Research - psychology (1958-2001). 1958/2001

[Madison, Wisconsin]: [s.n.], 1958/2001

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THE UNIVERSITY of WISCONSIN MADISON

UNIVERSITY COMMUNICATIONS
NEWS RELEASES

Jan. 9, 2001

TO: Editors, education reporters
FROM: UW-Madison University Communications, (608) 262-3571

RE: FOCUS ON PHONICS

The education bill signed into law this week by President Bush includes an ambitious federal commitment to teaching reading, with a focus on phonics.

Mark Seidenberg, professor in the Department of Psychology at the University of Wisconsin-Madison, has reviewed literature on the effectiveness of whole language vs. phonics methods and strongly concludes that phonics instruction should be an essential element of reading instruction.

He was one of five experts commissioned by the American Psychological Society to do a monograph assessing what psychological research says about reading and the implications for reading instruction.

Seidenberg also is a co-author of an article on how to teach reading in the upcoming March issue of Scientific American. Seidenberg says the article attempts to synthesize what psychological and linguistic research has to say about how to teach reading. It provides strong scientific support for the emphasis on phonics in the new legislation.

Seidenberg came to UW-Madison from the University of Southern California this past fall. His research addresses issues in reading and the causes of dyslexia, two growing areas of research at UW-Madison.

To contact Seidenberg, call (608) 263-2553 or email: marks@lcnl.wisc.edu.

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University Communications

News Releases

UNIVERSITY OF WISCONSIN MADISON

FOR IMMEDIATE RELEASE
10/8/01

CONTACT: Janet Hyde (608) 262-9522, jshyde@facstaff.wisc.edu

NEW STUDY: CHANGING ROLES BENEFIT BOTH MEN AND WOMEN

MADISON -- Contrary to longstanding theories of gender and psychology, women and men can benefit by taking on more than one traditional social role, such as worker or parent, report two researchers in the October issue of American Psychologist.

In the last 30 years, more women have joined the work force and more men have taken on household tasks. Commonly accepted gender theories suggest that juggling these work and family roles has introduced distress in families, but Janet Hyde, a psychology professor at the University of Wisconsin-Madison who co-authored the paper, says she's found quite the opposite.

"We used to think that multiple roles and their balancing caused people stress," Hyde explains. "However, the research shows that multiple roles are beneficial, thereby overturning the classical theories."

Hyde, along with psychologist Rosalind Barnett from Brandeis University, examined more than two decades of empirical data. Overall, the researchers found that employment was associated with improved health for both single and married women, regardless of their parental status, who had positive attitudes toward their jobs.

Men who held multiple roles also had better health. Some data suggest that men's family roles may be more critical to their psychological well-being than their wage-earning ones. Furthermore, Hyde and Barnett found that multiple roles do not strain relationships: In one study, marital dissolution was highest when the wife had no income.

"That multiple roles improve the physical and psychological health of both men and women is a distinct departure from the old formulations," Hyde says.

Hyde and Barnett go beyond those studies to propose a number of factors that explain the relationship between multiple roles and beneficial outcomes. Among them are added income, social support, opportunities to experience success, perspective and buffering. This last factor, which is an interaction between two roles, enables the successes in one role to offset the failures in another. As Hyde explained, "We all have bad things happen to us in one role, but if we're doing well and are successful in another role, we'll feel better because we're buffered." Men's positive experiences in their family roles, for instance, can counter distress in their wage-earning ones.

The authors note, however, several qualifications. "There are upper limits to the benefits. Sometimes, too much is too much," says Hyde. "If the number of roles becomes too great or when the demands of one are excessive, overload and distress might occur."

As this point suggests, role quality is more important than the number of roles or time spent in a role. "High levels of role satisfaction were associated with low levels of depression and anxiety," the authors wrote.

"We're proposing a new view of how women and men balance work and family," Hyde says. "We're presenting a new way of looking at things that's better matched with today's realities."

As the authors mention in the paper, their theory is neither timeless nor culturally universal. Rather it "reflects the current situation of women and men in their work and family roles and . . . will be far more useful than the predecessor theories in guiding future research and clinical practice."

# # #

-- Emily Carlson (608) 262-9772, emilycarlson@facstaff.wisc.edu

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News Releases

UNIVERSITY OF WISCONSIN MADISON

FOR IMMEDIATE RELEASE
December 6, 1999
CONTACT: Arthur Glenberg, (608) 262-8992

TOTAL RECALL IS A MYTH, UW PSYCHOLGIST SAYS

MADISON -- For those who get flummoxed by how-to manuals, or stymied by instructions for assembly, University of Wisconsin-Madison psychologist Arthur Glenberg has a reassuring theory.

It's not all your fault. The instructions run counter to how your memory works.

Glenberg is an expert on the nuances of human memory, one of the most intriguing, but hard to understand, mysteries of the mind. More recently, Glenberg has been refining a controversial theory about memory and language that questions some basic assumptions of his field.

Glenberg's opening salvo came in 1997, when his paper was published in the journal Behavioral and Brain Sciences called "What Memory is For." It suggested psychologists drop the widely accepted view that human memory works like computer memory, which stores abstract symbols designed to be reproduced with verbatim accuracy.

Instead, Glenberg argued that human memory is a direct result of action: Of how the body moves and responds to its environment. Memory exists to help us walk, talk, run, drive a car, answer the phone, and all of the myriad tasks of getting along in the world.

Because these memories are designed to facilitate action, rather than verbatim reproduction, human recall is rarely totally accurate.

His theory was not universally accepted, to put it lightly. The paper generated more than two dozen written responses from peers, uncommon in the erudite world of research journals, ranging from expressions of interest to piercing critiques.

"It's actually a matter of some pride now that I got so much flak," Glenberg says. "Because now we're starting to convince the editors of some of the major journals that there's something to be learned from this."

Beyond creating an academic snit, Glenberg's ideas have strong practical applications. Glenberg is now looking at memory's role in language, and his "embodiment theory" of memory could lead to better pedagogical techniques. He has experiments designed to find whether action-oriented learning tasks can improve the teaching of technical information to adults and help children who are good oral language users but poor readers.

And it may end up helping those poor souls who bristle at the phrase, "some assembly required."

In a recent study, Glenberg taught volunteer participants how to identify landmarks using a compass. The students heard descriptions of all the different parts of a compass and map.

However, one group received only written and oral descriptions of the components, whereas another group watched video clips of a person interacting with a compass while the parts were described. The video group had no problem later when asked to read and use instructions for how to use the compass, Glenberg says, but the text-only group was utterly baffled. Tests showed they could describe parts of a compass, but couldn't put that knowledge into action.

"As in the compass experiment, understanding verbal instructions requires that those instructions 'contact' the right memories," Glenberg says. In the case of following instructions for assembly, the trouble sometimes stems from trying to draw on memories that we don't yet have.

Glenberg says the various tests of his theory -- that action is the basis of memory -- could be

strong reinforcement of what teachers know intuitively: Hands-on and interactive lessons pack a bigger punch.

How memory really works is still totally up for grabs, he says, cautioning that theories on the subject draw from limited knowledge of the human mind. "For the most part, memory does a magnificent job for us," he says. "Every time you spell a word, drive a car or pick up a telephone and recognize your mother's voice, it's a wonder."
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Brian Mattmiller, 608/262-9772, bsmattmi@facstaff.wisc.edu

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University Communications

News Releases

UNIVERSITY OF WISCONSIN MADISON

FOR IMMEDIATE RELEASE
2/19/2001

NOTE TO REPORTERS: Saffran will participate in an AAAS news briefing at 11 a.m. Monday, Feb. 19, in the Nikko Grand Ballroom III of the Hotel Nikko. The symposium is "Tools Human Infants Might Use to Learn Language."

NOTE TO PHOTO EDITORS: High-resolution images of Jenny Saffran at work may be downloaded at: http://www.news.wisc.edu/newsphotos/saffran.html

BORN WITH THE PERFECT PITCH?

SAN FRANCISCO - The ability to identify a note on the musical scale without a single reference point - known as absolute or perfect pitch - is a rarity even among musicians, but new studies with infants suggest that everyone may begin life with this remarkable talent.

Psychologist Jenny Saffran, director of the Infant Learning Laboratory at the University of Wisconsin-Madison, has discovered this latest evidence of the complex architecture babies use to acquire knowledge. The work provides another example of how infants and adults hear and process sounds in fundamentally different ways.

In past studies, Saffran has demonstrated that infants use statistical learning, or the practice of detecting consistent patterns in sounds, as a foundation for learning language. For example, statistical learning helps babies define where individual words begin and end in a spoken sentence.

As in language, Saffran is now showing that infants apply these same talents as "little statisticians" to understanding music. In a test for infants and adults, Saffran devised a way to measure whether subjects show a preference for absolute or relative pitch in recognizing different tunes. Relative pitch, unlike absolute pitch, relies on tracking intervals between notes.

Not surprisingly, the adults in her test all performed well on measures of relative pitch and poorly on absolute pitch. But the infants showed exactly the opposite pattern, excelling at absolute pitch but unable to recognize changes in relative pitch.

"We certainly know that infants are not blank slates, and that they enter the world with a structure or hard-wiring that helps them learn," Saffran says. "But what's interesting here is we may not have dedicated hardware just for language. The structure is probably general to many complex forms of learning, including music."

Saffran presented her work, which appeared in the January 2001 issue of the journal Developmental Psychology, at the annual conference of the American Association for the Advancement of Science Monday, Feb. 19, in San Francisco. Saffran was part of a symposium discussing some of the innate tools that help infants with the complex task of learning language.

Saffran's lab developed a test to manipulate the pitches of songs to determine whether her learners were following absolute or relative pitch. The "songs" in this case are a continuous three-minute stream of bell-like tones, rather than real tunes that would be previously recognizable. After infants listen to the three-minute sequences, they then listen to segments of the song that are identical in relative pitch, but different in absolute pitch.

The listening time infants devote to familiar or novel segments tell researchers when a baby's attention is held or diverted. Saffran's research design relies on a standard impulse in infants: what's new is interesting, but what's familiar - or previously learned - is less engaging.

Why would absolute pitch come as standard operating equipment, only to fade from our grasp when we grow up? Saffran says it may have something to do with the way the brain responds to tones and frequencies, with so-called tonotopic maps. The brain's neurons are organized to respond to sounds in a particular frequency band. We map our aural worlds based on pitches of sounds in the same we visually map a room by spatially identifying objects.

Absolute pitch provides a remarkably detailed tool for this cartography of sound, giving infants the ability to track extremely fine-grained information regarding everything they hear. But people eventually lose absolute pitch, Saffran argues, because it is simply too detailed to be functional in everyday life.

"Absolute pitch is too fine a form of categorization," she says. "If that's all we knew, we couldn't generalize any of the sounds we hear. If we only used absolute pitch as adults, we wouldn't understand that 'Happy Birthday' in two different pitches is the same song, or that the word 'cup' spoken by a man and a woman was the same word."

With absolute pitch, it may be a case of use it or lose it. Saffran says there are many studies indicating that people who learn musical instruments at a very young age have a higher incidence of absolute pitch. There are also studies showing a higher incidence among people who are blind, since the pitch of a moving car or a person's footsteps can provide important spatial cues.

One the other hand, absolute pitch also has important implications for learning language, Saffran says. Consider that one-third of the world's languages are tonal languages, and absolute pitch is needed to understand the subtle differences between similar-sounding words. These languages include Cantonese, Hmong, Mandarin, Thai and Vietnamese.

Human language may be the most complex product of the human mind, Saffran says, and it's something 1-year-old babies accomplish with remarkable efficiency. She says her research findings further reveal the false dichotomy of the nature vs. nurture debate, Saffran says, by showing how both biology and experience work together in complex knowledge acquisition.

# # #

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Res Psych

Advances gives a glimpse of the many significant research projects at the university. Tell us about your discoveries by e-mailing: wisweek@news.wisc.edu.

Common genes form new family tree

Looking deep within the genes of three very different kinds of animals, scientists have found enough molecular evidence to finally fell the animal kingdom's old family tree.

Writing in the British journal Nature, scientists from UW-Madison and elsewhere reported the discovery of a common genetic theme that provides powerful new evidence to firmly place nearly all animals — from mollusks to humans — on a simplified, three-limbed tree of life.

Scientists find gene that controls organ shape

Growing complete organs in the laboratory, a longstanding dream of biomedical science, is one key step closer to reality as a team of Wisconsin scientists report the discovery of a genetic mechanism that gives organs their shape.

Writing in the scientific journal Nature, a team of Howard Hughes Medical Institute researchers describe a protein that regulates organ shape in the nematode Caenorhabditis elegans. With the new discovery of an organ-shaping protein, and the gene that makes the protein, a key step in the process of how nature organizes an ambiguous mass of cells into a complex organ has been identified.

Study: Rural women take too little calcium

Less than 40 percent of rural Wisconsin women participating in a pilot study of osteoporosis risk reported taking the recommended amount of calcium, according to preliminary findings from a unique research project involving the schools of pharmacy and medicine and five community pharmacies. Osteoporosis, or low bone mass, affects up to 25 million Americans, especially women.

Study examines scope of partner violence

A new study of violence between intimate partners by two university psychologists reveals a problem of disturbing scope, with as many as one-third of respondents reporting being either victims or perpetrators of physical abuse.

Surprisingly, the researchers found that results by gender were not as lopsided as one would presume: Women reported being perpetrators of physical violence toward their partners slightly more than men did.

Link between gender, self-esteem exaggerated

Popular assumptions about a cavernous self-esteem gender gap may be greatly exaggerated, according to a new analysis of nearly 150,000 respondents by university psychologists.

The study, led by professor Janet Shibley Hyde and researcher Kristen Kling, consisted of an analysis of hundreds of self-esteem studies done since 1987. The conclusion: Males have only slightly higher levels of self-esteem than females across most ages. Hyde says the results took the group by surprise.

Lung cancer drug study under way

A study to assess the safety and effectiveness of squalamine, a new drug designed to treat the most common form of lung cancer, is under way at the Comprehensive Cancer Center. Unlike conventional chemotherapy, which destroys cancer cells, squalamine is a so-called anti-angiogenic agent – something that actually prevents the creation of blood vessels that feed cancer cells.

Caterpillar teaches old biology lesson in new way

Terry Devitt

In Walter Goodman's laboratory, Manduca sexta, a.k.a. the tobacco hornworm caterpillar, lives in the limelight.

Goodman

Twenty-four hours a day, seven days a week, the caterpillar grows ever larger — and ever more interesting — under the steady, unblinking eye of a video camera. Soon, if all goes well, the caterpillar will become the star of biology class for elementary school students nationwide as they tune in through the World Wide Web to the life and times of Manduca sexta.

"This is serious fun for these kids, and that serious fun turns into serious learning," says Walter Goodman, a professor of entomology.

Like many other research scientists around the country, Goodman has labored to find ways to move primary school students beyond science texts to learn about biology firsthand. And now, through the Web and a growing collaboration with teachers from Wisconsin to Arizona, Goodman has found a way to capitalize on new, inexpensive technology to deliver lessons of life.

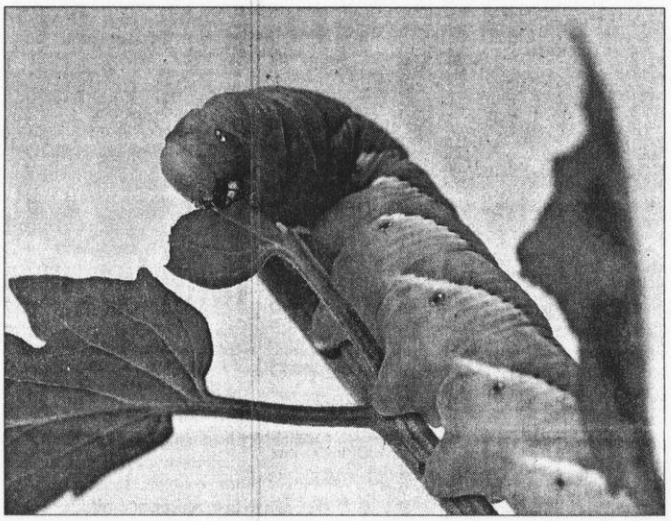
The tobacco hornworm, says Goodman, is an ideal prism for viewing the lessons of biology. Because it develops quickly as it cycles through the several stages of caterpillarhood known as instars, students can see development firsthand and, ultimately, view the rarely observed process of metamorphosis as the caterpillar changes into an adult moth. But it is during its life as a caterpillar that the tobacco hornworm serves up a host of biology lessons.

With the help of the Center for Biology Education through the Science Education Scholars Program, students from the School of Education, and Madison public school teachers, Goodman is bringing his vision to the Web.

In addition to basic information on the caterpillar's life history, lesson plans and information on how to raise your own Manduca sexta, Goodman's Web site has a caterpillar under 24-hour video surveillance, meaning that students miss nothing as the caterpillar grows and undergoes metamorphosis.

By bringing the insect to the Web, Goodman and the students and teachers who work with him hope to bring a new and more powerful way of learning about the world to more students.

"With the live video camera, the kids aren't looking at a picture that was taken five years ago," says Sean Ruppert, a School of Education student who, with fellow student Tess Bashaw, is helping develop the Web site. "It gives them a real-life feel." ■



The star of Walter Goodman's show, Manduca sexta, chews on a leaf. If all goes well, elementary school students nationwide will be able to use the World Wide Web to observe the caterpillar's life. Visit: http://manduca.entomology.wisc.edu Photo: Jeff Miller

New technique may lead to better flu vaccines

Brian Mattmiller

A research team has perfected a method for creating designer influenza viruses, which can be tailor-made to solve mysteries about how flu strains mutate, spread and cause illness.

The development may also lead to more efficient influenza vaccines and safer gene therapies, says Yoshihiro Kawaoka, a virologist and author of the report in the Aug. 3 Proceedings of the National Academy of Sciences.

"This technology should help us gain a greater biological understanding of influenza and improve our methods of disease control," says Kawaoka.

Scientists have tried for years to create influenza viruses in the laboratory, but the process is made difficult by the complexity of the virus, Kawaoka says. The influenza genome has eight different segments of RNA, compared to only one in viruses such as rabies.

To accomplish the feat, the researchers used a basic ingredient in biotechnology called plasmids, which are independent segments of DNA capable of replicating on their own. Plasmids are commonly used in science to transport genetic material from one cell to another.

Kawaoka and his School of Veterinary Medicine research group introduced eight plasmids — one for each segment of flu RNA — into a common line of cells used for research. They also introduced nine other plasmids into the cells that serve as building blocks for the proteins needed to make a complete influenza virus.

Although Kawaoka says they are not entirely sure why the system works so well, it is producing viruses in about one in every 1,000 cells. It's a 1,000-fold improvement over current methods, which only produce altered viruses but not entirely new ones.

This technology is exciting, Kawaoka says, because it allows scientists to precisely manipulate influenza viruses by flipping genetic switches and producing mutations, which can expose the flu's complex machinery.

"With this technology, we can introduce mutations any way we want," he says. "We can control the virulence by mutating here, there, anywhere. That could help us generate a live vaccine that is also stable."

Current inactivated flu vaccines are good, but can be improved. Live vaccines could be advantageous because they induce both cellular and antibody immune responses. They also produce immunity where it needs to be, such as the nasal cavity and respiratory tract.

There may be even broader applications in gene therapy in areas such as cancer treatment, he says. In fighting cancer, doctors want to introduce genes that effectively kill cancer cells but will not replicate in the body and damage healthy tissue. The influenza virus may be an ideal vector, Kawaoka says, because it does not get integrated into the human genome.

Influenza remains a major public health menace, killing an average of 20,000 people each year and infecting up to 40 million people in the U.S. alone. Influenza-related health costs top $4.6 billion per year. But basic mechanics of the virus, such as what triggers dangerous shifts in flu strains, are poorly understood.

Kawaoka says this technology will be valuable from a basic science perspective. They can use cloned viruses to study influenza viral growth, pathogenesis and what allows some viruses to transmit across species.

For example, avian flu viruses almost never transfer to humans, but when they do they can be particularly deadly, such as the 1997 Hong Kong virus. "Now we can introduce mutations in the avian influenza virus and understand for the first time what makes these viruses grow in humans," he says.

A dozen researchers worked on the project, including post-doctoral researcher Gabriele Neumann and graduate student Tokiko Watanabe. The research was supported by the National Institute of Allergy and Infectious Diseases Public Health Service, a division of the National Institutes of Health. ■

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Psych.

THE WISCONSIN WEEK WIRE - July 28, 1999
for UW-Madison faculty and staff
(issue on Web at http://www.news.wisc.edu/wire/i072899/)

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Wisconsin Week's print edition is on vacation until Wednesday, Aug. 25, but the Wire will continue to keep you updated through the summer.

HEADLINES

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- o Wisconsin lands federal transportation center

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TIP
- o Unmarked letters pose no threat, police say

TOP NEWS

COMMUTER INCENTIVES TO BE UNVEILED

Transportation Services is offering several new options to make it easier for faculty and staff to get to campus in ways other than driving their cars. The options include a pre-tax payroll deduction for parking and van pool permits and Madison Metro commuter passes; discount campus bus passes; and new bike lockers. Employees will get letters this week explaining these options in greater detail.

(Full story: http://www.news.wisc.edu/wire/i072899/transpo.html)

PEERCY NAMED COLLEGE OF ENGINEERING DEAN

Paul S. Peercy, a leader in the nation's semiconductor industry, is the new dean of the College of Engineering. Peercy, a doctorate degree-holder in physics from UW-Madison, will begin his leadership of the college Sept. 1 on a part-time basis during a brief transition. Peercy is currently president of SEMI/SEMATECH, a non-profit consortium that steers technical issues for more than 130 of the nation's top suppliers to the semiconductor industry.

(Full story: http://www.news.wisc.edu/wire/i072899/engrdean.html)

REVITALIZING STATE STREET IS FOCUS OF NEW PLAN

A new report outlines several recommendations to improve the business climate, enhance the physical appearance and streamline the management of one of Madison's greatest downtown assets: State Street. The State Street Strategic Plan is the culmination of a months-long community planning effort sponsored by Downtown Madison Inc., the City of Madison, the university and private contributors.

(Full story: http://www.news.wisc.edu/wire/i072899/statest.html
Illustrations: http://www.news.wisc.edu/newsphotos/statestreet.html)

WISCONSIN LANDS FEDERAL TRANSPORTATION CENTER

Wisconsin is behind the wheel of a multi-million dollar Midwest transportation research center, thanks to an innovative partnership forged between University engineers and state officials. The U.S. Department of Transportation awarded UW-Madison $890,000 per year over five years to support the new University Transportation Center. The combined effort will help steer transportation priorities for Illinois, Indiana, Michigan, Ohio, Minnesota and Wisconsin.

(Full story: http://www.news.wisc.edu/wire/i072899/transpocenter.html)

RESEARCH

STUDY EXAMINES SCOPE OF PARTNER VIOLENCE

A new study of violence between intimate partners by two university psychologists reveals a problem of disturbing scope, with as many as one third of respondents reporting being either victims or perpetrators of physical abuse. Surprisingly, the researchers found that results by gender were not as lopsided as one would presume: Women reported being perpetrators of physical violence toward their partners slightly more than men did. A complete copy of the study can be accessed on the NIJ web site at: http://www.ncjrs.org. Scroll to the "current highlights" section of the page.

RESEARCH: LINK BETWEEN GENDER, ESTEEM EXAGGERATED

Popular assumptions about a cavernous self-esteem gender gap may be greatly exaggerated, according to a new analysis of nearly 150,000 respondents by university psychologists. The study, led by professor Janet Shibley Hyde and researcher Kristen Kling, consisted of an analysis of hundreds of self-esteem studies done since 1987. The conclusion: Males have only slightly higher levels of self-esteem than females across most ages. Hyde says the results certainly took the group by surprise.
(Full story: http://www.news.wisc.edu/wire/i072899/selfesteem.html)

$6.75 MILLION TO EXTEND PRIMATE STUDIES OF DIET AND AGING

A decade-long study of how diet affects the process of growing old, will continue and be expanded at the university with the help of $6.75 million from the National Institutes of Health. Begun in 1989 at the Wisconsin Regional Primate Research Center (WRPRC), the study of rhesus macaques on controlled diets is one of only two such studies in the world. The research is intended to answer a central question of biology: Can aging be held at bay by cutting down on calories?
(Full story: http://www.news.wisc.edu/wire/i072899/dietandaging.html
Illustrations: http://www.news.wisc.edu/newsphotos/aging.html)

MAJOR GRANT TO AID DIRTY SEARCH FOR DNA

The dirt beneath your feet holds many secrets, not the least of which may be the next miracle drug. A pinch of soil is home to millions upon millions of microbes, mostly bacteria that routinely secrete chemicals that are the keys to an elegant signaling system through which microbes communicate with friend and foe alike. A nearly $1 million grant has come to the aid of university scientists who are studying the genetic instructions that bacteria and other soil microbes use to synthesize their chemical arsenal.
(Full story: http://www.news.wisc.edu/wire/i072899/dnagrant.html)

ON CAMPUS

Events calendar: http://calendar.news.wisc.edu

HARP CONFERENCE INCLUDES PUBLIC CONCERTS

The heavenly music you will be hearing the first week in August on the lower campus does not mean you've arrived at the pearly gates. Rather, those celestial sounds belong to participants in the 1999 Historical Harp Society 1999 conference and workshops, held this year for the first time at the university. Three public concerts are planned: 7:30 p.m. Saturday, July 31, at St. Francis House, 1001 University Ave.; 4 p.m. Sunday, Aug. 1, in Morphy Hall, Humanities Building; and 7:30 p.m. Friday, Aug. 6, in St. Francis House. Tickets: $5/general, $3 seniors and students. Information: 265-5629, or 263-2790.

MILESTONES

BUGHER CHOSEN TO HEAD UNIVERSITY RESEARCH PARK

Mark D. Bugher, secretary of the Wisconsin Department of Administration, has been appointed the new director of the University Research Park. Bugher, who will begin the job on or before Oct. 1, will be responsible for the overall management of the 300-acre west Madison development, which is home to 76 diverse companies employing more than 2,200 people.

(Full story: http://www.news.wisc.edu/wire/i072899/bugher.html)

FOUR RECEIVE NSF CAREER DEVELOPMENT AWARDS

Four College of Engineering faculty members have received 1999 Faculty Early Career Development (CAREER) Awards from the National Science Foundation. Civil and environmental engineering assistant professors Gregory W. Harrington and Daniel R. Noguera, and electrical and computer engineering assistant professor Akbar Sayeed each have received four-year, $210,000 awards; and mechanical engineering assistant professor Jaal Ghandhi has received a $235,000 four-year award.

(Full story: http://www.news.wisc.edu/wire/i072899/nsfengr.html)

GREENE TO FOCUS ON GENDER EQUITY, FACULTY DEVELOPMENT

Linda Greene has been appointed an associate vice chancellor concentrating on gender equity and faculty development. Greene's half-time appointment begins this week and she will continue to teach two classes at the law school. Specifically, Greene will function as the university's point person on issues involving women faculty and she will lead the provost's work group on human resource issues such as workforce diversity, climate, professional development and quality.

NEW DIRECTOR NAMED FOR LAND TENURE CENTER

Harvey M. Jacobs, a professor of urban and regional planning, has been named the new director of the Land Tenure Center. Established in 1962, the center focuses its research and training on the relationship land ownership has with social structure, economic development, political organization, and environmental sustainability. Jacobs has been a member of the UW-Madison faculty for 15 years. His work is required reading in urban planning programs throughout the country, and he has conducted research in Albania, France, Italy, Kenya, Poland, and the United States.

TECHNOLOGY

INTERNET GOPHER SERVICE TO END THIS YEAR

The Division of Information Technology has decided to discontinue the WiscINFO Gopher publishing services before the year 2000. Over the years, the Web has replaced Gopher as the Internet medium of choice. Many older WiscINFO Gopher resources have been republished as Web sites and others have been deleted altogether. For details, visit: http://wiscinfo.doit.wisc.edu/euc/wiscinfo/gopherpub.html

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NEWS IN BRIEF

STATE BUDGET REMAINS IN CONFERENCE COMMITTEE

The conference committee made up of legislative leaders from the Assembly and Senate has not yet resolved differences between the 1999-2001 state budget versions passed by each house. Among other proposals still under negotiation, Senate Majority Leader Chuck Chvala and other Democrats have proposed freezing tuition at UW schools for the next two years. Under this proposal, the state would invest an additional $75.6 million in the UW System to fully fund the Board of Regents' request for salary increases for faculty and academic staff. For the latest updates, visit State Relations Office site: http://www.news.wisc.edu/chancellor/staterelations

SCHOLARSHIPS TO OFFSET TUITION INCREASE

Tuition increases for the 1999-2000 academic year will be offset for students receiving federal or state financial aid as part of the Madison Initiative. About 4,200 undergraduates - those receiving a Pell grant or a Wisconsin Higher Education Grant - will receive $300 scholarships from the Vilas Trust to offset a $289 tuition increase on the Madison campus. The result: Resident undergraduates would pay $11 less in tuition than last year. The UW System Board of Regents will adjust tuition rates in subsequent semesters after a state budget is finalized.

HORTICULTURALIST EXPLAINS BOOM IN BLOOMS

A bumper crop of wildflowers at the Arboretum and elsewhere this summer greet passersby with splashes of fiery orange, lavender, white and gold. Dennis Stimart, horticulture professor, says two straight years of exceedingly mild Wisconsin winters are helping native flowers run wild. "Wildflowers are probably performing at their optimal point right now," Stimart says. Stimart says the efforts in Dane County toward increasing green space, expanding public lands and restoring natural areas means native prairie flowers will become a much bigger part of our local landscape.

LAW SCHOOL EXAMINES USE OF VIDEO IN SEX ABUSE CASES

A study underway at the Law School is examining the use of video technology to protect child victims in sexual-abuse prosecutions. The study focuses on the use of videotaping during investigative interviews with children and on taking children's testimony at trial via closed-circuit television. When the study is done, the institute will produce a manual that will help Wisconsin law enforcement and child protective services personnel learn from each other's experiences using video technology to protect young sexual-abuse victims.

ATHLETIC BOARD APPLICANTS SOUGHT

The academic staff Nominating Committee is seeking candidates to fill two vacancies on the UW Athletic Board as a result of recent resignations. The initial appointments will be for the remainder of the incumbents' terms. Interested candidates may get a description of Athletic Board functions from the Secretary of the Academic Staff. Call 263-2985; e-mail: cmccabe@bascom.wisc.edu. Deadline: Aug. 10.

TIP

UNMARKED LETTERS POSE NO THREAT, POLICE SAY

UW-Madison police say a recent spate of "suspicious" letters with no return address on the envelope are simply a new marketing ploy meant to distinguish the items from traditional "junk" mail. Detective David Williams says numerous staff and faculty are receiving personally addressed plain envelopes with no return address that contain advertising for books and other promotions. The mailing postmarks are usually from southern California, Williams says.

The Wisconsin Week Wire: Vol. III (No. 14)

Res-
Self-
Esteem

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NEWS
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STUDY FINDS TENUOUS LINK BETWEEN GENDER AND SELF ESTEEM

MADISON - Popular assumptions about a cavernous self-esteem gender gap may be greatly exaggerated, according to a new analysis of nearly 150,000 respondents by University of Wisconsin-Madison psychologists.

The UW-Madison study, led by professor Janet Shibley Hyde and researcher Kristen Kling, consisted of an analysis of hundreds of self-esteem studies done since 1987. The conclusion: Males have only slightly higher levels of self-esteem than females across most ages.

Hyde says the results certainly took the group by surprise. The popular media is teeming with best-selling books and articles about "girls' self-esteem robbery" and "the self-esteem confidence gap." Hyde says the prevailing view in psychology has been that girls are having their self-esteem systematically destroyed by sexism, harassment and stifling stereotypes.

The study, published in the current issue of the journal Psychological Bulletin, did find that males scored higher on standard measures of self-esteem than females, but the difference was small. The largest gender difference occurred in late adolescence, or high school age, but Hyde says it was not large enough to suggest that self-esteem problems are rooted in gender.

"I think a lot of very well-intentioned people believe that girls have serious self-esteem problems, particularly in adolescence," Hyde says. "But we may create a self-fulfilling prophecy for girls by telling them they'll have low self esteem."

- more -

Gender and Self-Esteem -- Add 1

Self-esteem has been a hot research topic in psychology circles. It is most commonly measured through a standardized test called the Rosenberg Self-Esteem Scale, which gauges responses to statements such as "on the whole, I am satisfied with myself" or "I feel I am a person of worth on an equal plane with others."

It is considered to be an essential ingredient in mental health, and low self-esteem has strong correlations with depression, low achievement and poor social adjustment, Hyde says. However, the issue raises a "chicken and egg" question about whether the low self-esteem causes or is a symptom of these other problems.

Researchers used two different strategies to examine self-esteem differences. The first was a computerized literature search of studies based on esteem, and the second focused on large, nationwide samples gathered by the National Center for Education Statistics.

Using a numerical scale, the researchers plotted gender differences in self- esteem among different age groups. (For example, a score of 0.80 would show boys scored much higher than girls, 0.50 would be moderately higher, and 0.20 would be slightly higher. Zero would be no difference.) In ages 7-10, the difference was 0.16; ages 11-14 scored 0.23; ages 15-18 scored 0.33; ages 19-22 scored 0.18; and ages 23-59 scored 0.10.

The overall difference in the first analysis was 0.21, a small difference favoring males.

"The small size of the gender difference suggests that males and females are more similar than they are different when it comes to measures of self-esteem," says Kling, now a researcher at the University of Minnesota-Twin Cities.

Given the implication that boys do not have self-esteem problems, the subject may receive less attention than it deserves for males, Kling says.

Why is society assuming the worst about self-esteem and girls? Hyde suggests that popular books such as psychologist Mary Pipher's "Reviving Ophelia" are filled with horror stories about eroded self-esteem in girls, but are drawn mostly from a psychotherapy setting and may not provide an accurate snapshot of the total population.

Another study in the early 1990s by the American Association of University Women suggested that girls' self-esteem plummets at adolescence and never recovers. This analysis challenges that finding, and even suggests that self-esteem for both males and females gradually improves with age.

There may be more inherent dangers in claiming that gender and self-esteem are connected. "If parents believe that their daughters have lower self-esteem than their sons, they may behave in ways that telegraph this message to their children," according to the study.

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- Brian Mattmiller, (608) 262-9772

Res -
Psychology

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NEWS

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NEW UW-MADISON STUDY EXAMINES SCOPE OF PARTNER VIOLENCE

MADISON - A new study of violence between intimate partners by two University of Wisconsin-Madison psychologists reveals a problem of disturbing scope, with as many as one third of respondents reporting being either victims or perpetrators of physical abuse.

Surprisingly, the researchers found that results by gender were not as lopsided as one would presume: Women reported being perpetrators of physical violence toward their partners slightly more than men.

The study, released Tuesday (July 13) by the National Institute of Justice, chronicles the responses of 861 21-year-olds on their experiences with violence within their relationships over the past year. Relationships included current or former intimate partners - spouses, boyfriends or girlfriends. The subjects are part of a longitudinal study carried out in New Zealand by UW-Madison psychologists Terrie Moffitt and Avshalom Caspi.

"This field is full of surprises," said Moffitt. "Almost everything we thought we knew isn't true when we use sound scientific methods to examine it correctly."

The researchers conducted interviews with the subjects and used a standardized measure of physical abuse, which includes more than a dozen violent acts from shoving, slapping or punching to using a knife or gun.

"One of the first lessons learned from this study is there are no tidy and distinct groups of victims or perpetrators," Moffitt said, adding that "mutual violence" between both men and women was a strong trend.

However, the consequences of violence against women are more consequential, as they are more likely to be injured by men, she said. Unlike the women, physically abusive men also tend to have other extremely deviant patterns such as drug abuse, chronic unemployment and dropping out of school.

Some of the major findings are:

* About 27 percent of women and 34 percent of men in the study reported they had been physically abused by their partner. The abuse was most prevalent among couples living together.

* Young adults most likely to be involved in violent relationships are also most likely to be parents. Women who had children by age 21 were twice as likely to be victims of domestic violence, and men who were fathers by age 21 were three times as likely to be physical abusers.

* The strongest risk factor for both male and female perpetrators was a history of physical aggression before age 15. Male perpetrators were more likely to have backgrounds of poverty and low academic achievement; while disturbed family relationships and harsh discipline were common backgrounds for female perpetrators.

Moffitt suggested that future interventions include the teaching of non-violent problem-solving to teenagers and young parents, and better coordination between police, the judiciary and psychiatric professionals.

The methodology of the study was solid, Moffitt said. The New Zealand study group includes all the males and females born in the city of Dunedin in 1972, so it represents a snapshot of the full population. Researchers also interviewed 360 of the partners independently, and there was 80 percent agreement about the violence reports.

Moffitt noted that the results are quite similar to two other national studies of domestic violence that were used for comparison.

The Dunedin study participants have been surveyed over a variety of ages from childhood, adolescence and young adulthood. While the primary focus of the study was on teen behavioral problems and delinquency, the partner violence question became a natural extension of that earlier work, Moffitt said.

Both Moffitt and Caspi are on extended leave from UW-Madison and are serving on the psychiatry faculty of the University of London. For more information on the study, contact Moffitt at t.moffitt@iop.kcl.ac.uk or by phone at 011-44-171-919-3936.

A complete copy of the study can be accessed on the NIJ web site at: http://www.ncjrs.org. Scroll to the "current highlights" section of the page.
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- Brian Mattmiller, (608) 262-9772

Res-
Psychology

RESEARCH DIGEST

STUDY FINDS SURPRISES IN TEEN PEER INFLUENCES • Peers influence teens' decisions about sexual behavior in specific — and surprising — ways, according to new research and polling data to be released Thursday, April 29, in Washington, D.C. The press conference will be sponsored by the National Campaign to Prevent Teen Pregnancy (NCPTP) and will feature the findings of university researchers, including Bradford Brown of UW-Madison.

Brown is a professor of educational psychology and a nationally known expert on peer influence among youth. His analysis will be included in a new report to be released Thursday by NCPTP titled "Peer Potential: Making the Most of How Teens Influence Each Other."

Among the findings of Brown and other researchers:

- Much peer influence is positive.
- Best friends and the leading "in" crowd are less influential than we think.
- Having high-risk male friends and older friends of both sexes increases girls' risk of pregnancy.
- Parents can influence peer influence.
- Peer leaders are not measurably more effective than adult leaders in intervention programs.

BOOK PROFILES BLACK EXPERIENCE IN WISCONSIN A new book on African Americans in Wisconsin presents a current profile of the population and how it has changed during the past 25 years, making an earlier research report more accessible to professors, policymakers and others.

Sociologists Doris Slesinger of UW-Madison and E. Howard Grigsby of UW-Whitewater report positive trends in high school achievement and college enrollment for Wisconsin's African Americans. But data on poverty and unemployment, among other things, are less encouraging.

The book, "African Americans in Wisconsin: A Statistical Overview," has been published by Simon and Schuster Custom Publishing. The book uses data that shows, for example, that compared to all Wisconsin families African-American families are more than four times as likely to have incomes below the poverty line.

NEW USES FOR MANURE Aside from an annual cow-chip toss, the world hasn't stumbled on many alternative uses for cow manure. But university researchers have found two: water filters and particle board.

The biological systems engineering scientists are using separated and cleaned fibers from cow manure to make high-quality hardboards. Those fibers also have an uncanny ability to filter heavy metals from water. Richard Koegel, a USDA researcher and professor of biological systems engineering, says they use a separating press at the U.S. Dairy Forage Research Center at Prairie du Sac to separate the manure fibers from liquid waste.

The researchers teamed with a Chicago consultant to make steam pressure-treated hardboard from manure fibers. They are also working with the Forest Products Laboratory, which has installed a system that will use manure fibers to filter storm water at Mount Horeb's Stewart Lake.

Koegel says odor is removed in the separation process. But whether the public ever catches wind of the material might depend on the wood market, where shortages in wood and paper pulp are predicted.

"People should know the research is preliminary," adds Koegel. "Otherwise, I'll get phone calls from 500 farmers asking where they can drop off their manure."

A brush with the saola

UW zoologist found rare animal in a roadside zoo

Terry Devitt

If there's a common wisdom to field biology, it is to expect the unexpected. And the last thing primatologist Nancy Ruggeri expected to encounter was the saola.

But there it was, the spindle-horned animal that is possibly the last of the world's large mammals to be discovered. And it was not in some Southeast Asian mountain forest, the animal's natural setting, where Ruggeri saw and photographed the saola. It was in a dingy menagerie in a dusty frontier town in Laos, the curiosity of a local official.

The saola was cataloged for Western science for the first time in 1993 by Vietnamese scientists. The description was based on a captured juvenile. To that time, it had escaped notice by the many bands of intrepid field scientists dispatched from the West over the past 150 years — especially the great expeditions of the 19th century — to find and describe all the animals and birds of the world.

"The saola is probably the last large mammal in the world to be described," says Ruggeri, a zoology assistant faculty associate. "That's what's so incredible about it. It was completely overlooked."

Ruggeri's pictures are the first of a live adult saola, an animal that looks very much like an antelope, but whose precise taxonomic classification is still murky. Ruggeri may have been the first Western scientist to see an adult animal.

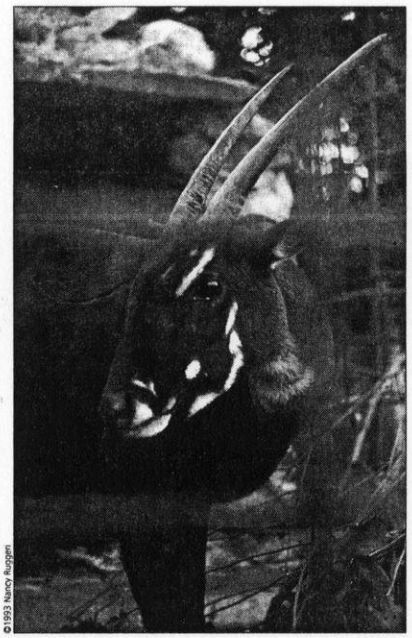
The size of a sheep, short and stocky, and the color of chocolate, the saola's two-foot-long horns are reminiscent of the spindle on a spinning wheel. With distinctive white facial marks and white bands across its rump, the animal, says Ruggeri, is unmistakable. It stayed hidden for so long because it exists in a limited and very remote area of Laos and Vietnam — countries until recently closed to the West — where it is thought to inhabit the wet forests of the Annamite Mountains.

Although very rare — with guesses of population ranging from 200 to 2,000 — the saola is not unknown to the Hmong tribes of the region who hunt the antelope-like animal with the help of dogs. And that, Ruggeri says, is how the saola she encountered in early January, 1996, came to be in the menagerie of a powerful Lao official.

Working on a field study of gibbons near the frontier town of Lak Sao, Ruggeri heard with disbelief rumors that a saola had been captured and sold to the local official for his private zoo.

"When I heard about it, I was very skeptical — until I got there," says Ruggeri of entering Lak Sao, a town that is little more than a dusty spot in the road, a frontier outpost whose primary authority is the local general or warlord.

Ruggeri took pictures of the female saola, which lived for only 18 days in captivity. No one, she says, knew how to care for it, although attempts were made and a veterinarian was dispatched by the Wildlife Conservation Society in an effort to save it. The Hmong did, however, make an uncanny — and accurate — prediction that the animal was pregnant.



©1993 Nancy Ruggeri

Although the region of Laos where Ruggeri was working on behalf of the Wildlife Conservation Society is remote and teems with exotic wildlife — tigers, gibbons, macaques and other rare primates — the prospects for the saola are probably not very good, she says.

With such a small population and with new pressures from logging and other forms of development, the saola will, at best, remain a rarely encountered animal. ■

Researchers plot a strategic plan to reduce state highway headaches

Brian Mattmiller

As the season of jackhammers and dust descends on state highways, it might be reassuring to know that a statewide research effort could ultimately reduce road-maintenance headaches.

That's just one goal of the new Wisconsin Highway Research Program, which brings together a diverse group of experts to set a strategic course for state highways. The effort teams engineers from UW-Madison and other state universities with state and federal transportation offices, private industry and consultants.

It's the first time that all of these interests are working together to set a research agenda for state transportation, says Peter Bosscher, a UW-Madison civil engineer and director of the UW-Madison effort. The program has started with $500,000 in funding from the state Department of Transportation (DOT) for 15 distinct projects on improving pavement, structures and foundations.

The concerted effort could not come at a better time, Bosscher says. Like most states in the country, Wisconsin is on a collision course between rapidly rising traffic rates and the ability of existing highways to handle it all.

