

Thorns Also and Thistles

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1. Introduction

The principles of God's government were expressed in the beauties of His creation and the harmonious relationships which existed among His creatures (Gen 1:31; Isa 65:17-19, 24, 25; cf. Rev 21:3, 4, 8). There was one individual, however, who was determined to change all this. His dissatisfaction with God's government commenced in heaven and progressed so that finally Lucifer found himself barred from its inner courts but with access to other parts of God's created universe. Now we find that on earth he has despoiled that which was once perfect and good and thereby has added to the cup of human misery.

In this article I examine the biblical record, selected evidences of science, and the resources of the Spirit of Prophecy in an attempt to answer some of the basic questions regarding the nature of selected curses proclaimed by God on the earth after the Fall. I attempt to reconstruct scenarios which help us to understand the intent of and methods used by Satan to deface and change nature and lead humanity to deface the image of God. This will help us to relate to events happening in the world around us in a more intelligent manner and will aid in understanding statements on amalgamation made by Ellen White. I will show that these statements are coherent and have deep meaning and relevance today. I will commence the discussion with a review of Satan's wisdom.

2. Detailed knowledge

Lucifer was the leading angel in heaven “the signet of perfection, full of wisdom and perfect in beauty” (Isa 14:13, RSV). There was nothing lacking in his abilities. His intellectual powers are mentioned particularly and we note that it was not just knowledge that he possessed, but wisdom or higher order reasoning ability. We might reasonably believe that today’s brightest and best could not match the brilliance of unfallen, early man let alone that of Lucifer. Writing of Lucifer we notice Ellen White’s words: “He possessed the wonderful intellectual power of an angel, of which few form any just idea.”¹

We can only imagine the extent of Satan’s knowledge. Some minimal understandings might be as follows. Satan no doubt heard the scientific knowledge conveyed to Adam by God (Gen 2:19, 20) including the answers to the “many questions” that Adam and Eve put to their angel counselors about the things that they partially understood.² This undoubtedly included the information shared with Adam about the mysteries of the natural world.³ He knew the extent of God’s creation that included the world invisible to the naked eye—the microbial world. This knowledge is integral to a proper understanding of the meaning of the idea of being “full of wisdom” (Ezek 28:12, NKJV). He possessed “unrivaled” knowledge in common with those who lived before the Flood.⁴ His knowledge went beyond the bounds possessed by humans, since angels operate on a higher level of existence than mankind (Ps 8:4, 5). We might well ask: What knowledge was Satan offering Eve in the Garden and what was his schedule for transferring this information? And has he now transferred part of that knowledge to the human race?

The evil imaginings and wickedness of mankind were inspired by Satan and led God to destroy most of them (Gen 6:5). Their unrestricted thoughts were generated from minds not receptive to God’s Spirit (v. 3). They

¹ E. G. White, *Testimonies for the Church* (Mountain View, CA: Pacific Press Publishing Association, 1948), 2:71.

² E. G. White, *The Story of Redemption* (Washington, DC: Review and Herald Publishing Association, 1947), 29.

³ E. G. White, *The Story of Patriarchs and Prophets* (Mountain View, CA: Pacific Press Publishing Association, 1958), 83.

⁴ *Ibid.*, 82.

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worshiped their own intellects just as modern mankind is prone to do.⁵ Their unsanctified thoughts arose from suggestions made by the arch-deceiver.⁶ Soon after the Flood, rebellion arose again and they defied the memory of this destruction and God's promises. In effect, they had rejected God and set up the tower of Babel or the "gate of the gods."⁷ In time false religions of the basest types were invented. Baal worship provides us a suitable example. Here human sacrifices and gross sexual indulgences are thought to have occurred.⁸ Some of the sexual liaisons perhaps would have included animals by extrapolation from our knowledge of mythology. For example, in Baal worship the god is figured as having sex with a heifer to sire a bull god. Other gods are figured performing similar acts. In the first part of the last millennium there was a preoccupation with the possibility of animal-human hybrids.⁹ All this suggests that erotic fantasies, if not practices, were common. Such fantasies have been carried out through human history and were acted out at the Roman games and circuses where hundreds of thousands may have died in acts of torture and rape from a wide variety of trained animals. Today, acts involving sex with animals are not uncommon.¹⁰ The reason I mention these unseemly acts is to highlight the unsanctified thoughts of humanity and fascination shown by mankind in improving upon God's provisions by experimenting with crosses between living organisms including humans. All this served to destroy God's image in mankind at the moral level.

As time passed, Satan would have entered into the experimental sciences. Ingenious methods of manipulating genetic information other than human-assisted crossings of animals and plants became available by the time of Job (date unfortunately not fixed by the historical record). It was clear by this time that Satan had the ability to manipulate microbes so as to

⁵ C. Goldstein, *By His Stripes* (Nampa, ID: Pacific Press Publishing Association, 1999), 19-20.

⁶ White, 1958, op. cit., 378.

⁷ S. H. Horn, "Babel," in *Seventh-day Adventist Bible Dictionary* (Washington, DC: Review and Herald Publishing Association, 1960), 103-105.

⁸ S. H. Horn, "Baal," in *Seventh-day Adventist Bible Dictionary* (Washington, DC: Review and Herald Publishing Association, 1960), 99-100.

⁹ J. Ham, and M. Senior, *Animal Acts: Configuring the Human in Western History* (Florence, KY: Routledge, 1997), 10.

¹⁰ H. Miletski, "A History of Bestiality," in *Bestiality and Zoophilia: Sexual Relations with Animals*, ed. A. Beetz (West Lafayette, IN: Purdue University Press, 2005), 1-22.

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cause boils (responsible bacteria are in the genus *Staphylococcus*). Conceivably, this involved altering an existing microorganism (in today's world, most of these perform a beneficial function in both the environment and in animals). In the production of disease-causing organisms a means was provided to sweep unregenerate man to an early death and it also provided opportunity to bring accusations against God as the creator of such destructive agents.

We might read two things into the account recorded in Job chapters 1 and 2. First, on the basis of the belief that God, angels and devils present in the unseen realm have unusual and superior powers to mankind, we can assert with reasonable confidence that Satan's knowledge was far in advance of contemporary mankind. Secondly, the emergence of pathogenic microbes (as noted in Job's history) may have been due to the instability in copying genetic information in the parental types (chance production of pathogens) or Satan may have experimentally produced pathogenic staphylococci. The instability proposition is based on knowledge that mutations are known to give rise to pathogenic races in some categories of microbes.¹¹ (Mutations have consistently been observed in some genes). On the other hand, the possibility of experimental modification is not unreasonable if we consider the following historical facts. The discipline of microbiology emerged in the late nineteenth century, the genetic code was discovered by Watson and Crick in 1953, and genetic manipulations were common by the turn of the millennium. This sequence of events over a relatively short time frame informs us how quickly Satan could have acquired knowledge with his superior wisdom. Within less than 50 years of the discovery of the genetic code, modern scientists have acquired the ability to manipulate genetic information across species barriers. It might not be too rash to imagine that Satan and his minions already had achieved similar understandings well before the modern era. However, before we let our imaginations loose, it is also relevant to observe that Satan's abilities

¹¹ P. R. Day, "Mutation to Virulence in *Cladosporium fulvum*," *Nature* 179 (1957): 1141-1142; P. R. Day, S. L. Anagnostakis and J. E. Puhalla, "Pathogenicity Resulting from Mutation at the B Locus of *Ustilago maydis*," *Proceedings of the National Academy of Science, USA* 63 (3) (1971): 533-535; O. C. Yoder, "Toxins in Pathogenesis," *Annual Reviews of Phytopathology* 18 (1980): 103-129.

were limited by God's restraining hand (Job 2:5, 6).¹²

Conclusion 1: *Satan has concentrated his destructive activities on earth on obliterating the image of God in mankind and altering the face of nature to bring discredit on God as its creator.*

Before I return to discuss these possibilities of genetic manipulation further, I need to consider briefly the emergence of disease-causing organisms.

