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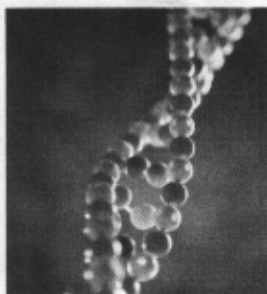
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UNIT 1 The Evolutionary Perspectives

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1. The Growth of Evolutionary Science, Douglas J. Futuyma, *Science on Trial*, Pantheon Books, 1982

Before the rise of science, the causes of orderly events were sought in the **divine purposes** they were thought to have served. Today, patterns and designs are seen to be the result of **natural selection**.

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2. Darwin's Influence on Modern Thought, Ernst Mayr, *Scientific American*, July 2000

As Ernst Mayr points out, our conception of the world and our place in it is, at the beginning of the twenty-first century, drastically different from the **Zeitgeist**, or "spirit of the times," at the beginning of the nineteenth century. The one person most responsible for this change is **Charles Darwin**.

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3. 15 Answers to Creationist Nonsense, John Rennie, *Scientific American*, July 2002

Opponents of evolution are trying to tear down real science by setting forth a series of specious arguments. In reality, they intend to use the **intelligent-design theory** as a "wedge" in order to reopen science classrooms to the discussion of **God**. This article consists of a series of rebuttals to some of the most common "scientific" arguments raised against the idea of evolution.

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4. Profile of an Anthropologist: No Bone Unturned, Patrick Huyghe, *Discover*, December 1988

Patrick Huyghe reports that the skills displayed by **physical anthropologists** and **archaeologists** in the analysis of old bones have resulted in the development of a whole new field: **forensic anthropology**.

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5. Go Ahead, Kiss Your Cousin, Richard Conniff, *Discover*, August 2003

Moderate **inbreeding** has always been the rule, not the exception, for humans. Despite the fact that close matings can unmask **deleterious recessives**, new research suggests that they may also confer **evolutionary and social advantages**. This is significant, especially when considering the **social benefits**.

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6. Curse and Blessing of the Ghetto, Jared Diamond, *Discover*, March 1991

Tay-Sachs disease is a choosy killer, one that for centuries targeted Eastern European Jews above all others. Jared Diamond reports that, by decoding its lethal logic, we can learn a great deal about how **genetic diseases** evolve—and how they can be conquered.

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7. **The Saltshaker's Curse**, Jared Diamond, *Natural History*, October 1991

Physiological adaptations that at one time helped West Africans and their descendants cope with unusually high **salt loss** may now be predisposing African Americans to **hypertension** and a premature **death**.

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8. **Of Mice, Men and Genes**, Robert M. Sapolsky, *Natural History*, May 2004

Two new studies having to do with the relationship between **genes and environment** shed new light on the **nature-nurture debate**. Although sometimes our genes seem to be about **inevitability**, more often they are about **vulnerability** and **potentials**.

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9. **What You Can Learn From Drunk Monkeys**, Meredith F. Small, *Discover*, July 2002

A remarkable National Institutes of Health (NIH) study on **alcoholism** sheds insight regarding the relationship between **heredity and environment**. It turns out that an individual is just as likely to become an alcoholic from a bad childhood as from bad genes.

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UNIT 2 Primates

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10. **What Are Friends For?**, Barbara Smuts, *Natural History*, February 1987

Barbara Smuts reports that an understanding of **friendship bonds** among baboons is not only destroying our stereotypes about monkeys in the wild, but it is also calling into question traditional views concerning the **relationships** between the **sexes** in early hominid evolution.

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11. **Fossey in the Mist**, Robert M. Sapolsky, *Discover*, February 2001

The memory of **Dian Fossey** will be forever filled with contradictions and controversy. She began as a scientist studying gorillas in the wild and quickly became a **conservationist**. Her methods, however, would ultimately lead to the murders of both the gorillas and herself.

59

12. **The Mind of the Chimpanzee**, Jane Goodall, from *Through a Window*, Houghton Mifflin, 1990

It has long been recognized that the differences in anatomy and physiology between apes and humans are a matter of degree. Because of the work of Jane Goodall, we have come to realize that there is continuity in **mental** and **emotional development** as well.

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13. **Got Culture?**, Craig Stanford, from *Significant Others*, Basic Books, 2001

The **rudimentary cultural abilities** of the **chimpanzee** not only sharpen our understanding of our uniqueness as humans, but they also suggest an **ancient ancestry** for the **mental abilities** that we and the chimpanzees have in common.

