

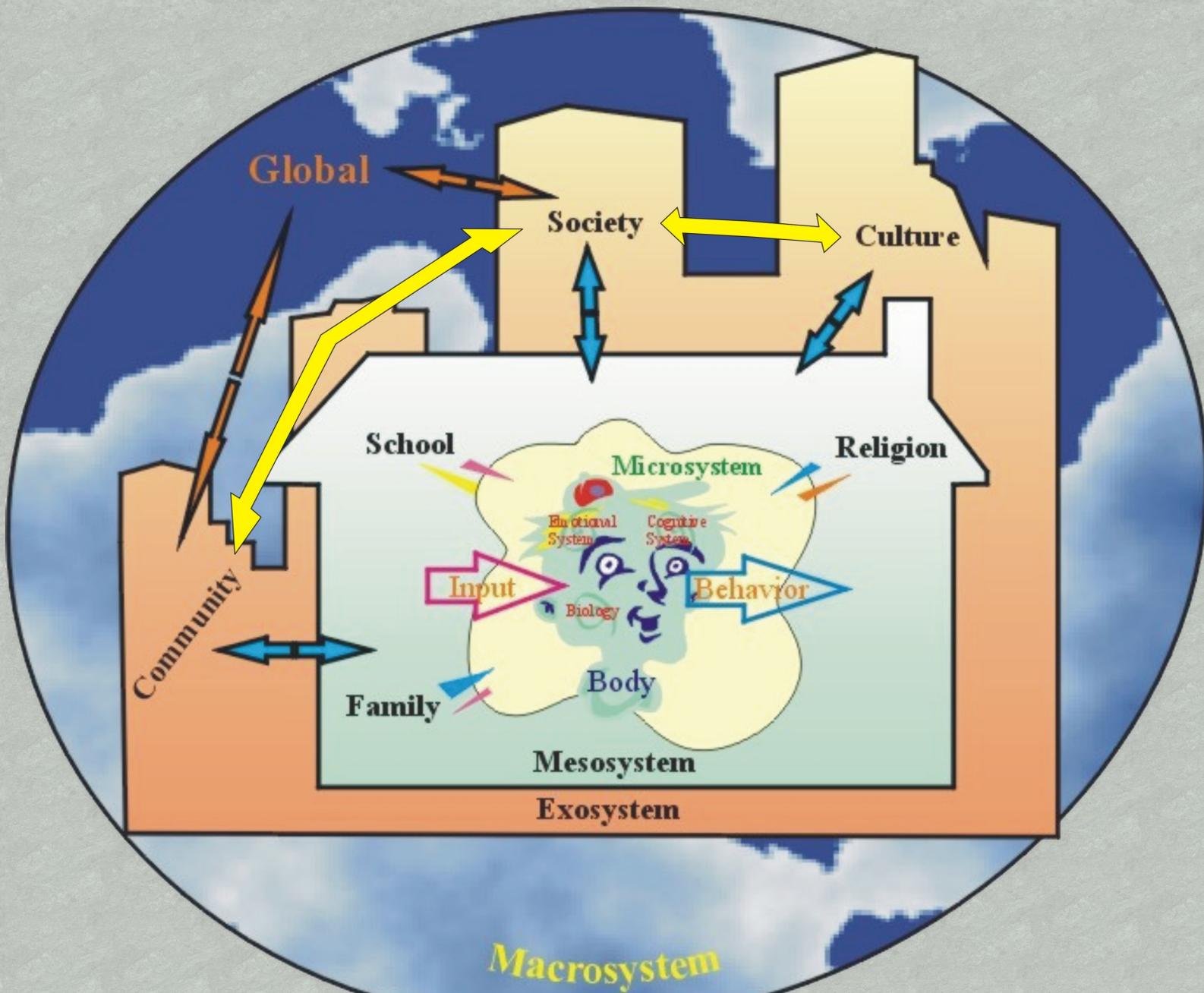
Bronfenbrenner's Ecological Systems Theory

Dede Paquette - John Ryan

Ecological systems theory:

This theory looks at a child's development within the context of the system of relationships that form his or her environment. Bronfenbrenner's theory defines complex "layers" of environment, each having an effect on a child's development. This theory has recently been renamed "bioecological systems theory" to emphasize that a child's own biology is a primary environment fueling her development. The interaction between factors in the child's maturing biology, his immediate family/community environment, and the societal landscape fuels and steers his development. Changes or conflict in any one layer will ripple throughout other layers. To study a child's development then, we must look not only at the child and her immediate environment, but also at the interaction of the larger environment as well.

The various terms in this graphic are links that lead to pages explaining their implications in this theory.



Bronfenbrenner's structure of environment:

The microsystem – this is the layer closest to the child and contains the structures with which the child has direct contact. The microsystem encompasses the relationships and interactions a child has with her immediate surroundings (Berk, 2000). Structures in the microsystem include family, school, neighborhood, or childcare environments. At this level, relationships have impact in two directions - both away from the child and toward the child. For example, a child's parents may affect his beliefs and behavior; however, the child also affects the behavior and beliefs of the parent. Bronfenbrenner calls these bi-directional influences, and he shows how they occur among all levels of environment. The interaction of structures within a layer and interactions of structures between layers is key to this theory. At the microsystem level, bi-directional influences are strongest and have the greatest impact on the child. However, interactions at outer levels can still impact the inner structures.

The mesosystem – this layer provides the connection between the structures of the child's microsystem (Berk, 2000). Examples: the connection between the child's teacher and his parents, between his church and his neighborhood, etc.

The exosystem – this layer defines the larger social system in which the child does not function directly. The structures in this layer impact the child's development by interacting with some structure in her microsystem (Berk, 2000). Parent workplace schedules or community-based family resources are examples. The child may not be directly involved at this level, but he does feel the positive or negative force involved with the interaction with his own system.

The macrosystem – this layer may be considered the outermost layer in the child's environment. While not being a specific framework, this layer is comprised of cultural values, customs, and laws (Berk, 2000). The effects of larger principles defined by the macrosystem have a cascading influence throughout the interactions of all other layers. For example, if it is the belief of the culture that parents should be solely responsible for raising their children, that culture is less likely to provide resources to help parents. This, in turn, affects the structures in which the parents function. The parents' ability or inability to carry out that responsibility toward their child within the context of the child's microsystem is likewise affected.

The chronosystem – this system encompasses the dimension of time as it relates to a child's environments. Elements within this system can be either external, such as the timing of a parent's death, or internal, such as the physiological changes that occur with the aging of a child. As children get older, they may react differently to environmental changes and may be more able to determine more how that change will influence them.

Nature vs. Nurture?

More modern child development theories accept that both a child's biology and his environment play a role in change and growth. Theories now focus on the role played by each and the extent to which they interact in ongoing

development. Bronfenbrenner's ecological systems theory focuses on the quality and context of the child's environment. He states that as a child develops, the interaction within these environments becomes more complex. This complexity can arise as the child's physical and cognitive structures grow and mature. So, given that nature continues on a given path, how does the world that surrounds the child help or hinder continued development? This is the question answered by Bronfenbrenner's theory.

Urie Bronfenbrenner, co-founder of Head Start, uses his bioecological model to provide a startlingly clear view of the problems we have been seeing in our students and in our families. He says that technology has changed our society, and while we are taking great pains to safeguard the physical environment from the damage done by a technology, we have spent no resources to provide similar safeguards to the damage done to our societal environment. (Henderson, 1995). Our economy has shifted from an industrial model to a technological model, yet the patterns of the workplace have continued to rely on the factory work ethic. Parents are expected to work a schedule that revolves around the factory whistle - even though they may work in a high tech office. The technology that enables workers to be free of manual labor, should also free them from the time and place boundary. Yet, our work ethic demands more face time - not less. As women entered the work force, they too were subject to the same demands. Family life in this country has taken a back seat to the needs of the workplace.

Also of concern to Bronfenbrenner is the "deficit" model used to determine the level of support granted by the public to struggling families. Parents must declare themselves deficient in some way in order to qualify for help in solving problems that may come about because of our cultural value of independence. A larger degree of failure means a larger amount of support. By working from this deficit model, we expect families to hold their hands up from deep inside a black hole of helplessness. Then, we expect them to have the psychological strength to climb up the thin rope the throw down.

Implications for practice

Bronfenbrenner sees the instability and unpredictability of family life we've let our economy create as the most destructive force to a child's development (Addison, 1992). Children do not have the constant mutual interaction with important adults that is necessary for development. According to the ecological theory, if the relationships in the immediate microsystem break down, the child will not have the tools to explore other parts of his environment. Children looking for the affirmations that should be present in the child/parent (or child/other important adult) relationship look for attention in inappropriate places. These deficiencies show themselves especially in adolescence as anti-social behavior, lack of self-discipline, and inability to provide self-direction (Addison, 1992).

This theory has dire implications for the practice of teaching. Knowing about the breakdown occurring within children's homes, is it possible for our educational system to make up for these deficiencies? It seems now that it is necessary for schools and teachers to provide stable, long-term relationships. Yet, Bronfenbrenner believes that the primary relationship needs to be with someone who can provide a sense of caring that is meant to last a lifetime. This relationship must be fostered by a person or people within the immediate sphere of the child's influence. Schools and teachers fulfill an important secondary role, but cannot provide the complexity of interaction that can be provided by primary adults. For the educational community to attempt a primary role is to help our society continue its denial of the real issue. The problems students and families face are caused by the conflict between the workplace and family life - not between families and schools. Schools and teachers should work to support the primary relationship and to create an environment that welcomes and nurtures families. We can do this while we work to realize Bronfenbrenner's ideal of the creation of public policy that eases the work/family conflict (Henderson, 1995). It is in the best interest of our entire society to lobby for political and economic policies that support the importance of parent's roles in their children's development. Bronfenbrenner would also agree that we should foster societal attitudes that value work done on behalf of children at all levels: parents, teachers, extended family, mentors, work supervisors, legislators.

