

Human ECOLOGY

Cornell Cooperative Extension's 4-H
Gets Kids Moving and Eating Well to
Choose Health, p. 16

Outreach
and Impact



Volume 36, Number 1
May 2008

Published by the New York State College
of Human Ecology at Cornell University

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Cornell's College of Human Ecology publishes this magazine to illustrate how its programs address complex societal issues to improve the human condition. This mission of human improvement is accomplished through faculty initiatives in research, outreach, and teaching—with an emphasis on an ecological perspective, collaborative projects, and multidisciplinary curricula within and across five academic units: the Department of Design and Environmental Analysis; the Department of Fiber Science & Apparel Design; the Department of Human Development; the Department of Policy Analysis and Management; and the Division of Nutritional Sciences, a unit shared with the College of Agriculture and Life Sciences. The college includes the Family Life Development Center and the Bronfenbrenner Life Course Center.

ISSN 1530-7069. Published by the New York State College of Human Ecology. Third-class postage paid at Ithaca, NY.

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Printed in U.S.A.

Produced by Office of Publications and Marketing
at Cornell University

Editor: Sue Baldwin

Designer: Laurie Ray

Photography: Cornell University Photography, Corbis, Fotosearch,
Min/DOT, David R. Gonzalez

Production Coordinator: Donna Vantine

Change of Address: To assure uninterrupted delivery, write to Cornell University, College of Human Ecology, Box HE, Ithaca, NY 14853-4401 (e-mail: he_magazine-mailbox@cornell.edu) a month in advance of your move and provide old and new addresses. Annual subscriptions for two issues: \$20 a year. International, \$26. Canada, \$24. Write to Cornell University, College of Human Ecology, Box HE, Ithaca, NY 14853-4401. Allow six weeks for subscription fulfillment. Back issues: \$10.

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Creating and Sharing Knowledge

In 1923, College of Human Ecology founder Martha Van Rensselaer described the then emerging discipline of home economics as “a valuable means of applying the principles of science, of art, of psychology, and of economics to vital questions whereby men and women will be healthier and happier and the nation more prosperous.”

While the college has grown and evolved in countless ways over the last century, the underlying sentiment she described still lies at the very heart of our mission today: to advance and improve the human condition by integrating education, research, and outreach. We do that by improving nutrition and health, advancing design and technology, enriching human development, and shaping policies that secure economic and social well-being for individuals, families, and communities.

At the end of the day, we’re in the business of creating and sharing knowledge, with students, researchers, policymakers, extension leaders, businesses, and a vast array of institutions.

It is our intention that *Human Ecology* magazine plays a part in our efforts by keeping these varied constituencies informed about our work. And we are constantly looking for ways to enhance and refine this important communications channel.

To that end, I am happy to introduce several new features to the magazine. We added a section of briefs, called “In Short,” to share a broader set of programs. And we are launching a new feature called “Afterword,” a perspectives piece to be written by extension leaders, researchers, and faculty members to bring you insights directly from the people who are delivering on our three missions. The inaugural column features Human Development Professor and Department Extension Leader Valerie Reyna discussing her groundbreaking work on adolescent risky decision making.

Please take a few moments to explore *Human Ecology*, and let us know what else we can do to keep you informed.

Sincerely,

Alan D. Mathios
Interim Dean
College of Human Ecology

inside.



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In Short

Poverty, Unemployment Trouble the Disabled

Working-age Americans with disabilities are twice as likely to be unemployed and live in poverty, according to the “Third Annual Disability Status Report,” co-written by Richard Burkhauser, professor of Policy Analysis and Management. It was presented to Congress in November 2007.

The report, the only one of its kind in the nation, found that 38 percent of working-age people with disabilities have jobs compared with 80 percent of people without disabilities. In addition, 25 percent of



working-age disabled people live in poverty, compared with only 9.5 percent of those without disabilities.

The study was published by Cornell’s Rehabilitation Research and Training Center on Disability Demographics and Statistics, a joint venture between Human Ecology’s Department of Policy Analysis and Management and Industrial and Labor Relations’ Employment and Disability Institute. You can read the full version at www.disabilitystatistics.org.



Conference Tackles How Chaos Affects Children

The first, biannual Bronfenbrenner Conference, *Chaos and Children’s Development: Levels of Analysis and Mechanisms*, attracted researchers and authors from across the globe to the Cornell campus on October 25–27, 2007.