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14. **Dim Forest, Bright Chimps**, Christophe Boesch and Hedwige Boesch-Achermann, *Natural History*, September 1991

Contrary to expectations, forest-dwelling **chimpanzees** seem to be more committed to **cooperative hunting** and **tool use** than are savanna chimpanzees. Such findings may have implications for the course of human evolution.

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15. **Rethinking Primate Aggression**, Richard Conniff, *Smithsonian*, August 2003

Having logged thousands of hours observing **chimpanzees**, Frans de Waal has found that **peace** may come to us more naturally than we imagine because of our long evolutionary history of **reconciliation**, **cooperation**, and **morality**.

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16. **Disturbing Behaviors of the Orangutan**, Anne Nacey Maggioncalda and Robert M. Sapolsky, *Scientific American*, June 2002

Some adolescent male orangutans experience an arrested state of development in the presence of an adult male. Recent research indicates that, rather than being a stress-induced response (as was once thought), **delayed maturation** is acutally an **alternative reproduction strategy**.

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17. **Are We in Anthropodenial?**, Frans de Waal, *Discover*, July 1997

To endow animals with **human emotions** and **mental qualities** has long been a **scientific taboo**, but the more we learn about them, especially our closer relatives, the more it seems that there really are similarities, as Frans de Waal's research indicates.

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UNIT 3 Sex and Society

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18. **Mothers and Others**, Sarah Blaffer Hrdy, *Natural History*, May 2001

In many species, including our own, **mothers are assisted** by others in rearing their offspring. The more we adhere to this evolutionary heritage of "**cooperative breeding**," the more likely we are to raise **emotionally healthy children**.

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19. **A Woman's Curse?**, Meredith F. Small, *The Sciences*, January/February 1999

Meredith Small reports on an anthropologist's study of the **ritual of seclusion** surrounding **women's menstrual cycles**, which has some rather profound implications regarding human evolution, certain cultural practices, and **women's health**.

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20. **What's Love Got to Do With It?**, Meredith F. Small, *Discover*, June 1992

The **bonobos'** use of sex to reduce tension and to form **alliances** is raising some interesting questions regarding human evolution. In Meredith Small's review, this question is raised: Does this behavior help to explain the origins of our **sexuality**, or should we see it as just another primate aberration that occurred after humans and primates split from their common lineage?

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21. **Apes of Wrath**, Barbara Smuts, *Discover*, August 1995

Whether or not males beat up females in a particular species seems to have a great deal to do with who is forming **alliances** with whom. Barbara Smuts indicates that this has powerful implications as to what can be done about **sexual coercion** in the human species.

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UNIT 4 The Fossil Evidence

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22. **Hunting the First Hominid**, Pat Shipman, *American Scientist*, January–February 2002

In searching for the **first hominid** to branch off from the **apes**, it helps to take note of the **key features** that distinguish apes from people. Such a list can be misleading, however, since not all of these features arose simultaneously and we do not even know which came first.

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23. **Food for Thought: Dietary Change Was a Driving Force in Human Evolution**, William R. Leonard, *Scientific American*, December 2002
William Leonard asserts that **dietary change** was a driving force in human evolution. Studies of people of the past as well as traditional cultures of today show that humans evolved to be **flexible eaters**. 112
24. **Scavenger Hunt**, Pat Shipman, *Natural History*, April 1984
Microscopic analyses of tooth wear and cut marks on bone, combined with an increased understanding of the advantages of **bipedalism**, point in the direction of a "**man the scavenger**" model rather than "**man the hunter**," Pat Shipman reports. 120
25. **Chasing Dubois's Ghost**, Pat Shipman, *American Scientist*, November–December 1999
What kind of person would risk everything personally and professionally to find the **missing link**? In the case of **Eugene Dubois**, in pursuit of **Pithecanthropus erectus**, you will find a stubborn genius. 124
26. **Erectus Rising**, James Shreeve, *Discover*, September 1994
Most paleoanthropologists used to agree that **Homo erectus** was confined to Africa until one million years ago. James Shreeve notes that new finds and a new **dating method** are challenging that view. 127
27. **The Scavenging of "Peking Man"**, Noel T. Boaz and Russell L. Ciochon, *Natural History*, March 2001
Dragon Bone Hill in China is the site of the cave that yielded the first, and still largest, cache of fossils of **Homo erectus pekinensis**. In the process of applying **new methods of analysis** to the evidence, the authors try to determine whether these relatives of ours used **fire**, were **cannibals**, were **hunters** or were **the hunted**. 133