3. Emergence of disease-causing organisms

The earth as it came from the Creator's hand did not have within it anything that hurt or destroyed, for it was perfect (Gen 1:31, cf. Isa 65:25 concerning God's ideal). The first indication that something unusual would happen was the pronouncement made by God that thorns and thistles would appear (Gen 3:18). In terms of consistency of argument, God is not the originator of evil but rather Satan (James 1:13; Rev 12:9). Our text in Genesis thus is telling us that Satan would be permitted to alter the face of nature within certain limits. A complete list of possibilities was not provided.

The biblical record does not permit us to suggest when the first disease-causing organism appeared. For our purposes, it is most informative to focus on the account given in the book of Job (possibly written by Moses). By the time of Job, bacteria capable of infecting humans existed (virulent *Staphylococcus*) and Satan was able to induce experimental infection at will (Job 2:7). In understanding the latter phenomenon it is fruitful to refer to relatively recent community outbreaks where special environmental and contact conditions were shown to permit mass infection to occur.¹³ I am suggesting that Satan had discovered the elements of genetic engineering and understood something about the ecology of

¹² E. G. White, *The Story of Prophets and Kings* (Mountain View, CA: Pacific Press Publishing Association, 1943), 150.

¹³ M. G. Landen, B. J. McCumber, E. D. Asay and G. M. Egeland, "Outbreak of Boils in an Alaskan Village," *Western Journal of Medicine* 172 (2000): 235-239; J. Wang, S. Barth, M. Richardson, K. Corson and J. Mader, "An Outbreak of Methicillin-resistant *Staphylococcus aureus* Cutaneous Infection in a Saturation Diving Facility," *Undersea Hyperbaric Medicine* 30 (2003): 277-284.

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bacteria¹⁴ in order to have achieved the outcome described. His skills possibly were very advanced at this time.

How genetic engineering may be used to produce disease inducing microbes is illustrated by the relatively recent production of a virulent recombinant mouse pox virus. The virus was made through genetic manipulation. The virus particles had mouse derived molecules incorporated into them. When the virus was altered by receiving alien pieces of genetic information, it was able to undergo uncontrolled replication causing death in the experimental mice. This experimental result caused a stir in the scientific community.¹⁵ Further experiments were abandoned because the recombinant virus suppressed the immune response of the animals leading to their death. This example naturally forces us to ask the question where viruses have come from, for these entities are able to replicate only in living cells. They do not carry all the features of living organisms. A number of solutions have been postulated.¹⁶ One theory suggests that viruses may have arisen from the genome of living organisms,¹⁷ which makes sense in the context of our discussion. However, this is not the only suggestion postulated in scientific circles.¹⁸

It is simpler to account for the origin of pathogenic bacteria than for viruses as the majority of the former group of microbes has free-living relatives or closely similar counterparts in the environment. The switch from non-pathogenic to pathogenic bacteria can be illustrated through the following examples: the bacterium causing diphtheria in humans

¹⁴ Compare with. V. R. Racaniello, "Emerging Infectious Diseases," *Journal of Clinical Investigation* 113 (2004): 796-798.

¹⁵ R. J. Jackson, A. J. Ramsay, C. D. Christensen, S. Beaton, D. F. Hall and I. A. Ramshaw, "Expression of Mouse Interleukin-4 by a Recombinant Ectromelia Virus Suppresses Cytolytic Lymphocyte Responses and Overcomes Genetic Resistance to Mousepox," *Journal of Virology* 75 (2001):1205-1210; A. Müllbacher and M. Lobigs, "Creation of Killer Poxvirus Could Have Been Predicted," *Journal of Virology* 75 (2001): 8353-8355.

¹⁶ E. V. Koonin, T. G. Senkevich and V. V. Dolja, "The Ancient Virus World and Evolution of Cells," *Biology Direct* 1 (2006): 1-27.

¹⁷ D. Gillespie and R. C. Gallo, "RNA Processing and Tumor Virus Origin and Evolution," *Science* 188 (1975): 802-811; N. J. Dimmock and S. B. Primrose, *Introduction to Modern Virology*, 4th edition (Oxford: Blackwell Science, 1994), 276.

¹⁸ E. K. Wagner and M. J. Hewlett, *Basic Virology*, edition 2 (London: Blackwell Publishing, 2004), 8-9.

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(*Corynebacterium diphtheriae*) is relatively harmless until it acquires a bacterial virus that gives it a suite of genes which makes it virulent. Many other similar examples are known and include *Staphylococcus aureus* which may cause boils and other disease states.¹⁹ Blocks of genetic information found in harmless intestinal or soil bacteria are also commonly found in pathogenic ones, which have led to the suggestion that transfer of the information from one group of bacteria to another has given rise to disease-causing bacterial pathogens. How such horizontal transfer occurs in nature is not completely understood although in the laboratory the processes are both utilized experimentally.²⁰

I have indicated how viruses and pathogenic bacteria may have arisen but what about common eukaryotic parasites such as flatworms and nematodes? The emergence of parasites from among groups of organisms that commonly exist independently in the environment is perhaps not too difficult to imagine (e.g., nematodes occur in saprophytic and parasitic modes of existence). Parasites such as tapeworms and flukes also are considered to have originated from free-living counterparts.²¹ It is suggested here that these aberrant organisms or entities were brought into existence by clever reworking of the genetic code by the mind of one who said: “Skin for skin! Yes, all that a man has he will give for his life. But stretch out Your hand now, and touch his bone and his flesh, and he will surely curse You to Your face” (Job 2:4, 5).

¹⁹ J. W. Bass, “The Spectrum of Staphylococcal Disease: from Job’s Boils to Toxic Shock,” *Postgraduate Medicine* 72 (5) (1982): 58-74; H. Brussow, C. Canchaya and W. D. Hardt, “Phages and the Evolution of Bacterial Pathogens: from Genomic Rearrangements to Lysogenic Conversion,” *Microbiology Molecular Biology Reviews* 68 (3) (2004): 560-602.

²⁰ J. Hacker and E. Carmiel, “Ecological Fitness, Genomic Islands and Bacterial Pathogenicity,” *EMBO Reports* 2 (2001): 379; H. Ochman and N. A. Moran, “Genes Lost and Genes Found: Evolution of Bacterial Pathogenesis and Symbiosis,” *Science* 292 (2001): 1096; S. O. Jensen, S. M. Kwong, B. R. Lyon and N. Firth, “Evolution of Multiple Drug Resistance in Staphylococci,” *Microbiology Australia* 29 (3) (2008): 121-123; M. Q. Carter, J. Chen and S. Lory, “The *Pseudomonas aeruginosa* Pathogenicity Island PAPI-1 is Transferred Via a Novel Type IV Pilus.” *Journal of Bacteriology* 192 (13) (2010): 3249-3258.

²¹ N. Chowdhury, M. L. Sood and T. O. O’Grady, “1. Evolution, Parasitism and Host Specificity in Helminthes,” in *Helminthology*, eds N. Chowdhury and I. Tada (New Delhi: Narosa Publishing House, 1994), 1-33.

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Conclusion 2: *The origin of pathogenic microbes from free-living organisms can be accounted for in some instances by the operation of 'natural phenomena.'* However, it seems likely that this process may have been assisted by clever genetic manipulation by Satan who has the motive, ability and opportunity to do so.

In the next section, I wish to explore the concept of genetic manipulation and speculate about the use of such a process in Satan's laboratories a little more pointedly.