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The Body

“Anatomy is destiny”

Sigmund Freud, Collected Writings (1924) vol. 5

In the bioecological systems approach of Bronfenbrenner, the body is part of the microsystem. Its effects on the other parts of the microsystem are probably obvious to most of us. The body is the life support system, the mobility system, and that with which we perceive and interact with the environment.

There are several characteristics of the body that can influence development in different ways. The first and broadest is the general health of the body. A person's health is determined by how effectively the various subsystems in the body function and the influences of environmental factors. The complexity of the human body is well beyond the discussion here; from genes to biochemical reactions on the cellular level, from enzymes to proteins, and from bones to skin, we are an amazing collection of compounds and structures. If all our systems are working together and effectively, we can say we are in good health. Unfortunately this is a rather rare situation.

There are many more disorders of the body than there are of the mind, and some affect both. During the course of growth from infant to adult our bodies are assaulted by countless external threats. We are attacked by almost everything we come in contact with in one way or another. Airborne pathogens are drawn into our lungs, sunlight breaks down our skin cells and causes melanoma, and the thorn of a rose pierces our skin and leaves bacteria inside.

Some of us have genetic disorders that cause malfunctions in our internal systems like cystic fibrosis, Tay-Sachs disease, and osteogenesis imperfecta. Or we develop conditions as a result of lifestyle or environment like mesothelioma from asbestos exposure, alcoholism, or obesity.

Since the body is our life support system, it only makes sense that we try to protect it from harm and keep it in good working order despite the innumerable threats we have to counteract. Modern medical science continues to seek better ways to help us in this battle, but there are some basic things we all need to do in order to keep our bodies in the healthiest condition we can. In the broadest categories of health maintenance are; nutrition, exercise, and prevention.

Good nutrition provides the body with the fuel it needs to feed the living cells in all our subsystems, replace damaged cells, and grow new cells. The proper combinations of vitamins, proteins, enzymes, minerals, and other substances are needed on a continuing basis to keep the body healthy. Lack of needed components causes a variety of disorders as does over supply.

Exercise is necessary to maintain full use of the heart and lungs as well as assisting the structural components of the body in maintaining their strength and flexibility. Again, as with nutrition, there can be too much of a good thing, resulting in physical damage such as broken bones or torn ligaments. We need to know our limits and avoid dangerous situations.

Avoidance is one of the ways we prevent damaging ourselves. We learn at some point in our development that we cannot fly, and so we avoid jumping off buildings. Other forms of prevention we practice are inoculations against diseases, periodic medical exams, and the use of safety devices like seatbelts. All of these are designed to keep our bodies from harm.

The educational impact of all this involves the ability of our body to aid us in our quest for knowledge. Every one of the above dangers, disorders, or diseases can have an impact on the development of the child and that child's ability to learn. Poor nutrition can contribute to learning problems, so can a broken leg. Other physiological conditions, quite normal ones, can also have an impact on learning. Hormone changes in adolescence are notorious for causing disruptions in the learning process. In short, anything that happens to the body affects the mind and it's ability to process data.

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Brain & Biology

“I am a Bear of Very Little Brain, and long words Bother me.”

Winnie-the-Pooh, A.A. Milne (1926)

The biology of the brain is certainly one of the most important systems in a developing child. The health of the child’s brain will have a great impact on the rate and quality of development in all areas. Since all senses and motor functions are centralized here, virtually any activity must begin with the brain. Damage due to disease or injury can impair activity and cause a variety of developmental difficulties. There are numerous causes for brain injury, and they can strike at any time in the developmental process up to and including adulthood. In addition to trauma, disease is a major contributor to brain injuries. Millions of dollars are spent annually on research to find a way to stop the progression of Alzheimer’s disease, a pathology nearly exclusive to the elderly. Other diseases affect all age groups. Encephalitis, meningitis, Creutzfeldt-Jakob, and others are caused by external pathogens that can be acquired by any individual through the process of a normal life. The causes of many other conditions that affect the brain are genetic. Parkinson’s, Huntington’s, and Down’s are just a few of the more than 1000 genetic based brain disorders that have been identified. Other causes are environmental or are related to prenatal care issues such as fetal alcohol syndrome, a major cause of mental retardation. A fairly comprehensive source of information on neurological matters is the National Institute of Health site, <http://www.sfn.org/BAW/resources/what.is.neuro.html>.

In addition to the physiological causes of brain related issues, there are psychological and pharmacological factors that can affect a developing child in many ways. Depression and substance abuse are two of the largest problems faced by adolescents; both can have serious affects on learning and behavior. According to NIH statistics, in the United States alone, 9 million children and adolescents have some form of mental, behavioral, or emotional disorder and only 1/3 are receiving any treatment.

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2001 Brain Awareness Week

March 12-18, 2001

These statistics are taken from updates from Public Information departments at the National Institutes of Health and Research!America. For more information, please visit the NIH Web site, <http://www.nih.gov/> or contact Research!America at 703-739-2372.

What is Neuroscience?

Neuroscience is the study of the brain and nervous system. Each day, neuroscientists are unraveling the mysteries of the human brain, answering questions such as: What is the mind? Why do we feel emotions? How do we learn, remember, and process information? What are the underlying causes of neurological and psychiatric disorders?

Neuroscientists investigate the molecular and cellular levels of the nervous system; the systems within the brain, such as vision and hearing; and behavior produced by the brain. This research provides the basis for understanding the medical fields concerned with treating nervous system disorders. These medical specialties include neurology, neurosurgery, psychiatry and ophthalmology.



Neuroscientists have made enormous strides in understanding our most mystifying organ and treating disorders of the brain and nervous system that affect an estimated 50 million Americans each year. Stroke, spinal cord injury, chronic pain, learning disabilities, depression - these are but a few of the areas being addressed by neuroscientists.

Neuroscience research priorities include the following:

- Basic research in neurochemistry, neurogenetics, neuropathology, and other fundamental neurosciences, to identify the secrets of the brain and nervous system that will open the door to new clinical opportunities.
- Applied research to understand the brain's control of behavior, mood and innate creativity, and clinical trials to develop and bring to the market effective therapeutics for the treatment of neurological diseases, including research on the availability, access, use, and costs of mental health care and further development of promising model programs and treatments.

- Research efforts in the genetic basis of neurological disorders to address the increasing evidence of the genetic basis for many diseases.
 - Mechanisms of repair to identify how the brain restores itself after being damaged and to further explore the fundamental neurobiology of the normal nervous system.
 - Training of research scientists and clinicians in the field of neuroscience, to develop the basis for tomorrow's research.
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Statistics Regarding Neurological Diseases And Disorders

- 50 million Americans have a permanent, neurological disability that limits their daily activities.
- 1 in 3 Americans will experience some form of mental disorder at some point in their lives, and more people are hospitalized with neuropsychiatric disorders than any other disease.
- 18 million Americans suffer from depression. Disability from depression exceeds that of diabetes, hypertension, gastrointestinal, and lung diseases, and costs \$43.7 billion annually.
- More than 1 in 20 Americans have developmental disorders of the nervous system, such as cerebral palsy, spina bifida, mental retardation, and learning disorders. Health care associated with these disorders costs \$30 billion annually.
- 9 million children and adolescents in the U.S. are affected by a mental, behavioral, or developmental disorder; only one third of them get treatment.
- 4 million older Americans suffer from Alzheimer's Disease at a cost of \$100 billion each year, primarily from nursing home and other costs of long term care.
- 3 million incidences of stroke are reported each year at a cost of \$30 billion. 1,200 Americans are new stroke victims every day; 1/3 of these die and 1/3 are permanently disabled.
- 3 million Americans are affected by panic disorders during their lifetimes. The suicide rate for these individuals is 20 times that of the general population.
- 2 million Americans suffer from schizophrenia, the most chronic and disabling of mental illnesses. The cost for treatment is \$32.5 billion annually. Approximately 300,000 new cases are diagnosed every year.
- 1 million Americans suffer from genetic disorders resulting in brain and nerve damage. More than 1000 of these genetic disorders have been identified, many of which result in disability or death.
- 1 million cases of traumatic head injury are reported each year, resulting in 100,000 deaths and health

costs of \$25 billion.

- 500,000 Americans suffer from Parkinson's Disease incurring health costs of \$6 billion annually.
- 250,000 cases of traumatic spinal cord injury are reported each year at a cost of \$10 billion annually.
- 40,000 Americans are stricken with brain tumors each year, resulting in paralysis or death.
- 25,000 Americans are afflicted with Huntington's Disease and another 125,000 are at risk.
- 2 million people suffer from nerve and muscle disorders, such as Lou Gehrig's Disease and nerve damage associated with diabetes.
- Each year, addiction to tobacco and illicit drugs kills more than 400,000 people. An understanding of the underlying neurobiological causes of addiction is leading to more effective treatments.
- 14 million adult Americans meet the diagnostic criteria for alcohol abuse and alcoholism. Costs associated with these disorders are \$98.6 billion annually.
- Fetal alcohol syndrome (FAS) is the leading known preventable cause of mental retardation. FAS costs are estimated at \$2 billion per year in the United States.
- The retina of the eye is also part of the brain; for researchers, it is the most accessible part of the brain. Retinal tissue is full of nerve cells essential for vision.
- By the year 2030, an estimated 6.3 million Americans will have some form of macular degeneration, a disease that destroys the center of the retina and has no effective treatment in most cases. Blindness or vision loss are the result.
- More than 100,000 Americans have retinitis pigmentosa, a disease that destroys specific nerve cells in the retina. Most people with retinitis pigmentosa are blind by the age of 40.

Economic Burden of Brain Diseases and Disorders

- Brain-related diseases and injuries are estimated to exceed over half a trillion dollars a year in health care, lost productivity and other economic costs.
- Brain-related disorders account for the majority of our nation's long term care costs, and , when combined with psychiatric disorders, account for more hospitalization and prolonged care than almost all other diseases combined.
- Federal disability payments attributed to severe mental illnesses amount to \$14 billion annually, 25 percent of total payments.