"In the last 15 years, traffic loads have increased per lane by about 50 percent on all state highways," he says. "And we're not doing a good job in this state of putting more people in those vehicles. The average is about 1.2 people per car."

In addition, 46 percent of the state's highways are officially defined as congested, meaning they have traffic bottlenecks on a consistent basis. And by 2020, an estimated 62 percent will be congested, Bosscher says.

Urban areas such as Madison and Milwaukee face major traffic issues ahead. Needed upgrades to Milwaukee's highway and interstate system may top $5 billion in coming decades, and $20 billion for the entire state.

"There are some real challenges here," he adds. "Traffic volume is our single biggest problem."

The two overriding goals of the partnership are to reduce driver delays in key areas around the state, and gradually develop highway products that will last longer without additional costs. Some specific projects include:

- Finding new types of surface treatments that can lengthen the life of concrete.
- Investigating ways to reduce road settlement at the base of bridges, which often causes harsh bumps.
- Studying accident rates caused by wet pavement and finding new surface designs that can improve traction.
- Developing a Beneficial Reuse Program, which will turn industrial waste such as foundry sand, coal slag and fly ash into low-cost material for road construction.

"The question is, can we develop better materials so we only need to revisit roads for maintenance every 30 or so years?" Bosscher asks. "We hope to leave a legacy of improved materials and less required maintenance on roads. The payoff for research is always in the future."

One immediate research result, however, came from a small-scale project looking at reducing traffic noise caused by tires on pavement. A new type of grooved pavement significantly reduced traffic noise in urban areas, he says.

Partners in the research program include the Wisconsin DOT, the Federal Highway Administration (FHWA), and researchers at Marquette University, UW-Milwaukee and UW-Platteville. Private companies and consultants are also helping set the research agenda.

While the current agenda focuses on technical issues, Bosscher says the group will eventually tackle issues that get at community values, such as mass transit alternatives. Examples will include the feasibility of light rail as a commuting alternative, and assessing the impact new roads have – both good and bad — on a community.

"We all have the American dream of going where we want to go, when we want to go," Bosscher says. "I don't think people realize how much they depend on highways for that capability." ■

Res - Psychology

EMBARGOED FOR RELEASE APRIL 29, 1999

TO: Editors, news directors
FROM: Jeff Iseminger, (608) 262-8287
RE: Research on peers' influence of sexual behavior

Peers influence teens' decisions about sexual behavior in specific - and surprising - ways, according to new research and polling data to be released Thursday, April 29 in Washington, D.C. The press conference will be sponsored by the National Campaign to Prevent Teen Pregnancy (NCPTP) and will feature the findings of university researchers, including Bradford Brown of the University of Wisconsin-Madison.

Brown is a professor of educational psychology and a nationally known expert on peer influence among youth. His analysis will be included in a new report released Thursday by NCPTP titled "Peer Potential: Making the Most of How Teens Influence Each Other."

Among the findings of Brown and other researchers:

* Much peer influence is positive.
* Best friends and the leading "in" crowd are less influential than we think.
* Having high-risk male friends and older friends of both sexes increases girls' risk of pregnancy.
* Parents can influence peer influence.
* Peer leaders are not measurably more effective than adult leaders in intervention programs.

Brown will be available for phone interviews Tuesday through Thursday by calling Bill Albert, director of communications at NCPTP, (202) 261-5591.

Albert also can provide you with a copy of the "Peer Potential" report and other supporting documents. Or you may reach Brown after he returns to Madison Friday by calling (608) 262-0838.

Res - Psychology

May 4, 1999

TO: Talk/public affairs hosts/producers
FROM: Liz Beyler, (608) 263-1986
RE: Interview possibilities for May

Teen pregnancy and peer influence

Peers influence teens' decisions about sexual behavior in specific–and surprising–ways, according to new data released last week in Washington, D.C., by the National Campaign to Prevent Teen Pregnancy (NCPTP). One of the researchers who helped NCPTP analyze existing research was Bradford Brown, professor of educational psychology at UW-Madison.

Among the findings Brown can discuss with you: Best friends and the leading "in" crowd are less influential than we think, and having high-risk male friends and older friends of both sexes increases girls' risk of pregnancy. You can contact Brown at (608) 262-0838 or bbbrown@facstaff.wisc.edu.
-- Jeff Iseminger, (608) 262-8287

Raising capable, creative, caring kids

During the 1990s, researchers made remarkable gains in understanding how a child's brain develops and grows. At the same time, they discovered new ways to foster greater intelligence by nurturing brain growth during its most active phases.

Psychologist Susan Daniels can discuss dozens of easy and entertaining activities that parents and kids can do together to take advantage of these critical developmental periods.

Daniels, who works in the McFarland School District, also can describe the findings of the research for your audience and offer other ideas about how parents can enrich their children's environments. She's planning a workshop for parents and educators on this subject Saturday, May 22, sponsored by the Office of Education Outreach in UW-Madison's School of Education.

Daniels can be reached at (608) 240-1736. For more information on the workshop, call coordinator Julie Seaborg at the School of Education, (608) 262-5315.
-- Mary Lock Albrecht (608) 262-9792

Mission to planet Earth

In July of this year, the first of NASA's Earth Observing Satellites (EOS) is scheduled to be launched into a polar orbit 900 miles above the Earth. On the ground, scientists such as UW-Madison climatologist Jonathan Foley will be eagerly anticipating what promises to be an unprecedented flow of data about the Earth and its changing climate. Among other things, Foley studies how changes to our planet's mantle of vegetation influence climate.

Past research hints that changes in the vegetative cover of the Earth may have an influence on climate that is at least equal to the effects of the so-called greenhouse gases now blamed for the Earth's warming climate. Foley explains that the constellation of satellites that will make up NASA's Earth Observing System will provide scientists with a mother lode of data on such changes and promises new insight into our planet's dynamic climate system. For more on this topic, contact Foley at (608) 265-5144.
-- Terry Devitt, (608) 262-8282

The state of the arts

Just what is the state of the arts in today's society? Is its demise just around the corner as Congress threatens to cut funding for the National Endowment for the Arts? Is the theater dead, as we see revivals of old plays rather than new ones on Broadway? Or are the arts alive and well as we see more and more regional theaters, new museums of art and dance companies experience sell-outs as they tour the country?

Professor Harv Thompson can answer those questions for you. He chairs the Department of Liberal Studies and the Arts in the Division of Continuing Studies, where more than 30 faculty and staff design and offer continuing education classes in everything from visual arts to foreign languages, history, music and writing. He directs the School of the Arts at Rhinelander, a summer workshop for adults who want to study theater, dance, photography, and other arts. He has served on the Dane County Cultural Affairs Commission, the Guthrie Theater's board of directors, and produces an annual theatre auditions program attracting hundreds of actors and technicians in search of employment. Call Thompson at (608) 263-7787.
-- Judy Reed, (608) 262-5421

Summertime is learning time at UW-Madison

Registration for more than 1,600 UW-Madison summer school credit classes is now underway. The classes are available in one- to 12-week sessions. Summer students vary from continuing degree candidates to some 2,000 special students and guests who attend as non-degree students. The university also provides dozens of programs for K-12 students and hundreds of continuing education non-credit classes for people of all ages.

Why is UW-Madison a popular place for summertime learning? Why do people go to summer school? And what are some of the most sought-after offerings? Ask Continuing Studies Dean Howard Martin or Associate Dean Roger Maclean, who can provide insights into the summer school picture. Maclean oversees the K-12 programs. Call either of them at (608) 262-5821. For a look at the courses offered, check out the Division of Continuing Studies Web site at http://www.dcs.wisc.edu.
-- Susan Disch, (608) 262-1668

If you have difficulty reaching any of the sources or have questions about a tip, please contact the staff member listed at the end of the item.

Wisconsin Week

For Faculty and Staff of the University of Wisconsin-Madison

February 24, 1999

Res - Prejudice

UW research fuels growth in spinoff, startup companies

Brian Mattmiller

Research at the university has fueled a swift rise in new technology-based business ventures in Wisconsin during the past five years, according to a recent study of spinoff and startup companies.

The study, focusing on a 40-year period, was conducted by the University-Industry Relations office at UW-Madison. It identifies 172 Wisconsin companies that have some fundamental connection with the university. Of that total, 62 began in the last five years.

The total number is a dramatic increase from the first study conducted in 1993, says Philip Z. Sobocinski, associate director of UIR and author of both studies. This time around, he was able to identify three times as many companies with close university ties.

"This study shows what a dramatic effect UW-Madison has on Wisconsin's present and future economy through new business creation," says Sobocinski.

"We have more researchers than ever before giving thought and effort to the applications of their work," he adds. "There's also more peer acceptance in academia today for starting a commercial venture."

The findings reinforce a priority in Gov. Tommy Thompson's 1999-2001 budget recommendations. Thompson proposed creating a not-for-profit venture capital company and a new state position to facilitate more technology transfer between UW-Madison and the private sector.

"These new businesses are helping put research innovations to work right here in Wisconsin," Thompson said. "This study shows we're making great progress, but we can do even more to encourage technology transfer."

Sobocinski says the business-university connection is defined in two ways. A spinoff company develops products or services that stem directly from research on campus and often are using a license from a UW-Madison patent. The second are startup

continued on page fifteen

A day of discovery: UW-Madison faculty on the road

Photo by Jeff Miller

Veterinary medicine professor Joanne Paul-Murphy, with help from "Slim" the boa constrictor, gives school children at the Milwaukee Public Museum a sense of what scaly snakeskin feels like. The visit was part of UW-Madison's outreach program Feb. 16 at the museum, called "Whys and Wows." For details of this sesquicentennial event, the first of a series that will put Madison faculty "on the road" around the state, see page 16.

Policy: Hands off special equipment

Erik Christianson

Because of her disability, a rare genetic mutation that causes some of her muscle and soft tissue to turn to bone, Heather Niles needs to sit in a padded chair during her classes at UW-Madison.

But a special chair provided to her by the university was stolen from a classroom in Van Hise Hall last semester. The theft forced Niles to sit in a regular desk, which put pressure on her back and caused five new bones to form.

"Somebody thought it was more comfortable than a regular desk and took it," says Niles, a freshman from Rio who is planning on majoring in psychology. "A couple of people in my class searched all over Van Hise for it, but it was gone."

The theft of Niles' chair, and complaints from other students with disabilities, has prompted university officials to issue a policy related to classroom accommodations for students with disabilities.

The policy, distributed widely across campus, reminds students and instructors that tables, chairs and other equipment provided for students with disabilities must not be utilized for other uses in classrooms.

Marcia Carlson, facilities access coordinator for UW-Madison Facilities Planning and Management, adds that people can be charged with theft if they remove such items from classrooms.

"What it does is put students with disabilities at a disadvantage," says Carlson. And it raises liability concerns as well, because the Americans with Disabilities Act requires the university to provide accommodations for students and employees with disabilities.

There are approximately 1,000 students with disabilities being served by the university's McBurney Disability Resource Center. Students must identify themselves as disabled to receive services.

Niles says the theft of her chair not only injured her back but also forced her to take more medicine to manage her pain, which affected her ability to study and attend classes. She now has another chair.

"Hopefully it won't happen again," she says. ■

Race matters

UW expert works to uncover bias in medicine

Dian Land

A new study on race and medicine may sadden and anger UW Medical School's Vanessa Northington Gamble, but it doesn't surprise her. Professionally and personally, she knows all too well that skin color and cultural background figure in medicine, as in every other aspect of American life.

Vanessa Gamble

Gamble learned a few weeks ago that a study to be published in the New England Journal of Medicine Thursday, Feb. 25, shows doctors are less likely to order cardiac diagnostic tests for blacks than for whites, even though all patients noted exactly the same symptoms of heart problems.

"This meticulous study shows us once again that — consciously or subconsciously — race and ethnicity shape the expectations, beliefs and sometimes the practices of physicians," says Gamble, director of the UW Center for the Study of Race and Ethnicity in Medicine.

She will appear on several news programs, including ABC's "Nightline," this week, commenting on the study and offering her perspective as a nationally known expert on race and medicine.

"For a long time, people have mistakenly believed that doctors are above racism; that since their job is to heal people, they simply can't be prejudiced," she says. "This study is one of many to remind us that the medical profession is not immune to this difficult issue of race, and that disparities based on race exist in medical decision-making."

Gamble's life work is dedicated to the arduous task of getting people to honestly think about, discuss and try to understand the insidious role racism can play in interactions between doctors and patients. Her efforts were rewarded most in spring 1997, when President Clinton formally apologized to the remaining survivors of the Tuskegee Syphilis Study.

The 40-year, federally sponsored study may have been the most compelling and sobering example of racism in American medicine, says Gamble, who served as chair of the legacy committee that sought the

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Inside

Postcards from UW's past

Page 5

case of past IT grant projects can also be viewed at this site. Pre-proposal consultations with LTDE staff are available and encouraged. Deadline: Friday, March 5, by 4:30 p.m. Call Lisa Caire, 265-8638, or e-mail lmcaire@doit.wisc.edu at least three weeks before proposal submission to arrange a consultation.

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Administrative

031109: Sr Outreach Spec,
CALS/Ctr For Cooperatives (100%).
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031143: Associate Dean,
School of Business (25%-50%).
Apply by March 5.

031151: Admin Prg Manager III,
Athletics/Ticket office (100%).
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Applicability: Field research for short periods (four to eight weeks). Grants cover international travel and may include a modest stipend.

Evaluation Criteria: Applications will be judged on scholarly merit. These grants are intended to facilitate an initial trial field period, not for comprehensive research itself. Applicants undertaking their first field research will be given preference; interdisciplinary and/or collaborative projects welcome. Priority areas: social sciences, international relations, humanities, professional fields, natural resource studies, and pure and applied sciences. Applicants proposing natural resource studies or projects in the pure and applied sciences must demonstrate persuasively the area studies content of their research.

Deadline: 4:30 p.m., Friday, March 19. Send applications to: 209 Ingraham Hall. Information: 262-2811.

UNDERGRADUATE TEACHING IMPROVEMENT COUNCIL

The Undergraduate Teaching Improvement Council offers grants of up to $500 for development and sponsorship of local, regional and systemwide workshops and conferences focused on the improvement of teaching. UTIC Conference Development Grants support workshops, seminars or conferences on teaching-related subjects, including meetings of faculty or staff in a particular discipline to discuss teaching issues raised by that discipline. Proposers may invite guest speakers to give presentations as part of their program. Funds typically support travel, materials and some expenses incidental to the funded event; they are not intended to support conference travel for individual faculty members attending non-UTIC-funded events.

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031150: Sr Inform Proc Conslt,
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031171: Systems Programmer,
DoIT/Sys Engr Network/Engr Technology (100%).
Apply by March 15.

Instruction

030864: Lecturer,
Educ/Counseling Psychology (100%).
Apply by March 12.

030865: Lecturer,
Educ/Counseling Psychology (100%).
Apply by March 12.

030866: Lecturer,
Educ/Counseling Psychology (100%).
Apply by March 12.

030996: Asst Faculty Assoc,
L&S/Chemistry (100%).
Apply by March 5.

031017: Lecturer,
L&S/Journalism & Mass Communication (33%-66%).
Apply by March 15.

031118: Lecturer,
L&S/Anthropology (50%).
Apply by March 5.

031177: Lecturer,
L&S/African Studies Program (50%).
Apply by March 2.

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Race matters

continued from page one

national apology. The study involved 400 poor, black sharecroppers who were led to believe they were being treated for syphilis, when in fact they weren't.

"The apology was important because Tuskegee is a metaphor for why black Americans may not trust the medical establishment," she says, noting that the mistrust may explain why some African Americans reject or don't comply with certain treatment programs. "The gesture was a start toward rebuilding trust."

Beyond the fleeting symbolism of a presidential apology, Gamble tries to bring historical perspective on race in American medicine to present-day health care policymaking. She's a member of the Agency for Health Care Policy and Research's National Advisory Council and is helping the agency develop a response to the Department of Health and Human Services' "Race and Health" initiative. She's consulted with and presented workshops for the Centers for Disease Control and the Association of American Medical Colleges.

Gamble, an associate professor of history of medicine and family medicine, also pursues her mission at the UW Medical School center.

"Racial and ethnic diversity has increased dramatically in the entire country during the last 25 years, and this trend is likely to continue," she says. "The center was created to understand the implications of these demographic changes on medical education, research and practice."

Center staff investigate the often subtle ways race and ethnicity affect opinions and actions that can lead to inequities in health care delivery. Planned studies will examine, for example, why the incidence of some diseases and conditions is higher or lower in certain racial and ethnic groups.

"We want to identify and implement strategies to improve the health care status of racial and ethnic minorities throughout the state and nation," she says. "We hope to achieve this through educational programs, outreach efforts, networks and clearinghouse activities."

Gamble says there are plans to institute educational programs on race and ethnicity at all levels of medical education, although in the past, medical educators have been reluctant to include race issues in the formal curriculum.

"But the AAMC considered the topic important enough to address in a plenary session at its annual meeting last November," she says, "and the current study dramatically makes the point — race matters." ■

Tandem Press teams with Salon 2000 for innovative exhibition of prints

The university's Tandem Press and beauty purveyor Salon 2000 plan to inaugurate a series of print shows with the work of Los Angeles artist Charles Arnoldi.

Lithograph and monograph prints created during Arnoldi's residency at Tandem last year will be displayed at Salon 2000 in the High Point Centre, 7475 Mineral Point Road, Madison. An open house at the salon will introduce the exhibition Sunday, March 14 from 1-4 p.m.

Tandem, the university's fine arts press, since 1987 has been bringing acclaimed artists to collaborate with faculty, staff and students on original prints. Tandem Press director Paula Panczenko says she hopes working with Salon 2000 heightens press visibility off-campus.

"Madison has been growing by leaps and bounds, and we're eager to inform people on the far west side of our presence," she says.

The exhibition of work by Arnoldi, veteran of the prestigious Whitney Biennial exhibition, will be up until summer. For more information, contact Tandem Press, 263-3437, or Salon 2000, 833-2898.

Res-
Prejudice
Psychology

FOR IMMEDIATE RELEASE 11/23/98
CONTACT: Rebecca Bigler, (608) 265-8949; rbigler@facstaff.wisc.edu

PROFESSOR FINDS THAT IN SHIRTS, AS WELL AS SKIN, COLOR MATTERS

Prejudice strikes most people as a learned behavior, but a study of grade school kids exposes prejudice as a much cagier beast, waiting to rear its head at the slightest provocation.

Rebecca Bigler, a visiting psychology professor at UW-Madison, has used the idyllic setting of a summer-school classroom in St. Cloud, Minn., to study fundamental questions about bias. Through the subtle prompts of a controlled study, Bigler measures whether children will become biased about something seemingly trivial: the colors of their assigned T-shirts.

"We have this view that you have to teach children to be biased," she says. "This research shows that they'll do it even if you don't teach them."

Bigler's work begins with a six-week, half-day summer program for elementary school children sponsored by St. Cloud State University. It looks like any other summer school, except kids in each class are randomly assigned one of two different colors of T-shirt -- their "work shirt" for the next six weeks.

In a control classroom, teachers ignore the blue and yellow shirts. But in another classroom, they make extensive use of the shirt colors to organize their class, from seating charts to special events, and frequently mention color groups when addressing students. But they do not favor one group over another or promote any competition between colors.

In tests done after the summer session, Bigler compared differences between the two classes. She found that kids in the experimental class consistently assigned more positive traits to their "color group" than to those wearing another color. They also saw far less variation among individuals in their group than did the control class.

And overall, kids from the experimental classes were more likely to say that "all" of the children of their shirt color had positive traits and that "none" had negative traits than were kids from the control group.

This happened, Bigler says, without teachers ever suggesting any value differences between the two color groups. But the mere existence of this visible difference in the class, coupled with a teacher making use of that difference, set the wheels of bias in motion.

"Kids started to think the blue was different from the yellow," Bigler says. "What comes very quickly after that is, 'the blues are better than the yellows.'"

Adds Bigler: "What we say to kids about some of these organizational things is, if the adult world is calling attention to them, there must be something important about them."

Bigler has done other variations on her classroom study, including one that organized rooms by gender. That study found children in the "gender rooms" more likely to rate occupations as appropriate for "only men" or "only women" and were more extreme about their perception of gender traits within their group.

A classroom study this past summer dealt with a more potent dynamic, that of majority and minority. In the experimental class, most of the class was given one color shirt, and only

two students with a different color. In wrap-up interviews with the kids, Bigler says those in minority shirts frequently said they were unhappy and wanted to change shirt colors. The two kids in the same-colored shirts also became friends at an almost clockwork rate.

Bigler says this should not suggest any fatalism about bias. Instead, she says parents and teachers need to be more diligent in talking about the differences children see, and more careful about how they organize activities. Teachers should think twice about organizing classrooms by gender, she says.

At the end of each summer session, the researchers explain to the kids the underlying point of the T-shirts. "We always try to link it to the greater lesson, something they could use for the rest of their lives," she says. "People who have been through some sort of prejudice will understand how tough it can be."

###

-- Brian Mattmiller, (608) 262-9772

Who knew?

Column answers your questions

Eileen Gilligan

Q: Which book is checked out of the campus libraries most often?
A: *Organic Chemistry* — yes, a textbook. But one may wonder if the numbers are skewed by professors who put books on reserve for checkout by diligent students. The highest-ranking humanities entry is a collection of writings labeled *Early English Books*, which comes in at 16th. Other popular selections include *The New Our Bodies, Ourselves* at 18th and *Madison, A History of the Formative Years*, at 21st. *The African Storyteller: Stories from African Oral Traditions* numbers 99.

But don't let the numbers fool you. As Don Johnson, a library editor in external relations, points out: None of these figures includes the number of people who pull a book off the shelf, peruse, copy or read it, yet never check it out.

Why is there no popular novel in the top 100? "We're not used that often for diversion," Johnson says of the crowded stacks located in 45 libraries around campus.

Q: Where did Bucky come from?
A: Bucky's ancestors started gracing the state seal one sesquicentennial ago — in 1848, a badger was put atop the state seal, where it still resides today.

When the university began playing intercollegiate football about 41 years later, a badger quickly became the mascot and appeared at home football games, traveling either in a cage or on a chain. Those visits ended after the badger broke free and started snapping at fans and cheerleaders. Cited for delay of game, the badger stayed home on subsequent game days.

In 1940, local commercial artist Arthur C. Evans drew the first cartoon of the "traditional" Bucky as we've come to know him. And the 1941 Badger yearbook was the first to feature the upright, personified Bucky. The athletic-looking badger came next, wearing a black sweater and carrying, what else, a football.

The "life-size" Bucky, with a papier-mâché head worn by a student, made his first appearance on the steps of Memorial Union at a pep rally in 1949, where he was introduced as "Buckingham U. Badger." And Bucky's life has never been the same — or better — since.

More information on the Bucky story can be found in *The Bucky Badger Story*, a 1981 softbound book compiled by Gwendolyn Schultz, a professor emeritus of geological and natural history.

Send your question to Who Knew? c/o Wisconsin Week, *19 Bascom Hall; or e-mail: wisweek@macc.wisc.edu.*

UW research bringing emotions into focus

Brian Mattmiller

The scientific study of emotion, an area once considered too "soft" for serious inquiry, is developing a solid future at the UW-Madison.

This fall, a team of researchers studying emotions and health have received three grants totaling more than $6 million over the next five years. The researchers say this new infusion of support is helping make UW-Madison one of the premier places to study the complex interplay between emotions and biology.

"When I first started talking about all this, I was regarded as somewhat of an oddball in advocating the neuroscience of emotion," said psychologist Richard Davidson, one of the leaders in the field. "The view was that emotions were too ephemeral to be approached scientifically."

No one doubts the field's potential any more. In fact, researchers are finding striking connections between emotions and health. For example, a recent study found that heart attack patients who become depressed are five times more likely to die than those who do not.

Studies at UW-Madison are identifying the brain's "processing centers" for negative and positive emotions. Other studies focus on a fear-regulating portion of the inner brain called the amygdala. Researchers are finding that abnormal function of these key emotional centers can trigger psychological problems.

Davidson said the field is being energized by new technology in brain imaging, which is allowing people to literally peer into the working brain. A large base of animal research is also laying a foundation for work with human implications.

Work being done at UW-Madison is under the Wisconsin Center for Affective Science directed by Davidson and the Health Emotions Research Institute, which is co-directed by Davidson and psychiatrist Ned Kalin. Other core members of the research team include psychologist Hill Goldsmith and psychiatrist Marilyn Essex.

Davidson said the group hopes to establish a baseline for normal emotional development, which will help them identify problems and intervene before psychological problems occur. "Emotion is the key variable in understanding all forms of mental illness," he said. "If we can better specify who might be vulnerable, we can intervene much earlier in the life span."

The team has reason to be blissful about the future of emotion studies here. The National Institute of Mental Health provided researchers with a $3.7 million, five-year center grant and another $1.5 million over five years to train new graduate and postdoctoral students.

Davidson said the program has hired eight new pre-doctorate and two new post-doctorate students so far this year. "Most people who are studying the brain ignore the body, and vice versa," he said. "The goal is to educate a new generation of emotion scientists with a broader range of expertise, including psychology, sociology and biology," he said.

A third grant of $1.25 million from the Keck Foundation will help create a new brain imaging facility at the Waisman Center "that is truly unique in the world," Davidson said. The facility will combine two different technologies that can track both the structure of the brain and the biological and chemical processes at work.

The resolution will be so precise, Davidson said, scientists will be able to perceive changes in very small areas of the brain never examined before. It will be especially valuable in studying the amygdala, which serves as a central processing center for fear.

Looking ahead, Davidson said he plans to devote more study to why some people have a persistent reaction to stress. "Some people are not able to turn off a negative emotion once it's been turned on by the amygdala," he said. In many people, this is the hallmark of anxiety disorders and creates a "vicious feedback loop," causing both emotional problems and physical damage to the immune system and the brain.

Other research projects include:

- A project led by Kalin has developed a primate model for human fear and anxiety. The researchers are working with monkeys that have excessively fearful dispositions, and finding parallels with humans. "We think that this research will tell us a lot about the factors behind why some people develop anxiety and depressive disorders," Kalin said.
- A study that will gauge the effects of group therapy for women who are recovering from breast cancer. The study follows a Stanford University finding that group therapy has the potential to double the survival time of breast cancer patients. The study will look at physiological measures that can explain why group therapy has this powerful benefit.
- An ongoing study of twins, led by Goldsmith, will attempt to identify children at risk of developing problems such as anxiety, social withdrawal and depression. One intriguing question is whether researchers can identify parts of the brain that regulate our temperament, such as shyness, boldness or fearfulness. ■

Stem cell research captures world attention

Researchers, media relations office spent a month laying the groundwork

Nick Weaver

The rigor of scientific research requires stamina, but James Thomson suddenly needed to draw on his physical and mental reserves for a different task recently — handling the frenzy of media interest in his research team's latest discovery.

The international spotlight focused on Thomson with the news Nov. 6 that his team had cultured human embryonic stem cells in the laboratory.

Terry Devitt, the science writer who handled the media onslaught for the university, said he's never seen a UW-Madison scientific breakthrough generate such hoopla.

At that day's UW System Board of Regents meeting, President San W. Orr Jr. of Wausau passed out copies of a front page story on the project from the morning *New York Times*, hailing the research as part of UW-Madison's long-standing tradition of excellence in the biological sciences. *Newsweek* reported that Thomson had "snared the golden ring of developmental biology." Broadcasters including ABC, NBC, CNN, NPR and the BBC jumped on the story as well. And the Associated Press and Reuters wire services carried the stem cell story to the pages of newspapers around the world.

But behind the scenes, campus public affairs personnel had been laying groundwork for the story for more than a month.

For example, staff at the Office of News and Public Affairs — with assistance from the Center for Health Sciences Public Affairs and The Graduate School — produced photography, graphics, animations, video and audio clips to help media tell the story simply and correctly.

To prepare for the media onslaught, Thompson and his colleagues completed a media workshop to help level the mass media playing field.

Media received the information in advance under an agreement, called an embargo, that gives media time to prepare stories and presentations ahead of an official announcement.

Devitt says this advance notice generated more than 100 media phone calls to his office during the week before the rest of the world received the news. To cope with such a gush of interest, Devitt set Thomson up in an office next door to his own in the basement of Bascom Hall. Thomson patiently completed interview after interview — some 80 total — as they were directed his way.

"This would have been impossible to do if Jamie hadn't been as cooperative and indulgent as he was," says Devitt.

For a firsthand look at how various media outlets around the world covered the stem cell story, visit: http://www.news.wisc.edu/stemcells.html. ■

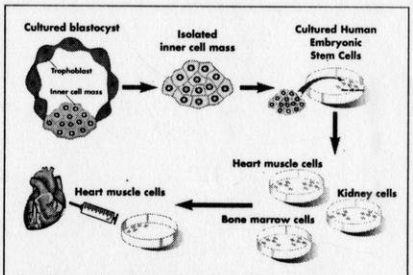


Illustration by Jeffrey James

Background on the story: Writing in the journal *Science*, a UW-Madison research team reported the successful derivation and prolonged culture of human embryonic stem cells — cells that are the parent cells of all tissues in the body. The achievement opens the door to growing from scratch everything from heart muscle to bone marrow and brain tissue. As the illustration shows, the stem cells were derived from the inner cell masses of donated human blastocysts. A blastocyst is a hollow ball of about 140 cells that develops several days after fertilization. Researcher James Thomson's team established five independent cell lines and has been able to grow them indefinitely in culture. They have observed the cells to differentiate into the three primary germ lines that make up the body — endoderm, ectoderm and mesoderm, and subsequently into arrays of tissue cells such as cartilage, bone, muscle, neural and gut cells. The work, which was supported by the Menlo Park, Calif.-based biotechnology company Geron Corp., caps a 17-year international quest.

Res-
Psychology

RESEARCH DIGEST

UW HOSPITAL JOINS MRI STUDY

Diagnosing some suspicious breast tumors could become simpler and more reliable using a new magnetic resonance imaging (MRI) approach being tested at University Hospital and Clinics as part of an international study.

The approach developed in Israel uses existing technology in a novel way, according to Frederick Kelcz, a breast-imaging specialist who will direct the study locally.

Under the study plan, women with suspicious breast tumors requiring biopsy — where breast tissue is removed and examined for signs of cancer — will first have MRI breast scans using the new technique. MRI interpretations and biopsy results then will be compared.

The study is expected to involve 250 women, including 50 locally. Kelcz agreed to conduct clinical tests after being "impressed by the excellent results" achieved in a preliminary test of 30 University Hospital patients.

A new, reliable MRI approach could prevent unnecessary biopsies and aid in detecting cancers early, Kelcz said. "Too often, women with ambiguous scans are told to come back in six months to be rechecked. Yet this decision can result in delayed diagnosis and treatment of breast cancer," Kelcz said. "A woman deserves a reliable answer in a timely fashion."

RESEARCH AGENDA TO BE SET

The third Issues Forum for UW-Madison's College of Agricultural and Life Sciences will look at future research directions and options for funding needed projects and programs.

The audience is invited to participate in panel discussions on the future of research at CALS. Two afternoon panels will examine the college's research agenda and how it will be funded. The panels will include CALS and Extension faculty and administrators as well as industry leaders.

Morning sessions will review past accomplishments and future challenges. The forum will run from 10 a.m. to 4:30 p.m. Tuesday, Nov. 10, at the Monona Terrace Convention Center in Madison. A $10 registration fee covers lunch, break refreshments and materials. Pre-registration by Nov. 4 is encouraged. For registration information, call CALS Outreach Services, 263-1672.

SOCIAL WORK TEAM GETS GRANT

A million dollar, two-year federal grant will help an interdisciplinary team of UW-Madison researchers join forces with community organizations in Dane County to identify the service needs of women with substance abuse and mental health problems who are victims of violence.

According to social work professor Joy Perkins Newmann, assessing needs will form the first phase of the $1.2 million study, funded by the Substance Abuse and Mental Health Services Administration. Research shows that health care systems are neither designed nor prepared to address often-related problems of substance abuse, mental illness and violence.

The 10-state, $8.5 million project is expected to gain valuable information about the pivotal role violence can play in the lives of women with substance abuse and/or mental disorders.

Newmann says she hopes the study will lead to new treatment and service delivery strategies, including new models of service integration. "We are very excited about this project because it will provide a vehicle for the many people who care about these women to forge an alliance with them on their behalf," she says. "It's a project very much in keeping with the Wisconsin Idea."

Exploring the roots of bias

Professor finds that, in shirts as well as skin, color matters

Brian Mattmiller

Prejudice strikes most people as a learned behavior, but a study of grade school kids exposes prejudice as a much cagier beast, waiting to rear its head at the slightest provocation.


Rebecca Bigler

Rebecca Bigler, a visiting psychology professor at UW-Madison, has used the idyllic setting of a summer-school classroom in St. Cloud, Minn., to study fundamental questions about bias. Through the subtle prompts of a controlled study, Bigler measures whether children will become biased about something seemingly trivial: the colors of their assigned T-shirts.

"We have this view that you have to teach children to be biased," she says. "This research shows that they'll do it even if you don't teach them."

Bigler's work begins with a six-week, half-day summer program for elementary school children sponsored by St. Cloud State University. It looks like any other summer school, except kids in each class are randomly assigned one of two different colors of T-shirt — their "work shirt" for the next six weeks.

In a control classroom, teachers ignore the blue and yellow shirts. But in another classroom, they make extensive use of the shirt colors to organize their class, from seating charts to special events, and frequently mention color groups when addressing students. But they do not favor one group over another nor promote any competition between colors.

In tests done after the summer session, Bigler compared differences between the two classes. She found that kids in the experimental class consistently assigned more positive traits to their "color group" than to those wearing another color. They also saw far less variation among individuals in their group than did the control class.

And overall, kids from the experimental classes were more likely to say that "all" of the children of their shirt color had positive traits and that "none" had negative traits than were kids from the control group.

This happened, Bigler says, without teachers ever suggesting any value differences between the two color groups. But the mere existence of this visible difference in the class, coupled with a teacher making use of that difference, set the wheels of bias in motion.

"Kids started to think the blue was different from the yellow," Bigler says. "What comes very quickly after that is, 'the blues are better than the yellows.'"

"What we say to kids about some of these organizational things is, if the adult world is calling attention to them, there must be something important about them," she says.

A classroom study this past summer dealt with a more potent dynamic, that of majority and minority. In the experimental class, most of the class was given one color shirt, and only two students had shirts with a different color. In wrap-up interviews with the kids, Bigler says those in minority shirts frequently said they were unhappy and wanted to change shirt colors. The two kids in the same-colored shirts also became friends at an almost clockwork rate.

Bigler says this should not suggest any fatalism about bias. Instead, she says parents and teachers need to be more diligent in talking about the differences children see, and more careful about how they organize activities.

At the end of each summer session, the researchers explain to the kids the underlying point of the T-shirts. "We always try to link it to the greater lesson, something they could use for the rest of their lives," she says. "People who have been through some sort of prejudice will understand how tough it can be." ■

UW engineers design bike for disabled cyclists

Brian Mattmiller

What started as a challenge to improve disabled access for a local outdoor recreation club put a team of campus engineers on the road to a better bike.

Since 1993, a succession of graduate students in the mechanical engineering department have developed a new style of hand-powered cycle designed for people who use wheelchairs. The three-wheeled bike's power train, unlike anything else on the market, employs a downward arm motion that gives the rider more power and control over the bicycle.

Craig Conner, a 1994 master's degree graduate of mechanical engineering, built the first prototype and has a patent pending on the power-train invention. And three graduate students since Conner have perfected a second prototype of the bike that is road-tested and ready for the next step of commercial development.

"We're at a really good time to start working with bike companies," says Conner, who plans to contact industry leaders such as TREK Bicycles of Waterloo, Wis., and Cannondale Inc. of Connecticut. "Making these bikes available to people has always been a big hope, especially if we can prove all the benefits we intended."

The major benefit is giving people with disabilities a more natural way to ride. Conner says current bikes make the arms replicate the pedaling motion of feet, rather than allowing for a more natural motion. Conner developed a four-bar linkage under the bike seat, which moves the bike forward when the rider pushes down and pulls up on the handlebars.

This motion uses much stronger arm and upper-body muscles, Conner says, which allows the rider to get more power with less fatigue.

Conner, a bike enthusiast himself, got the idea in 1993 from Hoofers, an outdoor recreation club run by UW-Madison. The club was looking for university-based ideas to make their recreational pursuits more accessible to the disabled.

Conner spent an entire year researching the concept. "The more you understand the problem, the more self-evident the solution becomes," he says.

More than 350,000 Americans have lost the use of their legs through either spinal cord injury or amputations. But there is a growing core of people dedicated to staying active through adaptive sports such as wheelchair basketball and biking.

The bike project has had amazing staying power in the mechanical engineering department, with new graduate students keeping it alive. David Pringle, a 1995 master's graduate, developed the steering and controls for the first bike. Kurt Ramsey, a master's graduate in May 1998, built the second prototype, which made a number of improvements on the original.

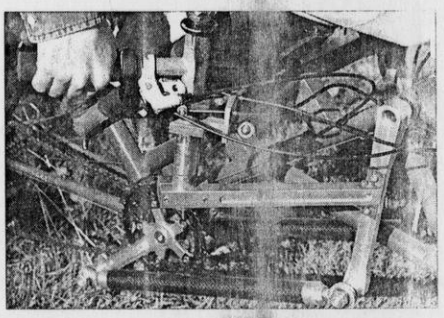
Now a fourth mechanical engineering graduate student, Chris Egle, is "debugging and fine-tuning" the prototype to make the bike ride more smoothly.

Frank Fronczak, a mechanical engineering associate professor and advisor for the project, says the multi-year aspect of the project is not unique with his students.

"A lot of my projects work this way because we design and build stuff here," Fronczak says, noting that combination of skills is becoming a lost art. "The work here is essentially never finished."

Fronczak says the goal of this project "is doing good for the sake of doing good, rather than trying to make money." But he is excited by the prospect of seeing a student design developed and marketed by a bicycle company. ■


Photos by Jeff Miller



Top: Craig Conner, a 1994 master's degree graduate of mechanical engineering, sits on a hand-powered prototype bicycle for people who have lost the use of their legs. His professor, Frank Fronczak, right, continues to advise students who are fine-tuning the project. Above: Conner's power train design allows the rider to get more power with less fatigue.

Research - Psychology

Guardian molecules for the brain

New research sheds light on Alzheimer's — and may point the way for future treatment

Terry Devitt

A new study of the proteins that may be responsible for the brain lesions associated with Alzheimer's disease promises a new understanding of its underlying cause, and may someday yield new treatments for the devastating and deadly disease.

Results of the study, reported this week at a meeting of the American Chemical Society, reveal a potential new pathway to understanding and treating Alzheimer's, a disease of the brain that afflicts 4 million Americans and for which there is now no definitive treatment and no cure.

Alzheimer's, which usually afflicts people over age 65, manifests itself through progressively impaired memory, leading to mental confusion as the disease systematically destroys the brain one cell at a time.

The new study, conducted by Regina M. Murphy, a professor of chemical engineering, and Laura L. Kiessling, a professor of chemistry, reveals a way to disrupt the aggregation of proteins that form the poisonous plaque deposits found in the brains of Alzheimer's patients.

The plaques associated with Alzheimer's are composed mostly of beta amyloid fibrils, small sticky protein molecules that, when clumped together, form toxic tangles of proteins that some scientists believe may be the root cause of Alzheimer's pathology.

"The protein sticks to itself," says Kiessling, and forms poisonous clumps that, along with dead and dying nerve cells, become the raw material for the plaques that form around and between nerve cells. The plaques, which first appear in the part of the brain responsible for memory and cognition, are believed to erode nerve endings and thus interfere with the normal processes of the brain.

Although the toxicity of the bundles of beta amyloid proteins is well documented, it has not been definitively demonstrated that they are responsible for Alzheimer's pathology. What is known is that when the proteins begin to clump, they become toxic, making them prime suspects in the case of Alzheimer's pathology.

Murphy, who studies protein aggregation, and Kiessling, an expert on inflammation, wondered if it might be possible to disrupt the aggregation process by synthesizing specific "inhibitor molecules" that could bind to the beta amyloid protein and thus prevent it from forming the toxic aggregates.

So far, that strategy seems to be working, says Kiessling: "It's a really simple idea and, as far as we know, there are few strategies that target this step in the process."

The beta amyloid protein molecules are composed of amino acids arrayed in a set sequence. By engineering synthetic molecules that have a beta amyloid binding region attached to a disrupting region, the Wisconsin scientists have generated compounds that successfully block the toxicity of beta amyloid in cell culture. In essence, using synthetic molecules to alter the structure of the protein aggregates, the scientists have found a way to detoxify the protein clumps that might otherwise kill or damage nerve cells.

"I see this as an important first step toward trying to find out how important the toxicity of beta amyloid proteins is," says John Cross, chief scientist for the American Health Assistance Foundation, which supported the work by Kiessling and Murphy.

Murphy and Kiessling say the advantages of their strategy lie in the precise targeting of the proteins believed responsible for the disease, and in the apparently simple tactic of disrupting the aggregation.

The scientists cautioned that while the approach seems promising as a way to understand and someday treat one of the nation's most prevalent and devastating diseases, the work is still preliminary. Further tests in animals and humans are required, and the significant problem of designing molecules small enough to pass through the blood-brain barrier — a primary line of natural defense for the brain — remain.

However, if subsequent studies affirm the potential of designing customized molecular inhibitors that can defang the poisonous proteins associated with Alzheimer's, new, more effective medicines may emerge within the next decade.

Jeff Miller

Jeff Miller

Murphy, left, and Kiessling, above, wondered if it might be possible to disrupt the protein aggregation process by synthesizing specific "inhibitor molecules." Says Kiessling, "It's a really simple idea and, as far as we know, there are few strategies that target this step in the process."

Engineer turns bad pottery into an environmental cleanup tool

Brian Mattmiller

Ceramic brings to mind the simple stuff of plates and pottery, yet it may work wonders in the complex world of environmental cleanup, from filtering pollution to degrading hazardous chemicals.

A UW-Madison research effort led by engineer Marc Anderson has produced a multitude of environmental products using microporous ceramic materials. The "porous" nature of these materials would make for flawed pottery, but excels as a tool for filtering water and air, whether it be at an industrial plant or in the home.

"These materials have a lot of advantages over conventional technology," says Anderson, who will discuss the environmental uses of his work during this week's American Chemical Society meeting.

"Since they perform at low temperatures, they are feasible for use in homes and office buildings," he says. "Cleaning indoor air is really where the action is, since these materials can remove extremely fine particles."

Microporous ceramics are actually composites of tiny metal oxide particles that are held together in a suspension. By packing them together in a controlled manner, researchers can create materials with high surface area and microscopic pores that can trap elusive traces of pollution.

In 1990, Anderson was the first academic researcher to receive federal funding to explore the basic properties of ceramic oxides, which had previously received limited interest in industry. Since then, Anderson and colleagues have generated more than 20 patents on applications for the materials.

Anderson says his latest patents may be the most commercially promising. They involve the use of high-performance porous oxides for breaking down volatile organic compounds, such as benzene, formaldehyde and industrial solvents. They work as photocatalysts, gaining their power to neutralize chemicals after being exposed to ultraviolet light. Their lab improved on existing technology by creating hybrids of different metals.

Anderson says these thin films also can be used in treating contaminated waste water and soils, and reducing air pollution in high-risk areas such as printing rooms and dry cleaning shops. His lab also has developed a prototype air filtration device for office buildings.

That line of research emerged two years ago, through a collaboration between Anderson and UW-Madison researchers growing plants aboard the NASA space shuttle. Anderson developed an air filtering device for the plant growth chambers that removed ethylene, the chemical that triggers rotting.

From that project, Anderson developed a commercial cooperative called PhotoKleen, which is working to develop devices that can reduce spoilage of produce in the shipping industry and refrigeration rooms.

The research group also has an energy program, looking at developing capacitors that can store 100 times more energy than current devices. Yet another project aims at developing extremely small, high-powered batteries for use in medical devices, micromachines, computer memories and space exploration vehicles.

Anderson says these materials are not a cure-all, but do offer a durable, inexpensive and more palatable alternative than incineration for getting the job done.

Emotion research more than homework for seminar

Brian Mattmiller

Does anger make us sick? Are there healing powers behind optimism and humor? Do good relationships with family and friends make good medicine for the body?

These are burning questions this semester in Psychology 711, a graduate-level course that explores new research on emotion, social relationships and health.