4. Producing the spectacular—amalgamation

In the previous section I suggested that manipulation of genetic information in the simpler forms of life (microbial world) was responsible for the emergence of some disease-causing organisms. However, Satan's abilities went beyond the microbial world to include "Every noxious herb." We are informed that these are of "his [Satan's] sowing, and by his ingenious methods of amalgamation [mixing of genetic elements from the context²²] he has corrupted the earth with tares."²³ Now, ingenious methods by definition go well beyond classical cross fertilization technology. Today we can eliminate thorns and prickles from plants through genetic and artificial culture manipulation,²⁴ but not enough is known about the genetic structure of organisms to suggest precisely how these features may have been acquired in the first place. (Thorns are modified branches while prickles are modified outgrowths from epidermal cells; Satan must have found a way to affect plant development.) Some prickles are expressed as

²² Compare J. A. H. Murray, H. Bradley, W. A. Craigie and C. T. Onions, eds, *The Oxford English Dictionary*, vol. 1, (Oxford: The Clarendon Press, 1961) 1:263 on the meaning of amalgamation—"The homogenous union of what were previously distinct elements, societies, etc." or "The action of combining distinct elements, races, associations, into one uniform whole."

²³ E. G. White, *Selected Messages* (Washington, DC: Review and Herald Publishing Association, 1958), 2:288.

²⁴ Example: F. A. Canli and R. M. Skirvin, "Separation of thorn less rose chimeras into their (*Rosa* sp.) consistent genotypes *in vitro*," *Pakistan Journal of Biological Sciences* 6 (2003):1644-1648.

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recessive traits²⁵ and it is conceivable that they can arise through mutations or through complementation (a form of interaction between genes).²⁶ Others may arise when somatic hybrids are created involving different plants (e.g. potato and tomato and related species), even though neither parent possesses the trait.²⁷

The interpretation that I have placed on the words “ingenious methods of amalgamation” used by Ellen White encompasses but are not restricted to induction and selection of mutants, tissue cloning, cell fusion, embryo culture and gene exchange using genetic engineering methodology as possibilities.²⁸ Using such techniques, the possibilities for changing the face

²⁵ T. Jinno, “Cytogenetic and cytoecological studies on some Japanese species of *Rubus* II. Cytogenetic studies on some F1-hybrids,” *The Japanese Journal of Genetics* 33 (7) (1958): 203.

²⁶ Y. F. Bogdanov, Y. S. Fedotova, S. P. Sosnikhina, V. G. Smirnov, S. Y. Dadashev, E. I. Mikhailova and J. H. de Jong. “Bar- and Thorn-like Abnormalities in Synaptonemal Complexes of a Mutant Rye, *Secale cereale*,” *Genome* 41 (2) (1998): 284-288—thorn-like abnormalities arise through mutation; R. N. Lester and Daunay, M.-C. “Diversity of African Vegetable *Solanum* Species and its Implications for a Better Understanding of Plant Domestication,” Proceedings of a Symposium Dedicated to the 100th Birthday of Rudolf Mansfield, Gatersleben, Germany, 8-9 October, 2001, *Schriften zu Genetischen Ressourcen*, band 22 (2001): 136-152—prickles appear when certain crosses are made; R. N. Lester and G. N. W. Thitaiz, “Inheritance in *Solanum aethiopicum*, the Scarlet Eggplant,” *Euphytica* 40 (1989): 67-74—reverse mutation noted causing prickles to be lost; M. Marcotrigiano, “Herbivory Could Unlock Mutations Sequestered in Stratified Shoot Apices of Genetic Mosaics,” *American Journal of Botany* 87 (2000): 355-361—prickle expression does not occur because of a mutation in a developmental pathway.

²⁷ F. Bletson, D. Roupakias, M. Tsaksira and A. Scaltsayjannes, “Production and Characterization of Interspecific Hybrids between Three Eggplant (*Solanum melongena* L.) cultivars and *Solanum macrocarpon* L.,” *Scientia Horticulturae* 101 (1-2) (2004): 11-21; M. Okamura, “Pomato: Potato Protoplast System and Somatic Hybridization between Potato and Wild Tomato,” in *Somatic Hybridization in Crop Improvement*, ed. Y. P. S. Bajaj (Heidelberg: Springer-Verlag, 1994), 1:209-223.

²⁸ Example: A. Kumar and S. K. Sopory, eds, *Recent Advances in Plant Biotechnology and Its Applications: Prof. Dr Karl-Hermann Newmann Commemorative Volume* (New Delhi: I. K. International Pub, 2008); D. S. T. Nicholl, *An Introduction to Genetic Engineering*, 3rd edition (Cambridge: Cambridge University Press, 2002); S. Wakayama, H. Ohta, T. Hikichi, E. Mizutani, T. Iwaki, O. Kanagawa and T. Wakayama, “Production of Healthy Cloned Mice from Bodies Frozen at -20° C for 16 Years,” *Proceedings of the National Academy of Sciences, USA* 105 (45) (2008): 17318-17322.

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of nature are enormous.²⁹ If we think about it carefully, Satan is the author of evil (Rev 12:9) and he must possess the tools with which to produce disease and the abnormal. It stands to reason, then, that his knowledge must be superior to that possessed by modern scientists. Whether the limits of Satan's activity are the same as that prescribed by God for man is unknown but mankind has not yet reached the limits of Satan's abilities if we follow the account given in Job. We can induce boils, but cannot cause tornadoes or arrange for destroying fire (as described) to descend from heaven.

Conclusion 3: *Genetic manipulation can account for the appearance of thorns, prickles, weeds and pathogenic organisms in God's creation.*

5. Amalgamation of man and beast

In this section I wish to address the debated statements of Ellen White relating to amalgamation and draw on some of the arguments established to this point. The disputed statements made by Ellen White³⁰ were about attempts to mix the genetic elements of animals and of humans. They are as follows:

But if there was one sin above another which called for the destruction of the race by the flood, it was the base crime of amalgamation of man and beast which defaced the image of God, and caused confusion everywhere.

Every species of animal which God had created were preserved in the ark. The confused species which God did not create, which were the result of amalgamation, were destroyed. Since the flood there has been amalgamation of man and beast, as may be seen in the almost endless varieties of species of animals, and in certain races of man.

These statements have caused some debate,³¹ but I am proposing an interpretation based on the information given above that may help resolve

²⁹ D. Concar, "Brave New Rose. It's 2000. You're Lying on a Lemon Scented Lawn," *New Scientist* 160 (no.2158) (1998): 30-33.

³⁰ The book by E. G. White, *Spiritual Gifts* (Washington, DC: Review and Herald Publishing Association, 1945), 3: 64, 75 was written in 1864.

³¹ G. Shigley, "Amalgamation of Man and Beast: What Did Ellen White Mean?" *Spectrum* 12 (June 4) (1982): 10-19.

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some of the remaining problems. For our purpose it is important to remember that the comments were written by Ellen White in 1864.

The word amalgamation commonly has been applied, in the time period under consideration, to social as well as sexual relationships among races.³² However, other meanings can be found so that the limitations placed on the meaning of the word amalgamation argued by some may be too narrow. For example, one recent account allowed the word to describe fusion of metals and different elements and the mixing of diverse races but not the production of “any kind of hybrid animal-human relationship.”³³ Certainly, as presented by this author and as elsewhere affirmed, the word “amalgamation” has been used to describe the combining (or mixing) of human cultures and intermarriage between racial groups,³⁴ but this represents a partial picture.

The deep seated resentments to inter racial marriages present in society and the other connotations that it held came to the fore in the United States in 1863/4. In fact, leading up to the election of 1864, the term “miscegenation” was introduced.³⁵ This term was used to describe mixing races and was based on the understanding that all races were derived from the one original type and that interbreeding was not a particularly dangerous idea. This move quickly led to the creation of a reactionary term called “subgenation.” It referred to the mixing of an inferior race with a superior race. This opposing understanding was based on the proposition that not all races (species) of man are equal and that mixing would bring inferior peoples into existence. Since the Negroes and some other groups

³² R. Bernasconi and S. Cook, *Race and Racism in Continental Philosophy* (Bloomington, IN: Indiana University Press, 2003), 32-33; M. E. Hodes, *Sex, Love, Race: Crossing Boundaries in Northern American History* (New York: NYU Press, 1999), 207.