- Eye diseases and vision disorders are costly. Each year, society pays \$38.4 billion in direct and indirect costs.
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Potential Savings From Brain Research

- A five year delay in the onset of Alzheimer's Disease could cut health care spending by as much as \$50 billion annually.
 - A five year delay in the onset of stroke could save \$15 billion annually.
 - A five year delay in the onset of Parkinson's Disease could save as much as \$3 billion each year in health care costs.
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Economic Benefits Of Biomedical Research

- NIH research helps support skilled jobs both in NIH-supported laboratories and in the many US companies that provide materials and instruments used in research.
 - Successes in the biotechnology and pharmaceutical industries are directly related to NIH support of clinical and especially laboratory research. In 1994, the 1,311 US biotechnology firms employed 103,000 people and generated \$11.2 billion in revenues.
 - The top 15 US pharmaceutical industries employ more than 350,000 people and earn profits of \$13.3 billion on sales of \$84.8 billion.
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Recent Discoveries/Opportunities in Brain Research

- **Gene therapy may lead to treatment for Alzheimer's** - Based on a study involving primates, scientists may soon be able to employ genetic engineering to treat such devastating human diseases as Alzheimer's and Parkinson's disease. Studies reveal that a substance called human nerve growth factor, a naturally occurring protein, has beneficial effects on brain cells. When genetically engineered growth factor-producing cells were injected into the brains of monkeys, deterioration was reversed in up to 92 percent of diseased brain cells.
- **Nerve cell grafts may repair spinal cord injury** - NIH-funded scientists recently discovered a group of proteins named netrins that act as long-range guidance signals for sprouting nerve cells during development. Information about how netrins work to guide new nerve cell projections may lead to

treatments for regenerating nerves after injury and refined methods of nerve grafting and transplantation.

- **Parkinson's advance** - Studies of a procedure called pallidotomy, which destroys overactive neurons in a brain region called the globus pallidus, show that many patients improve significantly following treatment. One new study shows a marked reduction in rigidity and paralysis, improved motor responses to Parkinson's drugs, and disappearance of uncontrolled movements following pallidotomy. The procedure is now being tested in an NIH sponsored clinical study that should determine which patients are best suited for surgery and how long the benefits of pallidotomy will last.
- **Protein yields clues to Huntington's disease** - New studies reveal a protein that binds to abnormal molecules and may lead to the first effective treatment for Huntington's disease. HAP-1 is the first molecule shown to bind to huntingtin, the protein that is damaged in Huntington's disease. While huntingtin is found in many regions of the body, HAP-1 is found only in brain cells affected by the disease. This suggests that it causes the brain damage seen in Huntington's disease and that agents that block it from working may be able to prevent this disorder.
- **Emergency treatment for stroke** - Extensive NIH-supported laboratory research on the mechanism of blood clotting contributed to the development of clot-dissolving drugs such as t-PA. This research and its applications already have important implications for stroke. With the brain starved of oxygen and other nutrients, damage follows quickly and often with devastating effect. Researchers now have shown that the clot-dissolving drug t-PA is an effective emergency treatment for strokes when given within 3 hours of initial symptoms.
- **Genes protect against stroke damage** - Researchers have also identified several genes that protect nerve cells against death when they are exposed to stress caused by factors such as stroke. Scientists hope to find ways to manipulate these genes to improve nerve cell survival in stroke and degenerative neurological diseases.
- **Synaptic proteins yield clues into muscular dystrophy** - Scientists studying how synapses form between nerve and muscle cells have identified a protein called agrin that is secreted by nerve cells and causes clustering of important molecules in the muscle cell. Receptors, or protein docking sites, for agrin are closely related to a molecule called dystroglycan that is linked to several forms of muscular dystrophy. Understanding how agrin and dystroglycan work could help scientists understand why muscle cells die in muscular dystrophy and lead to new treatments for the disease.
- **Altered breathing linked to "crib death"** - Researchers have found clues to the early signs of sudden infant death syndrome (SIDS), which may lead to ways of screening infants for risk of SIDS. In these babies, many show altered breathing patterns as early as the first week of life.
- **Deciphering the schizophrenic brain** - Using a brain imaging technique called positron emission tomography, or PET, scientists have shown that patients with schizophrenia use as much of their brain to perform a very simple sound discrimination task as normal people do when performing a demanding task. The abnormal mental strategies could result from factors such as abnormal brain wiring. Understanding why they occur will lead to an improved understanding of the disease.

- **Genetic error linked to mental retardation** - Recent studies reveal that mutations, or errors, in a gene called L1 cause severe malformations in human brain development that can lead to mental retardation and other abnormalities. Studies of L1's function in the brain may reveal ways of mimicking its protein product in a way that will help individuals suffering from these syndromes. Other research has shown that alcohol, even at moderate amounts, impairs the function of the L1 protein. This mechanism may explain the severe mental impairment seen in fetal alcohol syndrome and other alcohol-related birth defects.
- **The brain and blood pressure** - Recent studies show that three of eight tiny brain organs called circumventricular organs sense blood-borne hormones and signal the brain to change body functions to maintain normal balances of body fluids and blood pressure. Destruction of these organs, or their connections to the brain, prevents development of hypertension in animal models. They also are thought to underlie development of high blood pressure and congestive heart failure.
- **Drug improves learning in elderly** - A drug now used for brain injuries has been found to dramatically improve learning in the elderly. Scientists believe it could one day be used to counteract the mental decline that accompanies normal aging. It also shows potential for alleviating certain symptoms of Alzheimer's disease and may help to minimize brain damage caused by stroke or injury.
- **Men's and women's brains work differently** - A recent study found activation of different brain regions when males and females performed several tasks involved in reading. In light of a 20 percent rate of reading disabilities spread equally among boys and girls upon entry to school, the research is especially significant because it may help explain why females are better able to compensate for reading difficulties.
- **New treatment helps dyslexics learn language** - Computer-generated speech that slows and enhances specific sounds in language can help children with one type of dyslexia advance as much as two years in their language comprehension skills with just one month of training. Researchers believe the training induces permanent changes in the ability to understand spoken and written language. Similar strategies may be effective for other forms of dyslexia and reading disabilities.
- **Children learn native languages in infancy** - Recent studies show that infants begin to differentiate between sound in their native language as early as the fourth month of life. The findings may help explain why some infants who have recurring ear infections later have difficulties manipulating language. The studies also suggest that the exaggerated language, or "motherese," that parents use to speak to infants help them learn their native language.
- **Serotonin shortage provokes aggression** - Researchers have found that low levels of the brain chemical serotonin lead to increased aggressiveness in healthy men. Similar research found that low levels of serotonin led to increased autistic behavior such as rocking and hitting themselves. These findings have prompted clinical trials of a drug that increases serotonin levels to treat autism. They may lead to new treatments for other potentially violent individuals.



- **New treatment approved for alcoholism** - A product of neuroscience research, Naltrexone is the first new medication in 45 years approved for the treatment of alcoholism.
- **Multiple sclerosis treatments** - Two forms of the immunosuppressant drug beta interferon have now been approved for the treatment of relapsing/remitting multiple sclerosis. Beta interferon may actually slow the progression to physical disability and reduce the number of exacerbations. When attacks do occur, they tend to be less severe and shorter in duration. MRI scans, used to chart the course of the disease, indicate that beta interferon lessens the destruction of myelin, the fatty substance surrounding nerves that is damaged in multiple sclerosis.
- **Common drug linked to lowered incidence of cerebral palsy** - Treating mothers with an inexpensive and relatively safe drug called magnesium sulfate shortly before they give birth has been linked to a reduced incidence of cerebral palsy (CP) in very low birthweight babies. Low birthweight babies have an increased risk of CP, a movement disorder which causes lifelong disability and suffering for thousands of Americans. An NIH study compared a group of very low birthweight children with moderate or severe CP to a control group of very low birthweight children without the disability. Many more mothers of children in the control group received magnesium sulfate during their pregnancy, suggesting that use of the drug might significantly decrease the incidence of CP.
- **Researchers have identified the genes involved in some retinal diseases** - Understanding the mechanisms underlying these diseases may help scientists develop effective treatments, and may provide insight into other disorders that cause nerves throughout the nervous system to degenerate.
- **During strokes, parts of the brain don't get enough oxygen, resulting in disabilities for the victim** - Recent studies of the retina show that lack of oxygen triggers a series of events that are toxic to nerve cells. These studies may provide insights into how to protect brain cells from damage caused by strokes.
- **Studies on how to promote regrowth of damaged nerve cells** - Scientists are conducting studies on how to promote regrowth of damaged nerve cells in the visual system, and how to prevent degeneration of healthy ones. These studies have applications to other areas of the nervous system as well.
- **The visual centers of the brain are the most widely studied parts of the central nervous system** - Scientists have mapped the visual centers, and have identified their functions. By manipulating these areas, researchers have gained a better understanding of critical periods in nerve development.
- **New studies regarding optic neuritis** - Multiple sclerosis is a crippling disease of the central nervous system. More than half of the people who develop optic neuritis, an inflammation of the optic nerve, go on to develop multiple sclerosis. Researchers have found that oral corticosteroid alone - the standard treatment for optic neuritis - is not effective in treating the eye condition, and may increase the risk of future attacks; however, researchers also have found that combined oral and intravenous doses reduce the risk of developing multiple sclerosis in first-time optic neuritis sufferers.

What Does The American Public Think About Medical Research?

