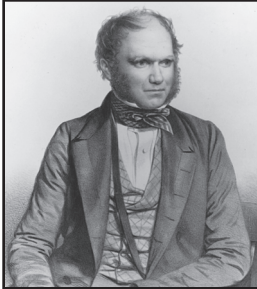


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UNIT 1 Evolutionary Perspectives

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- 1. Was Darwin Wrong?**, David Quammen, *Online Extra, National Geographic Magazine*, November 2004
Evolutionary theory is not just an ephemeral guess, but is **a well-established set of concepts** that has come to be critically important to **human welfare, medical science,** and **understanding the world around us.** 2
- 2. The Facts of Evolution**, Michael Shermer, from *Why Darwin Matters*, Henry Holt & Co., 2006
Evolutionary theory is rooted in a rich array of data from the past. While the specifics of evolution are still being studied and unraveled, the general theory is the **most tested in science**, tests spanning the past century and a half. 9
- 3. Evolution in Action**, Jonathan Weiner, *Natural History*, November 2005
More than 250 scientists around the world are **documenting evolution in action.** Some of the most dramatic cases are those that result from the **ecological pressures** that human beings are imposing on the planet. 17
- 4. Darwin and His Disciples**, Jean-Andre Prager, *History Review*, December 2011
The political impact of Darwin's work was to undermine **creationist doctrine**, provide ideological support for such philosophies as **communism** and **laissez-faire economics**, and **replace religious doctrine with science.** Darwin's ideas were even used to foster the **eugenics movement** and the concept of **social welfare planning**, including universal health care. 21
- 5. The Latest Face of Creationism**, Glenn Branch and Eugenie C. Scott, *Scientific American*, January 2009
Creationists have long **battled against the teaching of evolution** in the classroom. Because of a series of **legal setbacks**, their **strategies** have had to evolve from promoting their own perspective to **undermining science literacy.** 26
- 6. Why Should Students Learn Evolution?**, Brian J. Alters and Sandra M. Alters, *Defending Evolution in the Classroom*, Jones and Bartlett Publishers, Inc., 2001
In explaining how organisms of today got to be the way they are, the **evolutionary perspective** helps us to make sense of the **history of life** and explains relationships among species. It is an **essential framework** within which scientists organize and interpret **observations**, and make **predictions about the living world.** 33

The concepts in bold italics are developed in the article. For further expansion, please refer to the Topic Guide.



UNIT 2

Primates

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7. **First, Kill the Babies**, Carl Zimmer, *Discover*, September 1996

Infanticide has been found to exist among many primate species in addition to other kinds of animals. At first, it seemed to contradict **one of the hallmarks of primate social life—long-time intimate care of the young**. Yet, another view is that it is part of **an alternative reproductive strategy** that enhances the fitness and survival of the next generation.

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8. **The 2% Difference**, Robert Sapolsky, *Discover*, April 2006

Now that scientists have decoded the **chimpanzee genome**, we know that we share **98% of our DNA with chimps**. So how can we be so different? The answer lies in the fact that a **very few mutations** make for some **very big differences**.

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9. **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 is only a matter of degree. Because of the work of Jane Goodall, we have come to realize that there is continuity in the **mental** and **emotional developments** as well.

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

The study of the **rudimentary cultural abilities** of the **chimpanzee** not only sharpens our understanding of our uniqueness as humans, but it also suggests an **ancient ancestry** of the **mental abilities** that we and the chimpanzees have in common.

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

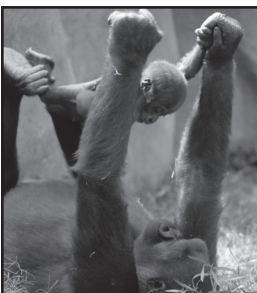
Contrary to expectations, forest-dwelling **chimpanzees** seem to be more committed to **cooperative hunting** and **tool use** than are savanna chimpanzees. Such findings may have implications for the understanding of the course of human evolution.

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12. **Peace Among Primates**, Robert Sapolsky, *Greater Good Magazine*, April 5, April 12, April 19, 2008

Are we humans hard-wired for violence? Recent studies indicate that the behavior of at least some primate species, and certainly our own, is **driven by the social structures and ecological settings**, not simply by our genes.

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UNIT 3

Sex and Gender

Unit Overview

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

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

68

14. **What's Love Got to Do with It?: Sex Among Our Closest Relatives Is a Rather Open Affair**, 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. Does this behavior help to explain the origin of our **sexuality**? Or should we see it as just another primate aberration that occurred after the split from the human lineage?