³³ H. E. Douglass, *Messenger of the Lord* (Mountain View, CA: Pacific Press Publishing Association, 1998), chapter 43. Online: www.whiteestate.org/books/books.asp (February 25, 2007).

³⁴ R. W. Burchfield, *A Supplement to the Oxford English Dictionary* (Oxford: The Clarendon Press, 1972), 71; R. L. Numbers, ed., *Creationism in Twentieth-century America* (New York: Garland Publishing, 1995), 452-453; H. Spencer, *On Social Evolution* (Chicago: University of Chicago Press, 1972), 163-164.

³⁵ S. Kaplan, *American Studies in Black and White: Selected Essays, 1949-1989*, ed. A. D. Austin (Amherst, Massachusetts: University of Massachusetts Press, 1996), 47-73; E. V. Lemire, *“Miscegenation”: Making Race in America* (Philadelphia, Pennsylvania: University of Pennsylvania Press, 2002), 51-52.

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were regarded as inferior to the whites, intercrossing with them was considered an act of debauchery or even “bestiality” and in this context reference was made to the crimes punished by death in the Jewish dispensation.³⁶ The debate became quite heated, it was well publicized, and it became political in nature and was protracted.³⁷ There is no questioning the connection of the idea of amalgamation (miscegenation) with bestiality. This was made abundantly clear in *The Herald* (Article title: “The Beastly Doctrine of Miscegenation and Its High Priests”) and *New-York Freeman’s Journal & Catholic Register* which called miscegenation (amalgamation) a “beastly doctrine of the intermarriage of black men and white women.”³⁸

It is recognized by some historians, over the broad sweep of the last 200 years, that the categorization of “‘Inter-race-ial’ sex was presented as an act of bestiality, miscegenation as a curse against civilization, and both perceived as the product of folly and physical immorality.”³⁹ Further, it has been observed that in the United States in the 1800s the “equation of miscegenation with bestiality” had been made by society.⁴⁰ However, it may be objected that the word bestiality carried the lesser meaning of being like or acting like an animal rather than engaging in sex with an animal. This argument might be persuasive except for the following points: There was a long established tradition in England which held that intermarriage between Jews and Christians was legally equivalent to sodomy and bestiality (sex with animals) and these all were regarded as sins that cry out to the heavens (*damantia peccata*) and were punished severely.⁴¹ Similar

³⁶ J. H. van Evrie, *Subgenation: the Theory of the Normal Relation of the Races an Answer to “Miscegenation”* (2006), 8-26 [Original produced by John Bradburn of New York in 1864.] Online: <http://books.google.co.th/books?id=BpwwfKWzlekC&ho=en> (10/12/2008); cf. Lev 20:10–16; M. Dekkers, *Dearest Pet: on Bestiality*, translated by P. Vincent (New York: Verso Books, 2000), 39.

³⁷ Debate ran from just before Christmas 1863 until the elections in late 1864.

³⁸ S. Kaplan, *American Studies in Black and White: Selected Essays, 1949-1989*, ed. A. D. Austin (Amherst, MA: University of Massachusetts Press, 1996), 47-73.

³⁹ J. Solomons and L. Schuster, “Hate Speech, Violence and Contemporary Racisms,” in *Europe’s New Racism: Causes, Manifestations, and Solutions*, ed. The Evens Foundation (Oxford: Berghahn Books, 2002), 43-56.

⁴⁰ A. Gordon-Reed, *Thomas Jefferson and Sally Hemings: An American Controversy*, (Charlottesville, Virginia: University of Virginia Press, 1998), 113.

⁴¹ B. J. Sokol, “Prejudice and the Law in *The Merchant of Venice*,” in *Shakespeare Survey: Shakespeare in the Eighteenth Century*, ed. S. Wells (Cambridge: Cambridge University Press, 2003), 159-174.

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understandings were held in parts of the United States over the time period in question and individuals were sometimes punished severely for their sexual exploits with other humans and animals. Elaborate rituals were invented in some communions to minimize the risks of such experiments.⁴² Finally, van Evrie, the author of the pamphlet on subgenation specifically indicated that mixing of races “belongs to that class of ‘bestial crimes’ which, under the Jewish law, were punishable with death.”⁴³ The Jewish laws alluded to included both sex between individuals of the same gender and with animals (Lev 18:22, 23). Critically, van Evrie identified his understanding of bestiality by referring to the observations of Herodotus (an historian) involving the Egyptians.⁴⁴ These activities are clearly recorded by Herodotus as the act of sex with animals, namely the sacred goat.⁴⁵ This allows the suggestion to be made that the term amalgamation carried both explicit and implicit meanings.

Conclusion 4: *The term amalgamation was used in the mid-1860s to refer to intercrossing between races (but was not limited to this meaning). It was likened by some to “bestiality” (sex with animals) in a highly publicized debate.*

Stepping back a little, the idea of amalgamation actually represents none other than the mixing of genetic elements. By logical extension, attempted union (combining or mixing of genetic elements) might also be allowed as a possible meaning for the word. The fact that some in the United States applied the concept behind the term to refer to acts of bestiality⁴⁶ indicates clearly that it was more broadly understood in the time when Ellen White wrote than some have been willing to allow. The mating (crossing or blending or amalgamation) of people from diverse races does not always end in reproductive success even though the intent to produce

⁴² J. D’Emilio and E. B. Freedman, *Intimate Matters: A History of Sexuality in America*, edition 2 (Chicago: University of Chicago Press, 1997), 117, 118, 122-128.

⁴³ van Evrie, *op. cit.*, 25-26.

⁴⁴ *Ibid.*, 22.

⁴⁵ E. Robinson, *The Biblical Repository* (Andover: Fagg & Gould, Publishers and Printers, 1832), 2: 459; H. Ellis, *Studies in the Psychology of Sex* (eBooks Library, 2004), V: 33.

⁴⁶ Example: Kaplan, *op. cit.*, 65, 71; van Evrie, *op. cit.*, 22, 26.

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offspring may often be present. God considers intent and completed deeds in the same category (Matt 5:28). We are making this application and also are suggesting that Ellen White may have had this in mind as this was the clear implication of some secular accounts in the very year she penned her words on amalgamation.

Conclusion 5: Imagined and attempted matings are equivalent morally to successful matings.

As background to expanding on the conclusions drawn already, the reader's attention is drawn to the fact that God has involved Himself in individual, regional and global judgments on those who, against the call of nature and conscience, persistently engaged in experiments involving sexual activity against nature in an attempt to increase the level and frequency of human sexual pleasure (or perhaps in some instances to experiment with the idea of improving on the biological resources available—particularly in the pre-scientific era). These activities include homosexual behaviour and bestiality or zoophilia (e.g., 1 Kings 14:23, 24; 15:12; 2 Kings 23:7; Lev 18:22-24). From earliest times, historical records show that men and women have shown a morbid fascination with sexual acts involving animals. This is still the case.⁴⁷ The fascination is primarily to experience unrestricted and unusual sexual pleasure, but also at times has carried with it the visionary hope that human-animal hybrids may be generated.

The fantasies relating to human-animal hybrids have been displayed in carvings and drawings. To illustrate, the common therianthropes (combined animal and human forms) have been worshiped throughout history.⁴⁸ Examples of the better known ancient animal-human forms include the deities Horus and Pan. Some of these therianthropes may have come from fairly uncomplicated underpinnings, but in selected pagan belief systems they represented visions of zoophilia. For example, the Romans had advanced in their depravity along these lines so that they had well

⁴⁷ A. Beetz, "New Insights into Bestiality and Zoophilia," in *Bestiality and Zoophilia. Sexual Relations with Animals*, ed. A. Beetz (West Lafayette, IN: Purdue University Press, 2005), 98-119; Miletski, *op. cit.*, 1-22.

⁴⁸ L. Dayton, "Half Man, Half Wolf," *New Scientist* 172 (2001):19.

