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Human Development

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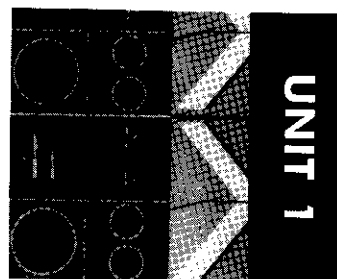


Northern Light

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see inside front cover for details

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A. GENETIC INFLUENCES	
1. Designer Babies , Sharon Begley, <i>Newsweek</i> , November 9, 1998.	8
<i>Genetic engineering</i> already enables scientists to place a healthy gene into an organ to repair damage or disease. Soon it may be possible to manipulate a fertilized egg (germline therapy) to remove the threat of a health problem (e.g., breast cancer, Alzheimer's) even before birth. Ethical questions exist. Will only the wealthy have designer babies? Will scientists know when to stop?	
2. Nature's Clones , Jim Neimark, <i>Psychology Today</i> , July/August 1997.	10
Twin research reveals fascinating facts; not all identical twins share all genetic traits. Prenatal development of twins can be different. An egg can split before it is fertilized by two sperm, resulting in one-egg fraternal twins. New genetic discoveries about twinning suggest that the nature-nurture question is still inexplicable and chaotic.	
B. PRENATAL INFLUENCES	
3. The Role of Lifestyle in Preventing Low Birth Weight , Virginia Roll Chomitz, Lilian W. Y. Cheung, and Ellice Lieberman, <i>The Future of Children</i> , Spring 1995.	18
Women's health during pregnancy has a profound effect on pre-natal development . Lifestyle changes such as improved nutrition , cessation of drug abuse (for example, cigarettes, alcohol), and avoidance of teratogens can prevent low birth weight.	
4. A State of the Art Pregnancy , Karen Springen, <i>Newsweek</i> , Special Issue, Spring 1999.	29
Prenatal diagnosis in the twenty-first century will assess the health of unborn babies and predict future physical development very early in pregnancy. Fetal DNA analysis will also allow more fetal surgery to repair malformations. A transmitter in the uterus may prevent preterm deliveries. This article also gives 10 tips to a healthy pregnancy without using technological assistance.	
5. Fetal Psychology , Janet L. Hopson, <i>Psychology Today</i> , September/October 1998.	32
Two months before birth, the prenatal fetus has emotions and personality that predict infant behavior. Very active fetuses become irritable babies, while fetuses with high heart rates become unpredictable, inactive babies. A well-nourished, low-stress, drug-free prenatal environment has the best chance of producing a baby with an easy temperament. It also enhances physical development and cognition .	



Genetic and Prenatal Influences on Development

Seven selections discuss genetic influences on development, cloning, and the role of lifestyle, including the effects of substance abuse, on prenatal development.



Development during Infancy and Early Childhood

Six selections profile the impressive abilities of infants and young children, examine the ways in which children learn, and discuss the development of empathy in early childhood.

6. **Drug-Exposed Infants**, Lucy Salcido Carter and Carol S. Larson, *The Future of Children*, Summer/Fall 1997. **Prenatal** exposure to **drugs of abuse** is **teratogenic**. It affects infant physical, cognitive, and social development and health. Legislative efforts have been directed at detecting the problem mothers and treating, rather than punishing, them. 37
7. **Sperm under Siege**, Anne Merewood, *Health*, April 1991. 41
Sperm as well as ova are susceptible to **teratogens**. Carcinogenic chemicals, tobacco, alcohol, and **drug abuse** can damage sperm, which, should they fertilize the ovum, may have devastating **effects on prenatal development**.