A recent Harris poll conducted for the non-profit organization called Research!America showed that:

- 65 percent of Americans oppose cuts in medical research dollars.
 - 73 percent would pay higher taxes to support more medical research.
 - 61 percent urge Congress to provide tax incentives for private industry to conduct medical research.
 - 60 percent are willing to designate tax refund dollars for medical research.
 - 61 percent would like more information on medical research in the print and broadcast media.
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Funding for The National Institutes Of Health

Our national investment in the NIH during the past 40 years has produced a wealth of opportunities in basic and clinical science that ultimately will alleviate many of the diseases and disorders afflicting millions worldwide. The historical support of the NIH by Congress and both Republican and Democratic administrations has produced a comprehensive network of scientists and technicians at more than 1,700 institutions across the United States.

We are closer than we have ever been to scientific breakthroughs in the understanding of many diseases and disorders which afflict millions of Americans every day. The pace at which these discoveries proceed is directly related to our federal investment in biomedical research. If we falter in our commitment to basic medical research, numerous opportunities for understanding the basic mechanisms of disease, and the eventual treatments and cures derived from this knowledge will be delayed.

Our continued world leadership in the pharmaceutical, biotech, and health care delivery industries, and the economic benefits from these enterprises are directly affected by our continued strong federal commitment to biomedical research.

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Emotional System

"I have said that poetry is the spontaneous overflow of powerful feelings: it takes its origin from emotion recollected in tranquility"

William Wordsworth, Lyrical Ballads (1800), preface.

Emotions are a very complex area of psychological study and there are many theories concerning what causes them, why we have them (or don't), and how they develop. One theorist, Plutchik(1980), believes that emotions are the result of evolutionary processes and are therefore present in animals as well as humans. His theory is that they have an adaptive function related to survival. His list of basic emotions is; acceptance, anger, anticipation, disgust, joy, fear, sadness, and surprise. These can be seen to be sets of opposites and are the components that more complex emotions are made from. Gardner (1999) states that emotional processing or coding is important to memory function. The memories that are associated with strong emotions are often the ones that we can most easily recall.

Bronfenbrenner's microsystem is the first domain of emotions, those that are found within the family are central to a child's development. As the child matures the range of emotion grows to include the influences of the expanding environment. Here, culture and other external forces can influence the development of emotions such as fear of strangers, shame, and romantic love.

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The Cognitive System

“I think, therefore I am.”

Rene Descartes, Les Discours de la Methode, IV

or

“If my mental processes are determined wholly by the motions of atoms in my brain, I have no reason for supposing that my beliefs are true. They may be sound chemically, but that does not make them sound logically. And hence I have no reason for supposing my brain is composed of atoms.”

J.B.S. Haldane, Possible Worlds (1927)

The cognitive system, together with the emotional and biological, forms the core of our being. Beginning in the womb, we gather knowledge from our sensory faculties, we recognize, we feel, we collect data. The brain processes this data into a representation of the world we exist in and our own existence.

Mankind has struggled throughout his history to understand his environment. Initially this quest was driven by the need for survival. As man evolved into a more complex social creature the quest broadened to include ways to control the environment and to understand himself. Philosophers have struggled from the beginning to define human existence and understand the human mind in all its complexity.

Through the works of men like Piaget, Erikson, and Gardner we have models for the ways in which our cognitive faculties develop. They seem to develop in stages, as Piaget and Erikson postulate, the nested environments Bronfenbrenner speaks of can be seen as the physical structure related to these stages. Using the Piagetian terms, when the infant is in the sensorimotor stage it's whole world is the microsystem and the most immediate part of the mesosystem. The preoperational stage includes more of the mesosystem as language develops. School and community begin to be more direct

influences as the child enters the concrete operational stage. Finally in the formal operational stage higher cognitive abilities reach out farther into the exosystem and even the macrosystem.

Gardner provides us a model, in his multiple intelligence theory, that explains that different people handle knowledge and information in different ways. Within the bioecological systems of Bronfenbrenner, we can view these multiple intelligences as cognitive subsystems, the atoms that make up the molecule of the mind. If each type of intelligence creates it's own interpretation of the events that make up the stimuli we receive, then the aggregate understanding is influenced by the filtering effect of these intelligences.

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The Behavioral System

“A talent is formed in stillness, a character in the world’s torrent.”

Johann W. von Goethe, Torquato Tasso, act I, sc. 2

Since we have no direct method of observing a person’s mind in action, we observe the behavior of the person. Many researchers have noted the correlation between environmental elements and behaviors. We can observe the response of an individual to a stimulus and we can see the individual learn from this incident and the repetition of similar incidents. This is called classical conditioning. On the graphic this is illustrated by an input which represents the external stimulus, and an output, which is the resulting behavior. The behavior is associated with the environmental event, and when a similar event occurs the response is recalled and replayed. In the bio-ecological system, it is the richness of the environment in the microsystem that is important to the development of the child. The mother-child, father-child, and father-mother pairs (or dyads per Bronfenbrenner), being the basis of the early microsystem, can be seen as being most influential at that stage. These two person systems are very bi-directional in nature; both parties develop together (Bronfenbrenner, 1979). Much of a child’s behavior is learned in the microsystem, though as the child ages, the other, more distant, systems will have increasing influence. Internal systems also have an effect on behavior. The emotional system and the biology of the child are two internal forces that can have significant influence on behavior. Any parent can verify that illness modifies (at least temporarily) a child’s behavior. Protracted illness or a physiological abnormality can be underlying causes for more lasting behavioral issues. Similar behavioral variations can come from emotional causes such as stress, depression, and grief. As the cognitive system develops, it can have an offsetting influence versus emotional and even biological factors. The more mature child will be able to apply social rules and mores to the behavioral influences of emotion and learn to compensate for and even appreciate biological differences as the cognitive system develops.

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FAMILY

“Having one child makes you a parent; having two you are a referee.”

David Frost, Independent, 9/16/89

The family is the closest, most intense, most durable, and influential part of the mesosystem. The influences of the family extend to all aspects of the child’s development; language, nutrition, security, health, and beliefs are all developed through the input and behavior related feedback within the family. The students that come to our schools are largely a product of the family they are a part of. Teachers need to be able to deal with a great variety of family systems in understanding their students. In today’s society the family is less frequently the archetypical combination of stay-at-home mother, working father, and sibling children. Single parent families, generation skipping families, and other non-traditional groupings are more common today than the traditional family. Another common force that has changed the family landscape in our society is divorce. Children of divorced parents often have a split family life, at father’s for the weekend, at mother’s during the week, or any number of other situations. Divorce is an excellent example of the type of interaction between systems that Bronfenbrenner writes about. The divorce arrangement can have a profound effect on the family and the development of the child, but it is often a product of society, decided by a judge, enforced by social services. In turn, the divorced family affects the community and society because by the proliferation of divorce social attitudes change and the social perception of family is modified. The school is also affected by the changes in a divorced family. Where does the report card go and who comes to parent-teacher conferences?

A number of other systems: community, religion, school, society, and cultural forces from within the mesosystem and the exosystem directly affect the family. Society and the culture of both the family and the neighborhood have influence on the child’s perception of the family’s place in the community. The family can affect the community through its needs for services and its contribution as taxpayers and voters. As the lead-in graphic illustrates, these relationships are all bi-directional and interrelated in a complex and ever changing matrix.

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Schools

“Education is what survives when what has been learned has been forgotten.”

B. F. Skinner, New Scientist, May 12, 1964

The relationships a child develops in schools become critical to his or her positive development. Because of the amount of time children spend in school, the relationships fostered there carry real weight. Also, children may for the first time be developing relationships with adults outside their immediate family. These connections help a child develop cognitively and emotionally. Bronfenbrenner highlights the importance of these bi-directional interactions with caring adults in the child’s life. He outlines five propositions that describe how relationships developed at home and at school work together for positive development (cited in Family Service America, 1990).

Proposition 1: The child must have on-going, long-term mutual interaction with an adult (or adults) who have a stake in the development of the child. These interactions should be accompanied by a strong tie to the child that ideally is meant to last a life time. It is important for this attachment to be one of unconditional love and support. This person must believe the child is “the best,” and the child must know that the adult has this belief.

Proposition 2: This strong tie and the pattern of interpersonal interaction it provides will help the child relate to features of his or her mesosystem. The skills and confidence encouraged by the initial relationships will increase the child’s ability to effectively explore and grow from outside activities.

Proposition 3: Attachments and interactions with other adults will help the child progress to more complex relationships with his or her primary adults. The child will gain affirmation from a third party relationship, and will bring those new skills to the primary relationship. Also, these secondary adults will give support to the primary adults, and help the child see the importance of the primary role.

Proposition 4: The relationships between the child and his primary adults will

progress only with repeated two-way interchanges and mutual compromise. Children need these interchanges at home and at school or childcare – parents need these interchanges in their neighborhoods and workplaces.

Proposition 5: The relationships between the child and adults in his or her life require also a public attitude of support and affirmation of the importance of these roles. Public policies must enable time and resources for these relationships to be nurtured, and a culture-wide value must be placed on the people doing this work. This includes the work of parents and teachers, but also the efforts of extended family, friends, co-workers, and neighbors

These five propositions have implications for practice in schools today. Bronfenbrenner sees the instability and unpredictability of modern family life as the most destructive force to a child's development (Addison, 1992). This destructive force may spill over into the school setting. Some children do not have the constant mutual interaction with important adults that is necessary for development. According to the ecological theory, if the relationships in the immediate family break down, the child will not have the tools to explore other parts of his mesosystem. Children looking for the affirmations that should be present in the child/parent (or child/other important adult) relationship look for attention in inappropriate places. These deficiencies show themselves especially in schools as anti-social behavior, lack of self-discipline, and inability to provide self-direction (Addison, 1992).

This theory has dire implications for the practice of teaching. Knowing about the breakdown occurring within children's homes, is it possible for our educational system to make up for these deficiencies? It seems now that it is necessary for schools and teachers to provide support for stable, long-term relationships between students and parents, and also between students and mentors, and students and teachers. Schools and teachers should work to support the primary relationship and to create an environment that welcomes and nurtures families. We can do this while we work to realize Bronfenbrenner's ideal of the creation of public policy that eases the work/family conflict (Henderson, 1995).