About 20 speakers from the United States, Canada, and Turkey contributed to the conference, which focused on how chaotic environmental settings—such as high levels of noise, crowding and unpredictability—influence human development from infancy through adolescence.

Papers written for the conference are anticipated to be published in a book this year.



Teaching Local Students to Design Fashion

Fiber Science & Apparel Design alumna Denise Green ’07 designed a curriculum to teach disadvantaged youth how to design and make their own fashions, and then put it into practice with the Ithaca 4-H Urban Outreach Program.

The project—which focused on letting the child become the fashion designer—taught elementary-aged students basic sewing skills with an emphasis on independent thought and creative freedom.

Green also created materials to show other 4-H programs how to replicate the program. To see a video about the project go to www.cornell.edu/video, and enter “empower” in the search box.

Study: Should Nursing Homes Go High-Tech?

The College of Human Ecology and the School of Industrial and Labor Relations have teamed up for a two-year study of 17 nursing homes in downstate New York designed to determine if electronic record keeping can improve resident care and reduce medical errors. It will also examine the impact of technology on employee relations, retention, and recruitment in long-term care institutions. Once completed, it will be the first comprehensive examination of how new medical information technologies affect both employees and residents in nursing homes.

Funding for the study is provided by the 1199SEIU Greater New York Worker Participation Fund and the Commonwealth Fund, a private foundation that supports independent research on health care issues.

New Center Will Translate Medical Research into Practice

In a major new effort to translate medical research into practical and accessible treatment, the College of Human Ecology will partner with Weill Cornell Medical College in the creation of a Clinical and Translational Science Center on Manhattan’s Upper East Side.

“We’re very proud to have a role in facilitating important research that will have a real impact in people’s lives, and we’re excited about another collaboration that brings together Cornell’s expertise across disciplines,” said Alan Mathios, Human Ecology’s interim dean and professor of policy analysis and management.

Also collaborating on the effort are Memorial Sloan-Kettering Cancer Center, Hospital for Special Surgery, Hunter College, and Cornell University Cooperative Extension–New York City. The center will be funded through a \$49 million Clinical and Translational Science Award from the National Institutes of Health. It is the largest federal grant ever awarded to the medical college.





Center Receives Grant to Study AIDS Risk Among NYC Teens

The National Institute of Nursing Research awarded a \$400,000 grant to the Family Life Development Center to investigate whether urban teens who become highly involved in community programs are less likely to become infected with HIV.

John Eckenrode, professor of human development and director of the Family Life Development Center, and Jennifer Tiffany, director of the center's HIV/AIDS Education Project, hypothesize that teens who are highly engaged in a program that connects them with a community are less likely to participate in behaviors that could lead to HIV. For the study, they will follow 300 teens living in New York City and involved in after-school programs over the course of a year.

Research Challenges Federal Lead Guidelines

The Centers for Disease Control and Prevention (CDC) standard for lead levels in children's blood may not be low enough, according to newly published research by Richard Canfield, a senior associate in nutritional sciences; Charles Henderson, a senior researcher in human development; and Human Development alumnus Todd Jusko '01.

The six-year-long study examined the effect of lead exposure on cognitive function in children whose blood-lead levels were below the CDC's standard of 10 micrograms per deciliter (mcg/dl), or about 100 parts per billion.

Taking into consideration other factors known to affect a child's cognitive performance, the study found that lead blood levels (BLL) played a significant role in predicting nonverbal IQ scores. "This indicates an adverse effect on children who have a BLL substantially below the CDC standard, suggesting the need for more stringent regulations," Canfield said.

The research was funded primarily by the National Institute of Environmental Health Sciences.

Faculty Member Appointed to Assess Health Risks of Mold in New York

Joe Laquatra, the Hazel E. Reed Human Ecology Extension Chair in Family Policy, was appointed to New York State's first task force on toxic mold.

The 14-member panel of experts will review scientific research on toxic mold and the illnesses it causes. Legislators urged the panel be formed after hearing complaints of debilitating exposure to potentially lethal indoor air.



Fiber Science Students Teach NYC Kids about Fabric

Karmann Cressman Mills, a graduate student in Fiber Science & Apparel Design, teaches students at a Harlem elementary school how to use a microscope to identify fabrics. Cressman Mills is a student of Juan Hinestroza, assistant professor of fiber science & apparel design, who organized the outreach effort.