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A. INFANCY

8. **Temperament and the Reactions to Unfamiliarity**, Jerome Kagan, *Child Development*, February 1997. 48
Jerome Kagan's research demonstrates that **infant development** is shaped by both **genetics** and socialization. Babies born with reactive nervous systems may become subdued, fearful children, while those born with relaxed systems may become more sociable and secure. However, predicting future **personality** from infant reactivity without considering social forces would be a mistake. **Biological and psychological explanations** are both part of the **phenomena of human experiences**.
9. **Baby Talk**, Shannon Brownlee, *U.S. News & World Report*, June 15, 1998. 53
Linguists are discovering that **infants** too young to use language can discern incorrect use of **language** rules. **Cognitive development** in the brain is literally sculpted and reorganized by language perception. Computer neural networks (artificial intelligence) have yet to come close to the computation powers of babies.
10. **The Cultural Context of Infant Caregiving**, Navaz Peshotan Bhavnagri and Janet Gonzalez-Mena, *Childhood Education*, Fall 1997. 60
Recommendations for caregiving in **infancy** should consider beliefs, practices, and goals of the **culture** of the **parents**. The **physical, cognitive, and emotional development** of the baby is enhanced by collaboration and support between parents and child care professionals in infant care settings. Child care courses should teach cultural diversity, not just the American way.

B. EARLY CHILDHOOD

11. **The Language Explosion**, Geoffrey Cowley, *Newsweek*, Special Issue, Spring/Summer 1997. 68
Most psycholinguists agree that in **early childhood** the young brain is wired to analyze and learn many aspects of **language**. This article reviews how children discern sound, meaning, and grammar in all 6,000 language **cultures**. It recommends ways to use "parentese" to facilitate language and suggests red flags to watch for that may signal language disabilities.

- Defining the Trait That Makes Us Human**, Beth Azar, 71
APA Monitor, November 1997.
 The development of **empathy in early childhood** is both a **cognitive** and an **emotional achievement**. While a **genetic** predisposition to empathize exists, **education** is important for shaping empathy. The author cites researchers' opinions on how it can best be taught in **family/parenting** contexts.
13. **Highlights of the Quality 2000 Initiative: Not by Chance**, Sharon L. Kagan and Michelle J. Neuman, 74
Young Children, September 1997.
Early childhood education programs help shape the **physical, cognitive, and emotional development** of the 13 million American children who attend them. This article describes the recommendations for state-of-the-art programs that use technologies and resources **creatively**, are cost-effective, and will enhance the well-being of our young children.

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A. COGNITION

14. **The Genetics of Cognitive Abilities and Disabilities**, 84
 Robert Plomin and John C. DeFries, *Scientific American*, May 1998.
 The authors of this article define heritability and explain how it influences **cognitive development**. They discuss the difficult hunt for specific **genes** for cognitive abilities at the molecular level and give a current status report. **Molecular genetics** may provide important answers to questions of how the environment also shapes the learning process.
15. **Basing Teaching on Piaget's Constructivism**, 91
 Constance Kamii and Janice K. Ewing, *Childhood Education*, Annual Theme Issue, 1996.
 Piaget's **cognitive theory** embraces the view that much of learning originates from inside the child. This theory of constructivism is clearly articulated in this article. Constructivism not only explains **how children construct knowledge** but also helps adults plan more sensitive ways to teach them.
16. **The First Seven . . . and the Eighth: A Conversation with Howard Gardner**, Kathy Checkley, 96
Educational Leadership, September 1997.
 Howard Gardner believes that there are eight **cognitive** abilities that can be used to solve problems or **create** products: eight different kinds of intelligences. In this interview he describes the first seven plus an eighth, the naturalist intelligence. Children should be helped to discover what they are good at, and **educational** situations should nurture and enhance their areas of expertise.

B. SCHOOLING

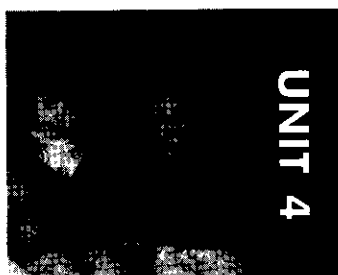
17. **Bell, Book, and Scandal**, *The Economist*, December 101
 24, 1994/January 6, 1995.
 An overview of **IQ measurement** illustrates the virtues, exaggerations, or vices of Francis Galton, Alfred Binet, Charles Spearman, L. L. Thurstone, Arthur Jensen, Howard Gardner, and others. *The Bell Curve* by Charles Murray and Richard Herrnstein is critically reviewed. Questions are raised about **cultural determinism**, the relationship of **physical development** to intellect, and the use of IQ tests to order children into differential **educational placements**.