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15. **The Double Life of Women**, Annie Murphy Paul, *Psychology Today*, November/December 2010
Women actually have two sexualities, one when they are **ovulating** and the other during the rest of the month. Moreover, the invisible turns of the **reproductive cycle** shape the everyday behavior of both women and men as **her cycle influences** not just **her preference in a partner**, but her **personality** as well. 78
16. **Mothers and Others**, Sarah Blaffer Hrdy, *Natural History*, May 2001
 In many species, including our own, **mothers are assisted** in rearing their offspring by others. The more we adhere to this evolutionary heritage of **“cooperative breeding,”** the more likely we are to raise **emotionally healthy children**. 82



UNIT 4 The Fossil Evidence

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17. **The Human Family’s Earliest Ancestors**, Ann Gibbons, *Smithsonian*, March 2010
 A rare hominid skeleton from 4.4 million years ago displays some surprising features, such as a skull and pelvis that hint at **upright walking** combined with hands and feet that show **a facility for climbing trees**. Is she our direct ancestor or an early offshoot? 90
18. **First of Our Kind**, Kate Wong, *Scientific American*, April 2012
 Researchers have revealed new details about the anatomy of **Australopithecus sediba**, a primitive hominin that existed around the same time **early Homo species** first began to appear on Earth. The new findings make it clear that this ancient relative displayed both **primitive characteristics** as well as **modern, human-like traits**. The **mosaic nature** of hominin features, researchers suggest, make *A. sediba* the **best candidate for an ancestor to the genus Homo**. 94
19. **Rethinking Neanderthals**, Joe Alper, *Smithsonian*, June 2003
 Contrary to the widely held view that **Neanderthals** were evolutionary failures, the fact is that they persisted through some of the harshest climates imaginable. Over a period of 200,000 years, they had made some rather **sophisticated tools** and have had a **social life** that involved taking care of the wounded and burying the dead. 99
20. **Twilight of the Neandertals**, Kate Wong, *Scientific American*, August 2009
 With their large brains and enormous strength, **Neandertals** were well suited to the rigors of hunting ice age mammals. But as the **climate changed** and a **new kind of human appeared** on the landscape, their numbers dwindled and **they could no longer compete**. 103



UNIT 5 Late Hominid Evolution

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21. **A New View of the Birth of Homo sapiens**, Ann Gibbons, *Science Magazine*, January 28, 2011
 Did **modern humans** come out of Africa, spread around the world and replace, rather than mate with, the **archaic humans** they met? **New genomic data** is shedding light on this decades-long dispute. It appears that neither the **out-of-Africa replacement model** nor the **multi-regional hypothesis** will completely win out. 110
22. **Meet the New Human Family**, Jill Neimark, *Discover*, May 2011
 There was a time when **our ancestors** shared the planet with **other human species**. Today, we stand alone, but the remains of the others, in the form of **fossils** as well as in the record of our **DNA**, tell **remarkable stories**. 113

23. **Refuting a Myth About Human Origins**, John J. Shea, *American Scientist*, March/April 2011
For decades, archeologists have believed that **modern human behavior as reflected in tools and food-getting strategies** developed along with what is identified in the fossil record as “**modern Homo sapiens**,” but **archeological evidence** now shows that some of these behaviors, most importantly **our capacity for wide behavioral variability**, actually occurred among people who had lived very long ago, particularly in Africa. 119
24. **The Birth of Childhood**, Ann Gibbons, *Science Magazine*, November 2008
Unlike our closest relatives, the apes, **humans depend on their parents for a long period** after weaning. **New investigative technology** has allowed researchers to determine **when and why our long childhood evolved**. 125
25. **The Evolution of Grandparents**, Rachel Caspari, *Scientific American*, August 2011
A marked increase in **survivorship of adults** in the Upper Paleolithic had far-reaching effects on the nature of society. The appearance of a **grandparental generation** meant **more resources** available to the group, significant **population increases** and a greater efficiency in the **transmission and accumulation of cultural knowledge** for future generations. These changes may very well have accounted for our ancestors being the only hominid species left standing. 129
26. **A Bigger, Better Brain**, Maddalena Bearzi and Craig Stanford, *American Scientist*, September/October 2010
The **diverse food-getting strategies employed by dolphin and ape societies** are an excellent gauge of their social complexity as well as an example of how **brain complexity, social complexity, and ecological complexity are all linked**. 133
27. **The Limits of Intelligence**, Douglas Fox, *Scientific American*, June 14, 2011
Although there has been a general relationship **between increases in brain size and intelligence in human evolution**, the connection is not as obvious as it may seem. The more we learn about this most fascinating aspect of our development, the more we are led to conclude that the **laws of physics may well prevent** us from having **an ever more powerful thinking machine**. 138
28. **Top Ten Myths About the Brain**, Laura Helmuth, *Smithsonian*, May 20, 2011
In contrast to the wonderfully informative studies being conducted on the **human brain**, as discussed in the previous article, there exists a considerable amount of **folk mythology** about our most distinctive organ. For a variety of reasons, including poorly designed research, theoretical biases, hidden agendas and wishful thinking, many of the myths are, unfortunately, more widely known and espoused than the evermore fascinating **scientific findings**. 143
29. **The Naked Truth**, Nina G. Jablonski, *Scientific American*, February 2010
Recent findings lay bare the **origins of human hairlessness** and hint that naked skin was a key factor in the emergence of other human traits, such as the **ability to cover long distances in the pursuit of food**. 146