Addison, J. T. (1992). Urie Bronfenbrenner. *Human Ecology*, 20(2), 16-20.

Bronfenbrenner, U. (1990). Discovering what families do. In *Rebuilding the Nest: A New Commitment to the American Family*. Family Service America [web site].

< <http://www.montana.edu/www4h/process.html> >

Henderson, Z. P. (1995). Renewing our social fabric. *Human Ecology*, 23(1), 16-19.

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Religion or Spirituality

“We must recall that the Church is always ‘one generation away from extinction.’”

George Carey, Archbishop of Canterbury, Youth A Part: Young People and the Church(1996), forward.

or

“Operationally, God is beginning to resemble not a ruler but the last fading smile of a cosmic Cheshire cat.”

Julian Huxley, Religion without Revelation (1957 ed.)

The role of the church in the lives of people has certainly changed over time. In the middle ages the church was a power as great as most governments, defended by armies of Knights. Today, at least in the United States, the various organized churches are separated from government by the Constitution, but still have a significant impact on many citizens' lives. There are over 4200 different religious organizations listed on the website <http://www.adherents.com/>. Of these, the vast majority of people are affiliated in some way with the most common 22 religious divisions. Interestingly, the 4th most common category is secular/nonreligious, people who express either no religious affiliation or are agnostic or atheist.

The relationship of religion to the developing child is usually seen as a source of moral and ethical values. In most American families, including most immigrants, religion is an integral part of culture. Whether Irish-Catholic or Syrian-Baha'i, a child's religion is usually based on the family's preference or heritage. There is a great variation in intensity of religious belief from family to family. Some have a very casual relation with a church, perhaps only observing major feasts or holidays, and some are very involved and their religion dictates everything from mode of dress to food preparation.

Educational policies sometimes conflict with religion, as in the evolution vs. creation argument. In these cases we see the effects of scientific theory that conflicts with

religious dogma rather than any moral or ethical issues. Few would dispute that the basic concepts of most established religions are similar in the areas of morals and ethics. Once the sectarian details are eliminated the basic virtues of most religions are nearly the same; love, respect, tolerance, and honor. These are certainly the same ideals we wish to instill in students, and a curriculum based on these would reinforce the positive values received from church or family. For more on combining virtue education with secular, see <http://www.virtuesproject.com/>, a site dedicated to the positive moral education of students in today's classrooms.

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Community

**“Though neighboring communities overlook one another and the crowing of cocks and barking of dogs can be heard,
Yet the people there may grow old and die without ever visiting one another.”**

Lao Tzu, 6th Century B.C., The Way of Lao Tzu, verse 80

The involvement of the structures in a child’s mesosystem are meant to provide the adult relationships required for positive development. The bioecological systems theory holds that these bi-directional relationships are the foundation for a child’s cognitive and emotional growth. Structures of the exosystem, such as community, society, and culture, provide the support for these relationships. They provide the values, material resources, and context within which these relationships operate.

Increasingly, however, we have seen a breakdown in the structures of a child’s mesosystem. For example, in 1999, at least 25% of children live with a single parent. That figure rises to 55% for African-American children (Dean, M. & Huitt, W. 1999). Further, 20% of all children in this country live in a household whose annual income falls below the poverty level. This rate is double among African-American and Latino families (Dean, M. & Huitt, W. 1999). Increasing number of hours worked outside the home by both mothers and fathers means that they have less time to spend being involved in their child’s development. With this breakdown occurring on the mesosystemic level, the structures of Bronfenbrenner’s exosystem must be called upon to shore up or provide primary relationships.

Communities provide parents with access to people with similar concerns that can function as resources and emotional support. Communities also provide child care, parent employment, and programs designed to encourage interaction among families. Partnerships between community agencies and business and industry will provide invaluable resources for families. Research by Lewis and Morris (1998)

provided a list of five basic needs for positive development in children: (1) a personal relationship with a caring adult, (2) a safe place to live, (3) a healthy start toward their future, (4) a marketable skill to use after graduation from high school, and (5) an opportunity to contribute to their community. Partnerships within the community can help provide for these needs.

Federal and state-run agencies exist within communities in order to help them provide for families needs. They create a series of referral touch points for families in need of health, financial, or crisis assistance. Following are examples of such agencies:

County Resources

4-H Extension

Office of Human Services

Department on Aging

Office of Parks, Recreation, & Culture

Crisis Intervention Line

Family Services

Women's Shelter

Alcohol & Drug Abuse Services

Family Crisis Center

Family Resource Center

La Causa Family Center

Parent Stress Line

Sexual Assault Treatment Center

The Parenting Network

Health and Legal Resources

Medical Referral Services

Legal Clinics

County Office of Mental Health

Coordination among these agencies, parents, and schools will help provide a safety net for families in crisis – and will provide a solid resource for strengthening all relationships within a child's mesosystem.

Dean, M. and Huitt, W. Neighborhood and community. Web page information

accessed on 06/05/01. <http://chiron.valdosta.edu/whuitt/col/context/neighbor.html>.

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Society

“If a free society cannot help the many who are poor, it cannot save the few who are rich.”

John F. Kennedy, Inaugural Address, Jan. 20, 1961

Much like the other structures of the exosystem, a child’s society is responsible for providing resources that enable structures of the child’s mesosystem to flourish, thus aiding in the child’s positive development. Societal values, legislation, and financial resources provided by our society also create the context in which families function. For example, the length of a typical employees’ workday is governed largely by societal custom. Also, laws governing the rights of families and the treatment of children are created from societal family values. Perhaps the biggest contribution to family welfare made by society, however, is the financial safety net provided by government entitlement programs.

Bronfenbrenner provides an interesting explanation of breakdowns that have occurred at the societal level that have attributed to problems within mesosystemic relationships. He explains that technology has changed our society, and while we are taking great pains to safeguard the physical environment from the damage done by a technology, we have spent no resources to provide similar safeguards to the damage done to our societal environment. (Henderson, 1995). Our economy has shifted from an industrial model to a technological model, yet the patterns of the workplace have continued to rely on the factory work ethic. Parents are expected to work a schedule that revolves around the factory whistle – even though they may work in a high tech office. The technology that enables workers to be free of manual labor, should also free them from the time and place boundary. Yet, our work ethic demands more face time – not less. As women entered the work force, they too were subject to the same demands. Family life in this country has taken a back seat to the needs of the workplace.

Also of concern to Bronfenbrenner is the “deficit” model used to determine the level of support granted by public entitlement programs to struggling families. Parents must declare themselves deficient in some way in order to qualify for help in solving problems that may come about because of our cultural value of independence. A

larger degree of failure means a larger amount of support. By working from this deficit model, we expect families to hold their hands up from deep inside a black hole of helplessness. Then, we expect them to have the psychological strength to climb up the thin rope we throw down.

Bronfenbrenner would agree that it is in the best interest of our entire society to lobby for political and economic policies that support the importance of parent's roles in their children's development. He would also agree that we should foster societal attitudes that value work done on behalf of children at all levels: parents, teachers, extended family, mentors, work supervisors, legislators (Henderson, 1995).

Henderson, Z. P. (1995). Renewing our social fabric. Human Ecology, 23(1), 16-19.

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Culture

“What other culture could have produced someone like Hemmingway and not seen the joke?”

Gore Vidal, Pink Triangle and Yellow Star, (1982)

Children are affected by their culture through the communication of beliefs and customs parents receive from other structures in the mesosystem and exosystem. Our culture dictates beliefs concerning religion, school, family, and community life. Generations pass on cultural values via these structures, and the developing child receives them in turn. For example, one culture in this country has the belief that parents are primarily responsible for their child’s up-bringing. To need help with the task of providing for one’s family is seen by the culture as negative. Because of this belief, our society has passed legislation that provides aid for families based on a deficit model. Another example can be seen in the cultural value of independence. Because of this value, people believe a necessary component of success in our society is individuality or separateness. This belief is responsible for fostering a competitive model in our educational and economic systems, rather than a cooperative one.

Cultural beliefs have real power in affecting all Bronfenbrenner’s systems. These beliefs are deeply held and become a basis for a child’s sense of self (Seifert, 1999). Because of the role culture plays in identity, there is a potential for conflict between cultures represented in this country. We may come together to form one society, yet we maintain different cultures – ethnic, religious, and national. The force of the dominant culture in communicating conflicting messages to families of other cultures can create crises of identity in children (Seifert, 1999). The cultural message of ideological support that is available for families in the dominant culture can be one of cultural disapproval for families of minority cultures.

Seifert, K. (1999). Constructing a psychology of teaching and learning. Boston: Houghton Mifflin Company. 283-316.

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Global Influences in the Macrosystem

“Dust from the African deserts is bringing germs and fungi across the Atlantic...some 25 percent of the microbes were known plant pathogens that affect elm trees or such crops as peaches, cotton and rice.”

By Randolph E. Schmid, Associated Press Writer

Reported by AP 7/1/01

There is no way to ignore the impact that global events have on even local individuals as we enter the twenty-first century. In times past, events across an ocean weren't even known until days or weeks later and their impact on life in the United States was thought to be negligible.

With satellites linking every corner of the planet, global news is a constant in the lives of today's children. Weather satellites show us that a plume of carbon dioxide produced by forest fires in China contributes to the smog in L.A. a few days later. Entire herds of cattle are destroyed to stop the spread of BSE across international borders. We are, in this new century, truly living in a global village.

Global influences on our children are not just limited to ecological and health issues, economic forces are much more reactive to international events than they were in the recent past. Changes in employment opportunities as a result of offshore competition can have a direct effect on a family when the wage earner is “downsized”. Communities can suffer tremendous economic stresses when a local business closes, or relocates to take advantage of lower wage costs in another country. These events can impact school district funding as well as student's families.