UNIT 3

Development during Childhood: Cognition and Schooling

Seven selections examine human development during childhood, paying specific attention to social and emotional development, cognitive and language development, and development problems.



Development during Childhood: Family and Culture

Six selections discuss the impact of home and culture on child rearing and child development. The topics include parenting styles, family structure, and cultural influences.

18. **The Death of Child Nature: Education in the Post-modern World**, David Elkind, *Phi Delta Kappan*, November 1997. 105
David Elkind argues that **education** continues to see children as alike and amenable to universal rules even though the postmodern world stresses the importance of differences. **Culture**, race, **gender**, learning styles, and other phenomena have no regularity. Children should not be expected to melt into a common amalgam; as individuals, learning is always a **creative** activity.
19. **In Search of . . . Brain-Based Education**, John T. Bruer, *Phi Delta Kappan*, May 1999. 110
This essay supplies rebuttals to the brain-based literature that advocates changing **education** to comply with right-left (**gender differentiated**) brain functions and a sensitive period for **cognitive development** between ages 4 and 10. Critical evaluation of scientific brain research reveals that neurobiology has not yet revealed answers to questions of how children learn, remember, and think.
20. **Caution—Praise Can Be Dangerous**, Carol S. Dweck, *American Educator*, Spring 1999. 117
The right kind of praise can boost **self-esteem** and increase achievement motivation in **school**. Praise for effort increases the challenge to learn. However, praise of a student's intelligence is dangerous. Students praised as intelligent choose easy tasks to avoid making mistakes and threatening their status. One sentence of praise (right or wrong) is pervasive and powerful.

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A. FAMILY

21. **Father Love and Child Development: History and Current Evidence**, Ronald P. Rohner, *Current Directions in Psychological Science*, October 1998. 124
Parental influence has historically been viewed as mother love as prime mover. New research shows that father love and acceptance is very important to a child's **cognitive** and **emotional development** in both **genders** and in all **cultures**. Ronald Rohner reviews six types of studies that demonstrate the power of father love. **Depression**, **drug abuse**, and **violence** outcomes, for example, are more linked to father love than to mother love.
22. **The Parent Trap**, Sharon Begley, *Newsweek*, September 7, 1998. 128
This article reviews the book by Judith Rich Harris that suggests that **parenting** influences are less important to child outcomes than **genetic predetermination**. Many rebuttals to Harris's thesis are voiced as well as some support. **Personality** traits, **peers'** influence, and **occupational** choices result from the interactive effects of both nature and nurture.
23. **Kids Who Don't Fit In**, Pat Wingert, *Newsweek*, March 22, 1999. 134
A child's **emotional intelligence** may have a genetic basis, but **family/parenting** skills can help children fit in better with **peers** and in social situations. This article discusses early signs of emotional disability. **Play and kindness stories in school** and at home can foster more empathy. Social skills therapy may also help both parents and children.