Beyond the subject matter, Psychology 711 is as unique a class as any you'll find. The course is organized around a national symposium that will be held May 2-3 on campus, bringing together some of the top researchers in the field — the same people whose work students have studied.

"This is the most fun class I've ever taught," says psychologist Carol Ryff, who organized the third annual conference. "It is an incredibly unique opportunity for students to study the current work of top researchers, then meet and interact with them at the end of the semester."

During the semester, each of the course's 15 students leads a presentation on one of the presenters. At the symposium, those students will lead question-and-answer sections on that research. Students also write a critical review of the research and propose new research directions. Those writings will be part of a bound volume published after the symposium.

"Knowing you will meet these people and socialize with them is motivation to really get on top of the material," says Ryff.

The annual symposia began in 1995 to highlight UW-Madison's prominence in research on emotion and health.

Students in the class come from eight academic departments, underscoring the wide reach of this research. Departments include psychology, sociology, nursing, continuing education and kinesiology.

Meg Wise, a graduate student in continuing education, says she was impressed with the wide variety of disciplines. "Having the symposium looming at the end helps us focus our energies, and bring all the information back to a single theme," she says.

Ted Robles, one of the class's two undergraduates, says the newness of the field made course material relevant and current. The field itself, he says, is moving from "folk wisdom" to research that is proving emotion and health connections.

The conference will feature six researchers from other universities, as well as Ryff and Christopher Coe from the UW-Madison psychology department. The event will be held in the Lakeshore Room of the Wisconsin Center. For more information, contact Kay Smith at 262-1818.

1•8•4•8 NEWS
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(Editor's note: For a schedule of events and specifics on Symposium speakers, contact Brian Mattmiller, (608) 262-9772.)

EMOTION, HEALTH SYMPOSIUM ENLIVENS THE CLASSROOM

MADISON — Does anger make us sick? Are there healing powers behind optimism and humor? Do good relationships with family and friends make good medicine for the body?

These are burning questions this semester in Psychology 711, a graduate-level course at the University of Wisconsin-Madison that explores new research on emotion, social relationships and health. The field is now a flourishing research area that is helping map the connections between mind and body.

Beyond the subject matter, Psychology 711 is as unique a class as any you'll find in higher education. The course is organized around a national symposium on emotion that will be held May 2-3 on campus, bringing together some of the top researchers in the field — the same people whose work students have studied for 15 weeks.

Rather than idle observers, the students will become direct participants in the conference.

"This is the most fun class I've ever taught," says psychologist Carol Ryff, who organized the third annual conference. "It is an incredibly unique opportunity for students to study the current work of top researchers, then meet and interact with them at the end of the semester."

- more -

During the semester, each of the course's 15 students leads a 45-minute presentation on the research of one of the presenters. At the symposium, those students will lead question-and-answer sections on that research.

Students also write a critical review of the research and propose new research directions in the field. Those writings will be part of a bound volume published after the symposium.

"This approach raises the stakes in the classroom," Ryff says. "Knowing you will meet these people and socialize with them is motivation to really get on top of the material."

The annual symposia began in 1995 to highlight UW-Madison's prominence in research on emotion and health. The National Institutes of Health (NIH) established a national Center for Behavioral Science Research here in 1993 with a $3 million grant.

Students in the class come from eight academic departments, underscoring the wide reach of this research. Departments include psychology, sociology, nursing, continuing education and kinesiology.

Meg Wise, a graduate student in continuing education, says she was impressed with the wide variety of disciplines the class covers. "Having the symposium looming at the end helps us focus our energies, and bring all the information back to a single theme," she says. "The class showed that a broad approach to science can still be focused."

Ted Robles, one of the class's two undergraduates, says he is intrigued by the newness of the field, which made the course material relevant and current. The field itself, he says, is moving from "folk wisdom" to research that is proving emotion and health connections. "We're showing the science behind this," he says.

The conference will feature six researchers from other universities, as well as Ryff and Christopher Coe from the UW-Madison psychology department. Research topics include a study of how emotional support groups impact the health of breast cancer patients; how the parent-child relationship can influence the health of both parties; and how stress during vulnerable points in life can weaken the immune system.

The event will be held in the Lakeshore Room of the Wisconsin Center, 702 Langdon Street, and is open to the public. For more information, contact Kay Smith at (608) 262-1818.

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— Brian Mattmiller, (608) 262-9772

Research - Psychology

The ultimate in internal medicine

New institute will study the mind's healing power

Judy Kay Moore

Why do breast cancer patients who receive psychotherapy live twice as long as those who don't participate in therapy?

Why do heart attack patients who are depressed have a risk of death five times greater than those who are not?

Just how strong is the link between the body and the mind?

Researchers at UW-Madison's newly established HealthEmotions Research Institute are aiming to answer just such questions. The institute is the world's first comprehensive center dedicated to scientific analysis of how emotions — particularly positive ones — influence disease and overall health. The institute's work will expand on the tradition of the late Harry F. Harlow, the UW psychologist who revolutionized ways of understanding behavior and emotions in non-human primates.

"Understanding how positive states of mind influence the body is part of the next great frontier in the brain sciences," says Ned Kalin, institute director and Hedberg Professor of Psychiatry and Psychology.

Although the science of "neurobiology" is still in its infancy, plenty of anecdotes and early research suggest that emotions do play a role in overall health. Newly available scientific tools, such as PET (position emission tomography) and functional MRI are helping investigators understand and identify the biological mechanisms underlying different emotions. Related studies, in turn, are making it possible to see how major organ systems function during periods of positive and negative emotion.

"We are hoping to take insights and findings from many different places and put them together in a way that will propel this whole field," says Kalin.

Kalin and institute researcher Richard J. Davidson, Vilas Professor of Psychology and Psychiatry, have already begun new ways of looking at key social issues:

- Studies involving monkeys show an opiate-like substance is released in the brain of both parent and child when they are in close physical contact, creating a feeling of happiness that reinforces the parent/child bond. What are the social implications of this finding as it relates to drug addiction, working parents and child abuse?
- Brain imaging technology, by literally seeing the working brain, can identify at an early age whether someone has an overall positive or negative personality. What factors contribute to the development of a positive or negative personality?
- People identified as having a positive personality show a higher immune response, and lower blood pressure and heart rates than their negative counterparts. How does this translate into greater resistance to disease?

While the institute is based in Psychiatry, participating scientists will represent areas from medical physics to psychology to the Waisman Center. They will be organized into four work groups: basic mechanisms of emotion, factors promoting resilience, interventional strategies, and education and training.

UW Medical School Dean Philip Farrell says the UW is uniquely poised to develop and support such an institute. In addition to having one of the largest concentrations of biological and social scientists interested in the study of emotion, the UW also has a rich tradition in cross-department collaboration and is home to several key resources, including the College of Letters and Science.

The scientific council and advisory board, comprised of some of the nation's most respected experts in the field, includes Joseph Coyle of Harvard Medical School; David Spiegel, Stanford University; and Jay Weiss, Emory University.

Anchor funding for the institute was provided by the Hedberg Foundation of Janesville, Donald Cheney of Eau Claire gave a significant gift and UW Medical School has contributed start-up funding.

Teaching academy hosts talk by student-learning expert

Bill Arnold

John Centra, professor and program chair of higher education at Syracuse University and an expert on learning assessment, will present a free lecture for faculty, staff and students on Nov. 8 at 3:30 p.m. in 1800 Engineering Hall.

Centra's lecture topic is "What Does Research Tell Us About Student Learning and Students' Perception of Their Learning?" He will describe current research and share the conclusions drawn from various approaches to measuring student learning via surveys and questionnaires.

Immediately following the lecture, at 4:30 p.m., the UW-Madison Teaching Academy will host a panel discussion about its Peer Review and the Student Assessment of Learning task forces. The lecture and panel discussion will be videotaped and distributed by the American Association for Higher Education to 12 other campuses that, along with UW-Madison, are taking part in the national Peer Review Project.

The assessment of learning task force is working with the University Committee and an ad hoc committee of the Faculty Senate to explore the possible advantages of a standard teaching assessment survey that could be used throughout the campus. The ad hoc committee's report is due at the Dec. 2 meeting of the Faculty Senate.

James Taylor, Bascom Professor of Chemistry and chair of the Teaching Academy, says the panel discussion will feature questions that explore concerns associated with determining learning effectiveness. Taylor is inviting questions for the session; mail questions to the Teaching Academy, Office of the Secretary of the Faculty, 133 Bascom Hall (e-mail patricia.elsner@mail.admin.wisc.edu).

Centra's resume and two articles about his student assessment work are available for review at the Teaching Academy office.

Meeting focus: Instructional technology

Members of the Teaching Academy are doing a bit of homework for their Nov. 1 meeting.

The Teaching Academy's Fellows have been asked by the Academy Task Force co-chairs on Instructional Technology — Jeff Hardin, assistant professor of zoology, and Steve Ackerman, assistant professor of space science and engineering and atmospheric and oceanic sciences — to prepare for an in-depth discussion about instructional technology and how it affects their teaching. Some of the issues and questions they've been asked to think about include:

- What benefits, features and incentives have encouraged your use of educational technology?
- What barriers and deterrents have been discouraging?
- How have course goals and content affected the selection of specific types of instructional technology?
- What resources and assistance have been or would be helpful to you?
- What should be the short- and long-term goals of the Teaching Academy Task Force in the area of instructional and educational technology?

Hardin says it's only fitting that faculty and instructional staff be the recipients of these difficult questions. "There are several questions about the use of instructional technology that need to be addressed by our campus, and faculty and instructional staff are the best group to provide the answers," Hardin says, adding that the task is "especially urgent in light of the biennial budget's emphasis on technology and distance education."

Academy Chair James Taylor, says it's important that the discussion pinpoint the types of instructional technology tools that improve learning, those academic areas in which technology is a benefit and "those where our present learning approaches work very well."

Discussing successes and failures, he says, will "be helpful in translating the experience from one discipline to another."

The academy, Taylor says, can provide a forum for presenting resources for faculty who want to implement new technology in their courses. "What is the experience level of our faculty and staff?" Taylor asks. "We expect it to span a substantial range. If so, what do we do to provide the most efficient campus resources to this area?"

Adds Hardin, "First, we need a clear definition of the problems we face in implementing instructional technology; second, we need further study by and input from experts in the field; third, we need to share our own experiences with each other; and finally, we need to develop a plan and a vision regarding how UW-Madison should move forward in using this tool to enhance learning."

Taylor says the academy is seeking opinions on these issues from faculty and instructional academic staff. Those who wish to participate can send information to: Teaching Academy, Office of the Secretary of the Faculty, 133 Bascom Hall (e-mail patricia.elsner@mail.admin.wisc.edu).

JOBS

from page 1

real estate, advertising and legal services. By comparison, health care-related jobs increased by 27,000 jobs and manufacturing jobs increased by only a few thousand.

Nichols said the sector is likely to keep growing in Wisconsin cities.

"The industrial park of the future is the office building," he said. "These white-collar service jobs are replacing the factory as the engine of economic growth."

Wisconsin's service-sector growth mirrors national trends, Nichols said. Production of goods is becoming more reliant on front-end engineering and design, and less in manufacturing.

"The difference between your father's car and modern cars is the accumulated 'brain hours' behind the manufacturing," he said. "The development of modern products is more dependent on brains than brawn, and that trend will continue."

But Nichols said the commission should consider whether we want more job growth. Wisconsin's unemployment rate is among the lowest in the nation, and employers are having trouble filling positions. Faster growth will trigger debate if it means more people moving to the state, he said.

Nichols said economic growth might be best achieved by promoting the state as a good place to live. "The young entrepreneur who is looking for a site to start a small business often looks for places that have high-quality education, low crime and a good environment. We have those traits right now and we should find a way to send that message."

Wiley emphasized an overlooked contribution the university makes to technology transfer. The most important "transfer" is that of highly trained, technically skilled graduates. Thousands of masters and doctoral graduates, and a growing number of undergraduates, transfer to industry a first-hand knowledge of technology gained through work in university research, he said.

Another big contribution is spin-off companies from UW-Madison research. Wisconsin can now claim 86 companies that have spun off of UW-Madison research, a number that has grown at the rate of 10 per year in the last three years, he said.

That trend is likely to continue in high-tech fields where UW-Madison researchers are national leaders. In biotechnology, for example, the university has been a huge contributor to understanding human, animal and plant genomes.

This knowledge, Wiley said, is "ushering in an era of 'Buck Rogers' medicine that will move many, if not most, of our health care concerns out of the realm of 'What is possible?' and into the realm of 'What is ethical?'"

Nanotechnology is another UW strength, and researchers are looking at building tiny instruments that could revolutionize surgery and improve the efficiency of automobiles and appliances. And materials science is producing commercial breakthroughs with products such as polymer-cellulose composites, which use wood and plastic waste materials to produce building materials with superior strength.

Wiley added that Wisconsin industries "will have a wonderful opportunity to embrace technological progress coming from university research." Some of Wisconsin's biggest industries — in areas such as dairy, paper-making and brewing — could especially benefit from increased partnerships.

TIRES

from page 1

empty the stockpile in five to 10 years."

Bosscher and Edil used a stretch of road east of Madison as a test site for roadbed material augmented with tire chips. They measured how the road held up under the weight of extensive car and truck traffic.

The studies have generally found that tire chips make a cheap and effective fill material for roads, while not adversely affecting ground water quality.

Edil says the best use of tire chips would be as a supplement to gravel and sand in places where the ground needs reinforcement, such as in land of marginal building value or in soils too soft to build on.

Edil says tire chips are already being used with some success on rural roads in Minnesota and Colorado.

"The issue is not just substituting one cheap and available material with another, but getting a superior material for what you're trying to accomplish," Edil says.

Tests of shredded tires as pollution filters also produced promising results. Park led projects that found tire chips have the ability to absorb organic compounds that might leach from landfill sites. They also had "great potential" in soaking up volatile organic compounds during waste water treatment.

The researchers have produced a report that they hope will guide state agencies and companies in using scrap tires in construction. The next step, however, has to come from agencies willing to develop projects.

Funding for the research has come from the state Department of Transportation, the state Department of Natural Resources, the Environmental Protection Agency and the Solid Waste Management Council.

Currently, about 17 percent of all waste tires are burned as an alternative fuel source in power plants and other industries, such as cement plants. Burning tires is growing in popularity as a solution, but Bosscher sees only valuable material going up in smoke.

"Why waste something as fuel that clearly has a greater engineering value?" he says. "We reuse the steel from cars, we can do the same for tires."

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NEWS TIPS

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Research - Psychology

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28 Bascom Hall • 500 Lincoln Drive
Madison, Wisconsin 53706–1380

Oct. 11, 1995

TO: Talk/public affairs show hosts and producers
FROM: Liz Beyler, (608) 263-1986
RE: UW-Madison experts/October tips

• <u>The psychology of effective financial counseling:</u>

When you shop around for a financial counselor, look for more than technical expertise. That's the advice of **Chuck Pulvino,** a professor of counseling psychology who's studied the qualities of effective financial counselors. A good financial adviser should pair his or her technical knowledge with the psychological needs of clients. For example, if a prospective counselor doesn't ask what your financial goals are and what your comfort zone is for investment risk, then move on. In that case, the needs of the counselor are taking priority over yours. You can reach Pulvino at (608) 262-0462.

— Jeff Iseminger, (608) 262-8287

• <u>Public health policy and issues for American Indians:</u>

A recent conference on Native American health issues, organized by **Gary Sandefur,** professor of sociology and associate vice chancellor, concluded that specific characteristics of and changes in this segment of the population might call for revising Indian health policy — especially in light of proposed Medicare and Medicaid modifications. Sandefur says fewer and fewer Indians live on reservations now; most are dispersed throughout the general population.

"However, reservations continue to be among the country's most economically impoverished areas," Sandefur says. "In addition, certain medical conditions such as alcohol abuse and adult-onset diabetes are much more common on reservations than in the general population." He is currently compiling conference papers into a new book; for more information, call him at (608) 262-0037/262-5246.

— Barbara Wolff, (608) 262-8292

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• **On the origins of the alphabet:**

You are reading this in written form because, eons ago, one person wanted to preserve the work of one poet.

Barry Powell, professor of classics, theorizes that a lone scribe developed the early Greek alphabet in order to save for later perusal the work of the poet Homer. To duplicate the complicated vowel rhythms exactly, Powell says, the fan devised a special code, which became the alphabet that we, and fully half the world, use today.

Powell currently is editing a volume of studies on Homer. Powell can be reached at (608) 233-5991/262-7337.

— Barbara Wolff, (608) 262-8292

• **Exploring French-speaking West Africa:**

What does your audience know about West Africa? Do they know of the rich oral traditions? About cultural celebrations? About the fact that French is one of the official languages in many of these nations?

A UW-Madison outreach and Wisconsin Department of Public Instruction conference, Gateway to West Africa, is being held this month to share information about West Africa.

Call **Edris Makward,** professor of African Languages and Literature, (608) 263-3891 or 262-2487, to learn about the richness of West Africa's oral traditions. Ask him to tell you a story handed down by generations of West African storytellers. Or call **Emilie Ngo-Nguidjol,** a reference librarian who grew up in West Africa, at (608) 262-3647 or 262-3197. She can tell you about foods and celebrations of these nations and how many were influenced by the French.

— Judy Reed, (608) 262-5421

A - Psychology

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FOR IMMEDIATE RELEASE 2/13/95

CONTACT: Janet Hyde, (608) 262-9522

STUDY: MEN AT CULTURAL CROSSROADS ON PARENTAL LEAVE

MADISON — Federal laws may guarantee parental leave to fathers of newborns, but the laws of family economics keep many willing fathers from taking advantage, a new University of Wisconsin-Madison study shows.

Janet Shibley Hyde, a UW-Madison psychology professor, conducted a survey of 550 men, whose wives or partners were pregnant, to gauge attitudes and experiences on parental leave. The study reveals a growing expectation that fathers be more actively involved in raising children, she said, but the realities of the workplace collide with that cultural shift.

"I think the take-home message is that we are caught in a time of transition between our traditional standards for fathers as breadwinners and the more modern standard of family involvement," Hyde said. "The way parental leave policies are right now with most employers, those two goals are really at odds with each other."

Among the findings:

• Seventy-eight percent of fathers and 89 percent of mothers supported the right to job-guaranteed parental leave for fathers. That right has existed since January 1993, when Congress passed a law providing up to 12 weeks of job-guaranteed, unpaid leave for working fathers.

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• Ninety-one percent of fathers took at least one day of parental leave at the birth of their child. While the average leave was less than five days, about 20 percent of respondents took a week or more of leave. That compares to an average of nine weeks for women in the study.

• The most common methods of taking leave were using vacation time (51 percent), personal days (44 percent), or sick days (17 percent). Almost no one took advantage of the law that allows for longer unpaid leave, Hyde said, because few families could afford any length of time without a paycheck.

• Forty-three percent of men anticipated a negative reaction among co-workers on taking a lengthy leave. Another 63 percent predicted a negative response from supervisors.

"There's the whole notion that if fathers take a longer leave they're not serious about their careers or their jobs," Hyde said. "They're worried about what people would say."

Hyde said the study supports the idea that U.S. employers should offer more flexible strategies for working families with newborns.

One progressive policy, in practice in New Jersey and Canada, fashions parental leave so that all costs do not fall on the employer, she said. New Jersey employees and employers pay equally into a fund, administered like a pension fund, that can be used for temporary disabilities that most employees are likely to encounter in their careers. The fund can be used for maternity leave, but it hasn't been extended to include men.

Other ideas include allowing more part-time leave and offering "flex-time" strategies to working parents. Also, some employers allow employees to "bank" vacation and sick days, which can later be used for paid parental leave.

Hyde said parental leave is far from a U.S. household word. But most European countries are further along in considering leave for both parents after child birth. Most

notable is Sweden, which offers couples 15 months of job-guaranteed paid leave to share between them. In the first year of these policies, only 3 percent of eligible fathers actually took leave. By 1989, 44 percent of fathers were taking advantage of the benefit.

Sweden, which was gravely concerned with a trend of declining birth rates since World War II, found it in the national interest to break with tradition and offer the aggressively pro-family benefit.

But is the United States open to such a social change?

"Yes and no," said Hyde. "I think we'll always have two camps of men, the ones who see bread-winning as most important and the ones looking to spend more time with their children. And that's fine, as long as both groups have options to do what they want to do."

The study, funded by the National Institute of Mental Health, is one of a series of UW-Madison studies on the challenges facing working families. Other studies from this project have investigated the psychological benefits of maternity leave, and the balancing act mothers and fathers play between work and family.

Co-researchers in the study include UW-Madison researcher Marilyn Essex, and psychiatry professors Roseanne Clark and Marjorie Klein.

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— Brian Mattmiller, (608) 262-9772

R. Psychology

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HOLD FOR P.M. RELEASE **2/19/94**

CONTACT: H. Hill Goldsmith, (608) 262-9932, (608) 263-4735

TWIN STUDIES SUGGEST AN EVEN TEMPERAMENT MAY LIE IN GENES

SAN FRANCISCO — Confronted with a toy mechanical spider, an infant recoils in fear. Faced with the same intimidating toy, the infant's fraternal twin shows interest, not anxiety.

Why the different response? The answer may lie in our genes, according to H. Hill Goldsmith, a University of Wisconsin-Madison professor of psychology.

In a series of studies of fraternal and identical twins, Goldsmith and others are accumulating evidence that suggests temperament is at least partly written out in the same genetic instructions that give us blue eyes or brown, short stature or tall.

"Our genes seem to account for about half of the variability we see in temperament," says Goldsmith. "The other half seems to be due largely to environmental sources of variation that remain to be identified."

In particular, negative aspects of temperament like fear and distress seem to be influenced more by our genes than by the experiences we share with our siblings, Goldsmith says.

The idea that our temperaments — one's customary frame of mind or natural disposition — may be inherent is not new. But the data emerging from studies of more than 700 pairs of twins is providing some of the first hard evidence that aspects of our temperaments arise from a genetic template.

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According to Goldsmith, who directs the Personality Development Research Groupat UW-Madison, human temperament emerges in the first year of life and serves as an emotional regulator. In the first days of life, temperament seems not to emerge or is immeasurable, the Wisconsin psychologist says.

"We should not think so much as being born with a temperament encoded in our genes. It may take genetic influences a while to get organized. Generally, those influences show up later in infancy."

Over a lifetime, stability of temperament is an important part of our identities, Goldsmith notes: "A stable temperament is what makes us unique and identifiable individuals, and makes us predictable to our friends."

In his studies, Goldsmith looked for the differences in the early-developing emotional components of personality between fraternal twins whose genetic makeup is about 50 percent similar, and identical twins whose genetic blueprints are 100 percent identical.

What he found was that the dark sides of our temperaments, at least during infancy, tend to be influenced by our genetic heritage to a much greater degree than the positive aspects of temperament. The positive side of temperament — the ability to smile and laugh and be soothed — have a stronger link to environment.

"One could infer from the data that there is a moderate genetic affect on fearfulness," Goldsmith says. "For fear, the identical twin correlation is definitely higher than for fraternal twins."

According to Goldsmith, as the twins are studied over time, the genetic influence becomes more apparent. In identical twins, for example, the temperament of one twin can

be reliably forecast by an assessment of temperament in the other.

"In fraternal twins you can predict it to a lesser degree," says Goldsmith. "The greater predictability of the identical twins indicates that genes are responsible for much of the stability of temperament."

How the environment influences temperament is more difficult to measure, Goldsmith says. Such things as social learning, the warmth and love present in the home and a sense of self all contribute to the development of human temperament.

Proof positive of the genetic influence on temperament, Goldsmith says, must now await molecular genetic studies of temperament, a field just now being opened to behavioral scientists.

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— Terry Devitt, (608) 262-8282

R- Psychology

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FOR IMMEDIATE RELEASE 10/12/93

CONTACT: Richard Davidson, (608) 262-8972, (608) 263-0528

GRANT ESTABLISHES CENTER FOR BEHAVIORAL SCIENCES RESEARCH HERE

MADISON — Researchers at the University of Wisconsin-Madison have received a $2.7 million grant to explore the social and physiological links to emotion. The five-year National Institutes of Health grant establishes a Center for Behavioral Sciences Research — one of only two in the United States.

Richard Davidson, center director and the William James Professor of Psychology and Psychiatry, said the grant will be the first comprehensive examination of the factors responsible for individual differences in emotional reactivity, from genetic and neurobiological processes to complex social variables.

The other principal investigators at the center are Hill Goldsmith, professor of psychology, and professors of psychiatry Ned Kalin and Marjorie Klein.

The researchers will be exploring a number of research problems including the relationship between regions and structures of the brain and various kinds of emotions, such as fear, depression and pleasure.

"The research done at the center should shed light on a number of elusive questions, the answers to which have profound implications for mental health and illness," Davidson says. "Why are some people more vulnerable to stress than others? Why are some people resilient in the face of life's difficulties? Probing and answering such questions should establish the UW-Madison as the leader in this field."

Included on the research agenda are studies involving:

- examination of temperament and brain physiology of fraternal and identical twins.
- measurement of brain electrical activity and metabolism in different emotions.
- assessment of the impact of infant temperament on personality and depressive symptoms in mothers.
- detailed study of the underlying brain mechanism of temperament in rhesus monkeys.

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— Harvey Black, (608) 262-9772

R: Psychology

① Hyde
② Research - Psychology

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HOLD FOR P.M. RELEASE 8/20/93

CONTACT: Janet Hyde (416) 361-1000 (after Monday, Aug. 24. She can be reached at (608) 262-9522)

(Note to editors, news directors: Hyde will be presenting this research at the annual meeting of the American Psychological Association in Toronto on Friday, Aug. 20 at noon.)

UW-MADISON STUDY FINDS

SHORT MATERNITY LEAVES CAN POSE PROBLEMS FOR NEW MOTHERS

MADISON — Short maternity leaves pose a risk for psychological problems for new mothers, according to a study by University of Wisconsin-Madison researchers.

In the first longitudinal study of its kind, a team of psychologists has found that when women who are worried about their jobs or marriage take maternity leaves of five or six weeks, they are more depressed and more anxious four months after the birth than women who take 12-week leaves.

"We're concerned that for women who already are experiencing stress of one sort or another, short maternity leaves put them at risk for depression and anxiety," said Janet Hyde, a UW-Madison professor of psychology and one of the study's authors.

According to Hyde, shorter leaves can be a problem because women have a great deal of adjusting to do after the birth of a child. To begin with, simple physical recovery after the birth can take a six weeks or more. Secondly, it takes time for mother and baby to become accustomed to one another. In effect, Hyde said, trying to squeeze physical recovery and adjustment to a new baby into five or six weeks can aggravate a situation with existing stresses.

Hyde said the increased levels of depression and anxiety she and her colleagues

-more-

found are not enough to send most of these women to seek psychological help, but they do add unnecessary problems.

The researchers also found that, on the whole, women who work outside the home are no more depressed four months after the birth of a child than are women who are homemakers. However, women who work full-time show elevated levels of anxiety compared with part-time workers and homemakers.

Known as the Wisconsin Maternity Leave and Health Project, the study, which is continuing, examined 570 new mothers and 550 of their husbands or partners, who completed a battery of tests and interviews.

Most (80%) of the women in the study came from Milwaukee, the remainder from Madison. All were recruited through obstetricians and HMO clinics.

The findings of the study are particularly important, said Hyde, in light of the new Family and Medical Leave Act, which allows new mothers to take up to 12 weeks away from their job to care for a new infant. Hyde said this research supports maternity leaves of that length over shorter leaves because of the psychological problems that can develop for for women who are already under marital or job stress.

But, Hyde noted, that because the 12-week leave is unpaid, many women simply don't have the option of spending 12 weeks away from work.

"Most of the women who said they would have liked to take the longer leaves took the shorter one because they couldn't afford a longer unpaid leave. One of the implications is we need to work toward policies of paid parental leaves," said Hyde.

Hyde and her colleagues expect to have results next spring or fall on the mental health of the women one year after the birth of their children.

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— Harvey Black, (608) 262-9772

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HOLD FOR TUESDAY, FEB. 11, PMs RELEASE

CONTACT: Richard Davidson, (608) 262-8972

RESEARCH FINDS BRAIN RESPONSES DIFFER UNDER STRESS, TRANQUILIZERS

CHICAGO -- Electrical activity in one part of the brain can mark the effect of a tranquilizer that helps monkeys overcome a stressful situation, a University of Wisconsin-Madison psychologist reported Tuesday, Feb. 11 at the annual meeting here of the American Association for the Advancement of Science.

Richard Davidson reported that monkeys showing more behavioral stress than others also showed more electrical activity in the left frontal cortex -- the portion of the brain responsible for thought and emotion -- when facing similar situations under the influence of a tranquilizer.

"The study is the first to show individual differences in behavior in relation to brain-lateralized drug responses," said Davidson, a professor of psychology, who conducted the research with Ned Kalin, a professor of psychiatry at the University of Wisconsin-Madison Medical School.

This research is designed to get at the reasons why the left and right frontal lobes may be differentially involved in different types of emotional responses.

"For many years we have done research which has established that the left frontal region is specifically activated during positive emotions associated with approach behavior such as exploration or a human infant reaching toward its mother. The right

-more-

frontal region becomes activated during negative emotions associated with withdrawal behavior. But we don't know why the two hemispheres are differentially sensitive to these two types of emotional states," Davidson said.

In this study, an unfamiliar person appeared on four occasions before 10 different year-old rhesus monkeys. The typical reaction of monkeys was to stand stock-still as if frightened. Researchers recorded the time each monkey froze in the presence of the stranger and correlated distress with the length of time the animal froze.

Davidson and Kalin found that rhesus monkeys who stood still for longer periods in the presence of a stranger also showed more electrical activity in the left frontal cortex, in a similar situation, under the influence of a non-sedating injection of the drug diazepam (valium).

In two additional sessions, the monkeys' brain activity was recorded after they had been given either non-sedating doses of the tranquilizer or placebos, and after they had been held by a stranger.

"There are molecules known as receptors for benzodiazapines on cells in the frontal cortex and the findings from this study suggest that individuals may differ in the distribution of these molecules," Davidson said.

"It may be that in those animals most prone to freezing, there are fewer such receptors in the the right frontal cortex than in the left," he said. "This may be why the response to valium is more pronounced in the left than right hemispheres of the monkeys who freeze the most."

Davidson plans to further examine the issue of benzodiazapine receptor distribution by using such brain scanning techniques as positron emission tomography, which could determine their presence.

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-- Harvey Black, (608) 262-9772

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FOR IMMEDIATE RELEASE 1/28/92

CONTACT: Frank Farley, (608) 262-0834

TYPE T PERSONALITIES: EINSTEIN AND BUNGEE-JUMPERS

MADISON -- What do these wildly disparate phenomena -- Einstein's theory of general relativity and a plunge off a bridge by a bungee-jumper -- have in common?

Simple, says Frank Farley: Both are products of a Type T personality. Farley is a professor of educational psychology at UW-Madison and the man who coined the term Type T, or thrill-seeking, personality.

"I wanted to develop a general theory of human nature," says Farley, "that would assess how a person engages the uncertain." His theory, proposed in 1985, says people range from those who cling to custom like a storm-lashed sailor hugs a mast, to those who continually spurn caution or convention.

What a concept: Albert Einstein as a fire-in-his-eyes Type T. But Farley insists that T Types aren't just physical thrill-seekers; they're anyone like Einstein or Margaret Mead or Albert Schweitzer who take major risks to do the unexpected or unimagined. "That's where human progress and human creativity take place," he says.

According to the Wall Street Journal, Farley's done more work on risk-taking than anyone. For example, he's ballooned over China and Russia and white-water rafted in Costa Rica to watch physical T Types in action, though he admits he doesn't covet thrills as much as they do. "I'm more of an intellectual Type T," he says, "because I'm

-more-

trying to develop a broad theory of human behavior in an age of specific psychological models for limited phenomena."

This Type T thinker has extended his theory to historical analysis: "The qualities of immigrants, versus the qualities of those who stay at home, affect the course of nations. I believe immigrants tend to be T Types." That's why the United States is one of the most creative nations in history, he says. And that's perhaps why a leading German newspaper, Die Zeit, blasted his theory as implying that Old World stay-at-homes generate less creative juice than New Worlders.

It's not edging toward hyperbole to say that Farley has become a media magnet. He constantly gets calls from such media as USA Today, the Today Show and Time Magazine for comment on anything from Type T to the Iran-Contra hearings. "Scientists should give their science away to the public," he says.

He'll push for other psychologists to do the same next year as president of the 101-year-old American Psychological Association, the country's second-largest scientific society at 112,000 members. The only other scholars from Wisconsin to head APA were Harry Harlow in 1958 and Joseph Jastrow in 1900, both from the UW-Madison Psychology Department.

Farley stumbled into psychology as a career. A native of Canada, he attended the University of Saskatchewan as an undergraduate. "One day I wandered into an experimental psychology lab, and a wonderful professor there showed me around," says Farley. That professor, now retired in Quebec, sent Farley congratulations upon his election as APA president. Farley went on to earn his doctorate at the University of London, England.

He teaches a crush of students every year, about 2,000 of them. Farley loves to

teach, and apparently many students love him as a teacher: In 1989 he was named a "Best Professor in Madison" in the annual readers' poll by Madison Magazine.

"Modern findings of cognitive psychology affect the way I teach," he says. He often embeds principles in stories, because he believes narratives facilitate the communication and learning of scientific ideas.

"I tell students there are two keys to success in life," Farley says. "One is self-knowledge, and the other is motivation. Know your strengths and act on them." A former student, Laura Olsen, remembers Farley as a professor who doesn't dwell in an ivory tower: "An interesting twist to his class is that he showed us how to apply motivational theories to our own lives. He's a fine example of motivation in the flesh."

Motivation fuels heroism — another phenomenon that's galvanized Farley's interest, making him one of the nation's leading authorities on the subject. Who are his heroes? A physical Type T who loves to skate deliciously close to personal extinction? Or an intellectual Type T who cleaves conventional wisdom with a laser-like mind? Not at all, he says.

His heroes are two people who didn't display Type T traits, but showed a lot of love for each other and their children: his mother and father. "They survived a depression and two world wars, raised a large family on a blue-collar income, had a terrific time together and lived until age 91," says Farley. "They lived a charmed life."

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-- Jeff Iseminger, (608) 262-8287

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R: Psychology

FOR IMMEDIATE RELEASE 11/8/91

CONTACT: BEN ROSENBERG, (608) 262-9945

PSYCHOLOGIST: ONE-CHILD CHINESE FAMILIES RAISING SPOILED KIDS?

MADISON -- China's policy of mandating single-child families will reap dramatic changes in the world's most populous nation, according to Ben Rosenberg, a visiting professor of psychology at the University of Wisconsin-Madison.

Chinese children may grow up more willful, spoiled and aggressive -- in short, more like American children, says Rosenberg, who has conducted research on child development for more than 30 years.

"It's a social experiment the like of which never has been conducted before," says Rosenberg, on leave from the University of California at Berkeley, who since 1986 has worked with Chinese psychologists to systematically study how the one-child family will affect socialization practices and the emerging personalities of the children raised under the policy. The one-child orientation may even be affecting the rate at which children develop physically.

But, the behavioral data is raising concern among social scientists. Already, studies by the Chinese Academy of Science in Beijing of only children in Chinese kindergarten reveal a personality picture heretofore often seen in the only child of the West -- willful, spoiled, impulsive and aggressive.

Such personality similarities between Chinese and Western only children are surprising, says Rosenberg, because of the differences between the two cultures. He

-more-

suggests that the Chinese, who have a tradition of venerating the elderly, might not be expected to lavish so much attention on an only child. The large numbers of extended families in China -- parents, grandparents, uncles, and aunts living closely together -- might also make it less likely that an only child would get so much attention. Nevertheless, the findings, which are based on ratings of children's behavior by parents and teachers, demonstrates that aspects of personality can span cultures.

Such personalities may bode ill for China because of the enormous numbers of only children in that nation, possibly setting the stage for large numbers of narcissistic personality disorders, says Rosenberg. Rosenberg adds that studies show that in Shanghai, China's largest city, and in Nanjing, 97 percent of the pre-schoolers are only children. In the West, he added, only about 8 percent of the children are "onlies."

According to Rosenberg, Chinese social scientists are worried about the social consequences of their one-child policy, begun in the mid-'70's to ease China's swelling population burden. China's population now is an estimated 1.1 billion -- more than four times that of the United States.

Rosenberg says that Chinese psychologists now are hoping to develop ways of countering some of the consequences of a nation populated by large numbers of only children. One possibility is structuring the educational system so that children will grow up less selfish,.better able to control themselves and better able to use social skills commonly learned through interaction among children in families.

The one-child family policy also appears to have caused unexpected changes in child development. Rosenberg says psychologists have found that the Chinese only child is two or three months slower than the typical child in learning to stand, creep, or crawl. The likely cause is doting parents,who are so concerned about their one precious

child, that they scoop the infants up off the ground to protect them from such threats as putting dirt in their mouths. "This is an example of of a social policy affecting what what was previously thought to be an unchangeable course of physical development," Rosenberg says.

Rosenberg will be returning to China this spring to work with researchers at the Tongji Medical University in the central China city of Wuhan to help analyze studies of socialization practices and the personality of only children.

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-- Harvey Black, (608) 262-9772

R: Psychology

UNIVERSITY OF WISCONSIN-MADISON

News and Information Service

19 Bascom Hall, 500 Lincoln Drive
Madison, Wisconsin 53706
(608) 262-3571

March 6, 1991

NEWS TIP
Teen performance in the classroom

TO: Reporters and editors
FROM: Jeff Iseminger (608) 262-8287

Teens often pay a price for a part-time job that, in the long run, can dwarf the benefits of extra cash in their pockets.

The price? Poorer grades, weaker family ties and missed opportunities in athletics, music and other activities.

That finding was just one of many in a massive three-year study recently completed at the University of Wisconsin-Madison. The study found that teens working more than 10 hours a week show a troubling tendency to drop out of extracurricular activities, spend less time on homework and participate in fewer family rituals like meals and trips.

In contrast, the study reveals that extracurricular activities, unlike part-time jobs, tend to produce better grades.

These findings come from responses of 12,000 students in nine high schools in Wisconsin and California. The study, coordinated by the National Center for Effective Secondary Schools at UW-Madison, is the most comprehensive ever conducted to answer this question: How do non-instructional influences like parents, peers, part-time jobs and extracurricular activities encourage -- or discourage -- student achievement? Other studies have looked at one or another of those influences but have not examined their interrelationship, as the UW-Madison project did.

If you would like to delve further into the study, there are many other findings. Among them:

--Authoritarian parents with high expectations tend to produce the worst grades in kids, worse even than parents with low expectations.

--Parents and peers, though operating independently, generally exert a positive influence on teenagers. For example, most students report that their peers discourage the use of hard drugs, just as their parents do.

If you'd like to know more, call Bradford Brown, one of the study's three primary researchers and a professor of educational psychology at UW-Madison, at (608) 262-0838 or (608) 263-4245 days or (608) 833-0710 evenings. Or call Jeff Iseminger at (608) 262-8287 to set up an interview with Brown.

Thanks very much for your consideration.

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uw news

R: Psychology

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: HOLD FOR PM RELEASE SATURDAY, FEB. 16, 1991

CONTACT: Terri Moffitt (608) 262-7951

DISTINCTIONS SHOULD BE DRAWN AMONG DELINQUENTS, UW-MADISON EXPERT SAYS

WASHINGTON, D.C.--The assumption that teenagers who commit similar crimes are psychologically similar is wrong and can harm their development, a University of Wisconsin-Madison psychologist reported Saturday (Feb. 16) at the annual meeting of the American Association for the Advancement of Science.

In a landmark longitudinal study, Terri Moffitt, a UW-Madison professor of psychology, found that teenagers whose childhoods were marked by family disruptions and continual behavior problems went on to commit crimes ranging from theft to assault in their teenage years. But she also found that many adolescents who commit similar acts had essentially problem-free, well-adjusted childhoods.

"We need to differentiate between these two groups," Moffitt said. "We're muddying the issue by lumping them together."

Moffitt argued that programs to identify and treat problem-causing children should be started as early as possible to help them control their behavior. She emphasized that treating as criminals those teenagers who grew up problem-free and exhibited "late-blooming" delinquent behavior runs the risk of stigmatizing that group.

"Labeling them as delinquents hurts their ability to desist from crime," she said. Moreover, studies indicate that those children, left alone, will stop their delinquent behavior as they mature, she said.

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The children in the study were evaluated every other year both during school and in their pre-school years. Both groups of adolescents who committed crimes came from similar social and economic backgrounds.

Moffitt's research, part of the Dunedin Multidisciplinary Health and Development Study, evaluated 536 boys in Dunedin, New Zealand. She found that adolescents whose parents and teachers described them as hyperactive, hyperaggresive, and who had general behavior problems, went on to commit crimes as adolescents. As children, these boys -- whom she terms Life Course Delinquents -- also had poor academic records marked by reading problems.

In essence, said Moffitt, their teenage anti-social behavior is a continuation of the behavior problems they showed before they began school.

Thirty-two teenagers, or 6 percent of the sample, were found to be Life Course Delinquents. According to Moffitt, that figure matches the number who would have been expected to be delinquents, based on previous studies of anti-social behavior.

The study also found that 169 teenagers whose early years had not been marked by such problems had committed delinquent acts. Moffitt attributed the anti-social behavior of the latter group to a "maturity gap."

Teenagers today, she said, physically mature far earlier than they did generations ago. They are biologically ready to participate in life as adults, yet there are limited opportunities for them to do so. The only alternative that society offers is school.

These teenagers, whose delinquent acts begin around the age of 13 and 15, are very likely imitating or modeling the anti-social behavior of teenagers who have had life long histories of social problems. The so-called late blooming delinquents may view this anti-social behavior as adult and regard it as one way they can act older, and gain the respect that comes with being adult. It's very likely, Moffitt said, that these teenagers will stop such behavior on their own as they grow up and gain entry into the adult world and the rewards it has to offer.

While the Dunedin group has not yet reached adulthood, Moffitt said that a similar study, which followed adolescents in London to age 36, supports that prediction. That study, carried out by David Farrington of Cambridge University, found that adolescents whose problem behavior began when they were teens stopped their criminal behavior by the time they reached adulthood.

Moffitt spoke at a symposium on "Violence and Youth: Research and Prevention."

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-- Harvey Black (608) 262-9772 #4329I

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

R: psychology

Release: Immediately 9/5/90

CONTACT: Judy Harackiewicz (608) 262-5924

PINBALL-PLAYING STUDENTS KEY TO MOTIVATION RESEARCH

MADISON--Why do some people enjoy playing the piano? Why do some people love their jobs? And how can joy in work or play be nurtured to make our lives more productive and satisfying?

Those are questions that University of Wisconsin-Madison psychology Professor Judy Harackiewicz is trying to answer. And she is doing it in a unique way: by testing the reactions of college students -- 170 of them so far -- as they play a 1970s vintage "Jungle King" pinball machine in her lab.

Harackiewicz is one of only about 10 researchers in the country studying intrinsic motivation -- people's internal drive to do something for its own sake, rather than as a means to an end. She wants to know what can foster such motivation, and what can sabotage it.

Intrinsic motivation is important, she says, because it is one of the few human drives that will sustain people throughout life. But it also can get undermined by external forces.

"Kids naturally love games and sports, but how many have had that enjoyment ruined by something that happens in Little League or some other setting?" she said. "There are countless ways to interfere with interest."

Researchers in the fields of sports, organizational, and educational psychology have worked for decades on research that ties motivation to performance. There is an enormous amount of literature on how to get kids to

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do better, Harackiewicz said. But there has been little scholarly attention focused on enjoyment.

"Piano lessons are a good example," she said. "Children don't just sit down and enjoy playing the piano. They have to be taught. How they are taught has a big effect on whether they learn to love it or to see it as a chore."

Harackiewicz's pinball players are providing her with some insights into the dynamics of performance and enjoyment.

Her subjects complete a standard personality test, in an effort to determine if they are basically achievement-oriented or non-achievement oriented. They then take to the pinball machines. Afterward, they are given varying feedback from Harackiewicz and her graduate students to see how it affects their enjoyment of the game.

The feedback can be positive or negative. Often subjects are told how their performances rate relative to other players. Sometimes the experimenters assign performance goals or give rewards (movie passes, for example) for good performances.

Research has shown that achievement-oriented people usually like competitive and goal-setting environments, while those less achievement-oriented react negatively to the same situations. That has proven true with Harackiewicz's subjects.