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rehearsed and cruel practices of submitting people to acts of sexual torture inflicted by trained animals in games and circus acts. These events were for the entertainment of the citizens and to illustrate sexual acts from the lives of the gods.⁴⁹ There is no lack of interest in the subject of sex with animals today as anciently and some philosophers even advocate zoophilic activity as a healthy experience.⁵⁰ These few comments are more than adequate to illustrate that genetic exchange (amalgamation or mixing of genetic elements) between beast and man was attempted. This type of activity undoubtedly extended to mating attempts among diverse animals groups. Mating attempts outside the usual were evident in biblical times in the production of the mule (male ass X female horse) and in modern times have been seen in the creation of the leopon, tigon, wholphin, huarizo and others.⁵¹

This brief outline gives us the ability to suggest that the people before the Flood were destroyed for “the base crime of [attempted] amalgamation of man and beast which defaced the image of God, and caused confusion everywhere.”⁵² This appears similar to the general category of crimes committed by the Romans (and others) who were obsessed by sexual activities, which undoubtedly helped fill their cup of iniquity and led God to terminate their great empire (Dan 2:40–45).⁵³ In another statement, White suggests that some “confused species” were destroyed at the Flood,⁵⁴ which indicates that perhaps some mixing experiments involving animals X animals were at least partially successful. (We do not know what the original ancestors of present day animals were, although we understand that modern dogs possibly arose from wolves, for example.) I have indicated already that receiving progeny from somewhat unusual animal crosses is

⁴⁹ C. A. Barton, *The Sorrows of the Ancient Romans* (Princeton, NJ: Princeton University Press, 1995), 68; Ellis, *op. cit.*, 31-39; Miletski, *op. cit.*, 1-22.

⁵⁰ G. R. Preece, *Rethinking Peter Singer: A Christian Critique* (Westmont, IL: InterVarsity Press, 2002), 25.

⁵¹ D. Batten, “Ligers and Wholphins? What Next?” *Creation Archive* 22 (3) (2000): 28-33; leopon (male leopard, female lion cross), tigon (male tiger, female lion cross), wholphin (false killer whale, bottlenose dolphin cross), huarizo (male llama, female alpaca cross).

⁵² E. G. White, *Spiritual Gifts* (Washington, DC: Review and Herald Publishing Association, 1945), 3:64.

⁵³ F. A. Schaeffer, *How Should We Then Live?* (Old Tappan, NJ: Fleming H. Revell Company, 1976), 24-29.

⁵⁴ White, 1945, *op. cit.*, 3:75.

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not an impossible outcome for fertile progeny of crosses across the species barrier have been achieved in recent years and furthermore the introduction of foreign genes into an animal may not interfere with their fertility.⁵⁵

Conclusion 6: *Human mating (mixing of genetic elements or amalgamation) involving same sex couplings and animals couplings has been a common feature of human behavior throughout history.*

Several issues are identified in White's statement cited in the above paragraph. In my opinion the issue of primary significance is that the image of God was defaced. Man alone was created in God's image (Gen 1:26, 27). Satan's foremost desire was to bring mankind under his total control to corrupt their minds and to make their bodies the "habitation of demons. The senses, the nerves, the passions, the organs of men, were worked by supernatural agencies in the indulgences of the vilest lust." At the time of Christ "Satan was exulting that he had succeeded in debasing the image of God in humanity."⁵⁶

The marriage institution was God's great gift of love to humanity at creation. And one great purpose of this gift was to assist in maintaining the image of God. This institution would help the race to hold their passions under the control of reason reflect the character of God and live in harmony with His will.⁵⁷ It was Satan's studied effort to deface God's image and one early, potent device used to this end was the practice of polygamy.⁵⁸ Another was intermarriage with idolaters and association with them (Gen. 6:2).⁵⁹ Attacking God through mankind has continued to be Satan's most

⁵⁵ Example: male llama crossed with a female alpaca or huarizo—S. J. Davis, *The Archeology of Animals* (London: Routledge, 1987), 132; T. L. Rankin, Z-B. Tong, P. E. Castle, E. L., R. Gore-Langton, L. M. Nelson and J. Dean, "Human ZP3 Restores Fertility in Zp3 Null Mice without Affecting Order-specific Sperm Binding," *Development* 125 (1998): 2415-2424.

⁵⁶ E. G. White, *Desire of Ages* (Mountain View, CA: Pacific Press Publishing Association, 1940), 36-37.

⁵⁷ White, *The Story of Patriarchs and Prophets*, idem, 45.

⁵⁸ *Ibid.*, 338.

⁵⁹ E. G. White, *Fundamentals of Christian Education* (Nashville, TN: Southern Publishing Association, 1923), 499.

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significant work.⁶⁰ I am suggesting that sexual relationships outside those originally designed by God (one partner of the opposite sex, same faith) functioned to destroy His image because the purpose and plan for the moral superiority of mankind were thus obscured.

Conclusion 7: *Preserving the marriage institution as made by God in the beginning has served to maintain the image of God in mankind.*

The second issue identified in White's statement is that "confusion" resulted from the cross breeding episodes entered into and that this was widespread. The significance of this statement differs for humans and animals. Among the human population confusion occurred relating to the purpose and appropriateness of sexual relationships as outlined in Romans 1 (vs. 25–28). The Bible contains graphic explanations portraying the depths to which mankind will descend in the pursuit of sexual pleasure. The account of Lot's experience in Sodom on the night of the angels' visit is one such instance involving male-male human couplings (Gen 19:4, 5, 13). Another example of activities performed in ancient societies is implied by the counsel given by Moses. God placed a prohibition on animal-human mating on the basis that they caused "confusion" (Lev 18:22–24; 20:12, KJV). The translation of the Hebrew word used in the basal texts is reasonably rendered "confusion."⁶¹ At the close of the eighteenth century, the understanding of the meaning of the term "confusion" as given in the Scriptures was still entirely consistent with that in society.⁶² Hence, it is not surprising to read that around this time "the sin (of bestiality) was the sin of confusion."⁶³ It might also be observed that the stated superior attraction of human beings to beasts on account of the proposal that they contained

⁶⁰ F. D. Nichol, R. F. Cottrell, D. F. Neufeld and J. Neufeld, eds, *The Seventh-day Adventist Bible Commentary* (Washington, DC: Review and Herald Publishing Association, 1954), 1: 1105-1106.

⁶¹ J. Botterweck, H. Ringgren and H. J. Fabry, *Theological Dictionary of Old Testament*, translated by D. E. Green (Grand Rapids, MI: Wm. B. Eerdmans Publishing, 1974), XV: 563-564.

⁶² *Encyclopedia Britannica*, 1771. Entry: "Buggery." Online: <http://1771.encyclopedia.org/vol1/buggery.html> (11/03/2009).

⁶³ B. J. Sokol, "Prejudice and the Law in *The Merchant of Venice*," in *Shakespeare Survey: Shakespeare in the Eighteenth Century*, ed. S. Wells (Cambridge: Cambridge University Press, 2003), 159-174.

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qualities which humans did not possess certainly left other significant humans in a state of confusion.⁶⁴ Confusion in this area probably now has reached one of its lowest points in the statement made by Peter Singer that human-animal couplings “cease to be an offence to our status and dignity as human beings” because “we are animals, indeed more specifically, we are great apes.” This means that bestiality is morally acceptable in his view, as long as animal suffering is not involved and the animal finds the act pleasurable.⁶⁵ Indeed, the modern humanist has attempted to bring the apes into “the same moral community as ourselves.”⁶⁶

An area of confusion among the animal population might be illustrated by the experiences of the Roman circuses. Here a variety of animals were trained to perform sexual acts with human beings. This was against the natural order arranged by the Designer who made various “kinds” of living animals, male and female “to keep the species alive” (Gen 1:24, 25; 7:2, 3). Today we recognize that similar confusing activities are still promoted in select circles.⁶⁷ An additional area of confusion might be the abnormal relationships promoted by humans among animals from groups not commonly given to intimate associations. Some of these unusual matings have given rise to fertile progeny such as between false killer whales and dolphins.⁶⁸

Conclusion 8: *Matings performed against nature cause confusion among both humans and animals thereby influencing their sexual and social behavior.*

A third area of possible confusion may be understood by reference to modern science. Until this point we have restricted our attention to the

⁶⁴ G. Brulotte and J. Phillips, eds, *Encyclopedia of Erotic Literature* (Boca Raton, FL: CRC Press, 2006), 1A-K: 140-141.