What is the impact of a business in a small Wisconsin town expanding by building a new manufacturing facility in Costa Rica instead of locally? The profits that made the expansion possible were earned through the efforts of people in the community; they did their jobs well and the company prospered. Their wages helped local business succeed and local contractors were paid to build them new houses. When the expansion was placed in Costa Rica, the local impact was that there were no

additional jobs added in the community and that the funds used for this expansion were paid to contractors in Costa Rica instead of here. The local tax base saw no increase, there was no added sales tax collected from purchases by the new employees that didn't come. No more new houses were built. The list of direct effects on the community is very long, and this is only one small business in one small town. The other side of the equation is that the town in Costa Rica received an economic boon. We can only speculate that they may have been able to build a new school, or expand a local hospital. Certainly the local builders and the employees of the new facility benefited, and in turn their community was enriched by this transaction. We can see from examining just this one example that the economic shifts we will witness in the coming decades as global trade initiatives proliferate will have social and economic effects on our communities and lives as broad and possibly as overwhelming as the wars of the last century.

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The Virtues Project Inc.

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What is The Virtues Project?

The Virtues Project is an initiative which began in 1991 to empower individuals and families to live by their highest values. It was inspired by the desire to do something to counteract the rising violence in and around families. Education is the key to transformation, but it must involve education which touches the human spirit.

The Virtues Project is an approach which calls people to remembrance of the virtues, the qualities of character and the simple elements of spirituality honored by all cultures and sacred traditions. It has been applied in a wide variety of ways which include: federally funded community development and healing projects in First Nations communities in Canada, programs with urban street children in Los Angeles, an enhancement of the religious life of "virtues congregations" of diverse faiths across the United States, in drug and alcohol rehabilitation programs and prisons in Australia and North America, [to restructure the curriculum and culture of schools](#), to enhance unity in [organizations](#), and as a tool in day-care centres, palliative care programs, [personal development](#), and in parent education programs throughout the world.

OUR VISION

The Vision of The Virtues Project is to serve humanity by having an empowering global impact on the moral and spiritual development of peoples of all cultures, by helping them to remember who they really are and to live by their highest values.

Our Mission

The mission of The Virtues Project is to provide multi-cultural products and programs of excellence and

simplicity which can serve as tools for the cultivation of virtues in individuals, families, organizations and communities.

The [materials and programs](#) of The Virtues Project support the development of character and self-esteem by making the sacred accessible in daily life. The seminal work of The Virtues Project is [The Family Virtues Guide: Simple Ways to Bring Out the Best in Our Children and Ourselves](#). The Virtues Project is not focused on the beliefs or practices of any particular religion but rather on the common thread that runs through all religions -- the virtues. The virtues are the simple elements of spirituality, the universal values found in all cultures and sacred traditions.

Company Profile

The Virtues Project was founded by [Linda Kavelin Popov](#), a psychotherapist, writer, speaker and hospice spiritual care director, [Dr. Dan Popov](#), a pediatric/clinical psychologist and scholar in the Sacred Texts of the world's religions, and [John H. Kavelin](#), a Disney art director and designer, who brought their experience to a project which has quickly encompassed the globe.

Since its inception in 1991, The Virtues Project, Inc. has prepared over a thousand [Facilitators](#) to make use of the [Five Strategies of the Virtues Project](#) in their own lives, organizations and communities. It has presented the same five simple strategies to thousands of others throughout the world for use in their own families and lives.

The Virtues Project, Inc. has worked with corporations as diverse as Hallmark Cards, MacMillan Bloedel Limited, and the Australian Broadcasting Corporation; communities from the First Nations of Canada's north to major metropolitan areas; faith communities of many religions and denominations; and organizations of every sort. Here is what some have had to say about the Virtues Project.

Endorsements -

- "The Virtues Project awakens the spirit in all people." Chief Ann Bayne, Liard First Nation, Canada
- "Never in my 15 years at the Church Council, have we sponsored a program that has generated as enthusiastic a response as The Virtues Project." The Rev. David Bloom, Church Council of Greater Seattle, Washington
- "I have seen so many programs come and go. They're all bandaids. The Virtues Project is penicillin. It's the cure." Lucinda Fess, Mayor of the City of Piqua, Ohio
- "I must tell you that The Virtues Project is the greatest idea to come along for both children and adults in a long time." Janet Luhrs, Publisher, Simple Living Magazine
- "The Virtues Guide is no sanctimonious tome. Its aim is to help pass on some basic values for living together, shared by cultures and faiths around the globe." Seattle Times

- "Now that I see my virtues, I'm ready to change my life." Sixteen year old incarcerated gang member
- "The Virtues Guide is not only useful for guiding children's activities but helpful for inspiring and enlightening the thought of adults. Also I like the vivid language and lively pictures, that will not allow me to feel tired even when I have read the book for a long time." Dr. Wu Xiaohua, Agenda 21, Beijing, China
- "The Virtues Project is a new lense for me to look at my family, my congregation, my community." Reverend Kevan Smith, Emmanuel Lutheran Church, Moses Lake, Washington
- "The Virtues Project can be applied in any life situation. It is brilliant!" Participant at East Anglia Baha'i Family Spring School, United Kingdom
- "The Virtues Project seminar was the most inspiring, affirming, useful...five days of my life." Dr. Joy Carey, Seattle, Washington
- "If you used the virtues every single time forever, there wouldn't be any fights or wars. We would all be caring for one another." Sunday School student, Washington State
- "The Virtues Guide is the most inspiring thing I have come across in fifteen years of teaching school." Nuala Scannell, Early Childhood Education Centre, Tunttable Falls, Australia
- "Many people are now working with The Virtues Guide as a way of life -- as a help to renewing their own spiritual direction, their focal relationships and the vitality of their family systems." Denis Ladbroke, Associate Professor of Social Work, Curtin University, Perth, Australia
- "Thank you for answering my cry in the wilderness for my people." Maria Turner, Maori elder, New Zealand.
- "The Virtues Project has the missing piece -- the spiritual component people have been looking for." Donna Bell, President, Glory of Home Foundation, Utah.
- "Your model program with its many thought provoking ideas hopefully will be adapted elsewhere in the world...It is programs like yours which will promote the strengthening of families, adding to the quality and richness of human life." Dr. Michael Stewart, Director, International Year of the Family Local Government and Corporations Program.

Contact Information

If you would like more information about The Virtues Project, Inc., please feel free to contact us. Thank you for accessing The Virtues Project world wide web site.

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Sales in Canada: Unity Arts - (800) 465-3287 Email: orders@unityarts.com Website: www.unityarts.com/famvirtgd.html

Sales in New Zealand: UCA - (800) 500-885 Email: uca@clear.net.nz Fax: (04) 239 9976

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NEIGHBORHOOD AND COMMUNITY

Authors: M. Dean & W. Huitt

Date: August 1999

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Educating a child takes cooperation and involvement from educators, parents, families, and the community. Everyone has heard the saying "It takes a village to raise a child." Research has shown the greater the family and community involvement in schools, the greater the students' achievement (Niemiec, R., Sikorski, M., & Walberg, 1999).

[Parent involvement](#) is an important influence on a child's school success (LaBahn, 1995), but today we are seeing an increasing number of children raised for some period of their childhood in less than ideal conditions. For example, in the United States at least one-fourth of children live with one parent and among African-Americans this figure increases to more than 55% (Edwards & Young, 1992). At least one in five children in the U.S. lives in a family with an income below poverty level and this rate doubles among African-Americans and Latinos (Edwards & Young, 1992). More and more mothers are working outside the home and that means that many parents cannot be as involved in their child's life as they should be.

The community has always been an important influence on children and youth, but even more assistance from the community is needed in order to ensure students' success in academics as well as in life. According to Lewis and Morris (1998), research has shown that young people need and deserve five basics: a personal one-on-one relationship with a caring adult; a safe place to learn and grow; a healthy start and a healthy future; a marketable skill to use after graduation; and a chance to give back to peers and community (p. 34). With increased burden on families, communities are making a definite impact on children in a number of positive ways and community leaders continue to look for ways to impact schools and improve student achievement.

Adults other than a child's parents are taking on significant child rearing roles (Edwards & Young, 1992). For example, a program established in 1977 called [Communities in Schools](#) (CIS, 1998) aims to provide mentors and volunteers that can support to schools. CIS purpose is to connect needed community resources with schools to help young people learn, stay in school, and prepare for life. Their website provides information about the program and gives ways that communities and schools can come together. This program has reached over 500,000 young people and their families. According to the founder of CIS, the program exists in over 1,700 schools and "surrounds young people with "a community of tutors, mentors, health care providers, and career counselors - caring adults who can

help..." (p.2).

Mentoring programs are one way community members can impact schools ([National Mentory Programs](#), 1999). A mentor is an adult who assumes "quasi-parental roles as advisors and role models for young people to whom they are unrelated" (Hamilton & Hamilton, 1992). The [Big Brothers Big Sisters organization](#) was one of the first mentoring programs designed to provide children with a positive role model. Many school systems are currently starting up mentoring programs with much success. This is a step towards each child having a personal relationship with an adult who they can confide in. Mentoring programs should primarily concentrate on at-risk youths from single parent homes or an environment of poverty (Hamilton & Hamilton). One example of a successful program is found in the Charlotte, North Carolina school system where more than 900 volunteers spend time each week with students as mentors, tutors, and lunch buddies (Lewis & Morris, 1998). Adults who serve as mentors benefit from these programs by making a contribution to work with a single young person. It can give adults a chance to give back to their communities and increase their own sense of self worth (Hamilton & Hamilton). Adults who mentor may also inspire children to give their time to community service. An effective mentor should be committed, accepting, supportive, and a positive role model (Rowley, 1999).