"The high achievers come in, and they want to know what the highest score has been," she said. "They enjoy the challenge of trying to beat it.

"But those who are less achievement-oriented, even those who are equally good performers, just don't want to know what other people have done. They hate it, because it puts pressure on them, and it ruins their enjoyment of the game."

Such insight could be particularly helpful to supervisors, coaches, teachers and others who have an investment in getting people to perform well

and enjoy their work, Harackiewicz said. Most management strategies designed to enhance performance were developed without considering enjoyment, she said.

"If you only care about performance, there are countless ways to get good performance -- goal-setting and positive feedback are two examples," she said. "But some strategies that are good for performance are bad for intrinsic motivation.

"In the long run, people who are happy, creative and involved in their work provide higher quality performance. That requires a larger view than a focus on immediate performance, but it is important."

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 3/13/90

CONTACT: Richard Davidson (608) 262-8972/263-9461

BRAIN ACTIVITY MAY BE SIGN OF FUTURE DEPRESSION

MADISON--University of Wisconsin-Madison researchers have found a physiological marker of depression in people who are not currently depressed.

The research subjects had been clinically depressed in the past. However, at the time of the study they showed no depressive behavior.

These are individuals who are not depressed but exhibit electrical brain activity linked to depression, said psychology Professor Richard Davidson, whose study appears in the latest issue of the Journal of Abnormal Psychology.

Davidson suggests that individuals showing this physiological marker may be more likely to become clinically depressed in the future, as a result of stresses in their environment.

"The nature of those stresses is difficult to specify, other than to say it is likely, based on other scientists' work, that they have to do with negative life events (divorce, death of a loved one, loss of job, etc.)," said Davidson. But the nature and timing of these events in producing depression is not yet well understood, Davidson went on.

He emphasized that these differences in brain function are only one part of the equation in understanding depression.

Davidson also pointed out that there may be individuals who show the pattern of brain functions found in depressed patients, but who never develop the disorder.

"Those individuals, we would hypothesize, have been buffered from the

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kinds of environmental stresses that produce depressive symptomatology," Davidson said.

In this study Davidson and graduate student Jeffrey Henriques analyzed electrical activity from several brain regions in previously and never-depressed individuals. The researchers found the most dramatic differences in the left frontal or anterior lobes of the brain; once-depressed individuals showed less activity in this region than did those who were never depressed.

Davidson says the left frontal lobe of the brain shows increases in electrical activation when a person is feeling happy or excited, or experiencing "positive emotions associated with energy or vigor."

Davidson is uncertain as to why depressed and non-depressed individuals show these differences in brain activity. But he does say that both genetics and environment may play roles.

Psychologists have long known that individuals who have suffered severe brain damage in this area are subject to severe depression.

Davidson doesn't expect brain activity measurement will be used in mass screenings to predict depression in people. He says the procedure is too expensive and time consuming for that. Rather he thinks it eventually may help psychologists and psychiatrists offer improved treatment and understanding to depressed patients.

Davidson is directing a research program to understand the links between brain activity, emotion and affective disorders such as depression. He is currently doing a longitudinal study of a group of children whose behavior shows no signs of depression, but who do show the decreased electrical activity in the left frontal lobe part of the brain associated with depression. One object of this study is to find if these measures of brain activity can predict the occurrence of depression in conjunction with negative environmental events.

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--Harvey Black (608) 262-9772

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 11/22/89

CONTACT: Anne Savage (608) 262-7550

TINY MONKEYS WITH PUNK HAIRDOS INSPIRE COLOMBIAN VILLAGE TO CONSERVE

MADISON--Under the trappings of khaki, work boots and binoculars, Anne Savage is a missionary in disguise.

Her goal: convert Colombians to conservationism.

Savage, a University of Wisconsin-Madison graduate student in psychology, recently returned from the forests of northern Colombia where she developed a public awareness program on the plight of the cotton-top tamarin for the nearby town of Coloso. There is now interest in the international conservation community to make the program a model for other endangered species in South America.

Cotton-top tamarins, a rare species in the wild, are found only in Colombia. "Once we lose them in Colombia, we lose them period," Savage said. "They won't be found in any tropical forest in the world."

Savage created Proyecto Titi (Project Tamarins), to alert the villagers of Coloso to the dangers faced by the cotton-top tamarin. "Today the biggest threat is habitat destruction," Savage said. But it is not the only threat. People's lack of knowledge about tamarins, and about the forests themselves, add to the tamarins' dilemma.

The forests of Colombia are being razed to provide timber for fuel and housing, land for agriculture and pasture for cattle grazing, Savage said. The surviving cotton-top tamarins -- estimates of their population range between 300 and 1000 -- face the prospects of homelessness and death, she said.

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Before deforestation became the major threat to cotton-tops, the species was assaulted on a different front. Approximately 20,000 to 30,000 monkeys were imported into the United States for biomedical research before they were declared an endangered species in 1973, Savage said. Exportation of cotton-tops from Colombia was consequently banned.

Savage has been studying cotton-top tamarins for nine years, spending much of that time at the university's captive breeding colony. The species breeds very successfully in captivity -- most females have twins -- and the colony is now home to 55 monkeys. Cotton tops from the colony have been placed in zoos throughout the country.

In 1987, Savage and Charles Snowdon, the UW-Madison psychology and zoology professor who started the captive breeding center at UW-Madison, left for Colombia to observe cotton tops in their natural habitat. They joined forces with Colombian biologists from INDERENA (a protection agency similar to the U.S. Fish & Wildlife Service) and set up a field program on the northern coast of Colombia.

Proyecto Titi grew out of this field work. Savage would often go into Coloso to use the phone on weekends. She began questioning the villagers on their knowledge of cotton-top tamarins and conservation issues. She was startled by some of the responses.

Although Coloso is but three miles from the forest, almost 70 percent of the high school students had never visited the area. Myths and misconceptions about the forest and wildlife abounded.

"They thought the forest was teeming with snakes and they were really afraid of it," Savage said. More than 90 percent of the students had no idea that the cotton-top tamarin was found only in Colombia

"We would ask if there are the same number of monkeys today as there were ten years ago, and people would say yes," Savage said. "We would ask if monkeys made good pets, and people would say yes. We know neither is true."

Savage found that the villagers were willing to participate in a community action program. Savage and the INDERENA biologists developed a series of classroom lectures on the forest and wildlife of the region for elementary and high school students.

The lectures proved a success. After completion of the lectures, almost all of the students understood that cotton-top tamarins were native to Colombia and that the possibility of extinction was very real.

But Savage's missionary zeal did not stop in the classroom. She wanted to go one step further and give the kids a direct experience with cotton-top tamarins. Because myths about the forest made conducting a training program there difficult, Savage took advantage of a home-town opportunity.

Three cotton-top tamarins had made the village of Coloso their home, roaming from backyard to backyard. Because the group of three lacked a breeding female, Savage contributed a couple of female tamarins from IDERENA's captive breeding facility to the family and Coloso's cotton-top "field operation" was ready to go.

"We wanted to take high school kids and see if we could train them to become field biologists," Savage said. Twelve high school students received school credit for going through an intensive lecture series and learning the ropes of field research.

The project was funded by the World Wildlife Fund, which helped pay for materials such as binoculars and notepads so that the children could watch the tamarins and record what they saw.

The arms, chests, legs and tufts of hair on the monkey's heads were dyed in various shades of red, orange and blue hair dye to make identification easier. The cotton tops were custom-fitted with backpacks that held small radio transmitters. The tiny monkeys, (they weigh about a pound and are the size of squirrels), with their "punk" hairstyles, became the darlings of the village.

Savage eventually took these same students to the forest. Many saw the forest for the first time and all were able to see the effects of massive destruction on the forest. They left with a newly developed appreciation for the forest, Savage said.

This enthusiasm was infectious, says Savage. The townspeople were eager to become involved in the project. A peer teaching program seemed to be the answer.

"We asked ourselves, what more effective method to get the conservation message across than by kids teaching kids?" So a group of elementary school children was invited to go on a field trip to the forest and the students from Proyecto Titi shared their knowledge on cotton tops and conservation with the younger children.

"This type of peer-teaching program is exactly what is needed to make conservation a reality in many local communities," Savage said. "If the local villagers take pride in the forest, as these students have, the conservation programs developed by biologists will be effective."

Savage has been asked to run a workshop on Proyecto Titi at the first Pan-American Conference on The Conservation of Wildlife Through Education, to be held January 23-27 in Caracas, Venezuela. Participants will explore the possibility of implementing programs modeled on Proyecto Titi for endangered species in other South American countries.

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-- Judy Davidoff (608) 262-8290

1890I

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 10/10/89

CONTACT: Janet Hyde (608) 263-2051 or (608) 262-9522

FIRST MAJOR U.S. STUDY ON MATERNITY LEAVE TO TARGET MILWAUKEE WOMEN

Is there really an optimum length of time for a working mother to remain at home with her new baby? How does going back to work full time versus part time affect a mother's emotional health, her relationship with her baby, and her marriage?

These are some of the critical issues that University of Wisconsin-Madison researcher Janet Hyde will tackle in the nation's first major study on the ways that maternity leave affects a new mother and her family. By studying a group of 600 Milwaukee mothers, their partners and their infants, from the time the mothers are five months' pregnant until the babies are one year old, Hyde hopes to provide information that could help governments at the state and federal level make critical decisions about family policy, and help women make difficult personal choices about when to return to work after their babies are born.

The study is funded by a $1.3 million grant from the National Institutes of Mental Health.

Until now, research on working mothers has focused on the implications for infants rather than on the emotional tension between home and work responsibilities that working women face. With nearly half of mothers with infants under a year old in the work place, and the lack of a nationwide parental leave standard, many families are struggling with increasingly difficult choices. But information about the way women and families react to various kinds of maternity leave has largely been based on anecdotes and studies too small or limited to be statistically significant.

The work of Hyde and her co-investigators will be a foundation for some of the most critical social policy decisions - as well as some of the hottest political debates - of the future.

To arrange an interview with Janet Hyde, director of the Women's Studies Research Center at UW-Madison, call (608) 263-2051 or (608) 262-9522.

Among the issues Hyde is prepared to discuss are:

THE PART TIME IDEAL: CAN IT REALLY WORK FOR MOTHERS?: The pilot program that preceded this major study yielded some very interesting information: Mothers who returned to work part time while their children were babies seemed happier and better adjusted at work and at home than mothers who returned to work full time - and happier than mothers who stayed at home full time. Can part time work fulfill personal and financial needs while giving a mother more time to spend with her infant, or is it a one-way track to lower pay and a stalled career?

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THE POLITICAL AND SOCIAL IMPLICATIONS OF THE MATERNITY LEAVE STUDY: Parental leave is a political hot potato, and until now, irrefutable evidence of the social and mental effects of abbreviated maternity leaves has not been available. Yet some believe that guaranteed parental leave is simply another minimum labor standard - as were child-labor restrictions and minimum wage. How will this study be received by politicians who oppose a national family policy? What could the data the study provides do to help lawmakers tailor a policy that will take both the needs of business and the needs of family into account?

A PERSONAL COMMITMENT TO RESEARCH: Psychology professor Janet Hyde, 41, is a mother of two children, aged 8 and 11 years old. When each was born, she was able to take a year at home, "but I was in a very privileged situation, since I had tenure both times," says Hyde. "I'd like to see other women have those kind of opportunities if they want them." Her personal experience, combined with the hardship stories she'd heard about mothers in far more difficult situations, helped point Hyde at the work that will absorb much of her professional life for the next four years. Most of the research until now in the area of parental leave focused entirely on the needs of the infant - which Hyde considers critically important. But until now, she says, "The woman was completely left out of the picture."

-- Jackie Mitchard (608) 262-0065

1808I

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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CONTACT: David Gubernick (608) 262-3918

FATHERHOOD: OF MICE AND MEN

By Liz Beyler
University News Service

MADISON--Males of a monogamous species of mouse undergo a striking hormonal change at the onset of fatherhood that may have a positive effect on their parental behavior, a University of Wisconsin-Madison psychologist has found.

David Gubernick, an assistant professor of psychology, discovered that the level of prolactin (a hormone normally associated with the onset of maternal behavior) is significantly higher in father mice than in non-fathers.

The expectant fathers display a higher incidence of paternal behavior than virgin males, Gubernick said; they begin acting fatherly during the last trimester of their mates' pregnancies.

Gubernick's next step will be to examine whether similar hormonal changes occur in human fathers.

The discovery is part of Gubernick's effort to shed light on the basic processes of fatherhood in mammals and how they evolved. He works with the California mouse because it's one of the few rodent species believed to be monogamous.

Little is known about male parental care in mammals. "It's not a common activity, and is found primarily among some rodents, carnivores such as wolves and wild dogs, and some primates," Gubernick said. "Most of the data has been

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based on studies of the interaction between mothers and infants, but fathers can and do provide care for their young."

"The more we learn about the similarities and differences between species, the more insight we'll get into what favors male parental care in humans," he said. "Hopefully, we'll have a better understanding of the variations in parenting among males and the difficulties fathers face, and maybe we can help change or alleviate some of those."

Gubernick's male mice exhibit the same parental behaviors as females, and to the same extent, with the exception of nursing. From the day of birth, they sniff and lick their pups and huddle over them in a nursing position. The mothers and fathers both build nests, and watch over and carry their infants. Both are intimately involved and actively participate in childrearing. First-time mothers and fathers appear to be as likely to be parental as experienced ones.

Gubernick also has been looking at the possibility that the male mice, like females, undergo changes in certain brain functions with the arrival of parenthood.

Gubernick says factors underlying male parental behavior may differ from those influencing maternal behavior. For instance, the presence of a mate seems to play a strong role in maintaining the male mouse's parental responsiveness in the days after birth, which is triggered by a chemical signal in the mother's urine. Her parental responsiveness, on the other hand, is linked to the presence of her offspring rather than the presence of her mate.

The males receive certain benefits from investing in the care of their young, including an increase in successful reproduction and development of a social bond with their mates.

There is a personal footnote to Gubernick's research: the absence of his own father during his childhood gave him an even greater curiosity about "what turns males on to parenting and keeps them acting like parents."

Gubernick's research is funded by the National Institute of Child Health and Human Development.

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-- Liz Beyler (608) 263-1986

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Research Psychology

Release: Immediately 2/07/89

CONTACT:Richard Davidson (608) 262-8972

LOVE REMAINS A MYSTERY BUT SCIENCE CLOSING IN ON CERTAIN EMOTIONS

MADISON--What is this thing called love?

A complex equation of physiology, attitudes, emotion and mystery that science seems far from solving, according to a UW-Madison psychologist.

Richard Davidson, a specialist in the psychophysiology of human emotion, says substantial headway has been made in untangling the organic processes and behavioral cues involved in basic emotions such as sadness, happiness, disgust and fear.

But, at least for the time being, love is probably too complicated for precise physiological description and prediction, Davidson says.

One reason is that love, unlike happiness for example, does not appear to include universal facial expressions and other behavioral signals that psychologists can use as a starting place for comparative research, Davidson says.

Love also is laden with thought processes, attitudes, and other factors that are difficult to measure in the laboratory, Davidson says.

For example, even the definition of love seems to vary from individual to individual, Davidson adds.

"Love is probably not a pure emotion; it's more likely a state that includes a lot of processes other than emotion such as cognition and thought," Davidson says. "Twenty years from now, there may be a whole range of literature on what love is. But because of its complexity, it really hasn't been very well explained."

Davidson has been studying the physiology of human emotion, in both infants and adults, in response to clearly positive and negative stimuli -- a pleasant film clip, for example, or an abrupt separation of baby and mother.

Tracking the way people react to the stimuli has revealed certain characteristics that can be used to predict future behavior in some individuals, he says. That holds promise for predicting which people are susceptible to depression, anxiety and other psychological disorders, Davidson explains.

"And if you can identify, from psychobiological responses, which kids in a group of three-year-olds will develop, say, anxiety or depression, that might provide a rationale for very early intervention," Davidson says. "And with children, early treatment can be very valuable."

In the laboratory, Davidson has found a relationship between certain individuals' emotions and brain responses in the left and right anterior regions of their cerebral hemispheres.

Certain negative emotions tend to activate the right anterior region, while some positive emotions activate the corresponding region on the left side, he explained. Sometimes a person's vulnerability to a stressful event can be predicted by recording brain activity before a stimulus is introduced, he says.

Davidson expects further advances to come as new tools are developed for detecting chemical changes in the brain under different emotional states.

"We're still very far from being able to characterize the complete psychobiology of emotion," he says. "But certainly we are moving toward a more sophisticated analysis and understanding."

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--Chuck Nowlen (608) 262-0930

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Research Psychology

Release: HOLD FOR AM'S RELEASE JAN. 16, 1989

CONTACT: Lola L. Lopes (608) 262-9945/262-1040

DECISION-MAKING RESEARCH UNDER FIRE: ARE PEOPLE REALLY POOR DECISION MAKERS?

SAN FRANCISCO--In recent years psychology researchers have been convinced that people are, at heart, inept decision makers.

But that belief is now under increasing attack by other psychologists who contend that people are intuitively good decision makers.

Moreover, the widely-held notion that people of all stripes are seriously deficient in their decision-making abilities holds threatening social and political implications, said Lola L. Lopes, a University of Wisconsin-Madison psychologist.

This is especially true today, Lopes told scientists at the annual meeting of the American Association for the Advancement of Science (AAAS) here, because the hypothesis that people are irrational decision makers is transcending the field of experimental psychology and being uncritically accepted by social scientists and political decision makers.

Lopes, who studies decision making under risk, said the idea that people are irrational decision makers is little more than "hype and elitist hysteria telling us not to trust anyone without a Ph.D. in statistics or psychology."

She said "this message of irrationality" has arisen from an over-regard for statistical theory and the uncritical acceptance of the results of laboratory experiments that cannot be generalized to the real world.

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"I don't buy it at all," said Lopes. "A whole lot of important questions in life cannot be answered by statistical theory. It doesn't tell us much about day-to-day life."

Emblematic of the dangers of the spreading belief, Lopes said, is recent Congressional testimony that zeroed in on the decision-making process that led crewmen of a U.S. Navy cruiser to mistakenly shoot down an Iranian airliner.

Congress heard testimony that supported the contention that people are poor decision makers and that decried the military's lack of support for research into how people make decisions.

"I think the implication is unfortunate," Lopes said. "The incident was not caused by a simple statistical error as occurs in the laboratory problems."

According to Lopes, the crux of the emerging controversy over how people make decisions is a set of experiments used to determine if a human laboratory subject is using a statistical rule or intuition to make a decision.

"It's obvious that naive subjects don't know statistical rules. People reason using intuitive rules," she said.

While the experiments offer an acceptable way of gaining insight into how people make decisions, Lopes said, they are by no means applicable to evaluating the effectiveness of people's decision-making processes outside the laboratory.

"The conclusion of irrationality is not something you can draw from experiments themselves or from errors made by subjects in the laboratory. The failure of laboratory subjects does not imply that real people are failing."

Those laboratory results, Lopes said, have been selectively gleaned from research and amplified and popularized at the expense of other results that don't necessarily support the thesis.

She likened the research to toxicity tests where animals are exposed to large amounts of toxic substances. The tests, she said, will tell you

something about the effect of a toxin on an animal, but because doses are artificially controlled they do not reflect a real-world environment.

Lopes said it is conceivable that the flawed notion of people as inept decision makers will have a significant impact on social policy: "If decision making is statistical in nature, then the thesis is that only experts can make good decisions."

The Wisconsin psychologist fears this might erode public involvement in critical political and social decisions about such things as the introduction of new technologies, for example.

With this belief of people as having poor judgment, politicians may defer important decisions to technocrats and other "experts."

"At this point, this particular body of science is having an effect on social policy that is not supported by scientific research," Lopes said.

###

-- Terry Devitt (608) 262-8282

uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Research - Psychology

Release: IMMEDIATELY 07/14/88

CONTACT: Frank Farley (608) 262-0834

PUT SOME ADVENTURE IN YOUR FAMILY'S VACATION, PSYCHOLOGIST RECOMMENDS

BY Mary Ellen Bell
University News Service

MADISON--What is your idea of the perfect family summer vacation?

Is it two weeks at a comfortable cottage at the shore, reading trashy novels on the beach while the kids build sand castles? Or is it a white water rafting trip down the Colorado River?

If you want your vacation to bind the family closer together, choose the adventure on the river, not the snooze on the beach, recommends UW-Madison psychologist Frank Farley.

Farley is internationally known for his theories about what he calls the Type T personality. The capital letter "T" stands for "thrills," and Farley thinks some T-type excitement can be the glue that holds families together.

"Many kids are natural Type Ts," Farley explained. "They love it when their parents show some sense of adventure."

A vacation that exposes a family to some risks encourages them to work together to meet the challenge. An adventure together creates important family memories and family history, he added.

"People remember the things that stand out from ordinary experiences," Farley said. "They remember what is novel and exciting.

"Some individuals need to take risks in order to grow," he added. "Families, too, may grow stronger by taking some risks."

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How much adventure family members crave -- or will tolerate -- can be a good guide for planning a vacation, Farley said.

True Type T people seek excitement in most of what they do. When they take vacations, they like mountain climbing, exploring unfamiliar cities, traveling without reservations or schedules.

At the other extreme are people who want most things in life to be organized, predictable and familiar. They like returning to vacation spots where they've gone before. If they travel, they make arrangements through travel agents. They may like resorts and cruises, or they may prefer to spend their vacations at home. Farley categorizes them as Type (lower case) t people.

Most people fall somewhere in the middle, Farley said. Their every-day lives may be Type t, but they use their vacations as a Type T "break out."

"They might moderate the amount of risk they are willing to accept," he said. "They might decide that they will go to Poland. That's exciting. It's unfamiliar, behind the Iron Curtain. But, they'll go with reservations at the Holiday Inn."

Fortunately for the harmony of family vacations, Farley says the T factor seems to run in families. Thrill seekers tend to marry other thrill seekers; thrill avoiders pick out other thrill avoiders.

"It's called assortative mating in genetics," Farley explained. "T type, like physical appearance and intelligence, is an important part of what people find attractive in a mate."

Adventurous vacations are particularly important for young Type Ts, Farley said. His research has found links between juvenile delinquency, criminal behavior, use of drugs and alcohol and teen-age sex and the Type T factor. If kids get their thrills from skin diving or sky diving, Farley thinks they are less likely to find trouble when the go searching for excitement.

###

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Research Psychology

Release: IMMEDIATELY

07/14/88

CONTACT: Frank Farley (608) 262-0834

ARE YOU A T-TYPE TRAVELER?

MADISON--The University of Wisconsin-Madison psychologist who studies Type T (thrill-seeking) personalities, says that people who are risk takers in every-day life probably like adventurous vacations as well.

But Frank Farley says many people whose daily lives are fairly routine use vacations as times to indulge in a little T-type behavior. The following questions could help you determine if you, members of your family or a traveling companion are Type T travelers.

1. I like traveling a lot. T F

2. I would not like to be an astronaut. T F

3. I spend most evenings and week-ends at home rather than going somewhere. T F

4. I like taking long drives whenever possible. T F

5. I would not like to go camping in wilderness areas. T F

6. I do not like going to the beach. T F

7. I get very restless if I have to stay at home for long. T F

8. I would not like to go scuba diving in Australia's Great Barrier Reef. T F

9. I like exploring. T F

10 When I travel, variety, novelty and change are major ingredients. T F

-more-

11. I would not want to watch the "running of the bulls": in Spain. T F

12. I like going on vacations without much advance planning. T F

13. As a child, in my family we often traveled to sports events, took day trips, went camping, etc. T F

14. I would not be interested in visiting the ruins of ancient civilizations in Peru. T F

15. I would like a job with a lot of traveling. T F

16. I do not like travel that could be risky, such as exploring a strange city on my own, driving in the mountains in winter, etc. T F

17. I don't feel that I have a strong need for excitement. T F

18. I am high in energy. T F

Give yourself one point for each "true" answer to questions 1, 4, 7, 9, 10, 12, 13, 15 and 18 and for each "false" answer to questions 2, 3, 5, 6, 8, 11, 14, 16 and 17. The higher your total score, the more likely it is that you may be a Type T traveler.

If your score is fairly close to that of your traveling companion, you probably agree about the kind of vacations you like to take together. Farley cautioned that his questionnaire is not a definitive psychological test. Scores, he said, can vary from person to person and from time to time because of many factors.

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Research Psychology

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'STREET CORNER PSYCHOLOGISTS' COULD HURT U.S. OLYMPIC EFFORT, UW EXPERT SAYS

By TERRY DEVITT
University News Service

MADISON--The lack of qualified sport psychologists in the United States is leading many Olympic athletes to turn to "street corner psychologists" for help, says a leading U.S. expert.

William P. Morgan, a University of Wisconsin-Madison sport psychologist who studies the performance of elite athletes, said Olympic athletes looking to gain even the slightest competitive edge are increasingly seeking psychological help to put them over the top.

But with only a handful of formally-trained sport psychologists in this country, Olympic athletes in many cases are obtaining services in the guise of sport psychology from people who have little or no formal training in psychology, said Morgan.

Many of the psychological services being provided to U.S. Olympic athletes have no research or theoretical basis, said Morgan, a member of the U.S. Olympic Committee's (USOC) Sport Psychology Advisory Committee.

"At the same time, there is strong and compelling anecdotal evidence that argues against many of the interventions that are being performed," he said.

"The assumption by athletes and coaches is that this might not work, but it certainly can't hurt. Well, it can hurt. It can impair performance."

For example, Morgan said studies conducted at Pennsylvania State

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University showed that relaxation techniques, a common intervention, can induce panic attacks in athletes and lead to impaired performance.

He also cited UW-Madison studies that suggest moderate to high levels of arousal enhance performance, findings that contradict notions that relaxation techniques can enhance performance.

Morgan said at the elite level, the difference between individual athletic performance -- in sports such as track or swimming for example -- can be measured in milliseconds. Having nearly identical physiological and biomechanical levels of performance, many athletes then seek psychological services to help shave times or improve performance in other ways.

"When you get to this high level, where several hundredths of a second can make the difference between a gold medal and not even placing, then many of these coaches and athletes believe that the psychological edge makes the difference."

He said demand by athletes for such services is so great that it encourages the application of so-called psychological interventions based upon a series of yet-to-be confirmed assumptions or hypotheses.

For example, he said, studies show that fitful sleep can actually enhance performance, a finding at odds with sleep-promotion techniques sometimes taught to athletes.

The demand also can be attributed to an awareness by U.S. Olympic athletes that their European and Soviet bloc competitors are provided with sport psychology services on a grand scale, Morgan said.

"They (U.S. athletes) are impressed by the role of the sport psychologist in those countries," he said. "Sport psychology has played a very dominant role in Eastern Europe. The Soviets were working in the area of sport psychology 50 years before the field was even formalized in the United States."

One problem in the United States, Morgan said, is that athletes and

coaches rarely check an individual's credentials when selecting someone to provide psychological services.

In some ways it's understandable, Morgan said. "When people go to the dentist it never occurs to them to ask the person holding the drill if he or she is really a dentist. But if you were to ask 10 people representing themselves as sport psychologists, 'Are you really a sport psychologist?' the honest answer nine times out of 10 would be no."

Morgan also placed part of the blame for the problem on a general ignorance of science. "What's going on in sport psychology isn't unique to sport psychology. It has to do with the scientific illiteracy that pervades much of modern society."

According to Morgan, the USOC has taken steps to establish minimum criteria for sport psychologists, but there is nothing to prevent Olympic athletes or coaches from contracting with anyone they wish.

The only stipulation is that if USOC funds are involved, the sport psychologist under contract must be listed in the USOC sport psychology registry, a roster of psychologists meeting what Morgan termed "minimal competencies" in clinical, research or educational psychology.

Few of the people claiming to be sport psychologists and providing services to Olympic athletes, Morgan said, are capable of meeting the guidelines. So far, only about 50 psychologists are listed.

Morgan and four other sport psychologists sit on the panel that screens individuals seeking inclusion in the registry.

"Most of the people who apply are not approved for it," Morgan said.

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uw news

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Research - Psychology

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CONTACT: Frank Farley (608) 262-0834

RISK-TAKING DADS ARE TOPS

By Elizabeth McBride
University News Service

MADISON--Take a few risks in life, dad. Your kids will love you for it.

That's the latest finding of a University of Wisconsin-Madison psychologist who specializes in the study of the "Type T," or "thrill-seeking," personality.

Frank Farley asked 272 college students to rank their fathers on an affection scale ranging from one, "Don't like at all," to 10, "Love him deeply."

Sixty-four percent of the fathers classified as a Type T, in contrast to 33 percent of the fathers classified as risk avoiders, received a perfect "10."

The study sampled an equal number of males and females and students in a wide range of college majors.

Farley said, however, that the results do not mean fathers should go out and climb mountains in order to be loved: "We can't all be thrill-seekers of this kind. But we can keep a little of that excitement.

"Type T dads, I believe, are more likely to take their families to new and different places and to encourage creativity," Farley said in an interview. "I also believe that they are flexible in their relationships, tolerant of family disagreements and happier than risk-avoiding dads."

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"What we call Type T may capture a whole set of attributes kids relate to. These are fun people."

Farley found that the Type T personality was less of a factor in the students' love for their mothers.

However, students agreed more on mom's lovable qualities than dad's. About 75 percent said they loved their mother because she is loving, caring, compassionate, generous, supportive and understanding. Only 50 percent listed these qualities as reasons for loving their father.

This may reflect stereotypical ideas about the roles and attributes of mothers and fathers, or about men and women in general, Farley said.

"Even though things are changing dramatically, we may still have a more coherent picture of the mother as the nurturer. Perhaps these findings stem from the dual role fathers have played, outside in the work world and at home," Farley said.

In addition, Farley found that religious affiliation, or lack of it, was a factor.

"The particular denomination was not important, but whether the student did or did not identify with a religion was," Farley said. "For example, sons and daughters who identified with religion expressed stronger love for parents than did non-religious sons or daughters."

Farley also learned that feelings of affection did not differ significantly between students from large families and those from small families. The size of the age gap between parent and child did not seem to matter, either.

For fathers who want to establish a more loving relationship with their children, Farley suggests, "Put some 'T' into your life. Be a bit more adventurous, a bit more accepting of the kinds of conflicts kids have. Engage in something novel. That'll excite your kids as much as it will you."

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Research - Psychology

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CONTACT: Frank Farley (608) 262-0834 (Farley will be staying at New York City's Days Inn hotel Thursday night. He can be reached at Dr. James Hennessy's office at Fordham University (212/841-5100) on Friday. He will return to Madison early Saturday.

SPECIAL BRAND OF STUDENT ASPIRES TO BE AN INDY 500 RACER

MADISON--The green flag is about to drop on the Indianapolis 500, and a University of Wisconsin-Madison psychologist has some insight into the kind of person who aspires to compete in one of the world's fastest and most demanding road races.

Psychologist Frank Farley said he has long been fascinated with the dangerous race, and has done surveys among college students that reveal those who would want to race in the Indy 500 are predominantly male and are risk-taking, thrill-seeking people.

The surveys, part of Farley's larger studies of risk-taking or "Type T" personalities done over the span of several years, reveal more than three times as many male as female college students would like to drive in the race, and that those eager to drive are younger than those not interested.

He said his studies imply that the entry of more women in such races may depend on evolving a "more careful, less accident-prone competition."

Farley, who has surveyed almost 1,000 students about the Indy 500, found that race enthusiasts were higher in both physical and mental risk-taking and fit his profile of the stimulation- and thrill-seeking Type T personality.

Farley reported that student who aspired to race seemed happier and felt they led interesting lives. He also found, in one survey, that they showed a "substantially higher rate of personal auto accidents" than nonenthusiasts.

Indy 500 enthusiasts "are probably not crazy," concluded Farley, "but they are characterized by a special personality structure and are deeply motivated by risk, uncertainty and thrills."

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uw news

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Research Psychology

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DRINKING AND FLYING: MODERATE INTAKE LINKED TO UNSAFE FLIGHT CONDITIONS

By TERRY DEVITT
University News Service

MADISON--Pilots who drink even moderate amounts of alcohol could put themselves and their passengers at greater risk than previously thought, says a University of Wisconsin-Madison researcher.

Studies by psychologist Leonard E. Ross indicate pilot performance is impaired at .04 percent blood alcohol concentration -- the legal limit set by the Federal Aviation Administration (FAA) -- and can lead to unsafe flight conditions.

According to Ross, most pilots recognize the risks associated with high blood alcohol concentrations, but effects at lower levels have not been very thoroughly explored until recently.

"The problem is that people might think they can go up to .04 percent and still be safe. That's clearly not the case," Ross said.

The UW-Madison psychologist pointed out that although the effects of alcohol vary from individual to individual, an average-sized person could reach the .04 percent level after just two drinks.

Using a sophisticated flight simulator and orange juice laced with alcohol, Ross tested the ability of pilots with blood alcohol concentrations of .04 percent to perform such routine tasks as maintaining straight and level

-more-

flight, and monitoring instruments and nearby airspace for other aircraft.

Ross found that pilots at the .04 percent level were less attentive and experienced some difficulty maintaining level flight.

Moreover, when called upon to divide their attention by performing such tasks as changing radio frequencies or copying weather information, pilots may become so focused on the added tasks that they neglect the primary job of keeping their aircraft under control.

"In some circumstances, people can compensate for low or moderate alcohol levels if they have a single task to perform," Ross said. "But once something unexpected happens or if they're called upon to divide their attention, then the effects of alcohol may be quite serious."

Ross found that pilots at the .04 percent level engaged in secondary tasks and confronted with unusual aircraft attitudes such as unexpected banked descents or ascents, took longer to regain control of the aircraft.

The experiment's results, Ross said, indicate pilots under the influence of moderate levels of alcohol were less decisive in some cases.

Prior to his studies, Ross expected pilots under the influence to respond vigorously to unusual aircraft attitudes, perhaps leading to situations that would stress an aircraft. However, he discovered that pilots at the .04 percent level were somewhat tentative in responding to potentially dangerous situations.

"Many of the pilots seemed to 'undercontrol' somewhat," Ross said. "They didn't take the kind of decisive action needed to recover from some of these unusual situations."

The UW-Madison psychologist's studies also stressed that pilot experience does not compensate for moderate blood alcohol concentrations.

"The fatal accident record doesn't suggest that one is immune to the effects of alcohol just because one has a lot of hours of flying time," he

said. "It's a mistake for people to believe that experience will completely compensate for alcohol."

Although drinking and flying is still considered to be a serious problem by the FAA, in recent years there has been a trend toward fewer alcohol-related accidents and fatalities.

According to figures compiled by the National Transportation Safety Board, in 1986 there were 21 alcohol-related aircraft accidents resulting in 28 deaths. That figure has gotten progressively lower since 1983 when there were 46 alcohol-related accidents that killed 65 people.

However, Ross said that in the past there has been no way to determine alcohol involvement in non-fatal accidents and conclusive alcohol testing is possible only in 60 to 70 percent of all fatal accidents.

Ross feels that awareness of the problem among flyers has contributed to the decline in the number of reported accidents linked to alcohol.

"Within the aviation community there is an awful lot of concern about it. I think it's a very small minority of pilots who do abuse this, who drink and then fly."

But Ross quickly added that many pilots still are not aware that low levels of alcohol can hamper the safe operation of aircraft. He said the best thing for pilots to do is to consume no alcohol before flying.

A licensed pilot, Ross has been studying the effects of alcohol on pilot performance for three years. His research is supported by the National Institute of Alcohol Abuse and Alcoholism.

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uw news

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CUPID MUST BE A TYPE T

by SUSAN TREBACH
University News Service

MADISON--Cupid is undoubtedly a "Type T" personality, according to University of Wisconsin-Madison researcher Frank Farley.

Farley, who coined the term "Type T personality" to refer to the thrill (T) seeking, risk-taking, stimulation-seeking individual, says Valentine's Day is truly a Type T holiday.

In studies of hundreds of married and single students and others, Farley and colleagues have found that the classic Type T's are drawn to romance. "They are in love with love," Farley says.

Type Ts tend to have sex at an earlier age than most people, Farley said. They tend to be attracted to and marry each other and they are likely to know people for shorter periods of time before jumping into sexual encounters, he said.

The Type T person is less likely than others to become obsessed with one love interest to the exclusion of all others, he said. The obsessed person is addicted to a particular love relationship and has the urge to control and dominate that person, he said. But the Type T is more prone to variety in romance as in life, he said.

-more-

add one -- cupid

Type Ts describe themselves as exceptionally happy and, not surprisingly, as leading exceptionally interesting lives, he said.

"Type Ts also have strong interest in erotic material of most kinds, including pornographic material," he said.

The research may be helpful to counselors and others concerned with advising young and old in love relationships, he said, noting that "this research has added interesting dimensions to our understanding of Cupid's work."

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Research Psychology

Morgan the 'MINDREADER'

By Patrick Dorn

The stories are familiar ones. A consistent .300 hitter falls into a mysterious batting slump at mid-season; a marathon runner has one year of brilliance, then suddenly fades to a substandard performace level; a placekicker can't buy a chipshot field goal all day, but delivers a game-winning 52-yarder with only seconds remaining. When an inconsistent performance is not the direct result of a physical injury or ailment, we have yet to understand why. Prof. William Morgan believes the answer lies somewhere in the psyche of elite athletes. As director of our Sport Psychology Laboratory, Morgan has spent the last sixteen years probing the minds of the University's varsity athletes. His work with the University and Olympic teams in sports such as rowing, distance running, swimming and wrestling has led to the development of a mental health model that may be the answer to the problem of inconsistent performance. At the heart of that effort has been a long-term study on university swimmers.

For ten years Morgan and his associates have conducted psychological tests on members of the men's and women's swim teams at regular intervals during their seasons. Though the research project is years away from conclusion, he is optimistic it will produce a working mental health model for use in preventing the onset of what he calls "staleness" in athletes.

Swimming works well for research purposes, Morgan says, because the training load and conditions make the onset of staleness virtually inevitable. He says his ultimate goal is to create a model that will allow for prediction of that state before it occurs. The secret will then be for coaches to develop workout loads that take individuals to the edge of staleness and then taper off, preparing them for peak performance.

"The question, of course, is how well can you fine-tune that," Morgan says. "My feeling is that if we can't do this for a sport like swimming, we can't do it for anything." Women's swimming coach Carl Johansson is already sold on Morgan's theory. Johansson says there has been a movement in swimming toward extensive physiological testing of athletes to determine the results of training methods. Expensive blood tests make it possible to pinpoint what stage of training a swimmer is in. Morgan has been able to forecast training stages almost as accurately with psychological testing. "You look at our team profile and compare it to how we swam and you get a very good correlation," Johansson adds. He feels Morgan's mental health model also reassures swimmers they are on the right training path, particularly in mid-season when the most difficult workouts can cause race times and practice splits to actually increase.

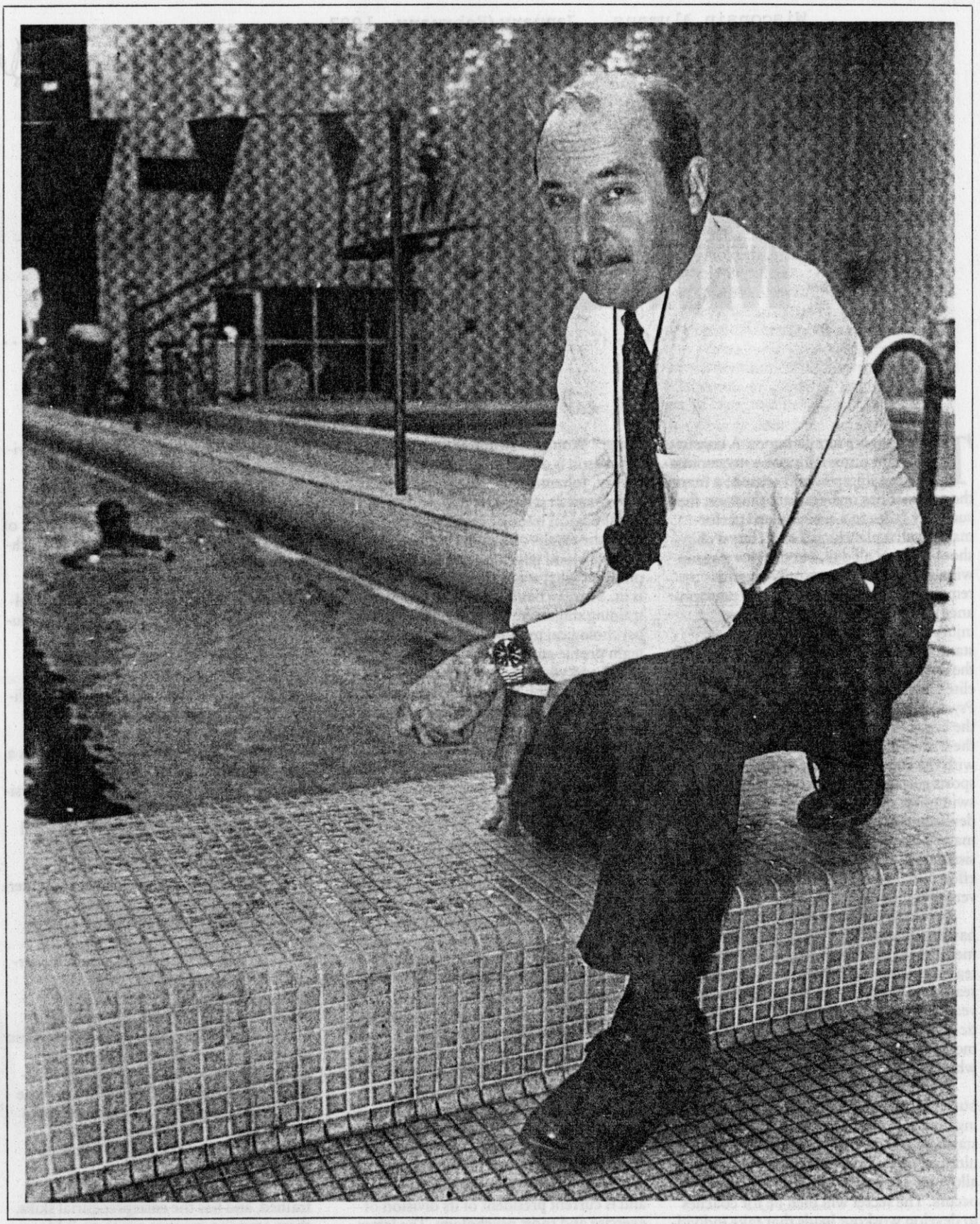
"If they have confidence that feeling the way they do in January is going to pay off in February and March (Big Ten and NCAA meet times), they feel better about where they're at," Johansson says. He feels better about his own abilities too, because of the profiles, adding that "any kind of a study that can help you be a better coach is worth participating in. Just having a resource like Bill Morgan available to us is tremendous."

Indeed, Morgan's expertise in sports psychology is widely sought. He is a member of the U.S. Olympic Committee's Sports Psychology Advisory Committee and serves as a consultant on the Elite Distance Runners Project at the USOC Training Center. He is a Fellow of the American College of Sports Medicine, American Academy of Physical Education and American Psychological Association, and is current president of its division of exercise and sport psychology. The latter field is relatively new in the United States; its official arrival was not until the mid-1960s with the creation of the North American Society of Sports Psychologists.

Morgan was hired to open the UW-Madison sports psychology lab in 1970 after working at the University of California-Santa Barbara Institute of Environmental Stress. He says UW-Madison and Arizona State University remain the only U.S. schools with labs noted for specializing in psychophysiology (A number of others have labs with strengths in researching the social psychology of sports.) Because the field is so young, standardized training requirements have yet to be developed. Morgan oversees a very small graduate studies program that usually has no more than four students enrolled at any time. Master's and doctor's degrees are offered in physical education with specialization in sports psychology. Students are required to have at least a minor in psychology. Morgan's own training includes a doctorate from the University of Toledo with a dual major in psychology and physical education, followed by post-doctoral training at the Institute of Environmental Stress at UC-Santa Barbara. There is at present a great deal of discussion about what type of training is best for those entering the field, and the USOC's Sport Psychology Advisory Committee is tackling the issue.

Most jobs in the field remain in university settings, teaching and conducting research. However, Morgan says the USOC is currently recruiting sports psychologists to work at the national Olympic training center. A couple of his former students have found jobs outside the academic world. Mike Ross PhD '77 is at the Army's national physical fitness center in Indianapolis and Mike Bahrke MS '73, PhD '77 operates two fitness centers in New York City.