⁶⁵ S. F. Krantz, *Refuting Peter Singer's Ethical Theory: the Importance of Human Dignity* (Santa Barbara, CA: Greenwood Publishing Group, 2002), 23; M. Somerville, “Crossing the species boundary,” (2007). Online: http://www.mercatornet.com/articles/view/crossing_the_species_boundary/ (16/03/2009).

⁶⁶ A. C. Grayling, *Meditations for the Humanist: Ethics for a Secular Age* (Oxford: Oxford University Press, 2003), 84.

⁶⁷ Beetz, *op. cit.*, 98-119; Miletski, *op. cit.*, 1-22.

⁶⁸ Batten, *op. cit.*, 28-33.

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products emerging from the application of classical breeding techniques. Those arising from genetic manipulation using more modern techniques introduce a whole new meaning. Today we have transgenic animals that hold genes from other sources incorporated in the genome (including from humans). Then there are chimeric animals which hold two or more populations of genetically dissimilar cells to make up the organism (e.g., sheep and goat and chicken and quail). This has reached such a level that one commentator has said “the biological co-mingling of animal and human is now evolving into even more exotic and unsettling mixes of species, evoking the Greek myth of the monstrous chimera, which was part lion, part goat and part serpent.”⁶⁹ Despite the unsettled attitude among many, the United Kingdom government recently allowed (2008) the mixing of human cells with animal eggs.⁷⁰ The ethical debate that such experimentation has created is considerable, especially where human neural cells are introduced into animals and where such animals are capable of reproducing. Issues of human dignity, moral confusion and going counter to God’s intent are at the forefront of such debates.⁷¹ I suggest that bizarre chimeras being created in our time represent a modern confusion of species. Is it possible that God’s displeasure will be expressed on those who rearrange His works?

White’s statements neither rule in or out the handiwork of Satan in producing “confused” species by using genetic engineering, as the techniques were unknown in her day. I am ‘ruling in’ the possibility, as she identifies that Satan has utilized “ingenious methods of amalgamation” in

⁶⁹ Associated Press. “Scientists Create Animals that Are Part-human,” (2005). Online: <http://www.msnbc.msn.com/id/7681252> (22/01/2007). Animal chimeras represent animals with some cells from one species and other cells from a different species. For example, the geep had the head of a goat and the torso of a wooly sheep, with admixtures seen elsewhere on the animal, too.

⁷⁰ D. Stringer, “Animal-human Hybrids Research Approved in U.K.,” *Natural Geographic News*, Thursday, October 28, 2010. Online: <http://news.nationalgeographic.com/news/2008/05/080519-AP-hybrids.html>.(15/03/2011). Canada has banned the formation of such hybrids, but only some states in the United States have done so—Bland, E, “Animal-human Hybrids Banned in Some States,” *Discovery News*, Friday, June 4, 2010. Online: <http://news.discovery.com/tech/human-animal-hybrids-splice.html> (27/10/2011).

⁷¹ L. P. Knowles, “Ethics of Research Using Hybrids, Chimeras and Cytoplasmic Hybrids,” *Stem Cell Network*. Online: <http://www.stemcellschool.org/pdf/Ethics-of%20Research-Using-Hybrids.pdf> (27/10/2011).

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the plant kingdom.⁷² I suggest that Satan worked behind the scenes with depraved mankind to cause confusion of God's creation. I already have argued that such engineering techniques seemingly were available to Satan around the time of Job to produce pathogenic microbes. (Such destructive micro-organisms may have been present before this time, being manufactured from useful microbes in the environment.) We understand from the Scriptures that limits have been placed on Satan's activities. This means there are boundaries beyond which his experiments cannot proceed.

Conclusion 9: *Experimental mixing of genetic elements (amalgamation or co-mingling) from widely different sources has led to deep ethical dilemmas.*

This brings us to the statement made by Ellen White about "certain races of men" arising from amalgamation or mixing of genetic elements,⁷³ which has caused a number of emotional responses (perhaps due primarily to the emphasis placed on the restricted dictionary meaning of the word "amalgamation" rather than on the outcomes of the process described which gives us a better understanding of the scope of meanings which might be attributed). We might link this idea with the companion statement that speaks of "almost endless varieties of species of animals" arising from the same process.

Some initial questions are: What has selective or directed breeding or interbreeding within small gene pools accomplished? And what was the fundamental purpose of such activity? These are the questions we need to ask. Until recent times, animal variants were produced to fulfill economic and other specific practical needs. Directed breeding, mutant selection and culling were the chosen methods to produce new animal lines. The variation within the canine, bovine and ovine group of animals produced over a relatively short period of time is sufficient to illustrate how easy it has been to produce different animal breeds. From these artificial or naturally occurring lines of animals, species may eventually arise. This occurs when populations are isolated so as to prevent interbreeding.

⁷² E. G. White, *Selected Messages* (Washington, DC: Review and Herald Publishing Association, 1958), 2:288.

⁷³ White, 1945, *op. cit.*, 75.

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Isolation may occur on account of habitat separation, the erection of sexual reproduction barriers and genetic barriers. The animals emerging over time in these groups will no longer interbreed successfully even if placed in the same location. Mutations are the genetic mechanism by which speciation occurs. Mutations may occur in isolated populations that alter mating success and this in turn may hasten speciation.⁷⁴ This means that if cross breeding does not now occur among groups of animals it is not a sure indicator that it never occurred.⁷⁵

Fundamentally similar changes have been observed within the human population as a result of restricted interbreeding. Breeding within restricted gene pools (e.g., Ashkenazi Jews, Amish, and Newfoundlanders) has led to the emergence of unusual population characteristics and defects among humans.⁷⁶ Breeding within larger gene pools has led to other interesting genetic variations arising when disease often has prevented individuals reaching reproductive maturity. For example, susceptibility to malaria is related to haemoglobin characteristics. In areas of the world where malaria is or has been endemic, individuals with altered haemoglobin characteristics predominate. Certain African populations commonly have genes practically unknown among other populations which give them resistance to fatal malaria.⁷⁷ Changes may also be found in the major histocompatibility protein complex. These proteins are associated with white blood cells and other cells and a subset of them is connected with the ability of higher organisms to resist the onslaught of pathogenic

⁷⁴ Example: K. Y. Kaneshiro, "Sexual Isolation, Speciation and the Direction of Evolution," *Evolution* 34 (1980):437-444.

⁷⁵ Batten, *op. cit.*, 28-33; S. J. Davis, *op. cit.*, 126-132.

⁷⁶ McKusick et al., *op. cit.*, 99-114; T-L. Young, M. O. Woods, P. S. Parfrey, J. S. Green, D. Hefferton and W. S. Davidson, "A Founder Effect in the Newfoundland Population Reduces the Bardet-Biedl Syndrome 1(BBS1) interval to 1 cM," *American Journal of Human Genetics* 65 (1999):1680-1687; J. Charrow, "Ashkenazi Jewish Genetic Disorders," *Familial Cancer* 3(3-4) (2004): 201-206; L. B. Weinstein, "Selected Genetic Disorders Affecting Ashkenazi Jewish families," *Family and Community Health* 30 (1) (2007): 50-62.

⁷⁷ V. St. Georgiev, *National Institute of Allergy and Infectious Diseases, NIH, vol. 2: Impact on Global Health* (New York: Humana Press, 2009), 168.