Adults can volunteer their time and resources in ways other than serving as a mentor such as

- one-on-one tutoring,
- small group instruction,
- grading papers,
- career counseling,
- coaching,
- library assistance, and
- fundraising (Niemiec, Sikorski, & Walberg, 1999).

Limited financial resources in many school systems increases the value of volunteers who can assist in a variety of ways.

Businesses are also forming partnerships with schools which benefits both parties involved. Businesses help ensure their future workforce will be well trained and possess skills needed to succeed in the workplace (Overman, 1999). Companies can get involved in school through career talks, career fairs, tours, internships, job shadowing, apprenticeship programs, and curriculum development. The business industry has complained for years that the schools were not teaching the right kinds of skills needed to succeed in the workplace. This gives business and industry the chance to get involved.

Much research has been conducted concerning how community involvement can contribute to achievement. The power of community involvement for improving learning can come from a number of different sources. According to Hatch (1998), "beyond changes in curriculum or improvements in self-esteem, meaningful community involvement sets in motion a chain of events that transforms the culture of the school and often the community that the school serves" (p. 16). Alliances between schools and

communities can be formed in countless ways including issues such as school safety, after school programs, physical improvements, student health, literacy programs, and many other ways (Lewis & Morris, 1998).

How can schools get communities involved? Careful planning is an important component. Questionnaires and needs assessments given to teachers, parents, and community members may provide a starting point for determining where the needs are (Niemic, R. , Sikorski, M., & Walberg, H., 1999). How each school may develop a plan is individual as each school and community has their own individual needs and priorities. Many times community involvement is just a matter of having staff members in the school who are willing to develop the plans and ask for assistance from community members. When educators are unsure how to proceed asking for opinions and assistance from the community can provide new ideas and positive outcomes (McPhee, 1995). McPhee has found that a community forum of open discussion can provide a "diversity of opinions and ideas" (p. 72).

As we enter a new century, schools and communities continue to search for ways to form alliances. Possibilities for alliances between schools and communities are limitless. When communities bond together to assist schools, we see many benefits for schools and communities and most importantly a brighter future for America's youth.

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Logo by Richard Satterfield

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The Assemblies of God (Attorney General John Ashcroft's faith) is now one of [America's Top 10 Largest Denominations](#)

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Gallup releases [latest polling data on U.S. religious affiliation](#), showing 9th straight year of decline in Southern Baptist Convention, other denominations stable

Summary Statistics Pages:

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[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

If the main database includes a total number of adherents in the world, the highest recent number (but not necessarily the most accurate one) is shown in the index.

A

[Aaronic Order](#): 2,000 (4 recs.)

[Abecedarians](#) (2 recs.)

[Abelites](#)

[Abenaki](#)

[Abenaki, Passamaquoddy, and Penobscot](#) (2 recs.)

[Abipon](#)

[Abkhazians](#): 594,500 (5 recs.)

[Aboriginal Evangelical Missions](#)

[Abyssinian Frontiers Mission](#) (2 recs.)

[Acharya's Yoga and Meditation Centre](#): 5,000 (2 recs.)

[Acheh](#) (3 recs.)

[Acholi](#)

[Achomawi](#) (2 recs.)

[Acolapissa and Tangipahoa](#) (2 recs.)

[Acts Full Gospel Church](#)

[Adai](#) (2 recs.)

[Adamites](#)

[Adja](#) (3 recs.)

[Adonis](#)

[Aduma](#)

[Advent Christian Church](#): 28,000 (47 recs.)

[Adventist](#) (18 recs.)

[Aetherius Society](#): 650 (12 recs.)

[Afar](#): 350,000

[affiliated](#) (203 recs.)

[affiliated - black](#)

[affiliated - full communicant](#) (7 recs.)

[Africa Evangelical Church](#) (4 recs.)

[Africa Evangelical Fellowship](#) (11 recs.)

[Africa Inland Church](#) (3 recs.)

[African Baptist Assembly, Malawi](#)

[African indigenous churches](#) (58 recs.)

[African Methodist Episcopal Church](#): 3,500,000 (27 recs.)

[African Methodist Episcopal Zion Church](#): 1,252,369 (66 recs.)

[African Orthodox Church](#) (10 recs.)

[African Orthodox Church of the West](#) (6 recs.)

[African People's Socialist Party](#)

[African Protestant Church](#)

[African Reformed \(NGK-South Africa\)](#)

[African Traditional Religion](#): 80,000,000 (251 recs.)

[African Union First Colored Methodist Protestant Church](#)

[African Universal Church](#)

[African Zion Church](#) (2 recs.)

[Afro-American Army](#)

[Afro-Brazilian religions](#) (6 recs.)

[Afro-Cuban religions](#) (2 recs.)

[Agapemonites](#) (9 recs.)

[Aggressive Christianity Missionary Training Corps](#): 19 (2 recs.)

[Aglipayan Church](#): 4,500,000 (8 recs.)

[Agni](#)

[Agnostic](#) (58 recs.)

[Agon-shu](#)

[Agudat Israel World Organization](#): 500,000

[Agul](#) (2 recs.)

[Ahanta](#)

[Ahirs](#) (3 recs.)

[Ahl-I Haqq](#)

[Ahmadiyya](#): 10,000,000 (27 recs.)

[Ahmadiyya - mosques](#) (10 recs.)

[Ainu](#) (8 recs.)

[Ais](#) (2 recs.)

[Aiyetoro Community](#)

[Aizo](#)

[Ajivikas](#) (5 recs.)

[Aka](#)

[Akan](#) (2 recs.)

[Akposo](#)

[Alacaluf](#) (2 recs.)

[Alamo Christian Foundation](#): 400 (3 recs.)

[Alar](#)

[Alaska Yearly Meeting](#) (2 recs.)

[Alaskan Athabaskans](#)

[Alawi](#): 1,400,000 (7 recs.)

[Albakourat al-Durzeyat](#) (25 recs.)

[Albani-Sinai Orthodox](#): 100,000

[Albanian](#) (5 recs.)

[Albanian Orthodox](#) (6 recs.)

[Albanian Orthodox Archdiocese in America](#) (11 recs.)

[Albanian Orthodox Church in America](#) (2 recs.)

[Albanian Orthodox Diocese of America](#) (7 recs.)

[Albigensianism](#) (2 recs.)

[Aleut](#) (2 recs.)

[Alevi](#) (6 recs.)

[Alexandrian Wicca](#) (3 recs.)

[Algard Wicca](#)

[Algemene Doopsgezinde Societeit](#)

[Algonguin](#)

[Alianza Evangelica Menonita](#)

[All Africa Conference of Churches](#)

[Allegheny Wesleyan Methodist Connection](#): 2,302 (21 recs.)

[Alliklik](#) (2 recs.)

[Alpha and Omega Pentecostal Church of God of America](#)

[Alsacian Churches](#) (2 recs.)

[Alsea](#) (2 recs.)

[Altays](#)

[Alternative Religions](#) (14 recs.)

[Altkolonier Mennonitengemeinde](#) (5 recs.)

[Altkolonier Mennonitengemeinde \(Colonia Manitoba\)](#)

[Altkolonier Mennonitengemeinde \(Colonia Nueva Durango\)](#)

[Altkolonier Mennonitengemeinde \(Colonia Rio Verde\)](#)

[Aluk To Dolo](#) (2 recs.)

[Amahuacas](#)

[Amal](#) (2 recs.)

[Amalgamated Flying Saucers Club](#)

[Amana Church Society](#): 1,200 (10 recs.)

[amaNazaretha](#) (2 recs.)

[Ambo](#)

[Ambonese](#)

[American Association of Atheists](#) (2 recs.)

[American Association of Lutheran Churches](#) (26 recs.)

[American Baptist Association](#): 250,000 (8 recs.)

[American Baptist Churches in the U.S.A.](#): 3,337,400 (74 recs.)

[American Bible Society - volunteers](#)

[American Carpatho-Russian Orthodox Greek Catholic Church](#) (19 recs.)

[American Catholic Church](#) (2 recs.)

[American Catholic Church \(Syro-Antiochean\)](#) (7 recs.)

[American Council of Christian Churches](#)

[American Eastern Orthodox Church](#) (2 recs.)

[American Episcopal Church](#): 13,200 (4 recs.)

[American Ethical Union](#): 4,000 (4 recs.)

[American Evangelical Christian Churches](#)

[American Evangelistic Association](#)

[American Family Association](#)

[American Gospel Band](#)

[American Holy Orthodox Catholic Eastern Church](#)

[American Independent Orthodox Church \(Bridges\)](#)

[American Indian Evangelical Church](#)

[American Lutheran Church](#): 2,300,000 (13 recs.)

[American Lutheran Conference](#)

[American Muslim Mission](#)

[American Muslim Society](#)

[American National Baptist Convention](#)

[American Nazi Party](#) (2 recs.)

[American Orthodox Catholic Church \(Irene\)](#)

[American Orthodox Catholic Church \(Propheta\)](#)

[American Orthodox Catholic Church, Archdiocese of Ohio](#) (6 recs.)

[American Orthodox Catholic Church, Western Rite Mission, Diocese of New York](#) (6 recs.)

[American Orthodox Church](#)

[American Prelature](#): 20,000 (2 recs.)

[American Rescue Workers](#): 2,700 (9 recs.)

[American World Patriarchs](#) (4 recs.)

[Americanism](#) (4 recs.)

[Americans United for Separation of Church and State](#)

[Amhara](#): 12,000,000 (8 recs.)

[Amidism](#) (7 recs.)

[Amish](#): 128,000 (53 recs.)

[Amish - other](#) (6 recs.)

[Amway](#): 14,000

[Ana](#)

[Anaak](#) (3 recs.)

[Anabaptist](#) (5 recs.)

[Ananaikyo](#) (2 recs.)

[Ananda Community](#): 300 (2 recs.)

[Ananda Marga](#): 250,000 (9 recs.)

[Ananites](#)

[ancestor veneration](#) (10 recs.)