B. CULTURE

24. **The Effects of Poverty on Children**, Jeanne Brooks-Gunn and Greg J. Duncan, *The Future of Children*, Summer/Fall 1997. 136
- This article reviews what poverty does to children's **physical development**, **health**, **nutrition**, **cognition**, **school achievement**, and **emotional development**. Poor children have less access to **peers** and see more **violence**. The authors back up their claims with extensive data.
25. **Effects of Maltreatment and Ways to Promote Children's Resiliency**, Barbara Lowenthal, *Childhood Education*, Summer 1999. 151
- Violence** (abuse, severe injuries, natural disorders) leaves children at risk for **stress** disorders, **emotional/personality** disorders, **health** problems, **cognitive** disorders, and **depression**. Such negative experiences cause abnormal neuronal activity that, in turn, disrupts brain development, creating greater risks to the neurons than in adulthood. Interventions to prevent further maltreatment and to promote resiliency are suggested.
26. **Tomorrow's Child**, Jerry Adler, *Newsweek*, November 2, 1998. 155
- What will the twenty-first century **culture of childhood** be like? This article reviews hallmarks of **family life** in the twentieth century, and predicts landmarks for the future. These include half of the children in the United States being non-Caucasian, having **health** ensured by DNA manipulations, going to free preschools and health clubs, having **computer Internet** expertise, and eating **genetically engineered** foods packed with **nutritional** supplements.

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A. ADOLESCENCE

27. **Growing Up Goes On and On and On**, Cynthia Crossen, *Wall Street Journal*, March 24, 1997. 160
- This article suggests that **adolescence** (the time between childhood and adulthood) is the longest it has ever been. **Physical** changes herald **emotional/personality** unsteadiness, **depression**, and threats to **self-esteem** that may last through age 21 or beyond. Comparisons are made with adolescence in previous decades.
28. **Why the Young Kill**, Sharon Begley, *Newsweek*, May 3, 1999. 163
- Quotes from experts on **adolescent psychology** and neurobiology show that **aggression/violence** probably requires a particular environment of **stress**, lack of **morality** training, and/or negligent **parenting** imposed on a temperamentally vulnerable child with a **genetic** predisposition to antisocial **personality**. Such doubly jeopardized youth lack the skills to restore their sense of **self-esteem** when faced with perceived injustices.
29. **The Secret Life of Teens**, John Leland, *Newsweek*, May 10, 1999. 166
- This selection points out the importance of **parents** entering the secret world of **adolescence**. Parents need to learn the secret **language** used to communicate about sex and **drugs**. Television, videos, and computer games present teens with a landscape of **aggression/violence** and **sex/gender** fantasies. Parental incursions can help replace poor quality role models with **ethics/morality training**.



Development during Adolescence and Young Adulthood

Seven selections explore a wide range of issues and topics concerning adolescence and early adulthood.

B. YOUNG ADULTHOOD

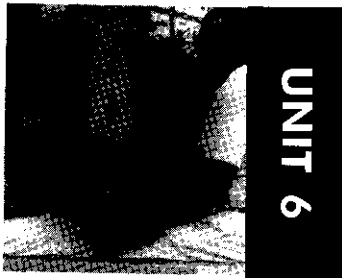
30. **Brain Sex and the Language of Love**, Robert L. Nadeau, *The World & I*, November 1997. **170**
Young adults show **gender differences** in intimacy. Male **communication** emphasizes action and autonomy. Female language promotes sharing and consensus. Women give "lack of communication" as a reason for **divorce**. Robert Nadeau explains that some of these differences may result from sex-specific brain hemisphere functioning.
31. **The Infertility Challenge**, Annetta Miller and Joan Raymond, *Newsweek*, Special Issue, Spring 1999. **176**
The problem of **infertility** has not been solved. This article reviews **gender-related** causes (evenly split between men and women) and new techniques of assisted reproductive technology (ART). The amazing transformations in ART since the first "test tube baby" in 1979 have a dark side. Costs are high and seldom insured, chromosomal abnormalities are four times higher than in unassisted pregnancies, and success is not guaranteed.
32. **The Science of a Good Marriage**, Barbara Kantrowitz and Pat Wingert, *Newsweek*, April 19, 1999. **179**
This article contradicts the Mars-Venus **gender difference** in **emotion/personality** as a factor in **divorce**. *Young adults* with happy relationships share power. They keep the demons of criticism, contempt, defensiveness, and stonewalling at bay. The birth of a first baby requires extra work in household and child-care roles. Happy marriages have a significant effect on good **health**.
33. **The Nature and Uses of Dreaming**, Ernest Hartmann, *USA Today Magazine (Society for the Advancement of Education)*, March 1999. **183**
Young adults' dreams are a window of their **emotional** state and can lead to useful self-knowledge, according to Ernest Hartmann. **Stressful** events bring dreams of fear, helplessness, guilt, and/or grief. Dreams make connections broadly, but not randomly, in a pictorial **language**. Reading dream language has **creative** as well as therapeutic uses.