UNIT 5 Late Hominid Evolution

Unit Overview

28. **Hard Times Among the Neanderthals**, Erik Trinkaus, *Natural History*, December 1978
In spite of the coarseness of their lifestyle and the apparent **violence** between individuals, **Neanderthal** skeletal remains reveal a prehistoric record of affection and respect, and they should be accorded the status of **human beings**. 140
29. **Rethinking Neanderthals**, Joe Alper, *Smithsonian*, June 2003
Contrary to the widely held view that **Neanderthals** were evolutionary failures, they persisted through some of the harshest climates imaginable. Over the past 200,000 years, they made some rather **sophisticated tools** and had a **social life** that involved taking care of the wounded and burying the dead. 146
30. **The Gift of Gab**, Matt Cartmill, *Discover*, November 1998
While the **origin of human language** is rooted in aspects of psychology and biology that we share with our close animal relatives, Matt Cartmill proposes that our kind of communication seems to be associated with **making tools and throwing weapons**. 150
31. **We are All Africans**, Pat Shipman, *American Scientist*, November–December 2003
For decades, **paleoanthropologists** have argued over two **competing theories** about the origin of our kind: the "**Out of Africa hypothesis**" and the "**Multiregional hypothesis**." Now, three new lines of evidence have converged to offer convincing support for just one of them. 155



UNIT 6 Human Diversity

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32. **The Lost Man**, Douglas Preston, *The New Yorker*, June 16, 1997
Recent findings indicate that the **first Americans** might not be who we think they were. Before the evidence could be adequately assessed, however, the U.S. government withheld it, Native Americans have been wanting to re-bury it, and archaeologists have gone to court to retrieve it. In the process, issues of **race** and **ethnicity** have been brought to a steaming head.

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33. **Skin Deep**, Nina G. Jablonski and George Chaplin, *Scientific American*, October 2002

Although recent **migrations** and **cultural adaptation** tend to complicate the picture, **human skin color** has evolved to be dark enough to prevent sunlight from destroying the nutrient **folate**, but light enough to foster the production of **vitamin D**.

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34. **Black, White, Other**, Jonathan Marks, *Natural History*, December 1994

With regard to classifying human beings, Jonathan Marks notes that the central message of anthropology is, "You may group humans into a small number of **rac**es if you want to, but biological evidence does not support it."

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35. **Does Race Exist? A Proponent's Perspective**, George W. Gill, *Nova Online*, October 12, 2000

Although the author understands why many physical anthropologists are able to ignore or deny the **concept of race**, George W. Gill claims that his experience in the area of **forensic physical anthropology** compels him to stand "clearly more on the side of the reality of race than on the 'race denial' side."

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36. **Does Race Exist? An Antagonist's Perspective**, C. Loring Brace, *Nova Online*, October 12, 2000

In denying the existence of a biological entity that warrants the term "**race**," C. Loring Brace claims that the concept is really the product of our **politically and culturally fashioned perceptions**.

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37. **The Bare Truth**, *The Economist*, December 20, 2003

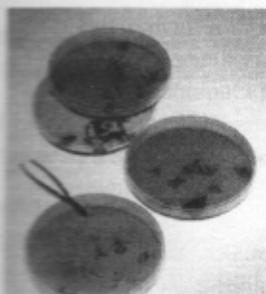
Evolutionary theories abound as to why humans have lost most of their **body hair**. Even more curious are the great lengths people will go to in order to accentuate what is left or eliminate it entirely.

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38. **The Tall and the Short of It**, Barry Bogin, *Discover*, February 1998

Rather than being able to adapt to a single environment, we can—thanks to our **genetically endowed plasticity**—change our bodies to cope with a wide variety of environments. In this light, Barry Bogin reports on research that suggests that we can use the average **height** of any group of people as a barometer of the **health** of their society.

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UNIT 7 Living With the Past

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39. **Great Apes as Food**, Dale Peterson, *Gastronomica*, Spring 2003

The taste for **bush meat** is rooted in the **cultural identity** and **village traditions** of many Central Africans. If current levels of **deforestation** and **commercial hunting** continue, however, the eating of the **great apes** of Africa will very shortly lead to their **extinction** in the wild.

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40. **The Viral Superhighway**, George J. Armelagos, *The Sciences*, January/February 1998

The modern world is becoming a **viral superhighway**. Environmental disruptions and international travel have brought on a new era in human illness, one marked by diabolical new **diseases**.

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41. **Dr. Darwin**, Lori Oliwenstein, *Discover*, October 1995

The application of **Darwin's theory of evolution** to the understanding of **human diseases** will not only help us better treat the symptoms of diseases, but also promises to help us understand how microbes and humans have evolved in relation to one another.

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