UNIT 6 Human Diversity

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30. **Can White Men Jump?: Ethnicity, Genes, Culture, and Success**, David Shenk, from *The Genius in All of Us*, Doubleday, 2010
Clusters of **ethnic and geographical athletic success** prompt **suspensions of hidden genetic advantages**. **The real advantages are much more cultural**, more nuanced, and less hidden. 154
31. **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**. 158

- 32. How Real Is Race?: Using Anthropology to Make Sense of Human Diversity**, Carol Mukhopadhyay and Rosemary C. Henze, *Phi Delta Kappan*, May 2003
The authors claim that ***race is not a scientifically valid biological category***. Instead, looking at it as a historically specific way of thinking about categorizing and treating human beings, ***race can be seen as a cultural invention***. 162
- 33. 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, research suggests that we can use the average ***height*** of any group of people as a barometer of the ***health*** of that particular society. 170
- 34. Dead Men Do Tell Tales**, William R. Maples, from *Dead Men Do Tell Tales*, Broadway Books, 1994
This classic piece by Maples maintains its relevance as a plea for the continued and expanded use of ***forensic anthropology***. There are just too many ***stories yet to be told*** and so much ***justice yet to be carried out***. 174



UNIT 7

Living with the Past

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- 35. Different Minds**, Kate Ravilious, *New Scientist Magazine*, November 15, 2011
The ***genes*** that currently cause ***mental illness***, such as schizophrenia and autism, may have arisen during the first ***great flowering of human technology*** 100,000 years ago. Some anthropologists believe that such genes, under nurturing conditions, may have ***conferred benefits***, such as ***innovative thinking*** and ***adaptability*** and may have actually been ***selected for***. 180
- 36. 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 of human illness, one marked by new diabolical ***diseases***. 183
- 37. The Perfect Plague**, Jared Diamond and Nathan Wolfe, *Discover*, November 2008
Globalization, changing climate, and the threat of ***drug resistance*** have conspired to set the stage for that ***perfect microbial storm***; a situation in which an emerging pathogen—another HIV or smallpox perhaps—might burst on the scene and kill millions of people before we can respond. 188
- 38. The Human Vector**, Wendy Orent, *Discover*, March 2012
Myths abound as to the ***origins of pandemic diseases and how they spread***. In this article, the author shows that the spread of disease is primarily a ***social phenomenon*** and goes on to outline the measures that must be taken to ***prevent pandemics***. 193
- 39. The Inuit Paradox**, Patricia Gadsby, *Discover*, October 2004
The ***traditional diet*** of the Far North, with its ***high-protein, high-fat*** content, shows that there are no essential foods—only ***essential nutrients***. 196
- 40. Curse and Blessing of the Ghetto**, Jared Diamond, *Discover*, March 1991
Tay-Sachs disease is a choosy killer, one that targeted Eastern European Jews above all others for centuries. By decoding its lethal logic, we can learn a great deal about how ***genetic diseases*** evolve—and how they can be conquered. 201

41. Ironing It Out , Sharon Moalem, from <i>Survival of the Sickest</i> , HarperCollins, 2007 <i>Hemochromatosis</i> is a hereditary disease that disrupts the human body's ability to metabolize iron . To understand why such a deadly disease would be bred into our genetic code, we need to take a closer look at European history , the bubonic plague , and medical practices that were discredited .	206
42. Children Who Sue for Being Born , Anjana Ahuja, <i>New Scientist Magazine</i> , October 29, 2011 This article discusses wrongful life lawsuits , cases filed by children with birth defects against medical professionals in Israel. Genetic testing is prevalent in Israel in part due to the high rates of genetic disorders such as Tay-Sachs disease, deafness and Down's syndrome in communities where consanguineous marriage is common. Further concerns are being raised about the possible abortion of healthy fetuses and lawyers who trawl for cases .	212
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