charles Darwin 1809–1882*, W.W. Norton & Company, Inc., New York, pp. 232–233, 1958.
 16. Darwin, Ref. 15, p. 234.
 17. Brent, P., *Charles Darwin: A Man of Enlarged Curiosity*, Harper and Row, New York, p. 247, 1981.
 18. Richards, Ref. 10, p. 886.
 19. Kevles, B., *Females of the Species: Sex and Survival in the Animal Kingdom*, Harvard University Press, Cambridge, MA, p. 8, 1986.
 20. Shields, Ref. 12, p. 749.
 21. McGrigor, A.J., On the real differences in the minds of men and women, *Journal of the Anthropological Society* **7**:210, 1869.
 22. Vogt, C., *Lectures on Man: His Place in Creation, and the History of Earth*, Hunt, J. (ed.), Paternoster Row, Longman, Green, Longman, and Roberts, London. xv:192, 1864.
 23. Lewin, R. *Bones of Contention*, Simon and Schuster, New York, p. 305, 1987.
 24. Richards, Ref. 6, p. 75.
 25. Richards, Ref. 6, p. 74.
 26. George, Ref. 8, p. 69.
 27. Darwin, C., *The Origin of Species by Means of Natural Selection*, D. Appleton and Company, New York, 1897 edition, p. 108, 1859.
 28. Darwin, Ref. 1, p. 561.
 29. Darwin, Ref. 1, p. 562.
 30. Darwin, Ref. 1, p. 563.
 31. Darwin, Ref. 1, p. 557.
 32. Richards, Ref. 10, p. 885.
 33. Darwin, Ref. 15, p. 43.
 34. Richards, Ref. 6, p. 67–68.
 35. Williams, G.C., *Sex and Evolution*, Princeton University Press, NJ, 1977.
 36. George, Ref. 8, p. 71.
 37. Millman, M., *Such a Pretty Face: Being Fat in America*, W.W. Norton and Company, NY, 1980.
 38. Beller, A.S., *Fat & Thin: A Natural History of Obesity*, McGraw Hill, New York, 1977.
 39. Shields, Ref. 12, pp. 741–745.
 40. Shields, Ref. 12, p. 739.
 41. Stephens, L.D., Evolution and women's rights in the 1890s: the views of Joseph LeConte, *The Historian* **38**(2):241, 1976.
 42. Stephens, Ref. 41, p. 247.
 43. Fisher, H.E., *The Sex Contract: The Evolution of Human Behavior*, William Morrow and Company, Inc., New York, pp. 115–116, 1982.
 44. Darwin, Ref. 1, p. 563.
 45. Gould, S.J., *The Mismeasure of Man*, W.W. Norton & Company, New York, p. 56, 1982.
 46. Van Valen, L., Brain Size and Intelligence in Man, *American Journal of Physical Anthropology* **40**:417–423, 1974.
 47. Darwin, Ref. 1, p. 54.
 48. Fee, E., Nineteenth-Century Craniology: The Study of the Female Skull, *Bulletin of the History of Medicine* **53**:415, 1979.
 49. Gould, Ref. 45, p. 83.
 50. Gould, Ref. 45, p. 83 (original in French).
 51. Gould, Ref. 45, p. 83 (original in French).
 52. Gould, Ref. 45, p. 85.
 53. Ellis, H., *Man and Woman. A Study of Secondary and Tertiary Sexual Characteristics*, Heineman, London, 1934 (first published 1896).
 54. Jensen, A., *Bias in Mental Training*, The Free Press, New York, p. 361, 1980.
 55. Van Valen, Ref. 46, p. 417.
 56. Schluter, D., Brain size differences, *Nature* **359**(6392):181, 1992.
 57. Rosser, Ref. 5, pp. 56, 59.
 58. Fee, Ref. 48, p. 415.
 59. Rosser, Ref. 5, p. 58.
 60. Alaya, F., Victorian science and the 'genius' of women, *Journal of the History of Ideas* **38**:261–280, 1977.
 61. Chomsky, N., *Language and Mind*, Harcourt, Brace and World, New York, p. 97, 1972.
 62. Fisher, E., *Woman's Creation: Sexual Evolution and the Shaping of Society*, Anchor Press/Doubleday, Garden City, NY, p. 112, 1979.