"If a person is well educated and trained, and has the entrepreneurial skills, there are opportunities out there," Morgan says. He notes that, just as the field of sports medicine has experienced tremendous growth, he finds it "inconceivable that every professional team and major university won't someday have at least one sports psychologist on staff." □



Mary Langenfeld

For sixteen years this sports psychologist has been looking into the psyches of athletes. His object, to find the whys of their highs and lows.

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Research Psychology

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PSYCHOLOGY/AGING:
Despite negative stereotypes, many people are finding pleasure in growing older, says UW-Madison psychology professor Carol Ryff who is teaching a new course called Optimal Aging. 490 words

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CONTACT: Carol Ryff (608) 262-5597/262-1041

LIFE CAN GET BETTER WITH AGE, UW PSYCHOLOGIST SAYS

By Linda Weimer
University News Service

MADISON--Wine isn't the only thing that improves with age.

There's life, for example.

Despite negative stereotypes, growing older can be, and for many people is, a positive experience, says UW-Madison psychology Professor Carol Ryff.

Americans have the impression of old age as a time of loss -- loss of health, friends, income, abilities, said Ryff. "There is a pervasive negative expectation of old age in our society."

But Ryff is out to emphasize the positive in her research and teaching.

"People continue to develop and grow all along the life path, not just as children and adolescents," she said. "I've tried to study this and see if people change in positive ways."

Ryff has found that they do.

In a recent survey, she and colleagues, working with community organizations, asked 180 Madison residents a number of questions about growing old, including what had been positive experiences for them.

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"We got very elaborate and thoughtful answers," she noted. "They said things like they've become more tolerant and broad-minded, they enjoy life more, they are more self-confident, better informed, more politically aware.

"One of the best things older people say about their lives is that they have more time, more freedom and they don't care so much about what other people think of them," said Ryff.

"Personally, I think our society is too hung up on achievement," she added. "I look forward to getting beyond the achievement phase of life."

Ryff, who joined the UW-Madison faculty last year from Fordham University, isn't there yet. One of her most recent achievements has been to pull together an ambitious new course called "Optimal Aging."

The course will be offered for credit to about 300 students at the university this fall, and will be aired on Channel 33, WHA-TV's Learning Channel.

Ryff said anyone can tune in on the lectures, Mondays and Wednesdays from 7:30 to 8:45 p.m. beginning Sept. 8, although students wanting to register for credit should contact Ryff for more information at 262-5997 or 262-1041.

Ryff has invited faculty from a variety of fields throughout the university to give lectures in her course. Topics range from cultural and historical perspectives on aging and health issues, to the economics of retirement, relocation of older people and political activism among the elderly.

Ryff notes that the course, sponsored through the Psychology Department and Division of University Outreach, is meant for people of all ages.

Apart from teaching those who go into fields like social work and health care, Ryff wants to help young and middle aged people gain a better, more balanced perspective on aging.

"In doing my research, I'm providing a lens that can help define aging for people in the future."

Ryff is the first to admit that there are negative aspects to growing old, and that one's cultural and economic environment can vastly color one's perspective and experience in aging.

"I know it's unfair to see aging through rose-colored glasses but I'm probably a hopeless optimist in this area."

It's an attitude, Ryff would say, that bodes well for her future.

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uw news

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Research
Psychology

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CONTACT: Richard E. Keesey (608) 262-3168

DIETING? YOUR BODY MAY HAVE OTHER IDEAS

MADISON--If you're having trouble shedding excess fat, you needn't blame it on a lack of willpower, says University of Wisconsin-Madison psychologist Richard E. Keesey.

Keesey, who has spent nearly 20 years researching weight control, says a person's bodily metabolism may work against even the most earnest attempts to lose weight.

"When a test animal loses weight as a result of calorie deprivation, it will regain the weight as soon as it's allowed to resume eating freely," Keesey said. Conversely, individuals who gain weight by intentional or binge eating generally lose any weight gained when they return to a normal diet.

"Traditionally, people use such observations as evidence that food intake is the important factor in weight control," he said.

Instead, Keesey developed the popular "set-point" theory of body weight which emphasizes calorie expenditure rather than intake. The theory holds that adult body weight resists change because of internal stabilizing mechanisms that offset changes in external conditions such as dieting or overeating.

"The evidence suggests that the body compensates for external changes by adjusting its resting metabolism to maintain a set-point weight," Keesey said.

He said that when calorie intake is reduced, metabolism is slowed by adjusting the rate at which food calories are burned. In contrast, a weight increase beyond the set-point triggers a disproportionate increase in the

-more-

resting metabolic rate as the body attempts to burn off the extra weight.

According to Keesey, this is the body's natural attempt to reduce the impact of external change. "It's a built-in blessing when starvation threatens, but a curse when weight loss is the goal."

Keesey cited a study during World War II in which the metabolic rates of volunteers placed on a semi-starvation diet for six months dropped more drastically than body weight, allowing their bodies to more efficiently use limited food supplies.

Keesey conducted a similar lab experiment in which rats, on a restricted diet, lost nearly 6 percent of their body weight. The weight loss was accompanied by an almost 15 percent decrease in metabolic rate.

Keesey said the associated drop in metabolic rate explains why "the diet stopped working" after the first week or so. It also explains, he said, why crash diets can actually lead to increased body weight in the long run when the dieter resumes eating normal quantities of food.

Another reason for weight gain after crash dieting is that fat is lost at a fixed rate, he added. To get fuel on a low calorie diet, the body may burn protein and other tissue constituents. Once off the diet, an obese person would tend to gain fat before replacing lost lean tissue.

Keesey said it's a myth that obese people are chronic over-eaters compared with people of average weight. The real difference, he said, is the higher weight at which the obese body is set to regulate itself.

Keesey doesn't recommend that physicians severely limit the caloric intake of obese patients.

One study of obese hospital patients on low calorie diets yielded weight losses up to 100 pounds. However, said Keesey, within 10 years, nearly all had returned to their former weight or even gained weight.

Such weight loss and gain cycles can, according to Keesey, cause psychological damage and depression. Health benefits, such as lowered blood pressure or cholesterol levels, can often be achieved, he said, with moderate weight loss.

Keesey recommends exercise rather than dieting to lose weight. "Increasing the expenditure side of the equation can produce more useful outcomes than reducing intake," he said.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 3/7/86

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ZOOS AND UNIVERSITIES WORKING TOGETHER FOR ANIMAL CONSERVATION

MADISON--Once places for idle curiosity, zoos today are becoming important links in the chain of conservation.

Zoo favorites like gorillas, tigers, leopards and various monkeys are endangered and disappearing in the wild. Now zoos are teaming up with university researchers to boost captive stocks, and to create a better environment for the animals they house.

University of Wisconsin-Madison is part of the effort. Rare South American monkeys raised at UW-Madison now reside in seven zoos nationwide, including the Milwaukee County Zoo and a new exhibit at the St. Paul Zoo.

The cotton-top tamarin, a jungle species almost extinct in the wild, has been the eight-year research subject of UW-Madison psychology Professor Charles Snowdon. Snowdon's observation of the endangered species led to insights on successfully housing the monkeys, and his techniques bolstered the number of tamarins in his research colony from 11 to more than 60.

In addition to placing animals at zoos, Snowdon said, "We've been working closely with zoo directors and staffs to pass on our techniques so zoos can be better caretakers of the animals they have."

"Cotton-top tamarins do quite well in mixed-species exhibits," said Anne Savage, research assistant to Snowdon. "The Milwaukee County Zoo has a pair of our animals in an exhibit called 'tropical river.' It's a very lush exhibit with fish, trees and finches." According to Savage, one female tamarin in the

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exhibit has given birth to two offspring and is pregnant again.

"Mixed-species exhibits are relatively new in zoos but are becoming more and more popular," said Savage. "They're much better for the animals because they provide many more things to react with," and more fun for zoo visitors because the animals are more lively and more interesting.

Snowdon duplicates the tamarin's wild environment as closely as possible to encourage natural behavior. Upper parts of cages are strung with a network of ropes and branches to make the tree-dwelling animals feel at home.

Snowdon explained that changes from natural conditions create stress for animals and cause unnatural behavior. For example, he said, tamarins are very hesitant to eat food off cage floors.

"Since these animals live in trees, going down to the ground is very risky and dangerous for them and probably creates a great deal of conflict and fear," Snowdon said. "This hesitancy disappeared immediately when we put the food on platforms halfway up their cages."

Bare floor zoo cages are a thing of the past, according to Savage. "Such conditions can result in abnormal behavior and even sterility. Zoos are making radical and creative changes to improve conditions."

Tamarins sent to St. Paul from UW-Madison live in a newly-remodeled primate house featuring six endangered species in naturalistic environments.

To complement this trend, Savage said zoos are hiring more people with actual field experience, people who know how animals live in the wild and who can help provide natural conditions for the animals.

Zoos also are developing their own research programs, often assisted by universities. Two UW-Madison researchers are working with the Baltimore Zoo to improve the breeding success of lion-tailed macaque monkeys by transplanting embryos into rhesus monkeys at the Wisconsin Regional Primate Research Center.

In October, UW-Madison will host a conference on "The Zoo-University Connection: Collaborative Efforts In The Conservation Of Endangered Primates."

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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FEARS AND PHOBIAS: MONKEY SEE, MONKEY DO?

By INGA BRYNILDSON
University News Service

MADISON--You may have your mother's walk and your father's habit of biting his nails, but did you also acquire their fears?

A University of Wisconsin-Madison psychology researcher, Michael C. Cook, thinks it's possible you did. Parents, Cook said, are indeed a likely source of fears and phobias.

"Our experiments show that fears can be learned by watching others. And since children watch their parents most of the time, it's likely they'll pick up their parents' fears," Cook said.

Cook bases his conclusions on experiments involving rhesus monkeys.

"We used wild-reared monkeys who displayed an intense fear of snakes," he said. "Their captive-born offspring, who showed no fear of snakes, were allowed to watch their parents react fearfully to snakes. In a very short time the observer monkeys displayed the same phobic reaction as their parents."

But according to Cook, fear is more than just "monkey see, monkey do."

"It wasn't an accident that we chose snakes for our first experiments. Rhesus monkeys have reason to fear snakes in the wild, so we felt they might have some sort of predisposition to fear snakes."

Cook is currently designing methods to test his predisposition theory.

In an effort to duplicate the snake experiment, Cook spliced separate

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pictures of flowers and snakes into videotape of monkeys reacting fearfully. The observer monkeys learned to fear the snakes, but not the flowers.

To Cook, this indicates animals are inclined to fear certain things and not others. "Humans tend to fear things like heights, snakes and spiders rather than electrical outlets or stove tops," he said. "So our evolutionary past still affects our present."

Cook said the notion that fear can be acquired vicariously flies in the face of previous theories about fear.

"Since the 1920s, it was thought phobias were a direct result of some traumatic experience in the individual's life. But this doesn't fit with common sense. It's unlikely everyone who fears a particular object or event has had an adversive experience with that object."

Cook said there's hope for parents who want their children to be heirs to a less phobic life. He said early exposure to non-fearful examples can have an immunizing effect on the observer.

"When we first allowed monkeys to watch non-phobic monkeys behaving without fear of snakes, they failed to learn to fear snakes even after witnessing fright displays by phobic monkeys," he explained.

Cook said human parents could encourage a similar immunity to a particular fear by letting children watch non-phobic behavior in others.

"It's probably a good idea for parents to suppress fearful reactions in front of their children," he said.

What about cures for existing phobias? UW-Madison psychology Professor Susan Mineka, now on leave to the University of Texas-Austin, studied whether long-term exposure to a feared object could cure a phobia.

Cook said the process, called flooding, didn't rid monkeys of their snake phobias. "Flooding sometimes works with people, but then they usually have a reason for wanting to get over a fear. Monkeys don't."

###

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research news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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VIOLENT FILMS DESENSITIZE MEN TO RAPE, WISCONSIN RESEARCHERS SAY

by JENNIFER RIDDLE
University News Service

LOS ANGELES--Movies depicting violence against women perpetuate rape myths and desensitize people to violence, two University of Wisconsin-Madison researchers said Friday (May 31).

Edward Donnerstein, a communication arts professor, and Daniel Linz, a post-doctoral researcher in psychology, have found that repeated exposure to sexually violent films increases male aggression and results in more negative attitudes toward women.

Addressing scientists at the annual meeting of the American Association for the Advancement of Science in Los Angeles, Donnerstein and Linz discussed their research and its broader social implications.

"Viewing a large number of violent films reduces negative emotional reactions to the material and increases enjoyment," said Donnerstein. "There is also a clear tendency for this desensitization to the violence to spill over into a social context."

The researchers said in one study, male subjects watched nearly 10 hours of five commercially released feature-length R or X-rated films. The films included R-rated, sexually violent films such as "Tool Box Murders," "I Spit On Your Grave" and "Texas Chainsaw Massacre."

After each movie, the men completed a mood questionnaire and evaluated the film in several different ways. The films were shown in reverse order to

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different groups of men so that comparisons could be made between ratings of the same film shown on the first and last day. A control group watched a series of neutral films.

After a week of viewing, the men watched a reenactment of an actual rape trial. After the trial they were asked to render a judgment of how responsible the victim was for her rape and to determine how much injury she had suffered.

"The men who viewed the filmed violence against women judged the rape victim to be significantly less injured than the control group did," said Linz, who also coordinates health services research at the Middleton Veterans Administration Hospital in Madison. "In addition, the subjects who had viewed the violent films rated the victim as significantly more worthless."

The Wisconsin researchers said repeated exposure to sexually explicit violence may also decrease the ability to respond to real-life instances of violence.

"Our studies suggest that one consequence of the dampened emotional response to violent pornography may be the failure to intervene in an actual aggressive situation," Linz said. "Our findings suggest that people who frequently view violent films would be less likely to help a victim or to try interrupting real-world aggression."

An increasing tendency in films to pair sex and aggression is especially troubling because it may condition viewers to become sexually stimulated by violence, Donnerstein said. Another problem is that aggressive pornography often has as its theme the idea that victims secretly desire assault and actually derive pleasure from it.

"Research suggests that reinforcement of this myth may account for the increase in male sexual arousal to rape depictions and aggressive behavior against victims following exposure to the material," Linz said. "Several studies have shown that if the victim is portrayed as becoming involuntarily sexually aroused by the assault, subjects show levels of sexual arousal as great and sometimes greater than those induced by mutually consenting sex."

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research news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 5/29/85

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MIXED EMOTIONS: THE LIGHT AND DARK SIDES OF THE HUMAN BRAIN

By TERRY DEVITT
University News Service

LOS ANGELES--Like two opposing personalities -- one good and one bad -- it seems that the human brain has emotional light and dark sides, says a University of Wisconsin-Madison psychologist.

Addressing scientists here at the annual meeting of the American Association for the Advancement of Science, Richard J. Davidson said Tuesday (May 28) that the expression of emotion, once thought to be solely a function of the right side of the brain, actually emanates from both sides of the brain with each side controlling opposite kinds of emotions.

Regions of the left side of the brain, said Davidson, are specialized to process positive emotions such as happiness and euphoria while parts of the right side process negative emotions such as sadness and disgust.

"Essentially, certain psychological functions are represented differently, physiologically, in the two hemispheres of the brain," Davidson said. "It seems that one hemisphere may be more important to the control of particular emotional functions than the other hemisphere."

In one study, Davidson and his colleagues measured electrical activity in the frontal regions of the scalp and correlated their measurements with exposure to positive and negative stimuli.

"We probed the different functions of the two sides of the brain by presenting to the left and the right hemispheres of normal subjects identical information," said Davidson. "We were then able to observe the differences in

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the way a person responded to that information depending on whether it first went to one hemisphere or the other."

Using film clips designed to elicit either negative or positive emotional response, Davidson's group had normal subjects rate the degree to which they were experiencing pleasant versus unpleasant feelings as they were exposed to the clips. These self-reports were then compared with changes in electrical activity of the brain recorded at the same time.

"We found that there were differences in the activation of the frontal regions of the brain," said Davidson. "When a person reported experiencing pleasant feelings there was more activation in the left frontal region and when the person reported an unpleasant experience there was more right frontal activation."

Davidson said these early findings from normal subjects gave scientists some of the first evidence consistent with that obtained from studies of brain damaged individuals.

"It's been found that people with damage to the right side of the brain were often oblivious to their quite severe neurological condition. Despite their injury these patients are frequently jocular and often burst into laughter at completely inappropriate times.

"Patients with the opposite pattern of brain damage show a very different emotional side," Davidson said. "They exhibit signs and symptoms that are sometimes difficult to distinguish from those seen in clinical depression."

What Davidson saw in his studies of normal subjects was a change, albeit momentary, similar to those observed in brain damaged people.

To refine their initial findings, Davidson's group embarked on a series of studies designed to anchor measures of brain activity to facial expression, long held to be a reliable indicator of emotional state.

By videotaping subjects as they were exposed to short film clips intended to elicit emotional response, Davidson was able to freeze periods of well-

defined facial expression and compare it with measures of brain activity taken simultaneously.

"We initially looked at two expressions that we felt epitomized the differences between the functions of the frontal region of the two hemispheres of the brain," said Davidson. "We chose emotions associated with approach and withdrawal: happiness and disgust. This is the dimension that we believe can explain a lot of the evidence on hemispheric differences in emotion.

"We found that there are different patterns of hemispheric activation during happiness and disgust in adults."

The next step, Davidson said, was to look at newborns to determine if similar patterns were present shortly after birth.

In order to produce approach and withdrawal patterns, Davidson gave newborn infants different tastes: a sucrose solution to induce happiness and lemon juice to induce disgust.

"We videotaped their facial expressions and they actually do show coherent facial expressions of disgust at birth which is something Darwin predicted in his book on the expression of emotions in men and animals.

"Two other groups had shown this previously," Davidson added, but he said his group was the first to record brain activity and "we found that different patterns of frontal activation were indeed present in newborns."

According to Davidson, these studies undermine the long-held view that what distinguishes between the different emotions is simply one's thoughts which are accompanied by a general physiological arousal. The idea, he said, is that the critical distinguishing features are thoughts that separate one emotion from the next.

"We hold that if there's a difference in behavior, in subjective experience, it's likely that we should be able to find a difference in physiology."

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 5/23/85

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(NOTE TO EDITORS/NEWS DIRECTORS: The Top 10 hero and heroine lists are included at the end of this story.)

COLLEGE STUDENTS' HEROES? YOU MIGHT BE SURPRISED

By STEVE SCHUMACHER
University News Service

MADISON--Prince? Dan Marino? Sally Ride?

Who are the heroes and heroines of today's college students?

A group of University of Wisconsin-Madison students was asked that question, and their responses may come as a surprise.

At the top of their lists? Mom and Dad.

"There wasn't even a close second," said Frank Farley, a UW-Madison psychologist who conducted the survey among 340 students. "Moms got six times as many first place votes as any other heroine, and dads got twice as many as any other hero."

Farley's surveyed an equal number of undergraduate men and women, with an average age of 20.2 years. He asked each to rank his or her top five heros and top five heroines and then analyzed only their number one choices.

The overwhelming nature of the students' selection of their parents as heroes was notable, Farley said.

"Perhaps the American family is in better shape than many people think," Farley said. "These students still look up to their parents, holding them high among their ideals. I think that's gratifying."

Although both male and female students awarded top status to their

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parents, Farley said, the females did so in much greater numbers. Among the women, 28 percent said mom was number one on the heroine list, and 23 percent put dad at the top of the hero list; among the men, 19 percent listed mom first and 12 percent listed dad.

Farley said he was impressed by the generally serious nature of the students' other choices.

On the females' list of heroines, Mother Teresa and Jane Fonda tied as the second most popular choice; grandmother was next, followed by Geraldine Ferraro; Madame Curie, Amelia Earhart and the Virgin Mary, all tied for the next spot; and Susan B. Anthony, Golda Meir and Barbra Streisand also tied.

One the males' list of heroines, four women tied in the second group: Mother Teresa, Amelia Earhart, Marilyn Monroe and rock star Madonna. A group of five tied in next group: Joan of Arc, model Christie Brinkley, a wife or girlfriend, Nancy Reagan and Margaret Thatcher.

Among the heroes, the female students ranked Jesus Christ second; John F. Kennedy, Albert Einstein and Martin Luther King, Jr., all third; and then Abraham Lincoln, rock star Bruce Springsteen, and a group that included grandfathers, Mahatma Gandhi and Ronald Reagan.

The men also chose Jesus Christ second, followed by Kennedy, Clint Eastwood and professional hockey player Wayne Gretzky, all tied for third; then Einstein, followed by a group that included grandfathers, Martin Luther King, Jr., John Lennon and Lincoln.

Farley said many participants, who responded anonymously, spent a long time filling out the questionnaire, thinking hard about their choices. In the end, 16 percent of the females and 8 percent of the males listed no heroes.

Farley said he was surprised so few entertainers or sports stars made any of the lists.

"We're bombarded with sports, and sports figures market everything from cars to beer," he said. "The tabloids would have you believe that young

peoples' heroes are Michael Jackson, Brooke Shields, people like that. But that just isn't the case with these students."

Rather, he said, students chose strong individuals covering a wide range of fields and periods of history.

"There are political figures and scientists," he said. "And there is a strong thread of humaneness and idealism running through many of the choices. For instance, Martin Luther King, Jr. was ranked higher than any president except Kennedy. And Mother Teresa, Gandhi and Abraham Lincoln made the lists."

Although the male and female student lists have many names in common, Farley said, the female choices for heroines included powerful feminists -- Jane Fonda, Susan B. Anthony and Geraldine Ferraro -- that did not make the males' list. The males' choices included such "glamour" choices as Marilyn Monroe, rock star Madonna and Christie Brinkley.

"The strong religious tone of some of the choices, might be an indication of a return to more conservative ideals among some students," Farley added. "The fact that males included their wives or girlfriends on their list also might indicate that. It could be a renewal of that old idea of putting women on a pedestal, although there could be other interpretations of that."

Farley now will begin analyzing survey responses to determine how they fit into a larger study on motivation and personality among students.

He has done some much-publicized work on people he terms "Type T" personalities, or "thrill-seeking" individuals. He will next compare the heroes and heroines of Type T students in his study with the choices of other students.

"But just scanning these lists, you can gain some insight into just who it is that students look up to and want to emulate," Farley said. "It may tell us something about how they perceive themselves.

"Biography holds enormous interest for people. It's difficult to identify with abstract ideas, but less so when the ideas are embodied in the behavior and characteristics of a well-known person."

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-- Steve Schumacher (608) 262-8289

UW-MADISON STUDENT SURVEY

TOP 10 HEROINES

Rank	Male Students	Rank	Female Students
1.	Mom	1.	Mom
2.	Mother Teresa Amelia Earhart Marilyn Monroe Madonna	2.	Mother Teresa Jane Fonda
		3.	Grandmother
3.	Joan of Arc Christie Brinkley Wife or girlfriend Nancy Reagan Margaret Thatcher	4.	Geraldine Ferraro
		5.	Madame Curie Amelia Earhart Virgin Mary
		6.	Susan B. Anthony Golda Meir Barbra Streisand

TOP 10 HEROES

Rank	Male Students	Rank	Female Students
1.	Dad	1.	Dad
2.	Jesus Christ	2.	Jesus Christ
3.	John F. Kennedy Clint Eastwood Wayne Gretzky	3.	John F. Kennedy Albert Einstein Martin Luther King, Jr.
4.	Albert Einstein	4.	Abraham Lincoln
5.	Grandfather Martin Luther King, Jr. John Lennon Abraham Lincoln	5.	Bruce Springsteen
		6.	Grandfather Mahatma Gandhi Ronald Reagan

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uw news

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Research Psych

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UW-MADISON RESEARCHERS TAKE AIM AT DRINKING, DRIVING

By STEVE SCHUMACHER
University News Service

MADISON--Frank Farley and Sharon McNeely believe college students drink too often and drink too much.

But more importantly, say the University of Wisconsin-Madison psychologists, it may be possible to predict who is most likely to drink and then take the risk of getting behind the wheel of a car.

Farley and McNeely have been surveying the drinking and drug-taking habits, driving behavior, personality and motivation of students in some undergraduate UW-Madison classes. They emphasize that their sample is not a scientific representation of UW-Madison students and may not reflect the total student population, but they also note that students in the courses are drawn from across the campus.

About 500 students have been surveyed to date, and the researchers are in the first stages of analyzing results. A sampling:

-- Among the student subjects, 61 percent of the men and 31 percent of the women said they drink anywhere from a few times a week to daily.

-- More than half the men surveyed and 30 percent of the women said that when they drink, they consume at least four and up to eight or more drinks at one sitting.

-- Only 4 percent of the 500 said they never drink.

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-- Forty percent of the men and 26 percent of the women said they had their first drinking experience by the age of 13.

"The percentages of those who drink and the amount they drink were much higher than I expected," said Farley.

But it is the "second phase of analysis" that Farley considers especially significant. Nationally known for his work on "stimulation seekers," Farley contends that motivation for certain behaviors results from a physiological need to reach a middle ground of "arousal," where outside stimulation matches the brain's need for stimulation.

He has keyed on "low arousable" individuals, those who seek large doses of stimulation to reach that middle ground.

"There are testing methods for identifying low arousable individuals," Farley said. "Those are people who look for stimulation, so they tend to be physical thrill-seekers and risk-takers."

Because alcohol may act as a nervous system depressant, said Farley, it may well lower the arousal levels of such individuals even further, causing them to seek even riskier means to get stimulation.

"We would hypothesize that when low arousal individuals drink, they are more likely to put themselves and others in danger of fatal accidents than high arousal individuals," he said.

There already is some suggestion of a connection between stimulation-seeking and accidents, Farley said. The need for stimulation through the lifespan tends to peak in the late teens and early 20's, then decline. The plot of driving accidents follows the same general pattern.

The most common scenario for fatal accidents includes young male drivers, night driving, presence of passengers, alcohol use and speeding, Farley said.

"Those would all fit the pattern," he said. "Males are often slightly higher than females in stimulation-seeking behavior; both drinking and speeding are risk-taking behavior; and nighttime driving provides little

external stimulation, making passengers more likely to divert the driver's attention. All of those factors maximize the likelihood of a mistake."

Significantly, in matching the behavior patterns and personality characteristics of approximately the first 100 survey participants, Farley found that those with stimulation-seeking characteristics have had twice as many car accidents as those who are stimulation-avoiders.

"Driving accidents are the major killer of those in the 16-to-24 age range," Farley said. "Efforts to ease the problem, such as building safer cars, have had little effect."

Moreover, raising the drinking age might not be an effective deterrent for those who are the greatest stimulation-seekers, he said.

"My hypothesis is that those who take risks, and are the most likely to be involved in accidents, would not be much affected by things such as raising the drinking age or making cars safer. They would be likely to take bigger risks by breaking the law or driving faster."

It might be more effective, Farley said, if parents and others involved in child development could identify youths likely to be these lethal risk-takers and work to alter their lifestyles, channel their energies into safer alternatives such as "thrill sports," contact sports or the creative arts.

Farley and McNeely, a doctoral student in educational psychology, have already begun to expand their study to high school students in Wisconsin, and may include high school and college students in other Midwestern states.

"At this point, it's mainly a question of nailing down the possibility that there may be this prime personality characteristic among lethal drivers," Farley said. "Once that can be done, then people can begin looking for means to deal with those stimulation needs."

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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UW-MADISON RESEARCHER SHEDS LIGHT ON HOW ATHLETES COPE WITH PAIN

By TERRY DEVITT
University News Service

MADISON--Bill Morgan studies pain.

To be precise, the University of Wisconsin-Madison sports psychologist studies how athletes -- from weekend runners to world-class marathoners and swimmers -- cope with the sometimes painful physical strain that accompanies strenuous physical activity.

That kind of physical distress, says Morgan, is something all athletes encounter. It takes various forms and intensities, just as different athletes employ different strategies to overcome the stress and discomfort of endurance sports.

Most of us do our best to shut out pain. In fact, many casual athletes cope with pain by simply ignoring it -- by dissociating, says Morgan, head of the UW-Madison Sports Psychology Laboratory.

"You can distract yourself from physical discomfort by knowingly using a dissociative strategy," Morgan said in a recent interview. The idea is that by concentrating on something other than the strenuous activity at hand, a marathon run for example, an athlete can shut the gate on the body's sensory feedback.

"It can be as simple as the casual athlete running with other people and

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carrying on a conversation," Morgan said. "When you talk, you forget about what you're doing. The run seems to go faster."

Some athletes, Morgan has found, use more elaborate dissociative strategies.

"Some people, in their minds, write letters to all the people they owe letters to. Others solve complex mathematical problems while running," said Morgan. "I know of one distance runner who, at the beginning of a marathon, visualizes a stack of records on a turntable. When the gun goes off the first record falls and, as he puts it, he grooves on Beethoven for the next 26 miles, 385 yards."

Morgan likens dissociation to a strategy once employed by Tibetan monks known as mahetangs, who reportedly could run 300 miles in 30 hours. By developing a visual fix on a distant object, placing their locomotion in synchrony with their breathing and repeating a sacred syllable or phrase to themselves as they ran, they were able to surmount the obstacles to such a remarkable feat, Morgan said.

Taking his cue from the mahetangs, Morgan has tested dissociation in the laboratory and found that not only does the strategy serve as a foil for pain, but that it also significantly improves performance.

"By getting people to employ a similar strategy -- developing a visual fix on an object, pacing locomotion with breathing and repeating a word or mantra with each step -- we've demonstrated on the average about a 20 percent to 30 percent performance gain," said Morgan.

Although dissociation can improve performance and allow some people to sidestep the physical stress associated with an endurance sport, Morgan cautions that there is an element of risk to employing such a tactic.

"There are times when your body, through pain, is telling you that you should stop or slow down or quit. But through dissociation, you're able to transcend that state. When you do that you run the risk of going into heat

stress, heat exhaustion or suffering a stress fracture without knowing it."

An extreme example of a runner using dissociation to ignore pain occurred during a Michigan marathon when a runner was able to finish the last 11 miles of the race with a .22-caliber bullet embedded in his skull.

"After he was shot, he entered into a monologue in which he said 'Well, that was a bee that hit me in the head. I can still feel it. Maybe it stung me. Now it's going away. I'm okay now.'

"He was 15 miles into the marathon at that point and he finished," Morgan said. "But he had this .22-caliber pellet in his skull that had to be surgically removed after the race."

Morgan also said that there is an alternative strategy called association for coping with pain, a strategy he has found used frequently by elite athletes pushing the limits of endurance.

Those who associate pay very close attention to their bodies. Instead of meditating or using distraction when in distress, they simply slow down.

"The elite, world-class runners we've worked with are associators," Morgan said. "They monitor themselves very carefully. They don't worry about pain zones. They avoid pain zones by slowing down and keeping the run under control."

Morgan said in a competitive situation a world-class marathon runner is running at a pace of 12 miles per hour and must pay close attention to what is going on in order to be successful.

"In competition, elite runners must be careful," Morgan said. "They can move up to the brink, or the "wall," as some people call it, and they can press and bump right against the edge. But when the edge gets more intense they should back off." said Morgan.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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CONTACT: Karl U. Smith (813) 676-7020

LEFT FACE, RIGHT MUSIC

By BILL KEENAN
UIR Science Writer

MADISON--Beethoven probably didn't know he was left-faced. Neither was he likely to know that left-faced people like himself may be predisposed to making great music.

But a recent study by Karl U. Smith, emeritus professor of psychology at University of Wisconsin-Madison, links dominance of one side of the face, termed facedness, and musical talent. It may support the theory that musical ability is inherited.

After studying the faces of hundreds of people to determine their facedness, and supplementing his visual observations with computerized analyses of lip, tongue and jaw movements, Smith discovered that facedness begins to emerge in infants several weeks old and is probably as common as right- or left-handedness in people.

"My results confirmed that all persons have a sort of facial 'fingerprint,' or distinctive way in which they use one side of their face just as they have distinctive patterns of handedness," Smith said in a recent interview.

Nearly 90 percent of all people Smith examined were right-faced. The connection between left-facedness and musical ability surfaced by chance as he was looking at facedness patterns in different occupational groups.

When he turned to musical artists, he said, "I was stunned to discover

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that 98 percent of the opera singers I examined were left-faced. In fact, of the talented musicians I observed, almost all were left-faced."

When Smith studied pictures of past musical greats like Beethoven, Brahms, Liszt and Wagner along with videotapes of eminent living musicians -- from country to classical -- he found the vast majority of them to be left-faced.

To determine facedness in long-dead composers, Smith relied on what he terms "static signs" when examining their pictures. For example, in right-faced persons the right brow is elevated higher than the left brow. Dimples and wrinkles are less pronounced on the right side, and the head tilts toward the left.

Smith put forth the possibility of a genetic basis for facedness, and the link between that phenomenon and musical talent after scrutinizing two special study groups: infants and twins.

"Facedness is clearly noticeable in infants, which means that it develops two to three years before handedness," Smith said. "This suggests that facedness is related to how the brain develops right after birth, which indicates that certain traits are inherited."

He also found that of 21 pairs of so-called symmetrical twins -- identical twins who share characteristics on the same sides of their bodies -- all of them shared right or left facedness.

Facedness, he believes, indicates which side of the brain is dominant. Current theories suggest the left hemisphere of the brain controls analytic skills whereas the right side is geared toward creativity. In either case, the left hemisphere of the brain controls movement on the right side of the body, and the right hemisphere controls the left side.

In the context of musical ability, Smith said, "The left side of the brain controls language articulation, but the right side controls total performance, or the ability to sing and control the voice."

"This right-brain dominance seen in left-faced people is the physiological

source of musical ability and is inheritable. Furthermore," he added, "the tendency toward left-facedness in family members of eminent musical artists and composers also suggests that these traits are heritable."

Smith also found that left-faced people are not typically left-handed. "In fact, most highly talented instrumentalists are right-handed since orchestras rarely hire left-handed players. That's because the synchrony of an orchestra depends on the integration of sound with movement," he said.

Although Smith cautioned that his study is not conclusive and further research is needed, he also suggested that recognizing patterns of facedness may someday help researchers to better understand speech disabilities, dyslexia and perceptual disorders.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Research Psychology

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PSYCHOLOGISTS HELP SMOKERS 'KICK THE HABIT'

By BILL KEENAN
UIR Science Writer

MADISON--Most cigarette smokers will try to kick the habit at least once in their lives and many of them will fail.

But those who try a smoking cessation program developed by University of Wisconsin-Madison psychologists stand a much greater chance of success -- in fact, a 60 percent chance of success.

This is a significant achievement since any addiction-breaking program that frees 20 percent of its participants is usually considered successful.

Developed by Timothy Baker, a UW-Madison psychology professor, and by Steven Tiffany, a former clinical psychology intern now at Purdue University, the program combines a rapid smoking technique with counseling. The psychologists designed the integrated program after studies showed that the rapid smoking technique used by itself had a very low success rate.

With the rapid-smoking technique, a smoker puffs a cigarette every six seconds until he or she becomes nauseous. Tiffany said it is based on animal research in which rats are exposed to a particular flavor and are then made sick. They won't touch that flavor thereafter even if it is associated with a sweet substance that they normally crave. Similarly, people can develop aversions to flavors that are important to them.

Cigarette smoke is an important flavor for a smoker. When the desire for

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that flavor is added to the smoker's physiological addiction to nicotine, the urge to smoke can be very strong.

Cigarettes also can be emotionally addicting. Tiffany speculated that many people smoke to regulate their emotions -- to calm themselves down when nervous or pick themselves up when feeling low.

"The fact that cigarettes provide instant access to a drug with such profound emotional effects makes smoking an especially insidious addiction," said Tiffany.

When a person begins the smoking cessation program, he or she must refrain from smoking for one day. The, during a rapid-smoking session, the smoker puffs a cigarette every six seconds until he or she is overcome with nausea. The smoker waits until the malaise goes away and them repeats the procedure two more times during that session.

"We stop them short of vomiting because we want the malaise to linger," said Tiffany. "The awful feeling strengthens a smoker's developing aversion to cigarettes."

The smokers undergo six rapid-smoking sessions over a two-week period with counseling following each session. Most report fewer urges the day after a session.

"Even though the rapid smoking continues to feed their physical addiction to nicotine, the developing taste aversion, at least temporarily, seems to override that addiction," said Tiffany.

If the rapid-smoking sessions lay the foundation that helps break a smoker's addiction, then counseling is the mortar that holds the program together and increases its odds of success.

Counselors offer encouragement and remind their clients that smoking is an addictive process, that they'll experience withdrawal symptoms and that their urges will eventually decrease.

Counselors also help smokers recognize and anticipate specific situations

that could spark a relapse. These include social cues such as an alcoholic drink or being around other smokers. In a counseling session, the client will think of situations that might spell trouble; then, counselor and client plan strategies to disrupt such situations.

For example, if a smoker habitually has a cigarette with coffee at the kitchen table, he or she will plan in advance to have coffee somewhere else, where the urge to have a cigarette won't be as strong.

"Don't argue with your urges, they're irrational, so they'll always win," said Tiffany. "Just stop them by doing something else."

He noted that smokers will often rationalize a relapse by saying to themselves: "Why delay having a cigarette when I know I can't make it through life without them."

"This is the irrational urge talking," said Tiffany. "Smokers can learn to recognize it and, by simply saying to themselves, 'Smoking is not an option and I will not smoke,' they can destroy the urge."

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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UW-MADISON VISION STUDIES SEEK ANSWERS TO MOTION SICKNESS

MADISON--What do fear of heights, car sickness and jet lag have in common?

If Sheldon Ebenholtz's theories are correct, these and certain other maladies may be symptoms of motion sickness caused by normal peripheral vision.

A psychology professor at University of Wisconsin-Madison, Ebenholtz says motion sickness stems from the powerful influence of vision on the body's sense of balance.

His ideas on vision and balance have been used by NASA in efforts to combat the causes of space sickness. Similar principles are being incorporated in a system to improve the safety of jet fighter pilots.

"Most people know the organ of balance is the inner ear," he said, "but vision also has a very significant influence on this system. We're investigating why it has this influence."

The importance of vision to balance, he said, is easily demonstrated: "It's a lot tougher standing on one leg with your eyes closed." But researchers also have learned that it is peripheral vision that is most important.

Researchers know that the periphery of the eye controls vision balance. For example, most people who have lost peripheral vision have problems keeping their balance while walking.

Ebenholtz said peripheral images affect certain brain cells that work with the inner ear canals to control body balance. The cells use the peripheral

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images to tell the brain's balance centers how the body's position relates to its surroundings.

But in research funded by the National Science Foundation, Ebenholtz has discovered that the brain cells can be fooled. In experiments conducted in a darkened room, subjects were asked to position a rod vertically within a lighted square when the square is tilted.

Ebenholtz said most people found it difficult to keep the rod vertical, tending instead to rotate it in the direction of the tilted square. "The periphery of the eye is sensitive to the square," he explained. "When the square is rotated 30 degrees, certain '30 degree' brain cells start firing. These tell the brain's balance center that this is the proper angle for maintaining balance."

This phenomenon, he claims, is exhibited in many real life situations. Fighter plane accidents often occur after pilots become disoriented following a false horizon such as cloud tops. The Air Force is developing a system that projects a line of light which represents the "true horizon," giving the pilot a visual orientation reference.

Many "fear of height" cases can be explained through vision orientation, Ebenholtz said. The greater the height from which a person looks down, the smaller the visual references upon the eye's periphery, causing a loss of balance.

"Studies have shown that body sway increases at greater heights," he said. Keeping "eyes on the trail ahead," he added, is more than just a psychological ploy for mountain climbers.

Wave motions on the eye's periphery lead the viewer to perceive he is moving, and can lead to the dizziness and nausea that are symptoms of seasickness, Ebenholtz said. Similar problems such as carsickness, dizziness from use of microfiche displays and cathode ray tubes, and even jet lag could also be forms of motion sickness, he said.

The problem, he explained, is a conflict between peripheral vision signals and the body's balance organs that control eye movements. When a car or plane bounces, or characters move on a video screen, peripheral vision cells may tell the eyes to move to a certain position, but the balance cells may provide a different signal.

"When these signals are in conflict, symptoms such as nausea and dizziness that correspond with motion sickness often occur," Ebenholtz said.

Ebenholtz discovered that placing a lighted circle around the square that he uses in his experiments reduced the subject's level of disorientation. He believes that because individual brain cells respond to only small segments of the circle, they are unable to respond to any single orientation.

"In effect the cells cancel each other out and lessen the total effect," he said.

His findings imply that viewing something through a circular object may help reduce forms of motion sickness, ranging from fear of heights to sea sickness, he said. "Our research emphasis is to learn the conditions under which motion sickness occurs and find ways to inhibit it," Ebenholtz said.

NASA already has applied Ebenholtz's ideas to combat the disorientation that can lead to space sickness. Space shuttle crewmembers often complain of nausea caused by viewing an apparently inverted earth through the craft's windows.

On the most recent shuttle flight, a circular frame was placed over a shuttle window. Although results from the experiment are not yet in, Ebenholtz said the astronauts' disorientation may have been lessened in the same way that it was in people who participated in his laboratory experiments.

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uw news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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SCIENTIST FINDS POSSIBLE CLUE TO ALCOHOL ADDICTION

by Jacqueline Kelley,
University News Service

MADISON--Scientists have long speculated that some people are chemically predisposed to become alcoholics.

Now a researcher at University of Wisconsin-Madison has found preliminary evidence of that predisposition in monkeys, animals whose physiology is remarkably similar to humans.

Gary Kraemer, a physiological psychologist, said he found that monkeys who may become heavy drinkers also are likely to have a lower-than-average level of a chemical involved in the transmission of nerve impulses. The chemical, a neurotransmitter called "norepinephrine," is found in the fluid surrounding the brain.

After drinking, the level of the chemical rises, he said.

If the same relationship is found in humans, said Kraemer, this discovery could lead to a test for potential alcoholism or perhaps lead to therapy to prevent alcohol addiction in susceptible people.

In a series of experiments, Kraemer gave rhesus monkeys at UW-Madison's Primate Lab a free choice of beverages -- both alcoholic and non-alcoholic -- during brief separations from their social group.

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Kraemer said his experimental monkeys fell into three distinct groups: those that barely sip alcohol, those that drink moderately but do not increase consumption with time, and the heavy drinkers who consume increasing amounts of alcohol.

Their norepinephrine responses also were distinct, he said. In very light drinkers, the level went down after alcohol consumption. In moderate drinkers it stayed the same. Heavy drinkers showed a rise.

These kinds of free-choice alcohol consumption experiments with monkeys are novel, Kraemer explained, because they combine alcohol exposure with a social stressor (separation). The animals usually do not voluntarily drink alcohol excessively and consistently.

Kraemer, however, found that ethyl alcohol flavored with the low-calorie sweetener aspartame was accepted by some of the monkeys in increasing amounts over time.

Free choice for the monkeys, he said, is an important aspect of his research because it better simulates human access to alcohol and may provide more insight into the alcoholic's motivation and incentive.

"In our culture, social drinking insures that nearly everyone is exposed to alcohol," Kraemer explained. "At some point, environmental factors such as stress may produce physiological changes in some people that will alter the body's response to alcohol. They may come to view alcohol as therapeutic, and become addicted in spite of the fact that many alcoholics admit their drinking makes them feel worse."

Kraemer also speculated that one or more neurobiological factors may predispose certain individuals to multiple problems such as depression and alcoholism.

To test possible links between alcoholism and depression, Kraemer induced "depression" by removing monkeys accustomed to living in a social group from physical contact with their peers. Such depressed monkeys typically respond by huddling, curling themselves into a fetal-like position.

He found that the monkeys that huddle the most have low levels of norepinephrine. Administering an anti-depressant drug, he found, reduced huddling and increased activity, just as administering low doses of alcohol did, and also raised the norepinephrine levels just as they were elevated after alcohol consumption in monkeys who were heavy drinkers.

"It looks like monkeys that respond poorly to separation from their peers, and animals most likely to drink, are both characterized by their unusual neurobiological response to drugs when compared to the majority of monkeys," Kraemer said.

In further studies, Kraemer hopes to look at several factors related to alcohol addiction, among them: neurochemical factors in newborn monkeys that might indicate predispositions, male-female differences in addictive behavior, changes in brain chemistry and behavioral responses over time, and chemical differences other than the norepinephrine level.

Kraemer said that monkeys make better subjects for alcoholism experiments than humans, whose testimony may be unreliable and who are usually studied only after they have become alcoholics.

Kraemer is an affiliate scientist at the Wisconsin Regional Primate Research Center and an associate scientist at the Psychiatric Research Institute in UW-Madison's Center for Health Sciences.