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organisms.⁷⁸ More recently it has been suggested that black plague epidemics (*Yersinia pestis*) shaped the distribution of people with iron overload (haemochromatosis) mutation in certain parts of Europe.⁷⁹ These examples provide abundant evidence that variants in human population groups have arisen through interbreeding, mutation and selective pressures. Whether we wish to call these groups races⁸⁰ or whether White had such a concept in mind is a matter of personal opinion and further research. Suffice it to say that the term “race” was used variously during this period and some even used the designation ‘race’ and ‘species’ interchangeably.⁸¹

Conclusion 10: *Interbreeding, mutations and selective pressure leads to the emergence of species. The latter do not readily interbreed. This process has been inferred from observations made among animals.*

Among the human population, a common view held in the general period when Ellen White wrote was that racial interbreeding would result in the production of biological monstrosities and inferior individuals.⁸² It was held by leading scientists that certain races were superior to others and that the less intellectual were being exterminated by natural evolutionary

⁷⁸ Madigan et al., *op. cit.*, 925-926; S. Segal and A. V. Hill, “Genetic Susceptibility to Infections Disease,” *Trends in Microbiology* 11 (9) (2003): 445-448; G. C. Cook and A. I. Zamla, eds, *Manson’s Tropical Diseases*, edition 22 (Canada: Saunders Elsevier Limited, 2009), 1208-1209.

⁷⁹ S. Moalem, “Survival of the Sickest,” *New Scientist* 193 (no. 2591) (2007): 42-45.

⁸⁰ Compare V. Sarich and F. Miele, *Race: The Reality of Human Differences* (Boulder, CO: Westview Press, 2004).

⁸¹ B. Douglas and C. Ballard, eds, *Foreign Bodies: Oceania and the Science of Race 1750-1940*, (2008). Online: <http://epress.anu.edu.au/foreignbodies/mobiledevices/ch01s08.html>.

⁸² L. C. Dunn and T. Dobzansky, T. *Heredity, Race and Society* (New York: Mentor Books, 1952), 130-131; R. L. Numbers, ed., *Creationism in Twentieth-century America* (New York: Garland Publishing, 1995) 452-453; S. Thernstrom, “The Demography of Racial and Ethnic Groups,” in *Beyond the Color Line: New Perspectives on Race and Ethnicity in America*, eds S. Thernstrom and A. Thernstrom (Stanford: Hoover Institute Press, 2002), 1-25.

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processes.⁸³ However, the view that racial interbreeding led to the production of monstrosities (unusual variants) and inferior individuals was not the only one held and there is no known reason why we should attribute the most unsatisfactory explanation to White's account.⁸⁴ In fact, Herbert Spencer expressed the then almost "universal belief" that crosses between different varieties and strains of animals and plants gave the immediate offspring vigor and fertility.⁸⁵ He added that this harmonized with the experience found with humans (and we might add that this corresponds with the evidence today).⁸⁶ Charles Darwin was arguably one of the most influential scientific writers around this time. In his account of *The Descent of Man*, when speaking of the crossing of races, he stated that the characteristics of each race would be diluted if the progeny intercrossed for many generations. He regarded monstrosities as chance phenomena that were either not transmitted to progeny or not fully developed in the next generation. In this work, the word monstrosity is noted to mean, in the simplest case, a marked change in color in the progeny.⁸⁷ He made no adverse comments about the progeny of crosses between the white race and Australian aborigines, for example, except to note that half-castes were not readily accepted by the tribes.⁸⁸ He further reported that in Brazil the Paulistas (cross between Indians and Portuguese) were energetic and successful in contrast to the inferior vitality of some inter-racial crosses or mulattoes.⁸⁹ I contend that he was citing best and worst case scenarios. In 1908 Herbert Spencer came out strongly against intermarriage between dissimilar races but this concern was largely owing to the perceived social disfunctionality of the progeny.⁹⁰ The idea that monstrosities and inferior

⁸³ E. Haeckel, *The History of Creation or the Development of the Earth and its Inhabitants by the Action of Natural Causes* (London: Paul, Trench & Co., 1883), 323; F. Darwin, ed., *The Life and Letters of Charles Darwin* (London: John Murray, 1887), 211.

⁸⁴ Compare Shigley, *op. cit.*, 10-19.

⁸⁵ Compare van Evrie, *op. cit.*, 19.

⁸⁶ B. V. Milborrow, "A Biochemical Mechanism for Hybrid Vigour," *Journal of Experimental Botany* 49 (1998): 1063-1071.

⁸⁷ C. Darwin, *The Descent of Man, and the Selection of Sex* (London: John Murray, 1871), 1: 224, 241.

⁸⁸ *Ibid.*, 220.

⁸⁹ *Ibid.*, 221, 225.

⁹⁰ H. Spencer, *On Social Evolution—Selected Writings*, Edited and an Introduction by J. D. Y. Peel (Chicago: University of Chicago Press, 1972), 256-257.

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individuals could arise following crosses between races⁹¹ can thus be seen to be a mixture of fact, fantasy and prejudice.

Conclusion 11: *Racial interbreeding was commonly held to give rise to biological monstrosities and inferior individuals in the mid-1860s. However, this was not the only view held by scientists in White's day. White should not be held to the worst scenario as an automatic reaction.*

Our view of the intent behind the interbreeding attempts involving both humans and animals has something to do with our attitude to the statements made by White, for it was intent as well as practice that led to the destruction of mankind at the Flood (Gen 6:2, 4). Directed or manipulated breeding was advocated anciently by Plato to produce a suitable soldiery and a relatively recent practical example comes from Nazi Germany.⁹² In the latter example the so called lesser races were eliminated along with those with genetic defects to preserve a perceived master race.⁹³ Then we observe that selective abortion is practiced in some countries⁹⁴ and gene testing and manipulated of conceptions occurs in others.⁹⁵ These could be regarded by some as modern examples of evil intent. Mankind through modern scientific advances has prevented the deaths of many who previously would have died before reproductive activity. This is seen by some observers as changing the outcome of natural processes; consequently, they bewail that evolution has ended for mankind.⁹⁶ Others

⁹¹ Summarized in B. Douglas and C. Ballard, eds, *Foreign Bodies: Oceania and the Science of Race 1750–1940*, (2008). Online: <http://epress.anu.edu.au/foreignbodies/mobiledevices/ch01s08.html> (10/11/2009).

⁹² J. L. Scholer, "Four Millennia of Literary Utopias: from Plato to Orwell; J. Lawrence Scholer reviews *The Faber Book of Utopias!*" *The Portsmouth Review*, November 12, (2001).

⁹³ M. R. Rose, *Darwin's Spectre* (Princeton, NJ: Princeton University Press, 1998), 142-145.

⁹⁴ D. Galton, *In Our Own Image* (London: Little, Brown and Company, 2001), 120.

⁹⁵ L. S. Penrose, "Phenylketonuria—a Problem of Eugenics," *Annals of Human Genetics* 62 (1998): 193-202; M. W. Strickberger, *Evolution*, edition 3 (Sudbury, MA: Jones & Bartlett Publishers, 2005), 620-628.