 63. Crook, J.H., *Sexual Selection, Dimorphism, and Social Organization in the Primates*; in: Campbell B. (ed.), *Sexual Selection and the Descent of Man 1871–1971*, Aldine Pub. Co., Chicago, 1972.
 64. Darwin, Ref. 1, p. 597.
 65. Darwin, Ref. 1, p. 565.
 66. Shields, Ref. 12, p. 743.
 67. Richards, Ref. 6 p. 88.
 68. Fisher, Ref. 62, p. 116.
 69. Steinem, G., *Revolution from Within: A Book of Self-Esteem*, Little, Brown and Company, Boston, p. 133, 1992.

70. Hubbard, R., Henifin, M.S. and Fried, B., *Women Look at Biology Looking At Women: A Collection of Feminist Critiques*, Schenkman Publishing Co., Cambridge, MA, p. 208, 1979.
71. Morgan, Ref. 11, p. 2.
72. Margulis, L. and Sagan, D., *Origins of Sex: Three Billion Years of Genetic Recombination*, Yale University Press, New Haven, 1986.
73. Tanner, N. and Zihlman, A.Z., Women in evolution. Part I: Innovation and selection in human origins, *Signs: Journal of Women in Culture and Society* 1(3):585–608, 1976.
74. Morgan, Ref. 11, p. 2–3.
75. Rosser, Ref. 5, p. 56.
76. George, Ref. 8.
77. Richards, Ref. 6, p. 97.
78. Fisher, Ref. 62, p. 113.
79. Hubbard, R., Have only men evolved? in: *Women Look at Biology Looking At Women*, Ed. by R. Hubbard, et al., Boston, p. 26, 1979.
80. Shepherd, L.J., *Lifting the Veil: The Feminine Force in Science*, Shambhala, Boston, 1993.
81. Love, Ref. 4, p. 124.
82. Hill, M.A., *Charlotte Perkins Gilman. The Making of a Radical Feminist 1860–1896*, Temple University Press, Philadelphia, 1980.
83. Hill, Ref. 82, p. 263.
84. Hapgood, F., *Why Males Exist: An Inquiry Into the Evolution of Sex*, William Morrow and Company, Inc, New York, pp. 23–24, 1979.
85. Reed, Ref. 9, pp. 43–74.
86. Goldberg, S., *The Inevitability of Patriarchy: Why the Biological Difference Between Men and Women Always Produces Male Domination*, William Morrow & Company, Inc., New York, 1973.
87. Ford, B.J., *Patterns of Sex: The Mating Urge and our Sexual Future*, St. Martin's Press, New York, p. 8, 1980.
88. Symons, D., *The Evolution of Human Sexuality*, Oxford University Press, New York, p. 61, 1980.
89. Symons, Ref. 88, p. 162.
90. Fox, R., *The Red Lamp of Incest*, E. P. Dutton, New York, 1980.
91. Eberhard, W.G., *Sexual Selection and Animal Genitalia*, Harvard University Press, Cambridge, MA, p. 67, 1985.
92. Eberhard, Ref. 91, p. 69.
93. Tavis, C., *The Mismeasure of Women: Why Women Are Not the Better Sex, the Inferior Sex, or the Opposite Sex*, Simon and Schuster, New York, p. 214, 1992.
94. Mosedale, S.S., Corrupted — Victorian biologists consider 'the women question', *Journal of the History of Biology* 9:1–55, 1978.
95. Fee, Ref. 48, p. 419.
96. Richards, Ref. 10, p. 887.
97. Hubbard et al. Ref. 79.
98. Richards, Ref. 38, p. 60.
99. Hubbard et al., Ref. 79, p. 16.
100. George, Ref. 8, p. 136.
101. Richards, Ref. 6, p. 64.
102. Hubbard et al., Ref. 79.
103. Hollingsworth, L.S., Variability as related to sex differences in achievement, *American Journal of Sociology* 19:510–530, 1914.

Jerry Bergman has seven degrees, including in biology, psychology, and evaluation and research, from Wayne State University (Detroit), Bowling Green State University and other colleges. He has taught at Bowling Green State University (Ohio) and at the University of Toledo. He is now a professor of science at Northwest College, Archbold (Ohio), and is working on a third Ph.D., this one in molecular biology.