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research news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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TREATMENT FOR CHEMOTHERAPY STRESS UNDER DEVELOPMENT AT UW-MADISON

By JOEL McNAIR
University News Service

MADISON--A surprising number of chemotherapy patients become sick simply at the sight of a doctor on the street or a hospital scene on television, say University of Wisconsin-Madison psychology researchers.

The physical and emotional stress of chemical cancer treatments is often so great that 25-35 percent of these patients suffer from nausea in anticipation of treatment, according to David Nerenz, coordinator of health services at the Veterans Administration Hospital in Madison. "Some people coming in for treatment become sick when they see the hospital door," Nerenz said.

Anticipatory nausea is one of the side effects of chemotherapy currently being analyzed by the UW-Madison researchers. They are hoping to provide programs to combat the side effects with minimal use of drugs, said Howard Leventhal, a psychology professor.

"Chemotherapy is a nasty treatment," Leventhal explained, but it's an important one. "If people ask for reductions in their treatment regimens because of discomfort, they are less likely to recover from the cancer," he said.

Nerenz, Leventhal and staff at the university's Clinical Cancer Center have been working with 240 chemotherapy patients for three years under a

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National Cancer Institute grant. "This is the first study aimed at getting solid information on the distress caused by side effects and at providing programs for fighting those effects," Leventhal said. "Up until now, many of the things done to help patients have been on a 'best guess' basis."

The patients, who suffer from breast cancer and lymphoma, kept diaries and were interviewed by researchers five times over six-month periods, Nerenz said. The researchers collected data about side effects such as nausea, fatigue and weakness, and now are beginning to analyze the results.

Nerenz said, for example, that nausea in anticipation of cancer treatment most often strikes younger patients. The researchers also found that it is more frequent in patients taking metallic-tasting medications. It is more likely to hit those being treated for cancer than those being treated to prevent its recurrence after surgery.

The National Cancer Institute recently awarded the researchers another three-year grant to develop effective and economical measures for fighting the effects.

Current psychological treatments for side effects are often expensive, Nerenz noted. "Various drug combinations have been tried, but those tend to produce their own side effects," he added.

Possible treatments might include taste blocking candies or simple, inexpensive relaxation treatments, he said.

Leventhal said the researchers are now developing and testing three separate stress treatments aimed at improving patient tolerance for chemotherapy. The test programs will include specific tactics for coping with the stress caused by side effects.

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research news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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CHILDREN'S BRAIN PROCESSES SHED LIGHT ON VISION PROBLEMS, RESEARCHER SAYS

By JOEL McNAIR
UW News Service

MADISON--When a child's vision is lost through brain damage or abnormality, the brain can sometimes compensate or "rewire" itself to regain that vision, according to University of Wisconsin-Madison psychology Professor Peter Spear. He is working to find out how this happens in the hope that it might lead to medical treatment to help vision-impaired adults.

It is the brain as well as the eyes that lets people see, said Spear. "A person can have perfectly normal eyes, but if the brain does not properly process the signals sent by the eyes, that person can have severe vision problems."

Young children have the ability to make up for a damaged visual center in the brain but adults generally lack this capability, Spear said. Along with research associate Lillian Tong and Professor Ronald Kalil of the UW's opthalmology department, Spear is probing the mysteries behind this phenomenon.

A main control center for vision is the primary visual cortex, a large convoluted area near the back of the brain. In research experiments with cats, the UW researchers have found that if the primary cortex in an infant's brain is damaged, secondary vision centers in the brain rewire themselves, changing their functions and enabling the infant to regain much of the lost vision.

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"The brain has a certain amount of plasticity," Spear explained. "That doesn't mean the damaged part of the brain regenerates or heals, but the intact areas do change their functions to compensate for the area that is damaged."

Most rewiring, however, occurs only during what scientists call the "critical period." Spear said this period generally ends in humans by about the age of eight. "If an adult and a child suffer similar damage to the primary cortex, the adult might only be able to differentiate crude changes in light while the child might be able to regain his or her vision," he said.

Spear discovered that the adult brain does utilize secondary vision centers, but those centers do not change their functions.

"If we can discover how a child's brain rewires itself, clinical researchers someday may be able to come up with something that would restore the vision of brain-damaged adults," Spear explained. "There may be certain chemicals that trigger this mechanism that could be synthesized and given to adults."

The researchers are also studying the effects of eye abnormalities on the ability of the brain to process visual signals. They have found that among the young, the brain also adjusts for abnormalities such as cataracts and crossed eyes, which are primary causes of amblyopia (lazy eye), a well-known childhood vision problem.

Through experiments with cats and monkeys, Spear has found that with visual disorders, the eyes often compete with each other instead of working together as happens when vision is normal. Binocular vision, which allows for proper focusing and depth perception, usually suffers when eyes compete, Spear said.

"In a normal cat, about 80 percent of the visual cortex cells are driven by both eyes while the remaining 20 percent handle a single eye," he explained. "If one or both eyes are deviated, the number of cells handling both eyes is greatly reduced and the number handling a single eye is increased."

"The result is loss of binocular vision," he said. "The brain has rewired itself but the rewiring is usually less than perfect, and some vision problems remain."

Experiments with animals have convinced clinicians that if there are vision problems, corrective methods such as glasses, eyepatches or surgery must be employed during the critical period to assure any measure of success.

"If corrective measures are undertaken very much after age eight," Spear said, "the eye can be in perfect focus, but the child will never be able to see well because the mechanisms through which the brain processes the visual signals have been permanently altered during the critical period."

Even when applied at an early age, Spear says eyepatches and surgery are not always completely effective. Through research on the reasons and processes behind competing eyes, he hopes to supply information that will help clinicians refine these methods.

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research news

Research Psychology

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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RESEARCHERS EXPLORE COURTROOM PSYCHOLOGY

By JOEL McNAIR

MADISON--Emotion or fact--which has more clout in the courtroom?

Fact may be the base upon which the American legal system is built, but many trial attorneys swear by emotional appeal as a way to impress juries.

Emotion may be a good tactic for certain attorneys in certain situations, say researchers from the psychology department at the University of Wisconsin-Madison. But these researchers also say that, in the great majority of cases, emotional appeals tend to backfire, leaving juries with less than favorable impressions of the attorney and client.

"Jurors usually feel they are getting the whole story from the trial attorney who uses a calm, factual approach," says psychologist Daniel G. Coates. "But an emotional appeal often makes the juror feel manipulated--something jurors resent."

Coates' research is part of an extensive project being conducted by the University's psychology, political science, communication arts and sociology departments and the Law School. Funded by a U.S. Department of Justice grant, UW researchers are studying behavioral patterns in five courtroom aspects: victims, persuasion, eyewitness testimony, jury selection, and negotiation and plea bargaining.

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"This research is designed to bring social science into the courtroom," said psychologist Steven D. Penrod. "It attempts to provide attorneys with information that will help them to perform better in the courtroom."

While most law schools offer classes in courtroom conduct and methodology, Penrod says that "a lot of mythology still exists" among law professors and practicing attorneys as to which techniques are most effective.

Many of the researchers' findings were obtained through experiments with student and faculty volunteers, interviews with jurors and analysis of actual trials. These findings include:

--Court presentation of graphic photographs showing victims of violent crimes often decreases jury sympathy for that victim. "People want to believe that this is a just world, and that bad things don't happen to good people," explains Daniel Linz, a graduate student in psychology. "People also feel threatened by these bad things, and tend to blame the victim in order to control this threat."

--District attorneys, mainly because of their greater courtoom experience, are more effective in communicating to juries than are defense attorneys;

--"Salesmanship" plays a big part in the effectiveness of eyewitness testimony, Penrod says. A confident eyewitness is more likely to be believed by jurors than one who expresses less confidence but gives a greater number of relevant facts.

--Jurors can be swamped by too many facts; attorneys often spend too much time presenting details.

--While many attorneys claim that the most persuasive evidence should be presented early in the trial, research has shown that jurors will remember much more of an argument presented near the trial's end.

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research news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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THESE MONKEY FATHERS BEHAVE A LOT LIKE MOTHERS

MADISON--Although male child-care is becoming more popular among young human couples, it's been going on for a long time among some animal species.

A case in point is the cotton top tamarin, a New World monkey about the size of a squirrel. In cotton top society, dad behaves a lot like a mom, according to a University of Wisconsin-Madison psychologist, Charles T. Snowdon.

"Males are much more involved in parenting than the females," he said. "Father or older brother, for example, carries the infant much more than mother or older sister."

Such behavior doesn't come naturally, Snowdon added. Cotton tops must learn to be good parents by assisting their own parents in raising younger brothers and sisters. The experience is essential to their future, the psychologist noted.

"Without this kind of practice, neither male nor female cotton tops breed successfully. They can produce babies, but they're incompetent parents and the babies don't survive."

Male-dominated child care may be a necessity for the tamarin, Snowdon speculated. Cotton tops, unlike other monkeys, always bear twins that weigh nearly 30 percent of the mother's body weight. Shortly after birth the mother becomes pregnant again.

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"Being pregnant and lactating at the same time represents a big energy cost to the female," especially considering the infant's large size, Snowdon said. "The females couldn't cope with these burdens without a lot of help from someone, and the father and older brother are the best helpers."

Snowdon's main interest is studying the monkeys' system of vocal communication. But since cotton tops are an endangered species, he and Jeffrey French of the University of Nebraska investigated their reproductive behavior and found the monkeys are monogamous.

"This means that it's important for both sexes to keep competitors away," Snowdon said. "Males are very aggressive toward strange males. You'll rarely find two unrelated adult males in a troop."

Females, however, solve the competition problem differently. French found that only one female in a group ovulates and mates. The other females don't ovulate and don't show any interest in the male--and vice versa.

"However, if we put one of the non-ovulating females in a different room with a mate of her own, she quickly ovulates, sometimes within two weeks," Snowdon said. "There is a tremendous spurt of hormone production, and she becomes sexually active. If we put her back into the original group with a dominant female, ovulation stops.

"This is evidence of a social form of birth control exerted by the dominant female."

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For more, See: Research-Pornography

Research Report

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October 29, 1980

AGGRESSIVE-EROTIC PORNOGRAPHY AND VIOLENCE AGAINST WOMEN

by Ann Beckel
UW Science Writer

Madison, Wis.--The increasing number of sexual attacks on women has led to renewed concern about the possible connection between pornography and violence. The question seemed settled in 1970 when the Presidential Commission on Obscenity and Pornography found no evidence of a relationship between exposure to pornography and subsequent aggression, particularly sexual crimes.

However, a new type of pornography--aggressive-erotica, which contains explicit violence against women--has become increasingly prevalent. And research by psychologist Edward Donnerstein of the University of Wisconsin-Madison links this violent pornography with increased aggression toward women.

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"There have been drastic changes in pornography in the past ten years," says Donnerstein. "If we used the same materials in our studies that the commission used, we probably wouldn't find any effects. But we have consistently found that viewing aggressive-erotic pornography increases aggression toward women.

"These films and books almost always show women enjoying rape and violence, thereby reinforcing the myth that women want to be raped. The men perpetrating the violence are not depicted as deviants, but as handsome, 'all-right' guys. So the effect may be to reduce many men's inhibitions to be aggressive toward women. They see aggression as having no negative consequences."

Aggression and Erotica

In one experiment, Donnerstein used three films. Two were highly erotic films, one of which contained explicit sexual aggression, and the other no aggression. The third film was neutral, containing neither erotic nor violent components.

The subjects--120 male college students--were told they were participating in studies of the effects of stress on learning and on physiological responses. They did not know that watching the films was part of the experiment. To test how anger affects subjects' responses to the films, half of the men were deliberately angered before viewing the films. Aggression was measured by the number of electric shocks the subject was willing to give to a man or woman for wrong answers on a "learning task."

Donnerstein found that the highest levels of aggression were expressed toward females by angered subjects who had watched the aggressive-erotic film.

"Even when subjects weren't previously angered, aggression toward females increased, which was not the case for subjects paired with males," says Donnerstein. "Apparently, the woman takes on aggressive cue values by being associated with the victim in the aggressive-erotic film, and the men's inhibitions to be aggressive toward women are reduced."

Aggressive vs. Aggressive-Erotic Films

Donnerstein then conducted a study to determine whether it is the combination of sex and aggression or aggression alone in films that elicits increased aggression toward women.

In this experiment, all subjects were angered before viewing one of four films--a neutral film, a non-aggressive erotic film, a film depicting violence toward a woman, but which was not sexually arousing, and an aggressive-erotic film.

"Both components in aggressive-erotic films are important," says Donnerstein. "Viewing the aggressive film did increase aggression toward females, but again the highest levels of aggression toward females were expressed by men who had watched the aggressive-erotic film."

Seeing non-aggressive erotic films increased subjects' aggression toward males only slightly, and toward females, not at all.

Postive vs. Negative Endings

Donnerstein also examined how the endings of aggressive-erotic films affect male subjects. He changed the last 30 seconds of two otherwise identical films. In one film, the woman is depicted as having enjoyed the rape, and in the other, she is obviously hurt and says she feels humilitated by the rape.

"Angered viewers of both films increase aggression toward females, but those who see the film with the positive ending exhibit the highest levels of aggression," says Donnerstein. "Among non-angered subjects the film with the negative ending increased aggression toward females only slightly, but viewing the positive-ending film greatly increased aggression."

When Donnerstein questioned subjects about the films, the men who saw the positive-ending film not only rated the film as much less violent, but also saw the woman as more responsible for her rape than did men who saw the negative-ending film.

"The positive endings typical of aggressive-erotic films condone aggression by indicating that violence doesn't really hurt women, and that women actually enjoy the aggression," says Donnerstein.

"It is interesting that in the very few films in which men are raped, their anguish is clearly evident. Women, however, are consistently depicted as enjoying rape."

add four--aggressive-erotica

Aggressive-erotica is not limited to 10-minute "stag" films, although it appears there in its most explicit form. Researchers are finding that aggressive-erotica in more subtle forms is becoming increasingly common in television shows, feature movies, advertising, and popular magazines.

"The aggression against women is always paired with something pleasureable," says Donnerstein. "The negative consequences are never shown."

Donnerstein has demonstrated the short-term effects of viewing violent pornography. But how does aggressive-erotica in films and its more subtle portrayal in the mass media affect long-term attitudes toward women? Does it make both women and men more accepting of violence? Does it reduce men's inhibitions to be violent toward women? No one yet knows the answers to these questions.

On a more optimistic note, however, Donnerstein finds that when participants learn the true nature of the experiments, they become less accepting of rape myths--that women enjoy rape and want to be raped. Just a brief confrontation with their attitudes toward women apparently produces a long-term change in the men's attitudes toward rape and violence against women.

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research news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release: Immediately 7/8/80 jmn

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PSYCHOLOGISTS EXPLORE 'ILLUSION OF KNOWLEDGE'

MADISON--The junior executive discovers a captivating article in a professional journal. Hoping to impress his boss he later tries to describe to him the information contained in the article, but falters and stammers as he realizes he never really understood the story. He leaves the boss's office, humiliated, wondering how he could have ever thought the article interesting in the first place.

All of us have been frustrated, at one time or another, by our inability to recall information that we were certain we understood totally. Three psychologists at the University of Wisconsin-Madison are exploring not only why this phenomenon happens but how people can avoid being trapped by it.

"As teachers we see it all the time," said Arthur Glenberg who, along with psychologists Alex Cherry Wilkinson and William Epstein, have tagged the phenomenon "the illusion of knowing."

"Students tell us they studied hard, that they understood the material but cannot figure out why they did so poorly on an exam," said Glenberg.

Drawing on two basic experiments, the researchers have been able to induce the illusion and measure it with introductory psychology students serving as subjects.

In the first test, subjects were asked to rate how well they understood a straightforward text containing several paragraphs of information, one of which contained a fairly blatant contradiction of the material that ran before it. Around 90

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percent of the participants failed to catch the contradiction yet indicated that they fully comprehended the material. Totally understanding the text would have been impossible without catching the contradiction.

The researchers were so surprised at the high percentage of those who fell victim to the illusion of knowing, that they ran the experiment again. The tests were changed to be sure that the instructions to the subjects were explicit and that there was sufficient incentive for the subjects to want to respond honestly. The participants were under no time pressure. Nevertheless, between 80 and 90 percent believed they completely understood the material when, in fact, they did not.

Other experiments by the researchers reinforced the findings. Only 50 percent of students who believe they fully understand material are actually picking it up, according to all the averaged laboratory data available.

Why the illusion of knowing occurs is not perceived exactly, but the psychologists are conducting research on two possibilities.

First, perhaps people just don't want to appear stupid. "It's possible subjects feel subtle pressure to say they know the information before they really do," said Glenberg. "While most of our results are inconsistent with this possibility, it still may account for a small proportion of the illusions we've observed."

Second, individuals may not realize that comprehension exists in degrees. "High levels of understanding textual materials," said Glenberg, "may involve understanding individual sentences, forming coherent ideas out of the sentences within a paragraph and, most importantly, relating the ideas presented in different paragraphs.

"Perhaps people are easily fooled into believing that they have a high level of understanding when they only understand the individual sentences or paragraph," he said.

If this turns out to be an explanation for the illusion, Glenberg suggests people could avoid being tricked by it if they would consciously pause and appraise after they've finished reading.

"Even if the material seem perfectly clear while you were reading it, the key is to try to assess your comprehension in detail when you are done," he said. "Ways of accomplishing this are by recalling, paraphrasing or perhaps by taking a test."

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research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Release: Immediately 2/8/80 jmn

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FRIENDS OFTEN ABANDON RAPE VICTIM JUST WHEN SHE NEEDS THEM MOST

MADISON--A rape victim needs the comfort and support of others to help her through the traumatic time following her assault. But a University of Wisconsin-Madison psychologist says persons around the victim are frequently turned off by a victim's description of herself as not coping well with the crisis.

Consequently, rape victims have a hard time dealing with the emotions about the rape and, at the same time, adjusting socially, according to Professor Daniel G. Coates.

The research by Coates, together with Camille Wortman and Antonia Abbey of Northwestern University, examined people's reactions to varying stories about how rape victims described themselves.

"If a victim is feeling depressed, probably the best thing she can do is talk about that depression with other people," said Coates. "But the study suggests that if a victim presents herself as being unhappy and not doing very well, people won't like it."

That sets up a conflict between what's good for the victim's personal adjustment--talking about her fears and depression--and her social adjustment, said Coates.

As a result, rape victims may suppress their negative feelings about the trauma in favor of maintaining social relationships. Which might be why, said Coates, many victims carry around depression about their rape for months or even years after the crisis.

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Other women tend to blame the victim for the crime more readily than do men, according to the study. That's especially unfortunate, said Coates, because with the post-rape wariness victims have of men, they usually look to women for support.

Why do people around a victim react negatively to her attempts to discuss the rape? Coates says it's part of a natural defense system people set up to convince themselves that they are, in a way, invulnerable. Humans need to protect themselves from the idea that they, too, could be victims.

"Every street we cross, it's possible we're going to get hit by a car. If we gave serious thought to what would happen if we got hit by a car, we'd never cross any streets," said Coates. People have to operate their lives as though the world is a secure and safe place. They have to in order to operate at all.

"Unfortunately, this defense system bears poorly for the victim, because we end up feeling threatened," he said. "We blame the victim to convince ourselves that somehow she is stupid or is not careful and that's why she became a victim."

Coates recommended that people close to a rape victim try to become aware of their own fears about rape and realize that those feelings may influence their reactions.

Friends and family also should try to encourage the victim to talk about the problem without forcing the issue. Many victims, especially right after the attack, don't want to discuss it until they start to get it straightened out within themselves, said Coates. "At least let the victim know you're ready to talk and listen."

The main thing to avoid, he said, is blaming the rape victim. "It's very easy, especially when you really love someone, to get nearly as upset by the rape as the victim herself. A common response to the victim is 'How could you let this happen?'

"But the victim doesn't need that kind of blame," said Coates.

Coates advised victims to realize that just because they are victims, some people aren't going to like them. And in the case of rape, he noted, other women are likely to feel most threatened by the crime and won't want to talk about it.

"The victim should know that if people are responding negatively to her, it's not because of anything she's doing, that it's nothing under her control. She should not blame herself if some friends don't come around any more," he said.

"Secondly, she should realize that people, as a rule, don't like to hear about depression, to see people being upset. And because it's important for the victim to have at least some people she can talk to about her problem she should try to find those people."

Perhaps the most important step she can take to help herself, said Coates, is to get in touch with a rape counseling facility, such as the Rape Crisis Center in Madison which maintains a statewide hotline for any rape victim to call for counseling.

"There she can talk to other people who have gone through or are going through the same experience," said Coates. "They can tell her better than anyone else what it's like and can validate her reactions."

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research news

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Research Psychology

Release: Immediately 12/5/79 jmn

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ANESTHETIC MAY SUPPRESS BRAIN GROWTH

MADISON--Halothane, one of the most frequently used surgical anesthetics, may temporarily interfere with normal brain growth, especially in young children, according to a University of Wisconsin-Madison psychologist.

But halothane remains one of the safest anesthetics currently available and Professor Robert E. Bowman cautioned against any panic to reject the agent on the basis of his research involving test animals.

Laboratory rats exposed to low levels of halothane from conception through 60 days after birth made significantly more errors in maze-learning tasks than non-treated rodents--even after the anesthetic had worked itself out of the animal's system.

"What we think happens is that halothane suppresses the growth of neuronal processes," Bowman said. During early brain development in both the rat and the human, components of the nerve cells branch out and attach themselves to other brain cells, thus expanding the ability to learn and remember.

Bowman, Dr. Etsuro Vemura, now at Oregon State University, and research assistant Edward Levin believe that this connection between neurons is inhibited by halothane.

Fortunately, the suppression seems to be a reversible one. "So long as halothane is present you'll have some inhibition," said Bowman. "If the halothane is blown off and gotten out of the system, the neuronal process can then start again."

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But the point at which the anesthetic is blown off appears critical. If exposure stops at 30 days, brain development can pick up where it left off. However, for rats not removed from halothane until the 60th day, "the period during which crucial brain growth can occur may be pretty well past," said Bowman. "It's possible the neurons can never recover even if the halothane no longer is present."

Further studies are planned to confirm Bowman's conclusions, but if his model is correct, what does it mean for a young person undergoing surgery? "If we're right, a two- to four-hour operation shouldn't matter to a child," Bowman said.

"It'll take several days for all the halothane to clear itself from the system, which means a youngster's neuronal growth may be suppressed for that time. But the process will then resume.

"That's not a long suppression, aconsidering how relatively slowly the human brain grows. There's plenty of time for it to recover and develop full growth," he said.

Adult rats subjected to halothane in Bowman's research do not seem to show the retarded development apparent in young animals. However, Bowman is not willing to dismiss the anesthetic as harmless to the adult brain. "If the model is correct, the ability to learn new things, the ability for new synapses (neuron connections) to form, may be affected."

If that's the case, persons in an atmosphere of constant exposure, such as surgeons, nurses and anesthesiologists, may have more difficulty in learning new material.

A survey of Madison hospitals indicates that halothane use varies widely, depending on the individual anesthesiologist and the patient. But most facilities depend on halothane for over half their surgical cases.

One anesthesiologist said halothane was favored for children because of heartbeat interference occasionally triggered by another popular anesthetic, ethrane. Both halothane and ethrane are mixed with nitrous oxide, or laughing gas, before they're administered to the patient.

"We're certainly not looking at all the things halothane could do," said Bowman. "The trouble with toxicity studies, you have to concentrate on certain effects, and you can't be certain you haven't missed something. So I wouldn't want to say halothane is perfectly safe.

"At this point, however, if I had to go in for surgery, I wouldn't quibble at all about halothane anesthesia. I think it is the best thing we have available right now and that the risks from it are less than from other anesthesiants.

"But at the same time," he added, "we shouldn't rest on our present state of knowledge. We should find out if there are sufficient risks from halothane that might warrant adoption of new anesthetics now being researched."

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feature story

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: (608) 262-3571

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ATTENTION: Sports and Recreation Editors

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COOLING EMOTIONS HELPS SPORTS SCORES

MADISON--Now that most golfers have been sliced off the links into their warm living rooms by the chilly autumn wind, they can cringe over the tactical errors they committed last summer and envision strategies to shave strokes cff next season's games.

To help, a University of Wisconsin-Madison psychologist and a colleague have come up with a system which controls a player's game by controlling the emotions. It's a program they feel can be expanded to sports besides golf.

It's called "Brain Power Golf" and was developed as an aside to a study of human self-regulation by psychologists Daniel Kirschenbaum of UW-Madison and Ronald Bale of the University of Cincinnati. The system's techniques are included in a book now being published called "Psychology in Sports: Methods and Applications."

Both golfers, Kirshenbaum and Bale started their study by reviewing what professional players have said about keeping their cool on the course. "We decided they knew something we Ph.Ds didn't," said Kirshenbaum. "After all, how else could they do so much better than us in a game that is supposedly played on a six-inch course--the space between one's ears?"

The psychologists didn't think it was so much a matter of physical ability as of emotional stability. "Maybe some of the pros do have special back muscles or coordination to make those swings, but we felt that played into the game in a relatively minor way. It's more a question of how they think about the whole game," Kirschenbaum said.

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Gleaning the writings of professional golfers, the pair selected, condensed and refined the best of the tips and the tricks and packaged five super-techniques into "Brain Power Golf" or "BPG:"

--Deep Muscle Relaxation. Golfers progressively tense and relax the various muscle groups of the body to achieve deep relaxation. This is done just before the game and any time throughout that tension is felt in specific muscles.

--Planning Checklist. Before each shot, the players review in a notebook a checklist of game factors. This mentally clarifies such items for each shot as distance, lie of the ball, target and wind. For each putt, the distance, break and condition of the green are reviewed.

--Imagery. For this, the Jack Nicklaus technique was used of imagining, in reverse, the different stages of each shot: picture the ball resting on the target spot, then in the target area, the flight, the execution of the swing and finally the feel of the shot.

--Positive Self-Monitoring. In order to keep their minds off any bad shots they've made, the golfers write down which clubs are most efficient for which hole. The players should forget their bad shots until after the game.

--Positive Self-Statements. Again, to keep a positive frame of mind, golfers recall and jot down the positive aspects of their game. When especially tense, they refer to this list of statements, which include such personal strokes as "you've made shots like this before" and "play your own game at your own pace."

While the psychologists admit the system needs additional evaluation, the testing they gave it using golfers at the University of Cincinnati and from an Ohio insurance company team proved very encouraging.

"Like any cognitive skills, they're something you have to work at," said Kirshhenbaum. "The system takes concentrated effort, but the techniques can be used for almost any sport requiring fine motor coordination."

Essentially, the system aims at keeping the player's mind on the task at hand and not letting emotions take over.

"Golfers, like most people, tend to get mad at themselves when they blow a shot, especially when they're half decent at the sport. That's why you see people breaking their clubs, stomping around and cursing their heads off," said Kirschenbaum. "It means they're focusing on the fact they just messed up a shot. And that's what determines your score: the number of shots you screwed up."

Research has repeatedly proven, he said, that concentrating a lot on the negative will negatively affect your performance.

For that reason, the psychologists have the golfers who take part in BPG read and mark down the important factors of the game in a notebook they carry around with them on the course. "All airline pilots go through a checklist every time they fly no matter how many years they've been at the controls," Kirschenbaum said. "For some reason people in sports don't do that. They should."

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feature story

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: (608) 262-3571

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ATTENTION: Sports Editor

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TOUGHER PENALTIES NEEDED TO CURB VIOLENCE IN SPORTS, SILVA SAYS

MADISON, Wis.--Violent behavior in some sports is increasing because fans reward violent acts more than they condemn them, says the teacher of "Psychology of Sport" at the University of Wisconsin-Madison.

And John Silva says more meaningful penalties are needed to reverse the trend.

Even Congress, Silva notes, has asked for a curb on professional sports mayhem.

Examples of violence abound in recent sports history. Rudy Tomjanovich's face is disfigured by a punch thrown by Kermit Washington in an NBA basketball game last season. Kareem Abdul-Jabbar and Kent Benson exchanged blows in the season's first game, making nationwide headlines.

In pro football, Lynn Swann was rendered unconscious from a forearm to the head by George Atkinson of the Oakland Raiders during an NFL contest. Atkinson ended up in court to face criminal charges.

In pro hockey, Silva says Dave "The Hammer" Schultz, long known for his policeman's role on the Philadelphia Flyers, had his violent behavior rewarded with endorsements, prestige and a higher salary. Because these rewards extended beyond the scope of the game and enchanced his personal life, says Silva, Schultz was more determined to maintain his violent role.

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"Mean Joe" Greene of the Pittsburgh Steelers, called part of the "criminal element" in professional football by his own coach, is frequently seen in advertisements promoting products. Basketball player Maurice Lucas has been featured by several major sports magazines as an "enforcer" -- or protector of members of his team at any cost.

In contrast, restraints against committing violence include only a short penalty or suspension of short duration. These consequences are only limited to the context of the game, and have only marginal deterring effects, Silva notes.

Silva advocates increasing the potency of what he calls "negative reenforcers" to deter athletes from violence in all sports. These would include:

(*)--Immediate game suspensions for overt fighting. This has worked successfully in college hockey without altering the nature of the game, believes Silva. He also proposes that the alternate official at a contest should have responsibility for determining who started a fight, with the aid of instant video replay.

(*)--Extended suspensions for repeat offenders. And, "the initiator should have stronger penalties than the person acting out of self-defense."

(*)--Imposing monetary fines with assurances they will be paid by the athlete, and not management.

(*)--Legal action. "Essentially what you have is someone mugging an individual," Silva says.

"What we're saying as a society is it's OK and we can't take legal action because the violence takes place in a social setting which is unique--the sports setting," observes Silva. "These acts are not necessary to the sport especially because both teams have mutually agreed to play by the same rules. The sport will go on without violence.

"If you exhibited the same type of behavior in any other social context, you'd immediately be reprimanded. And there would be the possibility of legal action. Why should anyone be allowed to exhibit behavior that could severely damage another human being?"

Most sports fans do not understand when a violent act has been committed, says Silva. It is often impossible to tell if a particularly forceful tackle or an aggressive dive for a loose ball was meant to injure or punish another athlete.

"By design, football is not a violent sport," says Silva. "Take for example, a lineman blocking. This is not necessarily violent; he's performing a task by using his body to move another player out of the way. Generally, he's not trying to inflict injury."

Research Silva has performed has indicated that a major inhibitor of violence--guilt--is missing from many sports events. He found that athletes felt little guilt for violent acts committed during a game, while similar acts carried out in a non-sports setting did arouse strong guilt.

Why society sanctions violence in sports is unclear, but Silva indicates that it is profitable for management as a means of drawing spectators.

Many people view sports as something abstract or outside of real life, says Silva. Fans may enjoy violence because it doesn't affect them directly.

Silva earned his Ph.D from the University of Maryland. He has played semi-professional baseball as well as college football and lacrosse at the University of Connecticut.

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UIR / RESEARCH NEWS

Research-Psychology

UNIVERSITY OF WISCONSIN-MADISON

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UIR SCIENCE WRITING PROGRAM
(Graduate Student Science Writing Division)

Further Information: Michael MacDonald (608/263-1821) January 17, 1978

SUICIDE NOT JUST A MODERN PROBLEM

(Sidebar to COMPUTER FORESEES HUMAN SUICIDE ATTEMPTS)

by William J. Broad
UW Science Writer

Madison, Wis.--High suicide rates illustrate to some people the cut-throat pace of modern industrial society. Oh, for those bygone days of peace and tranquillity.

Dream on. Every age had its share of suicides.

In fact, according to a historian at the University of Wisconsin-Madison, even a dreamy and faraway oasis like Merry Old England was thick with suicides.

"Coroner's records from just three counties in early 17th century England list 132 persons who hanged themselves, 88 who drowned, 27 who slashed or stabbed themselves, 19 who drank poison, and one who jumped into a pit," says Michael MacDonald, who studies early English society.

Pre-industrial England apparently had a surge of self-destruction. Women favored a watery grave, men preferred to hang--and intellectuals of the age were aghast.

"It is high time that the danger of this desperate, devilish, and

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damnable practice be plainly set out," declared Puritan divine William Gouge in 1637.

Nonetheless, unwed mothers died rather than live with a ruined reputation. Financial ruin or losing a loved one made many reach for the knife. Physical illness and pain drove not a few to self-destruction.

"Englishmen were often ill, and there were few remedies at hand," says MacDonald. "Indeed, sick men and women who killed themselves were pitied and often spared the usual punishments of civil law."

Strange as it may seem, taking your life was a crime in Tudor and Stuart England. Penalties were often brutal.

"Suicides were denied funerals and burial in the churchyard. Instead, the body was pinioned through the heart with a wooden stake and strung up for display at a crossroads. A coroner's jury then declared the suicide a murderer, and his movable goods were forfeited to the King."

Next-of-kin were often quick to arrange a cover-up rather than lose all their household possessions.

When one man hung himself, his wife and daughter secretly buried him, bribed the servants, and sent them to posts in another county. Another family battered and wounded the corpse of a loved one, then packed the coroner's jury in hopes of obtaining a verdict of homicide by an unknown killer.

Because of the cover-ups, there were probably even more suicides in Stuart and Tudor England than we know about, says MacDonald. Moreover, since most people who killed themselves were poor and illiterate, few could have left notes, even if they wanted to.

"Suicide was definitely on the rise in the 17th century," says MacDonald. "Even with all the stray records, we only get a rough approximation of its extent."

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research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Release: Immediately 1/3/78 rm

HEALTH NEWS

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YOUR BODY MAY BE 'PRE-SET' TO CERTAIN WEIGHT LEVEL

MADISON--For many flabby Americans, being obese may have less to do with how much food they eat than it does with how their bodies have been "pre-set" to regulate body weight, according to a University of Wisconsin-Madison psychologist.

"Many people who claim to eat the same amount of food which normal-weight people eat and yet remain obese are probably right," concludes Prof. Richard E. Keesey. "They'd probably have to eat less than the average person to lose weight, and keep on eating that smaller amount to maintain the lower weight level."

Keesey believes experiments he has conducted with rats may provide a clue as to how weight levels of human beings can vary dramatically, even when caloric intake remains the same.

Through his research, Keesey has found evidence to suggest a portion of the lower brain, the hypothalamus, determines the "set point" for body weight. This set point, whether below or above the average weight for animals of a certain age, is staunchly defended through control of food intake and metabolic rate. Keesey found that laboratory-induced lesions to a rat's hypothalamus resulted in changes in weight maintenance level. Keesey speculates that the hypothalamus may regulate body weight through the autonomic nervous system, which controls the functions of the intestines and glands.

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"I don't believe all kinds of obesity are of this type," says Keesey, "but I think many severe cases are. I think some people's physiological weight control mechanisms are simply set to maintain a higher weight level than normal."

"Their set point is maintained not only by the amount of food eaten, but by metabolic rates. There is a strong push by the body toward a set value. When we lose weight our body uses energy more efficiently, and if we gain weight we use it less efficiently, in an attempt to maintain the set value," he explains.

Keesey points out it is probably just as difficult for many obese persons to lose 20 pounds as it would be for normal weight people to lose the same amount.

"The hypothalamus of these people appears to work the same way as everyone else's; it's just set to maintain a higher weight level," he says.

Keesey points out many obese people have an abnormally high number of fat cells in the body. The number of fat cells any individual has is determined both by genetic and early nutritional factors, but it seems to remain constant once one reaches adulthood.

"Some obese have so many fat cells that they may remain obese even if they reduce the fat content of each cell below the normal level," says Keesey. He adds that, contrary to popular belief, exercising does not burn away fat cells, it merely reduces the amount of lipoid (fatty) material stored in the cells.

Physicians, Keesey feels, are reluctant to point out to their obese patients the role metabolism and genetics may play in their being overweight:

"Food intake is often the only thing the physician feels he has control over in such cases. Doctors also rely heavily on weight distribution tables in determining whether a person's weight is 'normal,' not taking into account the body's own weight regulation systems."

Keesey believes the weight regulation system works to protect its "set point" so tenaciously that even nutritional imbalances, famines, or gluttony can be compensated for, thus keeping body weight relatively stable.

The psychologist's advice to those who may resort to fad diets and high-priced exercise centers:

"It would be a mistake not to encourage people to attempt losing some weight because unless you know the cause of their obesity, you can't predict how successful they'll be in weight reduction. But many dieters should realize that they're just fooling themselves if they think simply reducing their food intake will result in substantial weight loss over the long haul."

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UIR / RESEARCH NEWS

Research Psychology

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June 7, 1977

HYPERACTIVITY AND FOOD ADDITIVES

by Roger Johnson
UW Science Writer

Madison, Wis.--Food additives do not cause hyperactivity in children, contrary to a highly publicized theory, according to an intensive three-year study conducted at the University of Wisconsin-Madison by a team of nine scientists.

Hyperactivity or hyperkinesis, as the behavior problem of children is sometimes called, is found predominantly in school-age boys, and is characterized by impulsivity, poor control of activity, and poorly focused attention.

"These children are in constant motion, going from one thing to another without completing a task," explained Dr. Raymond Chun, a neurologist who participated in the study at the University of Wisconsin's Center for Health Sciences.

There has been much concern over the effects of food additives on children ever since Ben F. Feingold, a California allergist, sug-

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gested in 1973 that hyperactivity is caused by synthetic colors, flavors, and salicylates--aspirin-like compounds--added to processed foods.

He developed the Kaiser-Permanente (K-P) diet which eliminated these additives and he claimed the diet produced dramatic improvements in approximately 50 per cent of hyperactive children.

In the Wisconsin study 46 hyperactive children in Madison were observed for eight weeks by parents, teachers, neurologists, and trained observers to see if either the K-P or a control diet containing food additives caused any changes in behavior.

"We used the most sensitive measures available to monitor behavior and found no effect of diet on hyperactivity," said J. Preston Harley, the psychologist who directed the study.

"Maintaining a child on a strict diet can be very difficult. To ensure compliance, the entire family of each child participated in the study. We provided all food for the family for eight weeks," added Harley. "Menus conformed to rigid restrictions but were still personalized to the wishes of family members as much as possible. If a family did not like brussel sprouts, for example, they did not get brussel sprouts. If a child's class at school had a party we provided all of the refreshments."

The control and K-P diets were disguised so that even parents did not know which diet was being tested on any of the children. For example, candy and cupcakes were prepared from natural ingredients and packaged in standard label wrappers.

Although the exact cause of hyperactivity remains a mystery, one suspected cause has been eliminated by the investigation which was supported by the Food and Drug Administration, Nutrition Foundation, and Food Research Institute at the University of Wisconsin-Madison.

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UIR / RESEARCH NEWS

Research Psych

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19 April 1977

DRY RUN DIVORCE AIDS AILING MARRIAGES

by William J. Broad
UW Science Writer

Madison, Wis.--It costs nothing, needs no court of law, and not only brings a lull in marital hostilities but maybe a little tenderness as well.

It is divorce--with a difference.

Although long-bickering couples often threaten to end their marriages, a University of Wisconsin-Madison clinical psychologist has shown that the threats can paradoxically lead to increased understanding and commitment.

"It's almost like a suicide gesture," says Dr. David Rice of the University's Center for Health Sciences. "A person often is trying to communicate feelings of helplessness and despair rather than threatening to take his life."

In a similar sense, Rice noticed that many couples who appear serious about divorce really don't want to break up the marriage. It's the shake-up they want.

Rice now calls it pseudo-divorce.

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"The financial, social and religious pressures to remain married are tremendous. Yet in every marriage the question at some point will arise as to whether they are together because they must be or because they want to be," he says.

"Sometimes being able to try out the feelings and fantasies of being apart helps a couple to choose to come together again with renewed commitment."

One feuding couple, Rice notes, had toyed with separation, but therapists they talked with kept beating around the bush and telling them to "think it over."

When the couple talked to Rice, however, he suggested rather matter-of-factly that maybe they should consider breaking up if they were so unhappy.

"During the second session, six days later, the wife appeared mildly buoyant. In fact, there had been a pronounced change of events and the couple was getting ready to go on a long-planned vacation."

Rice says the benefits of the crisis seem to vary from a few months to as long as a year. At that time another one may ensue. And even a successful "pseudo-divorce" doesn't ensure a second honeymoon.

"Following the crises the partners may not act much different than before. The same rigid, spouse-frustrating habits can remain. But, strangely enough, attitudes have improved. They are together by choice--not circumstance."

"In one sense," Rice adds, "you might consider divorce the first step to marriage."

# # #

research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Release: Immediately 12/29/76 mjm

CONTACT: Prof. Michael E. Lamb (608) 262-3515

FATHER CAN PLAY CRUCIAL ROLE IN CHILD'S SEX TYPING, RESEARCHERS SAY

MADISON--The presence of a father during the first two years of a boy's life may be important to the child's awareness that he is a male, according to recent research.

A boy's adoption of a masculine or feminine identity -- his gender identification--is highly influenced during those years.

"If gender identification is not established during the first two years, the child is really in trouble," said Psychology Prof. Michael E. Lamb of the University of Wisconsin-Madison.

Clinical evidence supporting this view, Lamb noted, was amassed by Dr. John Money of Johns Hopkins University and Prof. Henry Biller of the University of Rhode Island.

Researchers found that sons who do not develop gender identification within the crucial first two years tend to grow up less secure about their masculinity and to need psychological help.

"Fathers may play an important and often ignored role in the process of sex-typing and the early development of gender identity, particularly in boys," Lamb explained.

In a two-year study of infants, Lamb found evidence that fathers, like mothers, have potential for a significant and special impact on personality development of their babies from early infancy.

"Babies establish relationships with their mothers and father which involve different kinds of experiences," Lamb said. "These experiences presumably have different effects on the babies' development."

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The different ways mothers and fathers act with their babies are related to the sex roles the parents adopt.

Mothers are more likely to engage in such traditional forms of play as pat-a-cake and peek-a-boo. Fathers, on the other hand, are more likely to engage in physically stimulating and less predictable forms of play.

Similarly, when a mother holds her child, it is likely to be for caretaking purposes such as feeding, clothing and changing diapers. A father is more likely to hold his baby just to play or because the baby wants to be held.

"In addition, fathers become far more concerned about and active with their sons than with their daughters after the first year, although they have been involved equally with both sons and daughters up to this point," Lamb said. "Meanwhile, sons become more attentive to their fathers.

"There is a trend from the child showing no preference to 90 per cent of the sons showing preference for their fathers by the end of the second year. Fathers are modeling sex-typed behaviors and ensuring that their sons are attentive to that."

Girls, however, are less consistent in their choice of "preferred" parent, which is consistent with other evidence suggesting that sex-typing in girls takes place later and pressures for gender identification are less intense than for boys.

Roughly 35 per cent of the girls studied preferred their mothers, another 35 per cent preferred thair fathers and the rest preferred neither.

The study was conducted in New Haven, Conn., with 26 children. Begun in the summer of 1974 on a grant from the Foundation for Child Development, it is the only study involving repeated observation of mothers, fathers and infants at home as well as in laboratory settings, the investigators note.

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UIR / RESEARCH NEWS

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Further Information: Charles Snowdon (608/262-3974)

October 12, 1976

Research Psychology

UNDERGRADUATES STUDY CONTROL OVER NOISE POLLUTION

by Leslie Watson
UW Science Writer

Madison, Wis.,--Common causes of noise pollution--heavy traffic, pneumatic drills, snowmobiles--can cause irritability and even deafness.

The irritability, however, may not be caused as much by the noise itself as by the feeling that there is no control over it.

This is the conclusion drawn from a number of psychological studies, including one recently published by a group of 11 undergraduates at the University of Wisconsin-Madison.

"Both the results of the study and the fact that it was done by undergraduates make it interesting," says psychologist Charles Snowdon, advisor to the students.

The students, mostly juniors and seniors, conceived the idea for the experiment, arranged for the necessary materials, and then wrote a grant proposal to the National Science Foundation.

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They received $17,000 from a special NSF program that funds undergraduate research. The sum paid for materials and included a weekly stipend of $80 for each student while working on the project.

The students did the research and the results were recently published in Behavioral Biology, a psychology journal.

"That is exciting," says Snowdon. "Not only did the students have the idea, get funding, and do the research, they had the results published in a reputable journal."

During the experiments, the students exposed monkeys to high-intensity noise from heavy machinery, pneumatic drills, and snow-mobiles. Then they determined the level of a hormone called cortisol in the monkeys' blood.

Elevated levels of cortisol are one part of an animal's response to stressful situations.

The students used three groups of monkeys. The first group was never exposed to the noise. The second group was exposed to nearly an hour of high-intensity noise. The third group experienced the same amount of noise, but the experiment was set up so that the monkeys "believed" they could stop the noise.