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A. MIDDLE ADULTHOOD

34. **Memory**, Geoffrey Cowley and Anne Underwood, *Newsweek*, June 15, 1998. **188**
Forgetfulness is America's latest **health** obsession. What changes in **cognition** can be wrought with **nutrition**, **stress management**, and exercise? Books and seminars on memory retention sell quickly to **middle-aged adults**. This article discusses many antidotes for forgetfulness.
35. **The Age of Anxiety**, Donna Foote and Sam Seibert, *Newsweek*, Special Issue, Spring/Summer 1999. **193**
Middle-aged adults have many **stress**-related ailments. However, **gender differences** exist: women have more **depression** and **nutrition** disorders; men have more **aggression** and **drug**-related disorders. The **physical status** of men's and women's brains differs at midlife. Women have much less serotonin (a neurotransmitter) while men have less limbic system reactions to stress. Sex hormones are not the only cause of differences between the sexes.



Development during Middle and Late Adulthood

Eight selections review a variety of biological and psychological aspects of aging, questioning the concept of set life stages.

- 36. Understanding Perimenopause**, Sharon Begley, **196**
Newsweek, Special Issue, Spring 1999.
 Women undergo a few years of perimenopause in **middle adulthood**. It can masquerade as **physical status decline** or **depression**, but it is neither. It can be treated. This article explains the symptoms and the different therapies used for different women. It is not imaginary: It does not begin when menstrual periods end, and each woman experiences it uniquely.

B. LATE ADULTHOOD

- 37. The Johns Hopkins Prescription for Longevity**, *The Johns Hopkins Medical Letter Health after 50*, December 1998. **200**

Late adulthood can be a **healthy time** of life. This article reviews lifestyle factors that can make it salubrious. Exercise is the single most recommended anti-aging measure. Other lifestyle choices should include good **nutrition**, avoiding sun exposure, drinking water, reducing **stress**, challenging the mind, and cultivating friendships.

- 38. New Nerve Cells for the Adult Brain**, Gerd Kempermann and Fred H. Gage, *Scientific American*, May 1999. **203**

Until recently it was accepted as truth that neurons could not undergo mitosis after birth. Scientists have discovered that neurons in the hippocampus can regenerate. Stem cells in other brain locations may also have this potentiality. If so, many neurological diseases of **late adulthood** may be cured. This article reviews the current knowledge about this startling discovery.

- 39. The Age Boom**, Jack Rosenthal, *New York Times Magazine*, March 9, 1997. **209**

The institutions that are most important for **older adults** are the same as those for others: **family, school, work**. The author discusses raising grandchildren, going back to college after 50, and continuing to work after retirement as phenomena of the **culture** of late adulthood today.

- 40. Emotion in the Second Half of Life**, Laura L. Carstensen and Susan Turk Charles, *Current Directions in Psychological Science*, October 1998. **213**

The authors propose that **late adulthood** is marked by improvement in **emotional regulation**, and that decline sets in only at the very end of life. Social networks grow smaller but social contacts and partners become more significant. Poignancy reigns. Many old people say their lives have never been better. Negative emotions are reduced while positive emotions are maintained.

- 41. The Centenarians Are Coming!!** Cynthia G. Wagner, *The Futurist*, May 1999. **218**

Jeanne Calment lived to be 122 and broke the documented human longevity record. However, **late adulthood** now has many centenarians. This article analyzes the trend toward longevity. **Occupational choices** of the future will reflect both longer careers, as well as careers servicing the old-old (home care, prosthetics, etc.). Planning tips and resources for longer living are included.

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