⁹⁶ J. Rothschild, *The Dream of a Perfect Child* (Bloomington, IN: Indiana University Press, 2005), 56-57; D. Derbyshire, "Evolution Stops Here: Future Man Will Look the Same Says Scientist," Mail Online, October 7, 2008. Online: <http://www.dailymail.co.uk> (10/03/2009).

may wish to prevent the further decline in the human genetic endowment and look optimistically to managing and directing evolution.⁹⁷

In research involving chimeras, the ethical and legal questions have become center stage. Successful interspecies manipulations have been made with some unusual outcomes achieved, but these are of no riveting interest as they do not breed true to the altered form.⁹⁸ However, the future of human-animal cytoplasmic hybrids (cybrids) is just opening before us and is an area of intense ethical debate. Interest is primarily focused on the generation of embryonic stem cells using animal eggs as the incubator (a human nucleus is introduced into an animal cell that has had its nucleus removed). The interest in the human-animal cybrids is to enable research into crippling diseases and related issues. The technique also is used in order to rescue endangered species.⁹⁹ It is undoubtedly true to say that for every well intentioned use, there are those who are prepared to push at any boundaries erected. After the successful insertion of human brain cells into a mouse, the debate has entered new territory. The question now has become: What proportion of human brain tissue can a recipient animal receive before it becomes part of the human family?¹⁰⁰ These advances

⁹⁷ Compare B. Keim, "Research Breakthrough: Human Clones May Be Genetically Viable," *Wired Science*, February 2, (2009). Online: <http://blog.wired.com/wiredscience/2009/02/human-clones-ap.html> (09/03/2009); Y. Chung, C. E. Bishop, N. R. Treff, S. J. Walker, V. M. Sandler, S. Becker, I. Klimanskaya, W-S. Wun, R. Dunn, R. M. Hall, J. Su, S-J. Lu, M. Maserati, Y-H. Choi, R. Scott, A. Atala, R. Dittman and R. Lanza, "Reprogramming Human Somatic Cells Using Human and Animal Oocytes," *Cloning and Stem Cells* 11(2) (2009): DOI: 10.1089/clo.2009.0004. Online: <http://www.liebertonline.com/doi/pdfplus/10.1089/clo.2009.0004?cookieSet=1> (10/03/2009).

⁹⁸ Y. Xi, S. Fang, Y. Nada and N. Fujihara, "Peafowl-chicken Interspecific Chimera," *Journal of Poultry Science* 39 (2002): 149,155; S. Meinecke-Tillman and B. Meinecke, "Experimental Chimeras-removal of Reproductive Barrier between Sheep and Goat," *Nature* 307 (1984): 637, 638.

⁹⁹ Z. Beyhan, A. E. Iager and J. B. Cibelli "Interspecies Nuclear Transfer: Implications for Embryonic Stem Cell Biology," *Cell Stem Cell* 1 (2007): 502-12; S. Camporesi and G. Boniolo, G. "Fearing a Non-existing Minotaur? The Ethical Challenges of Research on Cytoplasmic Hybrid Embryos," *Journal of Medical Ethics* 34 (2008): 821-825; doi:10.1136/jme.2008.024877.

¹⁰⁰ A. R. Muotri, K. Nakashuma, N. Toni, V. M. Sandler and F. H. Gage, 2005. "Development of Functional Human Embryonic Stem Cell-derived Neurons in Mouse Brain," *Proceedings of the National Academy of Sciences, USA* 102 (2005): 18644-18648; doi: 10.1073/pnas.0509315102; L. M. Silver, "Human-animal Chimeras: from Mythology

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perhaps help in understanding the statement by White that at the Flood “the confused species which God did not create, which were the result of amalgamation, were destroyed.”¹⁰¹ (This idea becomes particularly relevant if we argue, as I have done, that Satan possessed some of these advanced manipulation abilities early in earth’s history.) Where all the current experimentation becomes unethical is a much debated issue. God may or may not figure in the emerging discussion, but one thing we do well to remember is that He has promised to reward negatively those who destroy His creation (Rev 11:18).

6. Acts against nature and God’s response

In the previous section I assumed a certain level of knowledge regarding activities which have caused God to express intense displeasure. In this section I will more fully develop our understandings. God has involved Himself in individual, regional and global judgments on those who, against the call of conscience, persistently engaged in experiments involving sexual activity against nature in an attempt to improve on the biological resources provided or to increase the level and frequency of human sexual pleasure. I have written already about aspects of this question.

At creation God established the natural order of reproductive activity. Human sexuality arose through a deliberate act of God (Gen 2:20-23) and was intended for the increase of the race (v. 24; Gen 4:1) and we understand it had a purpose in addition to procreation. Sexual activity involving husband (male) and one wife (female) was the continuing norm expected for those who understood God’s purpose—the Edenic model is presented as universal law in Leviticus 18.¹⁰² The importance of emotional bonding through the act of consensual sex is implied by the apostle Paul (1 Cor 7:2-5). The marriage union was meant to be permanent and those entering it were urged to maintain its fidelity and purity (Matt 19:3-9).

to Biotechnology,” (2007). Online: <http://www.scientificblogging.com/> (16/03/2009).

¹⁰¹ White, 1945, *op. cit.*, 3: 75; some unusual crosses are capable of producing fertile progeny—Wholphin and genae (snakes from different genera)—Batten, *op. cit.*; I have indicated already at reference number 55 some additional information.

¹⁰² R. M. Davidson, “Polygamy in the Old Testament,” in *Pathology of Polygamy: Cross-Cultural Mission on a Biblical Basis*, ed. Ron du Preez, 9-54 (Berrien Springs, MI: Omega Media, 2007).

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Fascination arose soon after creation with other arrangements outside the marriage model designed by God. By the time of the Flood, we are told that “they took wives for themselves of all whom they chose” (Gen 6:2). Reasonably, this may be interpreted to mean that polygamy and divorce were common.¹⁰³ The phrase “every intent of his heart was only evil continually” (v. 5) needs a little more explanation.

First, we might note that the evil intent of people’s minds led God to lament His creation (v. 6). They were “corrupt” and “violent” (Gen. 6:11, 12), taking by force that which they desired—property and wives.¹⁰⁴ As a consequence of the activities of the pre-Flood population, God proclaimed a universal death penalty on all except a remnant (Gen. 7:17, 21-23). The meaning of the word “corrupt” can be ascertained by reference to Israel’s history during the days when they were under God’s visible leading. Many of those receiving the death penalty came from among individuals who participated in sexual relationships outside the natural order. This included those given to homosexual and bestial behavior (Lev 18:6-17, 22, 23; 20:10, 11). A considerable proportion of the sins recorded as bringing utter condemnation from God dealt with sexual immorality (Lev 18, 20). Immoral behavior and abandonment of the God’s principles are chief among the sins that brought the destruction at the Flood.¹⁰⁵

Those who did not follow God’s instructions caused the land to “vomit” the inhabitants out (Lev 20:22; cf. 18:25). The apostle Paul is more explicit and indicates that persistent rebellion against God’s ideals ultimately would mean the departure of His Spirit (Rom 1:25-28) resulting in practitioners being given over to “their vile passions” (v. 26). Entrance to the path of sexual immorality brings with it a harvest of other unrighteous acts leading ultimately to the judgments of God and the reward of eternal death (Rom 1:28-32; Rev 22:15). This is similar to the outcomes delivered to the depraved inhabitants of Sodom and Gomorrah. They were destroyed by fire for their gross acts of immorality, for which they refused to repent (Gen 19:4-11, 24).

From this background of information, we can assert reasonably that one category of corrupt practices of the pre-Flood race was sexual immorality

¹⁰³ Compare Matt 24:38; White, 1943, *op cit.*, 338.

¹⁰⁴ White, *The Story of Patriarchs and Prophets*, *idem*, 92.

¹⁰⁵ E. G. White, *Testimonies for the Church*, (Mountain View, CA: Pacific Press Publishing Association, 1948), 5: 601.

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in the broadest sense and contributed to their destruction. Their motivation was evil continually and this was driven by the originator of evil, Satan.

***Conclusion 12:** It may be reasonable to understand that White's statements on the "base crime of amalgamation" to represent attempted crossings involving animals and humans and other perversions of the order established at creation.*

7. Concluding comments

The foregoing comments are not meant to address all the issues exposed through a discussion of how sin affected this world and the methods Satan used to cause deterioration of nature. However, some puzzling aspects of both the scriptural and Spirit of Prophecy record are becoming clearer as we progress into the twenty-first century. Others can add to the debate as time passes.

I have attempted to show that statements written by E. G. White that have appeared to be absurd at a certain time in history can become plainer years later. It is truly said by the apostle Paul: "we see through a glass darkly" (1 Cor 13:12). But in all the darkness perhaps we can confidently echo Jehoshaphat's thoughts when he said: "Believe in the Lord your God, and you shall be established; believe His prophets, and you shall prosper" (2 Chron 20:20).

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