[Anchor Bay Evangelistic Association](#)

[Ancient and Accepted Scottish Rite](#): 300,000

[Ancient and Mystical Order of the Rosae Crucis](#): 250,000 (8 recs.)

[Ancient Church of the East](#)

[Ancient Tridentine Catholic Church](#): 360 (6 recs.)

[Andamanese](#) (6 recs.)

[Andes Evangelical Mission](#)

[Andhra Evangelical Lutheran Church](#)

[Andhras](#)

[Angkola and Mandailing](#)

[Anglican](#): 80,000,000 (205 recs.)

[Anglican - active](#): 23,000,000 (3 recs.)

[Anglican - attend at least yearly](#)

[Anglican - confirmed](#)

[Anglican Catholic Church](#): 20,000 (3 recs.)

[Anglican Church of Canada](#) (4 recs.)

[Anglican Church of North America](#)

[Anglican Communion](#): 78,000,000 (10 recs.)

[Anglican Episcopal Church of North America](#): 1,000 (2 recs.)

[Anglican Mission in America](#) (2 recs.)

[Anglican Orthodox Church](#): 300,000 (7 recs.)

[Anglican Rite Jurisdiction of the Americas](#): 15,000 (4 recs.)

[animism](#) (7 recs.)

[Anthroposophical Society](#): 55,000 (6 recs.)

[Anthroposophical Society - full-time](#)

[Anti-cult movement](#) (3 recs.)

[anti-missionary movement](#) (2 recs.)

[anti-Semitism](#) (7 recs.)

[Antigua Barbuda Baptist Association](#)

[Antiochian Orthodox](#) (3 recs.)

[Antiochian Orthodox Christian Archdiocese of North America](#): 300,000 (14 recs.)

[Apa Tanis](#)

[Apache](#) (6 recs.)

[Apalachee](#) (3 recs.)

[Apayao](#)

[Apinaye](#)

[Apostelamt Jesu Christi](#)

[Apostolic](#) (4 recs.)

[Apostolic - historic Apostolic succession](#): 1,369,299,968

[Apostolic - independent](#): 18,000,000

[Apostolic - other](#)

[Apostolic Assemblies of Christ](#)

[Apostolic Catholic Church of the Americas](#)

[Apostolic Christian Church](#) (3 recs.)

[Apostolic Christian Church \(Nazarean\)](#): 3,730 (26 recs.)

[Apostolic Christian Churches of America](#): 16,916 (36 recs.)

[Apostolic Church](#) (10 recs.)

[Apostolic Church \(Australia\)](#)

[Apostolic Church of Christ](#)

[Apostolic Church of Christ in God](#) (2 recs.)

[Apostolic Church of Jesus](#) (8 recs.)

[Apostolic Church of Jesus Christ](#)

[Apostolic Church of Pentecost of Canada](#) (3 recs.)

[Apostolic Church of Queensland](#)

[Apostolic Faith](#) (3 recs.)

[Apostolic Faith \(Hawaii\)](#) (4 recs.)

[Apostolic Faith \(Kansas\)](#): 10,000

[Apostolic Faith Mission](#) (3 recs.)

[Apostolic Faith Mission Church of God](#) (5 recs.)

[Apostolic Faith Mission of Portland, Oregon](#): 54,000 (7 recs.)

[Apostolic Faith Mission of South Africa](#)

[Apostolic Gospel Church of Jesus Christ](#) (8 recs.)

[Apostolic Lutheran Church of America](#) (21 recs.)

[Apostolic Lutheran Churches](#): 12,000,000 (2 recs.)

[Apostolic Lutherans \(Church of the First Born\)](#)

[Apostolic Lutherans \(Evangelicals No. 1\)](#)

[Apostolic Lutherans \(Evangelicals No. 2\)](#)

[Apostolic Lutherans \(Heidmans\)](#)

[Apostolic Lutherans \(New Awakening\)](#)

[Apostolic Methodist Church](#) (2 recs.)

[Apostolic Overcoming Holy Church of God](#): 12,514 (6 recs.)

[Apostolic Spiritual Baptists](#)

[Apostolic United Brethren](#): 8,000 (6 recs.)

[Aquarian](#)

[Aquarian Foundation](#) (2 recs.)

[Aquarian School of Yoga](#)

[Aquarian Spiritualist Centre](#)

[Aquarian Tabernacle Church](#): 530 (3 recs.)

[Ar nDraiocht Fein](#): 400 (3 recs.)

[Arab](#) (30 recs.)

[Arab & Muslim combined](#)

[Arab Liberation Front](#): 800

[Arachne](#)

[Arapaho](#) (5 recs.)

[Arapaho and Atsina](#) (2 recs.)

[Arapesh](#)

[Araucanians](#)

[Arawak](#) (3 recs.)

[Arbeitsgemeinschaft Mennonitischer Brudergemeinden in Deutschland](#)

[Arbeitsgemeinschaft Mennonitischer Gemeinden in Deutschland](#)
[Arbeitsgemeinschaft zur geistlichen Unterstutzung in Mennonitengemeinden](#)
[Arcane School](#)
[Arianism](#) (6 recs.)
[Arica](#)
[Arikara](#) (4 recs.)
[Aristotelian](#) (4 recs.)
[Armenian](#) (6 recs.)
[Armenian Apostolic Church](#): 4,000,000 (39 recs.)
[Armenian Apostolic Church of America](#) (11 recs.)
[Armenian Apostolic Church of America - Eastern Prelacy](#) (13 recs.)
[Armenian Apostolic Orthodox Church of America](#) (2 recs.)
[Armenian Church of America](#) (4 recs.)
[Armenian Church of America, Diocese of the](#) (5 recs.)
[Armenian Evangelical Church](#)
[Armenian Orthodox Church](#)
[Arminianism](#) (3 recs.)
[Armitage Baptist Church](#)
[Arya Samaj](#) (37 recs.)
[Aryan](#) (2 recs.)
[Aryan Brotherhood](#)
[Aryan Nations](#): 500 (4 recs.)
[Aryan Warriors](#)
[Asatru](#) (3 recs.)
[Asbury Bible Churches](#)
[Ashaninka](#)
[Ashanti](#): 1,000,000 (2 recs.)
[Ashkenazi Judaism](#): 9,800,000 (9 recs.)
[Ashurism](#)
[Asmat](#)
[Asociacion Bautista de El Salvador](#)
[Asociacion Convencion Bautista de Costa Rica](#)
[Asociacion Convencion de Iglesias Menonitas de Costa Rica](#)
[Asociacion de Iglesias Hermanos Menonitas de Colombia](#)
[Assam Baptist Convention](#)
[Assassins](#) (11 recs.)
[Assembleias de Deus](#) (3 recs.)
[Assemblies of God](#): 30,000,000 (172 recs.)
[Assemblies of the Lord Jesus Christ](#)

[Assembly of Brothers](#)

[Assiniboine](#) (6 recs.)

[Associacao das Igrejas Menonitas do Brasil](#)

[Associacao dos Irmaos Menonitas de Portugal](#)

[Associacao Evangelica Menonita](#)

[Associate Reformed Presbyterian Church \(General Synod\)](#): 38,763 (25 recs.)

[Associated Brotherhood of Christians](#)

[Associated Churches of Christ](#) (4 recs.)

[Associated Gospel Churches of Canada](#) (13 recs.)

[Association des Eglises Evangeliques Mennonites de France](#)

[Association for Research and Enlightenment](#) (5 recs.)

[Association Mennonite Luxembourgeoise](#)

[Association of Baptist Churches](#)

[Association of Baptist Churches in Israel](#)

[Assyrian](#): 3,300,000 (7 recs.)

[Assyrian Church of the East](#): 300,000 (28 recs.)

[Assyrian Church of the East \(Chaldean-Syrian/Daly\)](#)

[Assyrian Evangelical](#)

[Assyrian Orthodox](#): 170,000 (4 recs.)

[astrology](#) (8 recs.)

[astrology - astrologers](#) (3 recs.)

[astrology - full-time astrologers](#) (3 recs.)

[astrology - part-time astrologers](#) (3 recs.)

[Atakapa](#) (2 recs.)

[Athanasianism](#) (4 recs.)

[Athapaskans](#)

[Atheism](#): 240,310,000 (90 recs.)

[Athiopisch-Orthodoxe Kirche](#)

[Atlantean](#)

[attendance - at least monthly](#) (6 recs.)

[attendance - at least occasionally](#)

[attendance - irregular or not at all](#) (4 recs.)

[attendance - regular](#) (11 recs.)

[attendance - weekly](#) (183 recs.)

[Augsburgian Confession](#) (2 recs.)

[Augustana Evangelical Lutheran Church](#) (5 recs.)

[Auldearne Witches](#)

[Aum Shinrikyo](#): 12,000 (15 recs.)

[Aum Shinrikyo - full-time](#): 1,100 (4 recs.)

[Auroville](#): 900 (5 recs.)

[Australasian Conference of Seventh Day Baptists](#)

[Australian Aboriginal religion](#) (3 recs.)

[Australian Aborigines](#): 265,000 (28 recs.)

[Australian Conference of Evangelical Mennonites](#)

[Australian School of Yoga](#)

[Australian Transmission Meditation Network](#): 4,000 (2 recs.)

[Autocephalous Slavonic Orthodox Catholic Church \(In Exile\)](#) (2 recs.)

[Autocephalous Syro-Chaldean Church of North America](#) (3 recs.)

[Avar](#) (2 recs.)

[Avoyel](#) (2 recs.)

[Aymara](#): 2,520,000 (6 recs.)

[Azali Babis](#) (2 recs.)

[Azande](#) (2 recs.)

[Azerbaijani](#): 40,000,000 (10 recs.)

[Aztec](#) (7 recs.)

40,190 adherent records.

4,335 groups.

Article was created by Dede Paquette and John Ryan as a project during their studies at National-Louis University and used with permission from Dede Paquette.