When the blood samples were analyzed for cortisol, the monkeys that believed they had control over the noise had similar cortisol levels as monkeys that were never exposed to the noise. The monkeys that had no control over the noise had significantly higher levels of cortisol.

add two--undergraduates

"High-intensity noise can still damage hearing," says Snowdon, "But we should reconsider what actually causes the irritability. Whether or not we have control seems to be an important factor in how we respond to stressful situations."

Snowdon does not think the conclusions are any less valid because students did the research.

"In fact," he adds, "people bent over backwards to help the students. Consequently, they had more monkeys to use for their research than most graduate students or professors. That makes the statistics even more convincing."

The members of the group were: John Hanson, Mark Larson, John Cotton, Melanie Ignjatovic, Charles Juno, Misao Kusuda, Michele Peters, Stanley Urban, Lawrence Wasserman and Hannah Wu.

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Further Information: Charles T. Snowdon (608/262-3974)

September 14, 1976

DIETARY DEFICIENCY MAY CAUSE LEAD POISONING

Research Psychology

by Julie Miller
UW Science Writer

Madison, Wis.--Lack of adequate calcium in the diets of children may cause them to eat lead paint--a widespread habit that claims the lives of thousands of young children yearly.

"Calcium is one of the nutrients most likely to be deficient in the diets of low-income children--the group with the highest incidence of lead poisoning," says psychologist Charles T. Snowdon of the University of Wisconsin-Madison.

The craving for lead, called lead pica, has puzzled physicians and scientists. Children often continue to eat lead after painful physical symptoms appear or even after treatment for lead poisoning. Eventually lead poisoning can cause brain damage and mental retardation.

In recent animal experiments, rats and monkeys with calcium deficiencies drank more lead-containing water than did normal animals, according to Snowdon, James L. Jacobson and Blythe A. Sanderson.

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"Monkeys seemed to find lead good-tasting initially, and they drank large amounts of the water containing lead," Snowdon explains. "But after several days some adverse effect of the lead made normal monkeys choose to drink the water without lead which was also available."

Other monkeys, whose diets were partially deficient in calcium but who showed no obvious symptoms of deficiency, did not reduce their lead intake as much. After a week they were consuming 44 times as much lead per day as the normal monkeys.

Similarly, calcium-deficient rats voluntarily consumed lead at toxic levels.

"Either the calcium-deficient animal gets some reward from eating lead that makes it feel better," Snowdon suggests, "or a calcium deficiency interferes with the animal's ability to learn that lead is toxic."

The biochemical processes of lead and calcium in the body seem to be linked. Like calcium, lead can incorporate into bones and teeth. A calcium deficiency causes greater uptake of lead from the intestines and thus increases the toxic effect.

Dietary deficiencies in two other minerals, magnesium and zinc, also caused rats to eat more lead. Calcium deficiency, however, had the greatest effect. In contrast, rats deficient in iron did not measurably increase their lead consumption.

According to the researchers, the animal results suggest that children with lead pica may actually have undetected deficiencies in calcium.

"It is now important to examine children who eat lead for evidence of a calcium deficiency," Snowdon says.

# # #

uw news

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Research Psychology

Release: Immediately 9/9/76 ss

VOLUNTEERS NEEDED FOR RESEARCH ON HEARING BY TWINS

MADISON--Same sex identical and fraternal twins, 13 years of age and older, are need for a study of auditory perception by Dr. Sally P. Springer, post-doctoral research fellow in the department of psychology at UW-Madison. Springer is studying relative contributions of heredity and environment to performance on a task which involves listening to a series of sounds through headphones and reporting what is heard. If heredity plays an important role in this task, Springer explains, identical twins should perform more similarly than fraternal twins, since identical twins are genetically indistinguishable while fraternal twins are no more similar than ordinary siblings.

Each twin will receive $3 for participation. Over 90 pairs of twins from other geographical areas have already been tested. Fraternal twins are especially needed.

For further information, please call 262-1041 or 262-3810 days, 238-9758 evenings and weekends.

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UIR / RESEARCH NEWS

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UIR SCIENCE WRITING PROGRAM
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Further Information: Michael Lamb (608/262-3515) July 27, 1976

Research Psychology

FATHERS PLAY IMPORTANT PART IN INFANTS' LIVES

by Richard M. Perloff
UW Science Writer

Madison, Wis.--Fathers play a more important part in the lives of their infants than has been previously believed, a series of studies by a University of Wisconsin-Madison psychologist has shown.

Dr. Michael Lamb's research challenges the belief that mothers are the main influence on infants' personality development.

By observing infants at home when both parents were present, Lamb and coworkers found that eight-month-old infants relate to both their fathers and their mothers as sources of security.

"In addition," Lamb noted, "the relationships infants experience with their fathers and mothers differ in quality and involve different sorts of interactions."

Lamb found that mothers held the infants most often for care-taking purposes--such as changing and feeding. Fathers were more likely to hold the babies to play with them.

Mothers were more likely to play more conventional games with

-more-

their children such as pat-a-cake while fathers were more likely to play vigorous physical games or engage in unusual types of amusement with their children.

Lamb's research also indicated that children smiled, laughed and talked more often with their fathers than with their mothers.

On the other hand, Lamb found that in stressful situations infants seek comfort more frequently from their mothers than from their fathers.

In a related study, Lamb found that fathers were more than twice as active with their two-year-old sons as with their two-year-old daughters. Mothers, on the other hand, were equally active with their sons and their daughters.

Lamb also found that girls between one and two years of age were especially dependent on their mothers, while boys of the same age were more dependent on their fathers.

Lamb suggested that fathers should be encouraged to participate in the rearing of their children from infancy onward.

"If fathers are assured that they, like their wives, have important roles to play in the upbringing of their children, this might significantly reduce the amount of marital conflict that occurs after a baby's birth," he said.

"There is evidence suggesting that close father-child relationships are beneficial to children," he added.

# # #

research news

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Research (Psychology)

Release: Immediately 5/20/76 rm

CONTACT: Gisela Labouvie-Vief (608) 262-0831

INTELLIGENCE DOES NOT NECESSARILY DECREASE WITH AGE, RESEARCHER CLAIMS

MADISON--A University of Wisconsin-Madison researcher doesn't believe that people automatically deteriorate intellectually as they grow older.

Prof. Gisela Labouvie-Vief, an educational psychologist, has completed research on learning abilities of the aged which she feels helps dispel the view that an irreversible decline in intellectual activity is a natural and necessary consequence of growing older.

"My research suggests that there isn't such a direct tie between intellectual functions and biological deterioration. My studies show that a minimum of outside help improves the performance of many older persons on intelligence and learning tests significantly. This challenges the widely-held assumption that intellectual deterioration is linked to an irreversible deterioration of the body."

Much of the testing of the elderly, Labouvie-Vief feels, does not take into account the many differences between generations. Traditional, cross-sectional studies appear to show that human intelligence begins to "deteriorate" as early as a person's 30s.

Such differences, however, do not reflect a loss, but rather that younger people may be more tuned in to particular skills asked for in most intelligence tests.

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"Unfortunately," she notes, "most of the measures we use for learning have been designed for younger adults." More recent studies have shown that if the same people are followed up for a long period of time, intelligence appears to increase or stay stable until at least age 60. Even thereafter, stability and increases are often observed as long as people are not affected by debilitating diseases or confined to unstimulating social settings.

Methods used by Labouvie-Vief and other researchers have yielded higher scores among older persons on many intelligence and learning tests. "We suggest the aged use many techniques adopted by college students such as guessing at answers to questions when the answer isn't known, trying to control fright in a testing situation, and using simple problem-solving strategies.

"Older people may be anxious over a test format, disinterested in the material, fearful of the testing environment, or may just think someone is trying to prove they are dumb."

Labouvie-Vief strongly believes that a decline in intellectual ability is closely linked to a lack of stimulation in the environments of the aged. She observes:

"When people move into retirement, they are often placed in situations where they aren't required to use the skills that intelligence tests are based on. By moving older people into nursing homes when they are old, we are moving them into environments where intellectual activity is discouraged. Instead, these peopleare encouraged to be dependent. Generally there is no support for them to maintain alertness and intellectual functioning."

Labouvie-Vief blames a cultural bias in our society for a stereotype of the elderly being "less bright" than younger persons.

The questions today should not be whether or not learning declines in old age. Sometimes it does and often it does not. "Rather," she says, "we should ask why it declines and what we can do about it."

Prof. Labouvie-Vief's research was funded, in part, by the National Institutes of Health.

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(Pronounce it GEE'-sill-ah LaBOO-'vee VEEF)

research news

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Release: Immediately 5/12/76 mjm

CONTACT: Prof. William Ickes (608) 262-2076

LOTTERY WINNER PROBABLY WILL TURN DOWN YOUR BID FOR A LOAN

MADISON--You were laid off your job through no fault of your own and you need to borrow $200. Should you approach your Uncle Stanley who just won $10,000 in a state lottery, or your Uncle Harry who is a highly competent businessman and could well afford to give you the loan?

Chances are, according to recent research conducted by psychologists at the University of Wisconsin-Madison, you'd have better luck with your Uncle Harry.

Harry's ability to earn money will still be there once he's given you a loan, so he can always get more. Stanley, on the other hand, may realize his windfall is the result of luck and is a once-in-a-lifetime occurrence. Because the odds are he will never win it again, he will probably be more reluctant to part with his money.

"When a person has the ability to affect what happens to him, he feels responsible for his life situation," according to Prof. William Ickes. "He holds others responsible for theirs if he perceives them as also having the ability to affect what happens to them.

"However, if a person is perceived as needing help because of a lack of ability, the person with this ability will probably assume this responsibility for him."

Of those studied, 75 per cent who believed they had earned money through ability felt an obligation to give help, compared to 44 per cent who believed they had obtained money through chance, Ickes explained. Furthermore, those with a belief in their own ability were not only more likely to give, but to give more. They gave 24 per cent of the money they had with them, compared to 10 per cent of money held by those in the luck category.

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Apparently, your chances of obtaining a loan are greatest not only when you've approached someone who thinks he earned money through his own ability, but also when you're in need of money because you appear to lack this same characteristic. This lack of ability is seen as being relatively unintentional, Ickes said. Uncle Harry is more likely to see you as deserving of his help if your need is unintentional and the result of external factors over which you have no control.

People in the study who didn't try to earn money when they had the opportunity were helped only 7 per cent of the time. This figure increased to 24 per cent if they were seen as willing but unable to earn the money.

The helping behavior of 98 undergraduates was studied in two experiments conducted by Ickes, Prof. Leonard Berkowitz and Robert Kidd, a graduate student at UW-Madison. Their work is described in a forthcoming book, "New Directions in Attribution Research," edited by Ickes and Kidd in collaboration with Prof. John Harvey of Vanderbilt University.

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research news

TEMPORARY LOCATION:
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Research Psychology

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Release: Immediately 6/22/76 jb

CONTACT: Barbara J. Shade (608) 263-7978

TEEN-AGE FEARS CAN BE BASE OF THEIR SOCIAL PROBLEMS, PSYCHOLOGIST SAYS

MADISON--Teen-agers have problems because they really know very few grown-ups, because they are uncomfortable in new situations, and aren't risk-takers in starting new relationships with their peers or others.

These are initial findings of researchers involved in the Social Decision Making Project at the University of Wisconsin-Madison. A one-year effort funded by the Wisconsin Council on Criminal Justice, the project studies teen-agers who are having some problems at home, in school, or in the community.

The project director is Prof. Barbara J. Shade of the Afro-American studies department. She is an educational psychologist.

"It appears from early observations," she noted, "that there are few materials to help boys and girls understand that their parents are human and sometimes need to be excused for their behavior with their children.

"It also appears that teen-age males do not have ready access to grooming and fashion information, something very important to their self-image."

The young people participating in the project were asked to join in the project to examine their feelings, values, and behavior when relating to authority figures in their lives. Also surveyed was the conformity or non-conformity to expectations of peers and other persons in their daily contact, and effective routes to develop a more positive self-image.

The participants confront possible dilemma situations in which they are asked to make decisions guiding their behavior and to predict the consequences.

Prof. Shade said another goal of the year's pilot study, about half completed, is to develop a total curriculum for work with other teen-agers in similar situations, perhaps on a school-related situation with counselors to divert the young persons from getting into further difficulties.

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UIR / RESEARCH NEWS

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UIR SCIENCE WRITING PROGRAM
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Further Information: Ann Frodi (608/262-0474) March 16, 1976

Research Psychology

WOMEN ARE LESS AGGRESSIVE THAN MEN--USUALLY, STUDY SUPPORTS FEMALE STEREOTYPE

by Mitch Waldrop
UW Science Writer

Madison, Wis.--Are women really less aggressive than men? Common stereotypes tell us so, and studies by many psychologists seem to bear them out.

But University of Wisconsin-Madison psychologist Ann Frodi wonders how meaningful these studies really are.

Frodi, Jacqueline Macaulay, and Pauline Ropert Thome have recently completed the first comprehensive review of experimental studies on aggressive behavior in adult women. In the few studies that exist they have found some intriguing patterns and an urgent need for further research.

"We're at the very, very beginning!" Frodi says, pointing out that practically all research on adult aggression has been confined to men.

"If women are included in the studies at all, they usually foul up the results," Frodi observes. "Their responses seem much more complex than men's responses."

Because of this, many researchers do not attempt to explain the data on women, she says. They may only mention in their final report that women's responses seem to bear out the unaggressive stereotypes.

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add one--women's aggression

By aggression, Frodi means something very specific: the intended injury of another human being. By this measure, experiments show that women are on the average less aggressive than men--sometimes. But why? And what does it mean?

For one thing, says Frodi, experiments in every branch of psychology show that women are more empathetic than men to the feelings of others.

This shows up in a typical aggression experiment when a woman is asked to deliver a mild electric shock to a "victim". As the victim (secretly a confederate of the researcher) begins to wince in pain, the women will drastically lower the frequency and intensity of the shocks, far more than men will in the same position.

In another test, a group of women were asked to rate the effects of various kinds of aggression. Most ranked hurt feelings, wounded egos, and other psychological hurts as worse than physical pain.

Empathy is clearly an important factor, says Frodi, but at least as important is the factor of social conditioning: most of us have been taught from childhood that women should not be aggressive.

This shows up in a subtle way in aggression experiments. When a woman subject is required to shock the victim, she tends to feel guilty, anxious, and ill at ease. And she feels this way even if the victim (again a secret confederate of the researchers) has first tried to antagonize her.

Typically, a man in this same situation not only feels less guilt, but he feels a tension release when he gets back at his adversary. ("Gottcha, you -----!") But a woman generally does not: the guilt and anxiety remain.

In another study, a confederate insulted women who were wired to measure their blood pressure and skin conductivity. The instruments

indicated the same kind of body arousal seen in angry men.

But when asked about their feelings, many of the women said "I'm hurt," or "I'm sad," or "I'm afraid," rather than "I'm angry." They had interpreted their arousal differently, says Frodi, as if they were unwilling to express anger.

Working with male subjects, Wisconsin psychologist Leonard Berkowitz in 1967 demonstrated the "weapons effect." If a man is first angered or frustrated, the later appearance of an "aggressive cue", such as a gun, seems to make him more likely to lash back at his tormentor.

But for a woman, says Frodi, the effect appears to be opposite. The aggressive cue inhibits her aggressive responses and makes her feel more anxious.

Perhaps the cue has a different meaning for her, Frodi suggests. Women do tend to show negative feelings about violence in general. Violent movies, hunting, football, and hockey--all are much less popular among women than among men, she says.

But society's conditioning is a two-way street, Frodi points out: if women are not supposed to commit violence, still less are they supposed to be the targets of violence.

In experiments, few of the subjects, male or female, were very willing to shock a female victim. Furthermore, says Frodi, women seem less willing to perceive aggression, whether directed against others or against themselves. Perhaps this is related to empathy, she suggests, and a willingness to give other people the benefit of the doubt ("Oh, he really didn't mean it that way!").

But what if this social norm is violated? Frodi describes one experiment in which a male confederate persistently insulted and tormented the test subjects. In the end, female subjects were just

as ready to shock him as the male subjects were. Apparently, she says, his violation of the norm set the women free to violate it themselves.

But a female confederate in a similar test still received fewer shocks. It seems, says Frodi, that the man's violation was perceived as more serious.

But women are not always less aggressive than men, Frodi says. There seems to be little difference between them if the aggression is somehow seen as beneficial.

For instance, a female subject might be told that the shocks serve to help the victim learn some task. Or she might be told that the experiments will "advance science."

In both cases the woman thinks her aggressive acts are doing a social good. Thus, says Frodi, they become justifiable and the woman feels no anxiety.

Are women ever more aggressive than men?

In large groups they can be, says Frodi, but only if they are strangers to each other and their victims.

Does the feeling that "everybody else is doing it" somehow set a new, temporary norm? Maybe, but Frodi does not feel she can say for sure

In fact, she does not feel that anything in this field is certain.

"Most of this is just speculation," she says. "It's good speculation, but the field has not been studied systematically."

Frodi is now conducting studies to fill in some of the gaps.

"Are men and women different only in their overt expressions of anger?" she asks, "or are they different physiologically? Do they get angry at different kinds of things?

"And if given a choice," she adds, "do women just show aggression in different ways, such as verbally instead of physically?"

Frodi says that Berkowitz summed up the whole problem 14 years ago: ". . . . leaving females out of a theory of human aggression constitutes something of a problem for theorists."

UIR / RESEARCH NEWS

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July 1, 1975

Research Psychology

by Mitch Waldrop
UW Science Writer

Madison, Wis.--Aggression--the flash of anger, the urge to lash out, to hurt--how can we control it? Try communication, says Ann Frodi, a Swedish psychologist working at the University of Wisconsin-Madison.

The word aggression can mean many things, from war to hard-nosed business tactics. To Frodi it means an attempt to injure someone, either deliberately or on impulse.

She feels that this kind of aggression is a totally destructive force in society, and one that is out of control

"We see violence displayed everywhere. It's the only model for resolving conflicts that many people ever see."

Furthermore, she says, this atmosphere of violence feeds on itself. An angry person is more likely to lash out if there are aggressive "cues" around him. For instance, Wisconsin psychologist Leonard Berkowitz long ago showed that aggression can be evoked by sight of a gun or a violent movie.

Noting that a person has to learn that a gun means violence, Frodi maintains

-more-

that virtually all aggressive behavior of this kind is learned.

"People hang onto the Freudian idea that aggression is innate, building up pressure until it has to burst out. They favor 'acting out aggression' as though this were a kind of safety valve. But experiments show that it isn't."

"Punching someone on the nose may make you feel good, but it actually increases aggressiveness. Next time the punch will come faster and harder."

So how should anger and frustration be handled? Frodi suggests communication and conciliation. The idea is supported by a recent experiment she conducted on aggression reduction in children, funded by the National Institute for Mental Health.

She had each of 180 seventh graders write a creative essay -- "what if animals could talk?". An adult confederate then arrogantly insulted their work.

Frodi told some of the children that the man had troubles at home and was not himself. They became sympathetic, showing little hostility toward him in later questioning.

She told a second group that the man was habitually obnoxious. Remarkably, these children also were quite understanding and no longer angry.

A third group learned that the gentleman was a high status researcher with the right to demand a lot from them. This group became more hostile than ever.

In this last response Frodi finds echoes of the current hostility toward authority. Or perhaps it is simply that no one likes to be pushed around. In any case, the study shows that an outburst is unnecessary to assuage anger. Insight into an adversary's personality and feelings is enough by itself.

Frodi notes that one part of society already shows little aggression.

"Most women are reluctant to inflict physical harm. Some experts even say that aggression is strictly a problem for men. But I'm not so sure."

add two--aggression

Frodi believes that women traditionally have learned to express their anger indirectly, or not at all.

This may be changing, however. Women abuse their children more often than men, and more and more women are commiting crimes.

Frodi finds that experimental psychology can give little insight into the lack of aggression in women. In the past the muted response of women has led researchers on aggression to study male subjects, because their reactions were more easily observed. Frodi is planning to correct this imbalance by a series of experiments on women over the next few years.

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research news

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Research Psych.

Release: Immediately 11/22/74 gf

LEAD POISONING IN CHILDREN AND CALCIUM DEFICIENCY LINK EXPLORED BY UW RESEARCHER

MADISON--Research which may result in a better understanding of voluntary lead poisoning by children is being conducted by Prof. Charles Snowdon, psychologist at the University of Wisconsin-Madison.

Snowdon has released preliminary reports on rat tests indicating a possible link between calcium deficiencies and lead poisoning, often referred to as lead pica. The results, if they can be confirmed in the next stage of research with primates, may suggest measures which will prevent lead pica in children.

While this condition is occasionally found in adults, lead pica is far more critical in children. According to Snowdon's theory, if a sufficient amount of calcium is not found in the child's diet, the child will replace it with lead, if lead is available. The lead is inactivated by the body and stored in the bones in place of calcium during growth. In sufficient quantities, lead produces severe physical disorders and mental retardation.

A major cause of lead pica comes from children eating paint peels from house and apartment walls. The buildings are usually old and concentrated in low-rent districts.

If a relationship between the need for calcium and the ingestion of lead can be proven in further research, it may be possible to remedy this problem by giving children high calcium diets.

- more -

Many problems must be solved before an absolute claim of success can be made. Whether the test rat's choice of lead can be applied to all animals or whether its choice is specific to that species must still be resolved.

Snowdon is currently conducting experiments with rhesus monkies which may serve as a bridge for human application.

A search for the mechanism responsible for the specific selection of lead and the maintenance of lead pica over time, if it exists, must be conducted, Snowdon said.

Prof. Snowdon believes caution must be taken in interpreting the results from this early testing with rats. There is a marked difference between the physiologies of the rodent and the human, Snowdon noted.

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UIR / RESEARCH NEWS

UNIVERSITY OF WISCONSIN-MADISON
UIR SCIENCE WRITING DIVISION
(Graduate Student Science Writing Program)

UNIVERSITY-INDUSTRY
RESEARCH PROGRAM

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Further Information: Prof. Elaine Walster (608/262-4344)

Research Psychology 5/1/74

by Mary Ann West
UW Science Writer

Madison, Wis.--Psychologists at the University of Wisconsin-Madison are now studying an emotion which inspires every virile young Romeo and blushing Juliet--passionate love.

More psychologists have begun to study romantic love in the last five years than ever before, says social-psychologist Elaine Walster. What they are discovering is that love is a puzzling emotion in which misery and ecstasy often coexist.

While poets continue to proclaim the illogic of love, scientists are searching for a theory to explain it. The phenomenon may be best explained, contends Walster, through a two-factor theory of emotions developed by psychologist Stanley Schachter.

For a person to experience romantic love, two factors must be present. First, the individual must experience emotional arousal. This kind of arousal accompanies many emotional states and is basically physiological, consisting at times of slightly accelerated breathing and heartbeat, tremor, and flushing.

Second, the individual must conclude that these feelings are due to passionate love. He will then experience true romantic love.

According to Schachter's theory, says Walster, a wide variety of arousing experiences have the potential to fuel passion.

(more)

Fear, pain, rejection, loneliness, and frustration--as well as delight and discovery--can contribute to the passionate experience. These are strong emotional reactions which the individual--under the right circumstances--can label as love, she says.

Socrates, Ovid, and "Dear Abby" all say that the hard-to-get person inspires more passion than one whose affection is easily won. Experimental studies show that other unpleasant but arousing states, such as fear and rejection, can flame passion as well.

As well as being physiologically aroused, an individual must be able to define the emotions experienced as love. People in Western civilization have been taught to label a wide variety of confused feelings as love. Some people associate "passionate love" with such sunny states as delight, sexual ecstasy, excitement, joy, or a heart that goes bumpety-bump. Others associate "love" with such dark states as longing, jealousy, loss of appetite, or suffering. All are partial glimpses of symptoms we define as passionate love.

A person who feels unwanted will experince the two factors of romantic love less often than individuals who feel secure in the esteem of others. Furthermore, the invididual who thinks of himself as a nonromantic person will probably fall in love less often than a individual who assumes that love is inevitable, says Walster.

Despite recent pioneering sexual studies and mankind's perennial interest in the tender emotions, most psychologists still must admit that they don't really know anything about love.

Perhaps Romeo could give them some advice after all.

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UIR / RESEARCH NEWS

UNIVERSITY OF WISCONSIN-MADISON

UNIVERSITY-INDUSTRY RESEARCH PROGRAM

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June 25, 1974

Research Psychology

by Hannah Pavlik
UW Science Writer

Madison, Wis.--Parental love and attention go a long way in making an infant prefer its own mother and father over other persons.

Not unusual? In humans, perhaps not. But if you are talking about young rhesus monkeys between one month and four years old you could be a little surprised, according to Stephen Suomi, University of Wisconsin-Madison psychologist.

Suomi has studied the social preferences of monkeys reared in a family environment at the Primate Laboratory.

The results of four studies indicated that maternal preference did not decline sharply with age, as might be expected, and no strong ties were found between siblings.

Even more surprising, the preference that young monkeys showed for their fathers was as strong as, and even more stable than, the preference exhibited for mothers.

The monkeys were raised in family units each consisting of four housing cages which enclosed a central play area. Every housing cage contained an adult male, female, and up to three of their offspring.

(more)

add one--monkeys

The monkeys had continuous access to parents and siblings. But only limited interaction was allowed with other monkeys residing in the remaining three cages of each unit.

Rhesus monkey females are possessive mothers who reluctantly permit their infants to interact with other adult females, Suomi explains. Consequently, most early monkey experiences with adults involve their own mothers. Other social activity is directed toward peers. As monkeys mature, interactions with their mother generally decline rapidly after one year of age.

Offspring did not show a significantly greater preference for mothers over fathers--despite the fact that they directed four times as much activity toward mothers.

The relatively high father preference was largely caused by the artifically created family environment, admits Suomi. Most studies have demonstrated a very low incidence of rhesus father-infant interaction in the natural environment.

Nevertheless, the results suggest that in monkeys, like humans, early experiences can affect behavior.

Measuring an individual's attachment to another is a complicated process, Suomi says. Affection grows from many types of behavior and a wide variety of social stimuli.

Truly dominant adult rhesus males rarely display aggressive behavior to maintain their social stature, he adds. But when they do, younger monkeys quickly learn who's boss.

"With respect to father prefence, we suspect the same is true--a little attention goes a long way," he says.

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research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Research Psychology

Release: Immediately 2/15/74

Contact: Kay Brief (608-262-6343) for further information

BRAIN'S BIOCHEMISTRY LINKED TO DEPRESSION BY UW RESEARCHER

MADISON, Wis.--Feeling blue? Helpless, hopeless, unsure about your ability to control your future? Perhaps you're one of the approximately 16 million Americans who suffer from severe depression, one of man's most widespread diseases and a top killer of adolescents and college age youth.

If so, your depression is most likely not the simple result of a few bad experiences, said psychiatrist and researcher William T. McKinney of the University of Wisconsin-Madison Center for Health Sciences.

Rather, your depression may stem from a combination of circumstances beginning even before you left your mother's womb. Due to your genetic makeup you may be more sensitive to depression than others and more vulnerable to interpersonal conflicts and other stressful experiences.

McKinney's four-year research with rhesus monkeys shows the importance of the brain's hormone levels. Depression was stimulated in the animals chemically with drugs and socially by isolating the animals from others. There were many behavioral similarities in the two situations.

McKinney emphasized the importance of both social and biological experiences as determinants of depression. For example, a person who is genetically prone to depression is more apt to feel the downs in life.

In some cases as with the experimental monkeys, lower hormone levels may cause you to view the world differently. In other, severe depression may actually induce hormonal change.

- more -

"It's almost a question of the chicken and the egg," said McKinney. "Since we don't yet fully understand the mechanisms, we can't say explicitly what comes first, depression or lower hormone levels. The most important thing is the nature of their interaction with each other."

Early childhood experiences can also affect your tendency toward depression, the UW Medical School professor explained. It is possible that early losses can stunt the growth of certain brain mechanisms making you more sensitive to disappointment and frustration.

Severe depression due to genetic vulnerability generally occurs in middle age and later, said McKinney. He suggests two possible reasons:

First, the magnitude of stresses such as retirement, loss of children through marriage, loss of friends through death, or chronic illness can make you feel as though you've lost control over your future.

The second reason may be biochemical since certain hormonal and enzyme levels in the brain change with age.

Depression is common in medical illness and researchers are beginning to find closer ties between a person's state of mind and state of body, McKinney stated.

In some cases, the drug used to treat an illness affects the brain's hormone levels and causes depression. An example is reserpine, a drug used to combat high blood pressure.

"A whole variety of physical illnesses are associated with life stresses including the common cold and arthritis," he said.

Severe depression is not just feeling blue once in awhile, explained the psychiatrist. It is feeling really despairing, helpless and unsure about tomorrow. A person may experience decreased appetite, sleep disturbance, reduced sexual feelings or withdrawal from friends. The usual treatment for this severe depression is a combination of drugs and psychotherapy.

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research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Research Psychology

Release: Immediately 1/22/74 bb

MADISON--Every year, an estimated quarter of a million children voluntarily poison themselves by eating paint chips or calking compounds that contain lead.

A popular theory explaining why children voluntarily eat lead has centered on lack of maternal attention received. But based on experiments with rats, University of Wisconsin-Madison psychology Prof. Charles T. Snowdon suggests that children may eat lead because of a calcium deficiency in their diet:

"We have found that when we take young rats and place them in a calcium deficient diet and allow them to choose between plain water and water that contained lead, they will drink large amounts of the lead. They will drink much more lead than animals without nutritional deficiencies, and they will drink more lead than animals with other types of nutritional deficiencies."

Lead poisoning--which results in stomach cramps, loss of appetite and muscle control, mental retardation, and possible death--is primarily found among lower income families where calcium is most often deficient in the diets of young children, and who live in older houses with paint that contains lead.

"There is a great deal of metabolic similarity between the action of calcium and the action of lead inside the body," Snowdon explains. "A child who is deprived of calcium might satisfy the body needs by ingesting lead where there is not an adequate calcium source available."

Most lead poisoning occurs between the ages of 12 and 18 months, when children begin exploring the environment and are mobile enough to pick up objects that might contain lead.

In addition to the critical six-month period, children need high levels of calcium throughout their growth period, and the situation probably is not helped by rising milk prices, Snowdon adds. ###

feature story

Research-Psychology

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Release: Immediately 10/16/73 bb

MALES NEED LIBERATION, TOO

MADISON--Women aren't the only ones having problems becoming liberated. Men are too, according to Dr. Robert Garfield, resident psychiatrist at University of Wisconsin Hospitals in Madison.

"Our society is filled with sex role stereotypes, which are rules dictating how people should act on the basis of gender. They are socially reinforced with an incredible amount of rigidity," he noted.

Garfield said there are six myths people hold about men which lead to such a stereotype. These are: That men are responsible, always in control, competitive, rational and unemotional, that men's physiques have no aesthetic value, and that work is the core of life.

"When we speak of these myths, there is what I call 'the deadly dependency' at work. Sex roles of men and women are dependent on each other. If there is a myth that says men are strong, there is one that says women are weak. The pressure to act in a certain way comes from both sexes," Garfield contended.

So while women's liberation advocates are protesting that James Bond types teach society to view women as sex objects, Garfield is protesting that such types also teach society that men are strong, unemotional, and always in control.

"Feelings of loneliness, of hurt, of being put-down are extremely hard for men to show. There is a great inhibition of expressing feelings," he believes.

- more -

Add one--men's lib

One alternative would be for men to form men's groups. According to Garfield, there is a need for a social support system to bring men together in a positive experience of men teaching each other and reorganizing so as to relate to women in a more meaningful way.

There is little cause to anticipate a desexualized society, Garfield added. Rules are changing during a time of tremendous frustration due to awareness. But hopefully, this is all a period of reorganization after which men and women will live in a liberated world.

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research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Research Psychology

Release: Immediately 8/14/73

UIR SCIENCE WRITING DIVISION
University-Industry Research Program (608) 263-2876

By HANNAH PAVLIK
UW Science Writer

MADISON, Wis.--Parents who encourage their angry children to strike out at those who have provoked them are unwitting victims of a popular misconception that it is better to express aggressive urges than suppress them.

This is the opinion of psychologist Leonard Berkowitz of the University of Wisconsin-Madison who says there is an important distinction between acting out and talking about one's feelings.

When an angry person attacks someone verbally or physically, he might be doing two things which could increase his chances of becoming more aggressive.

He could provide aggressive stimuli to himself and everyone nearby, for instance. He might also learn that his aggression pays off--a fact that is very likely to strengthen his aggressive habit.

On the other hand, if he tells everyone that he is angry, the feedback will be more informative and beneficial.

Berkowitz has been studying aspects of violence and aggression for more than ten years. He believes that too many influential psychologists insist that it is unhealthy to bottle up feelings.

Such "ventilationists," as he calls them, argue over the various underlying roots of aggression. But they are agree on one point--modern society has overemphasized the intellect and neglected spontaneous feeling.

- more -

So they encourage individuals anxious about aggressive inclinations to lash out at those who anger them.

There is, however, potential danger in the unrestricted show of aggression, Berkowitz points out. Aggressive display reduces the anxiety that often accompanies aggressive behavior and it often rewards the persons making the display. Both tend to encourage more violence.

Hence the activities engaged in by ventilation therapy groups emphasize short-term benefits. Like the pleasure a person feels when he attacks someone, for example.

But, at the same time, these groups generally ignore possible long-term effects--especially the increased likelihood of still more aggression.

Berkowitz believes it unnecessary to reduce internal anger by hurting others.

"We can talk about feelings and describe emotions without attacking others verbally or physically," he says.

"Human beings don't have to channel aggressive energy into emotional bonds for friendship and affection to develop."

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research news

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Research Psychology

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UIR SCIENCE WRITING DIVISION
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ISOLATED MONKEYS RETURN TO NORMAL WITH AID OF MONKEY "THERAPISTS" AT UW-MADISON

By HANNAH PAVLIK
UW Science Writer

Madison, Wis., --Can six month old rhesus monkeys raised in total isolation ever be normal again?

Yes, but with the help of monkey "therapists," says Stephen J. Suomi, research associate in the Primate Laboratories at the University of Wisconsin-Madison.

Suomi is referring to a recent study conducted with Harry F. Harlow and William T. McKinney Jr. in which monkeys deprived of all early visual and physical contact with fellow monkeys later recovered normal social behavior.

Behavioral abnormalities caused by isolation rearing are still considered irreversible by many scientists. So far, efforts to rehabilitate isolated monkeys by exposing them to their socially normal peers have been largely unsuccessful.

In the Wisconsin study, four male monkeys housed in total isolation for six months after birth were allowed contact with four normal females. The females were three months younger -- too young to be aggressive as peers, or to show behavior more complex than clinging and simple playing.

The prediction, as later confirmed, was that exposing the males to "therapist" monkeys who would provide acceptance rather than aggressive attack might reverse the effects of social isolation.

-more-

Add one--Monkeys

The monkeys were allowed to interact in pairs for two hours, three days a week, within specially designed cages. Also included in the "therapy" were meetings in groups of four for two days a week in a playroom.

At first, the males showed typical disturbance behavior: frequent self-clasping, self-mouthing, huddling and rocking. The therapists' first response was to approach and cling to the isolates.

After a week in the cages and two weeks in the playroom, the isolates began to return the clinging. They later copied the therapists' elementary playing and began to initiate play behavior themselves. Disturbance activities gradually decreased to the point where the isolates could no longer be easily distinguished from the therapists.

The isolates, now two years old, show virtually complete recovery. The early playing has led to more mature social activities such as grooming and sexual mounting. They cannot, however, be considered completely normal until they become old enough to mate.

The research finding suggests the intellectual capability for learning social tasks is not restricted to limited time periods during early development. If adult social performance is affected by early social experiences, the potential for recovery remains as long as an appropriately designed teaching method is available to tap this potential.

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research news

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Research Psychology

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Immediately 5/22/73 mn

EDITORS: Contact Mary Nohl 608-262-3571 for further information

REGULATION OF HUMAN LIPOSTAT IS KEY TO WEIGHT CONTROL, SAYS UW RESEARCHER

MADISON--Weight control programs are frequently plagued by their failure to maintain weight loss over the long run. Now, the work of a University of Wisconsin-Madison scientist may help explain why it's so hard to keep those pounds off.

"Weight control programs have so little success because they move counter to natural internally controlled body weight -- it's normal for some people to be what we consider 'overweight,'" says psychology Prof. Richard E. Keesey.

"Suggesting that an individual override these natural controls and maintain his weight at a lower than normal level, is like telling him to maintain his body temperature at a different than normal level. It's very, very difficult," adds Keesey.

Since 1951 scientists have known that lateral lesions of the hypothalmus (changes in the structure of the side areas of the brain due to disease, injury, or surgery) cause test animals to stop eating for a time. Traditionally, this response was believed to be triggered by the destruction of some feeding center in the brain--the animal was believed incapable of eating until there was nervous recovery of the area.

"Not true," says Keesey. "What the lesion does is reset the lipostat -- a thermostat-like, built-in weight regulator."

-more-

Weight of test animals drops to a new level during the period when they are not eating and never returns to normal, Keesey explains.

Ventromedial hypothalmic lesions (lesions in the center of the brain), have long been used in test animals to reset the lipostat upward, but the lipostat was only one of several concepts used to explain weight gain.

Keesey and graduate student Terry Powley, now a professor at Yale, found that a balance between the ventromedial and lateral areas of the brain determines body weight. "In obese individuals, the ventromedial system may be out of order."

Caloric value of food intake and not quantity is regulated by the lipostat. "When rats with lesions were given food diluted with water by 50 per cent, they ate twice as much. When the food was twice as rich, they ate half as much. In any case, the animals regulated and maintained their body weight at the new lipostatic level," says Keesey.

Surgical intervention as a means of weight control for humans is "unrealistic in the new future," he adds. "Costs are prohibitive and a serious side effect remains to be ironed out -- test animals show poor water regulation--they exhibit no natural thirst."

Weight loss in test animals is not due to dyhydration, however, Keesey explains, though it would have been if water was not added to their food.

There is limited clinical evidence showing that the concept of the lipostat applies to human beings as well as to animals. Keesey points to a case involving a multiple sclerosis patient whose weight dropped by more than 25 per cent in four years.

An autopsy revealed that the lateral hypothalmic regions of the patient's brain had been destroyed by the disease, thus upsetting the balance and lowering the level of the lipostat.

Add two--lipostat

Destruction of the patient's lateral brain areas was gradual and the weight loss was progressive, not sudden as in animals with hypothalmic lesions.

If the model of the lipostat holds, what hope is there for dieters? Dieting programs may work with long-lasting effects -- but only if the person stays in the program and is constantly getting feedback, says Keesey.

"It takes a lot to override natural controls but humans have alternate controls animals don't. They can step on a scale and use that reading to regulate intake."

Exercise may be the real answer though, says Keesey. "It makes the lipostat go to a new, lower level; but if exercise is stopped, the lipostat goes right back up.

"Besides, I don't know if it's all that bad to be 'overweight.' Medical links between obesity and heart and other disorders are still tenuous, and social and medical pressure forcing people to hold their weight at a lower than 'normal' level may cause anxiety and neurosis."

# # #

research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Research Psychology

Release: Immediately 2/26/73 dh

EDITORS: For further information, contact David Haskin (608-262-3571)

MADISON, Wis.--Monkeys may provide the key for better treatment of an extremely wide-spread human condition--depression.

Researchers at the University of Wisconsin-Madison cause depression in rhesus monkeys and then study the mental and physical effects, Dr. William T. McKinney, a psychiatrist who has done much of the research, explains.

"By understanding what goes on in the heads of depressed monkeys, there is hope of better rehabilitation methods for humans. Our goal is to improve understanding of depression and provide better treatment techniques."

Studies have been completed here which separated an infant monkey from its mother or peers. The result was depression of the infant.

"In human infants, this separation is called anaclitic depression," says McKinney. "This occurs first between six and 12 months of age. A major theory says people who have undergone separation early in life are more prone to become depressed later when subjected to separation."

Not all infants separated from their mothers go through anaclitic depression, according to McKinney. Other factors are the relationship between mother and child and the conditions and length of the separation.

This depression comes in two stages. The first stage is protest, in which the animal or human infant is hyperactive and very vocal. This is followed by withdrawal characterized by decreased activity and self-huddling.

"We have found, however, that if there is a good substitute for the mother, the chances of producing this syndrome are greatly reduced," McKinney says.

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Separation is just one way of causing depression in monkeys. Other social and chemical methods are also used. Researcher Stephen J. Suomi explains two other methods:

"We have a device that produces social deprivation. We put the animal inside. The monkey can move around, but it soon finds out that it doesn't do him any good because there is nothing happening in there. In humans, depression is often said to be feelings of helplessness and hopelessness sunken in a well of despair.

"We try to create such a well, physically as well as psychologically, in our experiment. When the animals are first put in there, there is a lot of activity. But after a day or so, they go into a corner and huddle and assume a posture such as we saw in anaclitic depression.

"When we take the animals out, they are socially withdrawn, and they maintain this behavior even in social situations."

Suomi notes that depression can be caused by chemicals, too. Humans suffering from high blood pressure are often given a drug, reserpine, which is known to cause depression in both humans and monkeys. Both Suomi and McKinney note that depression has been found to physically affect the brain and adrenal glands of monkeys no matter how the depression is caused.

The three-year-old study will continue as long as there are funds. McKinney points to what has been learned and what is hoped to be discovered.

"It seems quite clear now that social behavior can be altered by child-rearing conditions. These studies have shown the importance of the separation experience in humans. Hopefully, more of our research can be tried out on humans.

"In the last 10 years there have been great advances in treatment of depression. There isn't any panacea, though. People get depressed for a lot of reasons. We can correct some of them.

"But there are broader social causes that make people get depressed. And until some of those change, people will continue to get depressed."

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research news

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UIR SCIENCE WRITING DIVISION
University-Industry Research Program
(608-262-2876)

By Jan Laan
UW Science Writer

MADISON, Wis.--Simple treatment for the ten million Americans suffering anxiety neurosis may be at hand.

The treatment is exercise.

Until recently it was commonly believed that physical exercise should be prohibited for individuals with an anxiety neurosis since it was felt that exercise would increase anxiety symptoms.

Prof. William Morgan of the department of physical education at the University of Wisconsin-Madison is working on evidence to the contrary.

Earlier notions were based on knowledge that injections of a substance known as lactate into the bloodstream causes anxiety symptoms. The natural lactate level of blood increases during exercise. Therefore, scientists reasoned, increased lactate from exercise would intensify anxiety symptoms.

Not so, says Morgan.

The error lay in assuming that artificial injection of lactate acts the same as generation of lactate by exercise.

One obvious difference is that exercise-inducted lactate increase is accompanied by a shift toward acidity in the body while injected lactate causes a shift toward alkalinity.

-more-

"There was previously no hard evidence on reduction of anxiety in neurotics following exercise. Our research shows that this does take place," says Morgan.

"Actually, increases in lactate with exercise are associated with a decrease in anxiety."

Morgan found the decrease in anxiety in normal male and female subjects as well as neurotic individuals of both sexes. Anxiety is measured by a written test which measures psychological as well as physiological variables.

Morgan indicates more research is necessary and that the metabolism of hormones known as catecholamines, not lactate accumulation, may be the factor governing psychological states following exercise.

# # #

research news

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Release: Immediately 1/22/73

UIR SCIENCE WRITING PROGRAM
University-Industry Research Program (608--263/2876)

By HELY JANIS
UW Science Writer

MADISON, Wis.--New Year's resolutions--as everyone probably knows by now--are not a very good way to drop bad habits or acquire good ones.

It is now official, however. Two University of Wisconsin-Madison psychologists have confirmed it in what is believed to be the first clinical study of the New Year's broken promises.

Profs. G. Alan Marlatt (now at the University of Washington-Seattle), and Burt Kaplan were interested in studying how people change personal behavior by exercising will power or self-control.

"We thought New Year's resolutions would make a good subject since they are made by many people at the same time," the psychologists said.

Marlatt and Kaplan divided 128 student volunteers into groups according to the resolutions they had made. They further divided the student subjects into those who wanted to start a new good habit, and those who wanted to break an old bad one.

Resolutions involving smoking, physical health, and personal behavior were the most difficult to keep. Resolutions involving sexual or interpersonal behavior and those involving attitude and personal disposition were easiest to keep.

Girls who resolved to lose weight, for example, lost only one-half pound in 12 weeks.

Men made fewer resolutions than girls and tended to keep them for a shorter time. On the average, men made 2.6 resolutions and kept them for 41 days. Girls made 3.2 resolutions and kept them for 44 days.

- more -

Add one--New Year's resolutions

Participants had better luck trying to start a new activity than stop an old one. Broken resolutions in a "start" category lasted an average of 51 days, while resolutions to "stop" lasted only 32.

Well constructed excuses for breaking resolutions were apparently all designed to get the individual off the hook without loss of self esteem. More than a third of those who broke resolutions blamed circumstances beyond their control. Ten per cent cited forgetfulness. Twenty-four per cent said they lacked the necessary will power. Thirty per cent broke resolutions deliberately.

Both men and women indicated a loss of self-esteem as a result of breaking resolutions but they also said they began to consider the resolution less important than they felt originally.

Only 25 per cent of all resolutions made by the students were reported broken by the end of the 15-week study. The psychologists, however, caution that except for resolutions involving weight loss, the figure is based on each individual's own judgment of success or failure.

The psychologists point out that such general resolutions as "I plan to become a better person" were much easier to keep than specific ones such as "I will stop smoking."

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feature story

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Research Psychology

Release: Immediately 8/4/72

by MARK P. McELREATH

MADISON--Talk to your children more--and you may make them more mentally alert.

That's the advice of child psychologist and mental retardation expert Rick Heber of the University of Wisconsin-Madison, who is making national headlines with the work he is doing in Milwaukee, reportedly raising the IQs of children of retarded parents by creating more stimulating environments for the children.

He claims fathers and mothers can make their children more mentally alert by talking to them more and by structuring more creative surroundings for the youngsters.

Director of the Center on Mental Retardation and Human Development, Prof. Heber said: "Most mothers make reasonably good teachers for their children. But we could do a better job of training our mothers.

"One of the greatest possible improvements we could make in today's educational system would be to require everyone to take instruction on how to be a good parent.

"Parents need to talk to their children more, to reinforce the child's natural curiosity. For instance, instead of silently washing the dishes with the children about, mothers should carry on a conversation with their children about washing dishes.

"Parents need to verbally praise and punish their children instead of physically doing it. They have a responsibility to create opportunities for their children to explore new things, to be curious and persistent."

- more -

He gave an example of placing sought-after toys not directly in the hands of toddlers but just out of reach, so the child will move and enjoy the experience of getting the toy for himself.

News magazines, major newspapers, and professional journals have carried articles recently about the Milwaukee Project, a pre-school experiment that began six years ago. Heber had found from census data that most of the mentally retarded were living in the inner-city slum area; but more importantly, he found most of the children with low IQs in the slum area had mentally retarded parents.

So he set up a program that took a select group of infants from these parents out of their homes and into the intensive care of specially trained teachers who stayed with the children most of the day, talking with them, playing with them--mothering them.

Surrounded by attentive teachers, spending the day in a stimulating environment, the experimental group of children, who are now school age, developed a normal range of IQs.

A recent headline in The New York Times declared: "Tests Find IQs Can Be Lifted For Children of Retarded." The article quoted Caroline Hoffman, director of the Milwaukee Infant Education Center:

"The definitive proof of the experiment really won't be known until we test the children at the end of the second or third grade. We won't know until then whether they can maintain their high standings, or whether, cut loose from our special training and away from this special environment, they will begin to slip back."

His remarkable success at improving the mental alertness of children by creating the proper environment has convinced Heber that public schools should set up programs for the very young.

"All kids could benefit from a formal education program beginning at age 3. The most important thing to happen in education in the next 10 years would be some system of formal education for very young children."

Dr. Heber said most parents can create the appropriate learning environment at home. But for those parents who can't, "Society should provide the proper learning environment outside the home--and as soon as possible after the children are born."

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uw news

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Research Psychology

Release: Immediately 7/21/72

By MARK P. McELREATH

MADISON, Wis.--Do you like jokes better when you hear "canned" laughter on TV? It depends on your sex and how expressive you are, according to recent research.

Experiments conducted by psychologists on hundreds of college students indicate most women and highly expressive men are easily influenced by canned laughter. The experimenters had men and women judge the funniness of cartoons while hearing the cartoon captions read with and without canned laughter in the background.

Most men are quickly critical of canned laughter, the experimenters found. In other words, for most men, a bad joke with canned laughter still is a bad joke.

Gerald C. Cupchik, 24, a Canada Council Fellow receiving a Ph.D. in psychology this summer from the University of Wisconsin-Madison, concluded from a two-year study that because males and females are trained differently in our society the average man and the average woman react differently when they hear canned laughter.

He explained that most women think subjectively and most men think objectively -- quickly adding that highly expressive men think subjectively and many women think analytically and objectively.

"The over-riding importance of this study is how an individual's expressiveness determines reactions to humorous situations. A person who is expressive tends to be more subjective. If you are subjective, you respond

-more-

to the cartoon itself, the social atmosphere and your own laughter.

"Expressive males and expressive females react the same way. In our society, there happens to be more expressive females than expressive males.

"There's a sexual breakdown in the type of training society gives an individual. As a result, for instance, males do better in math, spatial perception problems, logic. Females do better in verbal skills. Also, a person's emotional response to a humorous event such as a cartoon, a joke, or a comedy film should vary with the sex of the individual.

"Extremely expressive people respond to both the cartoon's funniness and the experience of having other people laughing along. The presence of the laughter increases their good feelings about the overall experience.

"For many men, especially low laughers, the canned laughter is discreet and the funniness of the cartoon is discreet -- they consider each a separate piece of information."

Dr. Julie Sherman, a Madison psychologist and author of the book, "On the Psychology of Women," is critical of Cupchik's work. She questions the statistical significance of some of his findings and the validity of some of his statements.

"He is really stereotyping, making mistakes about lots and lots of men and lots and lots of women. Psychologists should not help perpetuate myths about male-female differences."

Cupchik, of St. Johns, Quebec, responds to such charges by insisting his study points out differences between people who think subjectively and people who think objectively.

"It just so happens more men think analytically and more women think subjectively. That's how the cookie crumbles, and I really can't help it if that is what the data shows.

"It shouldn't be thought that women have one trait and men have another -- it's a question of balance. And in our society, this balance is determined by the way men and women are taught to think."

Cupchik's research was supported in part by a grant from the U.S. Public Health Service.

# # #

research news

From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone (608) 262-3571

Research Psychology

Release: Immediately 7/11/72

UIR SCIENCE WRITING PROGRAM
University-Industry Research Program (608--263-2811, 2876)

By HELY JANIS
UW Science Writer

MADISON, Wis.--A person's size is a young child's sole basis for judging age, according to a recent study by a University of Wisconsin-Madison educational psychologist.

William R. Looft said that only after a child reaches the age of about seven does he begin to associate other characteristics with the age of another person.

Looft showed 28 pairs of drawings to 81 children ranging from three to nine years of age. He combined both 3½ and 5½ inch drawings of a baby, a boy, a young and a middle-aged man--thus the younger person often appeared larger.

"The younger children invariably picked the larger figure as oldest," Looft reported. The children often said "He's bigger" and "He has to be big to be older," giving these as typical reasons for their choice.

Young children construct their image of reality in a totally different way than older individuals, Looft said:

"As they grow older, they get bigger, so it's natural for them to associate size with age. They also think clouds are alive because they move. Movement is a correct criterion for life. They don't realize there are others."

Looft said a seven-year-old was the youngest respondent to correctly identify the oldest person in each pair. Two of nine nine-year-olds also responded perfectly, and several made only one or two mistakes.

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"These children had begun to associate other characteristics, such as hair, chest size, and body proportions with age," he added.

Data from a corresponding experiment involving Malaysian children showed similar results. However, these children also associated fatness with age. Looft explained that in Malaysian society, only older, wealthy persons could afford the luxury of overeating.

Looft said he was inspired to study how children judge age when he witnessed his four-year-old niece mistake a 20-year-old girl for her middle-aged mother simply because she was the taller of two persons.

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Research Psychology

Release: Immediately 2/18/72

UIR SCIENCE WRITING DIVISION
University-Industry Research Program (608--263-2811/2876)

By THOMAS BURROUGHS
UW Science Writer

MADISON, Wis.--The silent majority may not speak out on political issues because its typically moderate members tend to feel they are pawns with little control over their destiny.

"Liberals and conservatives, however, are more committed to taking political action. This may be related to their belief that they control their own destiny," says University of Wisconsin-Madison psychologist Frank H. Farley.

Farley revealed this relationship between political orientation and belief in control in a study of 99 college students.

The students--primarily white, American, middle-class, and midwestern or eastern in origin--were given a standardized test to determine beliefs in life control. They rated themselves politically from conservative to liberal.

"The moderates showed a marked tendency to believe their lives were controlled from outside themselves, while liberals and conservatives tend to have the opposite belief," Farley explains. "This strongly suggests that political attitudes, if not party affiliation, may be related to a person's belief in how his life is controlled."

The results also suggest liberals and conservatives may resist outside attempts to influece convictions, while moderates may be more easily influenced by such outside forces as government action and propaganda.

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Moderates may more readily accept events that, according to some segments of society, represent a shift of control from individual to external forces, Farley says. Current examples of this shift are urbanites' loss of identity, massive computerization and automation, and the seeming unresponsiveness of government to individual needs. He notes, however, that no direct evidence for this has yet been found.

The main factor working to establish beliefs about control is an individual's prior success in governing his life, Farley suggests.

"If an individual feels he has succeeded in running his life, he will probably continue to take action when he sees fit," he explains. "The person with little success in controlling his life, perhaps due to aggressive, domineering parents or some other factor, will likely be less motivated to act."

Though the results are fairly clear-cut, Farley cautions that this is only a relatively small study. Tests must be undertaken to study further the formation of convictions in terms of real political action and commitment before the results can be considered complete.

"In light of the new 18-year-old voting age and the young nature of the group tested, however," Farley adds, "the study may be relevant to current political persuasion efforts and electoral success."

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uw news

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Research Psychology

Release: Immediately 2/22/72

UIR SCIENCE WRITING DIVISION
UNIVERSITY-INDUSTRY RESEARCH PROGRAM (608--263-2811/2876)

By HARRY LESLIE
UW Science Writer

MILWAUKEE, Wis.--Group decisions do not always reflect the majority viewpoint.

University of Wisconsin-Milwaukee psychologist Charles Johnson has found that under certain circumstances groups tend to give equal weight to conflicting viewpoints regardless of how many people hold each position.

"Apparently social norms on how to behave prevent the majority from consistently overruling other group members," Johnson notes. "Also social factors often take precedence over problem solution.

"It is important to understand this kind of group behavior because most of the decision-making functions of government, business, and education are carried out by groups."

Johnson first tested individuals in a risk-taking or gambling situation in which they could win or lose real money to see how they would respond. Then he put these individuals into groups and had them make the same kinds of decisions collectively.

"We found that the groups tended to take more risks than the individuals took by themselves," explains Johnson. "Our results suggest that the conservatism was inhibited by group interaction."

Group members, particularly outgoing, extroverted types, are willing to forego having their personal preference adopted in order to maintain pleasant interactions within the group, he says.

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In another experiment, Johnson tested individual reactions to a crime and punishment situation where the subjects played jurors. He found that individuals invariably chose the lightest punishment for the crime allegedly committed.

However, in groups of three where Johnson had an accomplice advocate the most severe punishment, the individuals compromised on a moderately severe punishment.

"The tendency to act against one's better judgment appears to be increased in situations calling for a unanimous decision because when unanimity is required, groups work toward agreement rather than the best solution," he notes.

Johnson says his current data may not accurately reflect how groups of long standing like government bureaus or boards of directors with an established hierarchy would act.

But he feels the findings are most relevant to those groups of citizens who may be temporarily brought together and required to make decisions.

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Research-Psychology

Release: ADVANCE FOR TUESDAY, DEC. 28, PM's 12/23/71

By JOHN WOLF

PHILADELPHIA, Pa.--(Advance for Tuesday, Dec. 28, pm's)--Aggression is a trait that primates, probably including humans, do not need to learn--it is inborn.

This is the conclusion reached after years of experiments on monkeys raised in isolation at the Wisconsin Regional Primate Research Center on the Madison campus of the University of Wisconsin.

Reviewing the results of these experiments at the 138th meeting of the American Association for the Advancement of Science in Philadelphia this week, Prof. Harry F. Harlow and Allyn C. Deets concluded, "Aggression most likely remains in man as a solid component of his biological heritage as a primate."

Harlow and Deets cautioned, however, that the nature of primate aggression is modified by learning and other life experiences.

Harlow is a psychology professor at Wisconsin. Deets is now at the University of Pittsburgh Laboratory of Clinical Science.

The two researchers theorize that aggression toward members of the same species may be an important factor in allowing some primates to adapt to changing environments. "The relatively aggressive rhesus monkey has been able to adapt to environments ranging from remote forest areas to overcrowded urban ghettos," they point out.

Gorillas, however, which display little aggression toward one another, "are now threatened with extinction, being unable to cope with man's encroachment upon their traditional habitat."

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In one of the aggression experiments at the Wisconsin primate facility, monkeys were raised from birth under conditions that allowed them to see and hear other monkeys but did not allow any contact with other animals.

When these isolated monkeys were "threatened" by experimenters waving black gloves, the young primates first were frightened. Later the same monkeys began showing hostility toward the humans, and finally they showed physical aggression toward the only available targets--their own bodies--by biting themselves and throwing themselves against their cages.

Thus, these isolated monkeys, which never had a chance to be "taught" aggression, nevertheless displayed strange but definite aggression, Harlow and Deets noted.

In another experiment, young monkeys were raised normally until they had developed a natural fear of strange objects but before they had shown any aggression. Then they were placed in isolation. When released six months later, these monkeys were not fearful of other monkeys but were very aggressive toward their peers.

Harlow and Deets believe that if aggression develops while a young monkey does not have contact with other monkeys of his age, he does not learn to control his newly found aggression. As a result he becomes outwardly more aggressive than normal.

The fact that emotions like fear and aggression develop in definite stages plays a vital role in preventing normal primate group structures from breaking apart, Harlow and Deets feel.

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Research Psychology

Release: Advance for Wednesday, Dec. 29, am's 12/23/71

By JOHN WOLF

PHILADELPHIA, Pa.--(Advance for Wednesday, Dec. 29, AM's)--Monkeys forced to live in crowded cages with several other strange monkeys become alarmingly more aggressive than usual. Is it strange, then, that human prisoners, kept in crowded conditions with unfamiliar fellows, should show the same tendency?

Nine undergraduate students at the University of Wisconsin-Madison are completing a study of monkeys caged under various degrees of crowding and are convinced that their results should be carefully considered by monkeys' close relatives--men.

Jake Emmerick, a senior psychology major from Pittsville and student leader of the monkey-crowding study, presented his group's preliminary findings at a symposium during the 138th meeting of the American Association for the Advancement of Science this week in Philadelphia.

The other student researchers were Robert Anderegg, Fond du Lac; Clarence Chou, Bayside; Mary Donkle, Fort Atkinson; Barbara Loevinger, Washington, D.C.; Ruth Niebojewski, Brookfield; Scott Rode, Waukesha; Ann Schutts, Marshfield; and James Swinehart, Brookfield. Their majors include psychology, biochemistry, medical technology, nursing, and chemistry.

The study was conducted at the Wisconsin Regional Primate Research Center, one of seven such facilities around the country. Dr. Robert E. Bowman of the Center's psychochemistry unit has been the group's faculty adviser.

Nationally, it was one of 103 undergraduate research projects funded by the National Science Foundation's Student-Originated Studies (SOS) Program. The SOS projects focused on environmental problems.

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Emmerick explained that the SOS program is designed to give undergraduates a preview of the world of research and to allow the students a chance to express their concern that scientific research be used to meet human needs.

Actual research for the crowding study was conducted this summer at the Primate Center. The nine students are now completing analysis of their data.

They already know that when four monkeys are kept in a cage that normally is used to house one animal, the rates of aggressive behavior skyrocket. During the study, one group of four monkeys had to be replaced when it became apparent that one of the four would be killed by its cagemates.

Additional biochemical measurements indicated that these crowded monkeys were under a high degree of stress.

Four monkeys kept together in larger cages showed much less inclination toward aggression against their fellows. Even when aggression did occur, the victim had a better chance to escape because of the greater room for flight.

When only two monkeys were kept in close quarters, they showed a tendency to tolerate each other after a few days of hostility.

Prisons are similar to overcrowded cages of monkeys in this study, Emmerick feels. As long as human prisoners are kept in highly crowded facilities, there is little chance that they will learn to adjust to living outside prison, he noted.

Many have argued against the overcrowded situation in prisons for humans. Now nine students have seen for themselves that at least some primate prisoners held in crowded captivity have no chance of behaving "normally."

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uw news

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Release: Immediately 11/19/71

University-Industry Science Writing Program
(263-2811, 263-2875)

By HARRY LESLIE
UW Science Writer

MADISON, Wis.--Tune in on tight muscles and tone down tension headaches and muscle spasms, University of Wisconsin-Madison researchers say.

Psychologist Charles S. Cleeland is using a device developed by physicist Paul R. Moran to convert nerve signals causing muscle tenseness into a tone which becomes louder and higher pitched as muscles become tighter.

"Some patients suffering from muscle tension can learn to relax by listening to the tone and consciously trying to lower its pitch and volume," said Cleeland at a symposium on conditioning and medical practice Friday.

He noted that patients learn to sense muscle tension and become able to decrease it--without help from the tone--after one or two weeks of daily therapy sessions with the device.

Dr. Cleeland claims that the tone boxes can help people with a variety of tension problems. However, he is against indiscriminate sale of such devices and cautions that they should only be used with professional advice.

He stresses that a person will not solve his problems by becoming dependent upon the tone box and he avoids dependency in his patients by training them to respond naturally to muscle tenseness without the use of artificial aids.

UW engineering student Donald A. Erickson has made the system portable and modified it for use in treating more severe muscle problems like spasms. The altered device uses electrodes to pick up muscle activity but the sensing mechanism is more elaborate and can distinguish between regular muscle activity and a spasm which can be four to eight times more intense.

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Another difference is that the device gives patients a mildly painful shock to the skin instead of a tone. The patient's brain then becomes conditioned to associate muscle spasms with the shock and eventually stops sending the signals causing the spasms.

"A home-made device of this nature can be dangerous since electric shocks might be fatal if not administered properly," warns Cleeland.

"Home-made shock systems are probably useless also. This is because complex electronic equipment is needed to provide a shock nearly instantaneously with the start of the spasm or conditioning will not take place."

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uw news

From The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571

Research-Psychology

Release:

Immediately 11/1/71

University-Industry Science Writing Program
263-2811, 263-2876

By Thomas Burroughs
UW Science Writer

MADISON, Wis.--If your nerves shatter when something goes bump in the night or if you fear being rejected by others, chances are good that you are a first-born or only child.

"People who are the first-born children in their families are more fearful than later-borns," says University of Wisconsin-Madison psychologist Frank H. Farley. "Birth order, rather than family size, is a major factor contributing to the development of fears."

Farley, with Indiana State University psychologist Wallace L. Mealiea, gave a standardized fear test to 148 college students, asking them to rate their fears on a scale from "none" to "very much." Test items included things such as parting from friends, taking tests, fear of worms, and being alone.

The scientists find that while only children and first-borns do not differ greatly from later-borns in general level of fear, they do express a greater number of extreme fears.

Of the 88 items on the test, only eight failed to arouse fear in either of the groups: loud voices, crossing streets, imaginary creatures, strangers, dirt, journeys by train, and being with a member of the opposite sex.

Of the remaining items, first-borns rated 66 of them more frequently as arousing very much fear than did later-borns, Farley notes.

-more-

"First-borns show the greatest difference in extreme fears in social and interpersonal situations such as being alone and parting from friends," Farley says. "These results seem to support other research indicating that first-borns are more anxious, more likely to conform to group pressures, and more dependent on others."

This information on fears may be useful to parents, teachers, psychologists, and counselors, he believes. If they know that first-borns and only children have more of these kinds of fears, counselors can pay special attention to such situations in an effort to reduce anxiety and allay fears.

No single reason for the difference in extreme fears can be pinpointed at this time, Farley notes. However, one factor may be that parents usually have greater expectations of first-borns and there is therefore greater pressure on the child to succeed.

Also, parents are usually over-anxious with their first child, and through inexperience may communicate more of their fears and anxieties to the child, he adds. With additional children, parents become more confident in child raising. Later-born children reflect this confidence.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Research Psychology

Release: Immediately 7/28/71

By MARK P. McELREATH

MADISON--A psychologist at the University of Wisconsin has conducted research which challenges the scare tactics used in recent Wisconsin highway safety ads.

Dr. Howard Leventhal, who recently published an article about "Fear Appeals and Persuasion" in a medical journal, said: "The slick highway safety ads that say 'Wisconsin wants you to live' do nothing: they show a horrible accident, patronizingly suggest the state wants you to live...but, who cares about that?

"We have conducted research here on the Madison campus which tells us that scare tactics without appropriate recommendations for action do more harm than good."

He criticized the recent ads produced for the state by a documentary specialist, and said he considered it unfortunate "that the state does not make use of UW specialists in persuasion in the design of its highway safety campaigns."

The present state contract calls for six radio and six TV ads at a cost of $32,000. Leventhal estimates that UW specialists in persuasion could produce the same number but more effective ads for less.

"With $5,000 we could pre-test various safety ads and know that the ones we eventually produced, at an additional cost, would be based on valid theory," he said.

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Two-thirds of the ads were aired for Memorial and Fourth of July holidays. The remaining ads will be aired for the Labor Day period.

Leventhal's major criticism of the ads is that they arouse two reactions--a desire to know how to prevent the dangers shown, and a desire to control the fear of such dangers--and that they do not provide the necessary information to satisfy both reactions.

Writing in a recent issue of "The American Journal of Public Health," Leventhal stated: "Our experiments have shown that we risk arousing various forms of resistance to influence if we present communications that combine vivid information on a threat with clear information on one's vulnerability to it. This combination appears to stimulate loss of hope and feelings of resignation and inability to cope with danger."

Leventhal holds that short-run campaigns for specific holiday periods should be aimed at people already motivated to be safe.

"Just before a holiday, it is too late to try to motivate the unmotivated. It is better to give instructions on how to be safe to those people who are interested in safety."

For the long-run campaign, the best approach is a mix of safety ads, some that motivate people to be safety conscious, some that give instructions on how to be safe, and some that reinforce the actions of those people who are safe, Leventhal contended.

His suggestions apply to all types of health campaigns, highway safety ads, anti-smoking commercials, and other preventive health programs, he said.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Research Briefs

Release: ADVANCE FOR 10 A.M. TUESDAY, DEC. 29. 12/23/70

UIR Science Writing Division (262-5984)

By J. D. SCHREMSER

CHICAGO--(Advance for 10 a.m. Tuesday, Dec. 29)--Students cannot predict who will commit a violent act and who will not, psychiatrist Seymour L. Halleck told a Tuesday meeting of the American Association for the Advancement of Science.

Dr. Halleck was referring to violence that is "not related to social oppression and not understandable in political terms." He explained that we do not know enough to predict who will become, for example, a murderer.

"Some day we may get better at determining the likelihood of violence in particular people," said Halleck, a University of Wisconsin professor. "But we are unlikely to get really good at it."

He said that too many variables are involved--such as personality, the particular situation, or perhaps even biological abnormalities.

"Although some personality traits seem to be related to violence, an analysis of personality alone will never enable us to predict violence," he explained.

Halleck also said that people with an unusual propensity to violence may have some brain abnormality.

"But the information in this area is terribly limited and inconclusive," he added. "Biological explanations of violence are the most easy to abuse."

Halleck stressed to the audience of scientists that they should not let their work be used for "repressive political purposes."

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Even if it some day became possible to predict violence in particular individuals, it would be "totally unconscionable" for governments to restrain people before they have committed a crime.

He suggested that as we learn more about violence, we should concentrate on treating those people who have already been restrained in prisons, or on treating on a voluntary basis people who exhibit violent symptoms.

Setting fires and torturing animals are two particularly bad signs in children, Halleck said. Preventive programs could be established to help such children--but only with the permission of their parents.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Research Psychology

Release:

Immediately

11/13/70 wf

MADISON--A University of Wisconsin psychologist seeking to learn more about the mysteries of schizophrenia is the recipient of a National Institute of Mental Health research scientist grant.

Dr. Loren T. Chapman said his five-year research program would center on the nature of thought disorders in schizophrenics.

"Schizophrenia is a catch-all term applied to psychotics where the cause of their disorder is unknown," he explained.

"There is some debate on whether schizophrenia is one disorder or several distinguishable ones.

"We are looking for two or more distinguishable types so that discovering the causes of the disorder will become easier.

"People who are labeled schizophrenic often make little sense when they talk. One sentence has no connection with the one before it or the one which follows it.

"We are going to test patients on tasks designed to measure different varieties of thought disorder. For example, one task will measure the extent to which thought disorder occurs in dealing with emotional and neutral topics."

He is hoping to find one type of patient who has greater thought disorder on just emotional topics and a second type who has greater disorder on both emotional and neutral subjects.

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If such a distinction can be made, then the two types of patients will be compared for the presence or absence of schizophrenia in their relatives.

"The expectation is that some schizophrenia is of a genetic basis, while other schizophrenia is not," Dr. Chapman noted.

The researcher and his assistants will conduct the tests on patients in Mendota State Hospital, University Hospitals, Chicago State Hospital, and other institutions which have schizophrenic patients.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Research Psychology

Release:

Immediately 10/12/70 gw

MADISON--A couple, nationally known for their research in New York subways on why bystanders hesitate to help persons in distress, has joined the University of Wisconsin Madison campus faculty.

They are Prof. Irving Piliavin of the School of Social Work, and Prof. Jane Allyn Piliavin of the School of Family Resources. They will continue to do joint research here.

"My husband usually initiates the study ideas," said Mrs. Piliavin. "We design the studies together, I analyze the data, and we write the reports together. Irv got the idea for the subway study when he saw a man pass out while riding in a New York subway."

What followed was a widely publicized study in which the Piliavins staged subway episodes of a person collapsing. The researchers noted responses by the other passengers as to how long it took for someone to provide help, what type of person would help, etc.

They hope to continue the research to find out why bystanders are slower to help the more serious the apparent injury or illness.

Mr. Piliavin teaches a class in social work with an enrollment of 300 students, as well as a class in delinquency. He will also teach a course in corrections, one of his major areas of interest. Mrs. Piliavin, a psychologist, conducts seminars in research.

Married only a year and a half, the Piliavins came to Madison after serving on the faculty of the universities of Pennsylvania and California-Berkeley. He received the Distinguished Teaching Award at Berkeley in 1963.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Research Psychology

Release: Immediately 8/19/70 jb

TIPS ON PUNISHING CHILD
GIVEN BY PSYCHOLOGIST

MADISON--How should you punish your child?

A University of Wisconsin psychologist, Prof. Ross D. Parke, says the parent must give a reason to the youngster when punishing him.

"Then the child feels he is involved with the parent, and the punishment is more effective in controlling future behavior.

"The timing of the punishment is important, too. We have found that if a boy or girl is punished just as he is about to commit a forbidden act, it is much more effective than punishing the child after the act has taken place."

And the parent must be consistent in his punishment, the researcher contends.

He also feels the relationship between the punisher and the child is vital. The more warm and affectionate the parent is toward the child before and after punishment, the more effective it is for keeping the youngster from repeating the forbidden behavior.

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STUDENT DEMONSTRATION
IS VERY QUIET AFFAIR

MADISON--There's a continuing demonstration on the Madison campus which has not commanded any headlines. It involves more than 1,200 students who volunteer their time and services to 16 agencies in the Madison area.

The programs range from helping in pediatric wards in hospitals, working with handicapped persons and senior citizens, individual tutoring, recreational supervision, and helping with a Cub Scout den or a Boy Scout troop for retarded boys, to service work in the VA hospital.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Research Psychology

Release: Immediately 8/19/70 jb

SAYS POWER STEERING
IS FACTOR IN MISHAPS

MADISON--A University of Wisconsin expert is convinced that power steering on a car is a major cause of accidents "even when alcohol, inexperience, or carelessness are also factors."

Prof. Karl U. Smith, a psychologist, says power steering decreases the safety of any vehicle--especially in an emergency.

The mechanism, he finds, increases a delay in action, the time it takes a car to respond to a turn in the steering wheel.

"The car really is a continuation of the driver who expects it to react at the same speed as his own skeleton," Dr. Smith says. Due to the filter system in power steering, there is a delay of .2 to .4 second between the time the wheel is turned and the time the car actually turns. He also learned that other factors may contribute to this delay, such as the mechanics in any steering system and the car's momentum.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Research Psychology

Release: Immediately 8/5/70

UIR Science Writing Division (262-5984)

By MARYJO TAKACH

MADISON, Wis.--Power steering decreases the safety of any vehicle--especially in an emergency.

According to University of Wisconsin psychologist Karl U. Smith, the power steering mechanism, almost a necessity on many heavy cars, increases feedback delay--the time it takes a car to respond to a turn in the steering wheel.

"In my view," says Smith, "this feedback delay is the major cause of accidents even when alcohol, inexperience, or carelessness are also factors."

Smith's studies at Wisconsin's Behavioral Cybernetics Laboratory deal primarily with human reaction to various steering and tracking mechanisms and their effects on body coordination.

"The newest theories see the automobile as an exoskeletonal machine--a continuation of the driver who expects it to react at the same speed as his own skeleton," explains Smith.

Due to the filter system in power steering, however, there is a delay of 0.2 to 0.4 seconds between the time the steering wheel is turned and the time the car turns. Other factors may also contribute to this feedback delay, including the mechanics in any steering mechanism and the momentum of the car.

- more -

Feedback delay, though not normally dangerous in driving, damages the driver's coordination of hand and eye movement so that his mind can no longer predict the outcome of his actions, Smith believes.

Testing with bomber tracking equipment during World War II and, more recently, behavior studies of steering reflexes have shown that subjects never quite adjust to this delay factor, especially in emergencies.

Smith suggests that the simulator machines used in driver education courses be built with the delay in mind. Emergency situations could then be flashed on the screen and the driver would realize the limitations of his car.

"Detroit is not to be blamed for this problem," says Smith, "only in the past couple of years have psychologists made anyone aware of the delayed feedback problem in automobiles."

Some of the larger cars, which demand the most power steering, are now building their systems so that the mechanism gradually returns to regular steering as speed increases and steering requires less physical strength.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Research Psychology

Release: Immediately 7/30/70 wf

MADISON--A series of studies by University of Wisconsin psychologist Ross D. Parke will help parents to control deviant behavior in their children more effectively.

Dr. Parke has worked with five and six-year-olds in studying punishments and the various conditions under which they are effective.

"When a parent provides a child with a reason, or rationale, for the punishment he is being given, the child feels that he is involved with the parent and the punishment becomes much more effective in controlling future behavior. This method of punishing a child is more effective than any of the others we have studied," Parke said.

"The timing of the punishment is also important. We have found that if a child is punished just as he is about to commit a forbidden act, it is much more effective than punishing the child after the act has taken place."

The relationship between the punisher and the child is very important. Parke found that the warmer and more affectionate the punishing agent is toward the child before and after punishment, the more effective the punishment is for keeping the child from repeating forbidden behavior.

One of the problems most parents have to face in the disciplining of their children is that of inconsistency.

"When the parent is inconsistent in what is punished and how the punishment is given, the effectiveness of the discipline goes down," Parke said.

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uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Research-Psychology

Release: Immediately 6/16/70

By HARING FINCKE

MADISON--A study recently completed at the University of Wisconsin has found three distinct types of juvenile delinquency and the types of family interaction patterns which produce them.

The study was conducted by Prof. E. Mavis Hetherington of the psychology department. She explained:

"We found three types of delinquency in young people: The neurotic type which commits isolated offenses; he is a loner and feels guilty and depressed. Next, the psychopathic type has little conscience, and is a manipulative stimulus seeker. The social delinquent knows what is right and wrong but accepts the norms of a delinquent peer group."

Her study looked at male and female delinquents and the families they come from.

The neurotic delinquet comes from a family in which the mother is the dominant figure. She runs the family and makes all important decisions. The psychopathic types comes from a family where there is a great deal of friction and disagreement, especially on matters of discipline.

The social type usually has a father who is a very strong figure in the family structure. This family is happier than the others, but Dr. Hetherington noticed a current of passive resistance on the part of the wife and the child to the father's authority.

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One interesting point is that normal boys argue and disagree more with their parents than delinquent boys do while the normal girl argues less than her delinquent counterpart.

Dr. Hetherington feels that the common thread which runs through all the families of delinquent children is an inability to reach decisions as a unit.

"Families with delinquent children are much less open. They find it harder to make jointly agreed-upon-decisions than families with normal children," she said.

Dr. Hetherington concluded:

"Delinquency is not a unitary problem; the only thing delinquents have in common is that they have committed an anti-social act.

"We must work more with the entire family in cases of delinquency and get at some of the causes of family conflict which have a bearing on the behavior of the children."

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U. W. NEWS FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

Research: Psychiatry

12/6/62 jeb RELEASE: Immediately

By JANE BRODY

MADISON, Wis.--Principles of psycho- and group therapy could be used to counter Communism and organize individuals in underdeveloped countries, says Eugene T. Gendlin, University of Wisconsin psychologist.

Gendlin, project associate at the Wisconsin Psychiatric Institute, has submitted to government officials "A Proposal for Action" calling for an organized government-sponsored research program to put his theory into practice.

"The United States assumes that the Communists have a monopoly on organizing people in other countries," Gendlin contends. "We assume that we're helpless in this area, that our appeal to people is not attractive."

But, explains Gendlin, who has been doing research at the institute for four years, Communist methods stem from the 19th century. American methods of human relations are far more advanced, but although they have proven effective in psychotherapy, group work, community work, and industrial psychology, they have never been applied to mass organization.

If used, American techniques could not only organize individuals "in friendship to the United States and desirous of a free society," they would also harden people "against the Communist way of organizing," Gendlin believes.

"Many people think that interpersonal relations is a vague, emotional area which has made little progress since ancient times." But his research, which led to the authorship of "Experiencing and the Creation of Meaning," indicates that the experiences of people can be specified in detailed and defined ways. "We now know some of the processes of psychotherapy and interpersonal relations, and we can measure and observe them," he explains.

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Add one--psych proposal

Gendlin found that normal people with few psychological problems respond "more strongly and swiftly" than the psychologically ill to methods which fosters a "deepening and broadening of interpersonal relations."

In the field, this method would base a spreading social movement upon individual psychological needs and the "excitement which people find when they discover each other as persons." An "emotional belongingness," mixing individuals of different classes and social backgrounds, could overcome the barriers of "social class, suspicion, training, habit, personality, and culture" which currently block most organizational attempts.

American efforts to organize individuals in underdeveloped countries, Gendlin explains, have been limited to small-scale community development projects. These are successful to some extent, but "the people don't feel that they're moving to build their country, nor do these projects organize people politically." He adds:

"My proposal is an attempt to get at the roots of organization. Projects, such as well-drilling and road-building, which are the mainstay of community development, would be byproducts." For a striking side effect of the emotional involvement Gendlin's method inspires is that "everyone wants to do something." This energy and desire for action, the psychologist believes, could be organized into useful channels in an underdeveloped country.

As Gendlin notes: "The Russians and the Cubans are training many people from other countries to organize people and to advocate the Cuban model. After training, they return to their countries and work as indigenous organizers. Why can't we do the same, using American methods toward a democratic model?"

Gendlin, who is president of the Psychologists Interested in the Advancement of Psychotherapy, a branch of the American Psychology Association, says there are many specialists who could be brought together by the government to develop and test pilot projects.

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U. W. NEWS

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

Research
Human Behavior

10/29/62 jl

RELEASE: Immediately

MADISON, Wis.--Youngsters possessing normal mothers have an excellent chance of developing normally themselves, but an absence of maternal affection may not necessarily be serious if there are plenty of other youngsters around--and if the rules governing monkey behavior also apply to human behavior.

This is one of the Primate Laboratory findings reported by University of Wisconsin psychologists Harry and Margaret Kuenne Harlow in the issue of Scientific American published Monday (Oct. 29). The laboratory's studies of normal and abnormal development in monkeys may have begun to shed light on certain mysteries of human psychology.

Normal mothering alone isn't enough to insure normal development, the Harlows add. Young monkeys, as a matter of fact, need plenty of opportunity to play with other youngsters. Those reared alone with their mothers under isolated conditions do not subsequently develop normal interactions with their age mates when the opportunity arises.

Next to infants raised in complete isolation, the Harlows report, these were the most socially retarded of the infant monkeys tested.

The experiments with infant monkeys under total isolation during the first two to six months of life have "bracketed what may be the critical period of development during which social experience is necessary for normal behavior in later life," they write.

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Since the rhesus monkey is more mature than the human infant at birth and grows four times more rapidly, six months is equivalent to two years for the human child. Effects of short periods of early isolation, perhaps 60 to 90 days or even longer, appear quite reversible, but six months is destructive.

"Case studies of children reared in impersonal institutions or in homes with indifferent mothers or nurses show a frightening comparability," the Harlows point out.

"The child may remain relatively unharmed through the first six months of life. But from this time on the damage is progressive and cumulative. By one year of age he may sustain enduring emotional scars and by two years many children have reached the point of no return."

Studies of groups of motherless monkeys, in each of which four infants were raised in close association with one another, indicate that their affectional relationships with each other may compensate for lack of mothering, the Harlows disclose.

These experiments are still incomplete, but the monkeys give every indication of being socially and sexually on a par with infants raised by their own mothers and also given opportunity to associate with other young monkeys.

"Of course research on nonhuman animals, even monkeys, will never resolve the bafflingly complex roles of various kinds of early experience in the development of human personality," the Harlows report.

"The close behavioral resemblance of our disturbed infants to disturbed human beings gives us the confidence that we are working with significant variables and the hope that we can point the way to reducing the toll of psychosocial trauma in human society," they add.

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U. W. NEWS

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

Research
Psychology

10/23/62 jb

RELEASE: Immediately

Attn: Business Editor

MADISON, Wis.--Man's use of tools helps explain his nature, his behavior, and his social and economic patterns, a noted University of Wisconsin psychologist is convinced.

Dr. Karl U. Smith, internationally known because of his behavioral science findings, explains his statement in his new business pamphlet, "Work Theory and Economic Behavior." It is an evaluation of the meaning of work in society, a search to appraise the factors affecting unemployed persons and those unsatisfactorily employed.

"Tools alone never changed anything," he stated. "Tools and their design are a factor in the evolutionary process only in relation to human factors and organization. But tool using and work have affected both personality and economic development in the continual elaboration of the adaptive cultural systems of mankind.

"As man adapts to his environment through the use of tools, his work not only shows the fundamental nature of his behavior, but also affects the designs of the tools themselves and the structure of his surroundings. Human environment has ceased to be natural. It conforms to human design, and has been built specifically by work processes."

Thus, Dr. Smith contends, by means of the adaptive behavior of work, "man controls many physical features of the environment, its social and institutional organization, the design and types of his tools and machines, and his own organized behavior patterns. These effects in turn influence the personality and vital functions of the individual."

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The psychologist believes the activities of work are constantly being reorganized through the selective survival of people, tools, and human systems.

According to Dr. Smith, economists have been prone to view the human personality as an incidental factor in the study of economy activity. He is critical of orthodox economic doctrine because of what he feels is its lack of a valid analysis of behavior and its denial of basic human needs. There also, he adds, is a lack of communication between the sciences of behavior and economics.

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FEATURE STORY

Research
Psychiatry

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

9/28/62 jeb

RELEASE: Immediately

By JANE BRODY

MADISON, Wis.--Many of the 19,170 recorded suicides in the United States last year might have been prevented, states Dr. Milton H. Miller, University of Wisconsin psychiatrist, if the depressed patient had received proper medical attention.

"Too often we underestimate the seriousness of a depressed person's illness," explains Dr. Miller, newly appointed psychiatry department chairman. "As a result, he never receives the therapy which may save him from self-destruction."

Nearly everyone experiences occasional brief periods of depression. They may result from the loss of a loved one, a personal failure, a change in activity, an illness. But when depression becomes unusually severe or prolonged, Dr. Miller warns, prompt and proper medical care may make the difference between life and death.

Psychiatrists find that the judgment of depressed persons is often poor and they must rely on more competent individuals for guidance. The doctors urge that people close to such a person give him as much understanding and assistance as possible. It is often up to them to see that he receives medical attention.

Severe depression is particularly common among older people -- people who have retired from business and suddenly have nothing to do, or who may be physically less able than they once were. But, according to the U. S. National Office of Vital Statistics, each year suicide also takes the lives of some 8,600 persons between the ages of 15 and 50.

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add one--suicide prevention

Even children are not totally exempt from self-destruction. Frequently, Dr. Miller finds, their depressions go unnoticed by parents and their suicide attempts are brushed off as accidents. Eventually, the untreated child may succeed in taking his life.

Dr. Miller emphasizes the role of the family physician in detecting a depressed person's problem. "The emotionally upset patient frequently turns to his family doctor for help," the psychiatrist explains, "for many mental illnesses appear in subtle or disguised form." The patient may complain of sleep disturbance, constipation, pains in his chest, loss of appetite, or any number of physical ailments which cannot be attributed to physical illness.

Psychiatrists suggest that the physician detach himself as much as possible from the patient's physical complaints and take a careful look at the person before him. How, for instance, does the patient present himself? Is he tense, downhearted, frightened? What is his history, his past and present style of living? All these, Dr. Miller states, are important clues to proper diagnosis.

"For in most cases," he continues, "depression is curable and suicide preventable." Once accurately diagnosed, depression can be treated in a number of ways. According to the psychiatrist, one of the newest and most successful aids in suicide control -- antidepressant drugs -- relieves many patients who might otherwise require hospitalization and "electric shock" treatment. "This great advance in drug therapy" may also help nonpsychiatric physicians treat depressed persons.

Sometimes, however, referral to a psychiatrist, "shock" treatments, or hospitalization may be necessary. "In all cases," Dr. Miller stresses, "both family and physician must try to realize the extent of a patient's depression and act accordingly."

Today, he believes, the prejudice and shame once felt about emotional illness are disappearing, therapeutic drugs are getting better and better, students in all areas of medicine are receiving instruction in psychiatry, and emergency clinics are being set up all over the country. Psychiatrists expect these gains to help greatly in reducing the annual suicide toll.

Dr. Miller contributed to a recent series on suicide appearing in Medical Tribune, a periodical for doctors.

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Research
Psychology

RESEARCH AT THE UNIVERSITY OF WISCONSIN MEDICAL CENTER

WAISMAN, OTHERS

Profs. Harry A. Waisman and V. H. Auerback of pediatrics and L. Benjamin Wyckoff, psychology, have produced mental retardation in rats by feeding them above normal amounts of the amino acid phenylalanine.

In human beings lack of an enzyme in the liver needed to convert this same amino acid into tyrosin causes the hereditary mental illness phenylpyruvic oligophrenia or phenylketonuria. This disease occurs in one on 25,000 births.

Implication of this discovery is the foothold it gives in the study of metabolic abnormalities in mental disorders. It suggests that more diseases which have no known organic cause can be studied in animals once the chemical malfunction is described.

10/20/59

WIRE NEWS

[Research]
Psychology

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

3/15/58 jl

RELEASE: March 15, 1958

MADISON, Wis.--Funds to support major research projects on solar energy, cancer, and psychology, and for programs in the field of medical education were among gifts and grants totaling $551,368 accepted by University of Wisconsin regents Saturday.

The Rockefeller Foundation, New York, provided the University chemistry department with $250,000 to continue its studies in solar energy utilization.

Two major grants were accepted for research in the department of psychology: $66,000 from the National Institutes of Health for research in the UW Primate Laboratory and $30,700 for studies of learning and conditioning in the department of psychology.

The University Medical School received $35,800 from the National Fund for Medical Education and $8,846 from the American Medical Education Foundation, both grants to support the school's instructional and research programs.

The Albert and Mary Lasker Foundation provided the UW Medical School with $24,000 to support a fellowship in cancer research at the McArdle Memorial Laboratory for a three-year period, and the National Institutes of Health gave $5,184 to support research fellowships for medical students.

In economics, a $7,575 grant for support of a researcher was provided by the Social Science Research Council, and $6,533 was given to the University by the University of Wisconsin Foundation on behalf of students, friends, and colleagues of the late Prof. B.H. Hibbard. Principles and income of this memorial fund will be used to support an analysis of agricultural policy by University economists.

Gifts and grants accepted by the UW regents follow:

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