It doesn't take an economist to know we're getting whacked at the pump.

Economist Brings Scholarly Perspective to National Transportation Policy

BY ROGER SEGELKEN

W



When it comes to the billions in federal gasoline and diesel fuel tax revenues, one associate professor of policy analysis and management knows precisely where they are going—down to the last tenth of a cent—and Rick Geddes has a better idea. Four ideas, actually:

First, more of the fuel-tax revenues in the Highway Trust Fund should go back, no strings attached, to the states where the fuel was sold; individual states know more than Washington does about local needs for transportation infrastructure repairs, improvements, and innovations, believes Geddes, an expert on legal and economic aspects of government regulation of industry.

Second, transportation infrastructure maintenance and improvements should be paid for, to a much greater degree, by those who actually use the infrastructures; new technologies that would allow “value pricing” on busy highways, for example.

Third, the use of private capital to fund public transportation infrastructure should not be restricted by the federal government, said the Cornell economist,

Finally: no, the federal fuel tax should not be raised by 200 percent, as some members of the National Surface Transportation Policy and Revenue Study Commission believe. Even more money in the Highway Trust Fund would be an irresistible temptation for lawmakers with earmark projects like Alaska’s “Bridge to Nowhere” and Florida’s “Coconut Road” interchange, Geddes maintains.

Those views place the Cornell professor in a minority of three, among the 12-member commission that studied policy-and-revenue issues in advance of the 2009 reauthorization of the Federal highway and transit programs. Geddes questions whether allocation of federal fuel tax revenues under the 2005 reauthorization, known as SAFETEA-LU, has been either flexible or equitable.

But he’s sure of two things: His 22-month experience, as the lone academic appointee to a commission filled with transportation industry representatives and administrators, was an eye-opening education for a Ph.D. economist. And the experience continues to inform his teaching, here at Cornell. >>>



- Final report: transportationfortomorrow.org/final_report
- Minority report: transportationfortomorrow.org/final_report/pdf/volume_1_minority_views.pdf

When the President Calls

Duty on the commission wasn't Geddes's first national service. From 2004 to 2005, he had taken leave from the faculty he joined in 2002 to become a senior economist on the Council of Economic Advisers, in the Executive Office of the President, where his portfolio included transportation, regulation, and finance.

He returned to teaching at Cornell, and took on added responsibilities as director of undergraduate studies in the department when President Bush called again, making Geddes one of his appointees to the transportation policy-and-revenue commission. The appointment started a 22-month odyssey: numerous trips to Washington, D.C., of course, plus a 10-city round of public hearings to gather information on all sectors of surface transportation in the United States.

The public-hearing trips also gave commissioners a chance to study transportation experiments, such as a toll road in Minneapolis that constantly monitors traffic volume and adjusts tolls to discourage travel during peak times and give toll-payers a break when traffic is light. Seeing the Minneapolis experiment in action convinced Geddes that the so-called value pricing works: travelers willingly pay more for the convenience of using special infrastructure where traffic flows freely. (However, in Minneapolis a parallel conveyance is available to those who don't mind slogging it out with the crowd.) And the success of the congestion-pricing experiment cemented Geddes's conviction: that travelers who actually use particular pieces of infrastructure—a new highway in Los Angeles, for example—should foot the bill. And not the farmer pumping gas in Mississippi, with no intention of driving through Los Angeles.

Technology behind value pricing for the use of transportation infrastructure is the easy part, Geddes notes. Beyond the already-familiar RFID (radio frequency identification) tags that document road and bridge usage (in systems like Fast Lane and I-Pass), technologies such as ITS (for intelligent transportation system) and VII (vehicle-infrastructure integration) are ready to go. An ITS system, for instance, would employ geo-positioning satellites and GPS devices in vehicles to monitor usage of particular roads, bridges, and tunnels—and bill accordingly. The more down-to-earth VII would track a vehicle's passage with roadside monitoring devices. And VII would also allow hands-free, train-like convoys of hundreds of closely spaced cars on specially outfitted highways—if drivers come to trust computers to operate vehicles, that is.

Big Technology Is Watching

Trust, indeed, is a key issue in futuristic toll-collection systems. Some travelers might not want a satellite tracking their movements. But those who jealously guard their privacy—while zipping through an E-ZPass tollbooth—aren't the only ones who know where the car has been lately. In any case, the desire for privacy among travelers is another reason to maintain at least one cash-based toll booth.

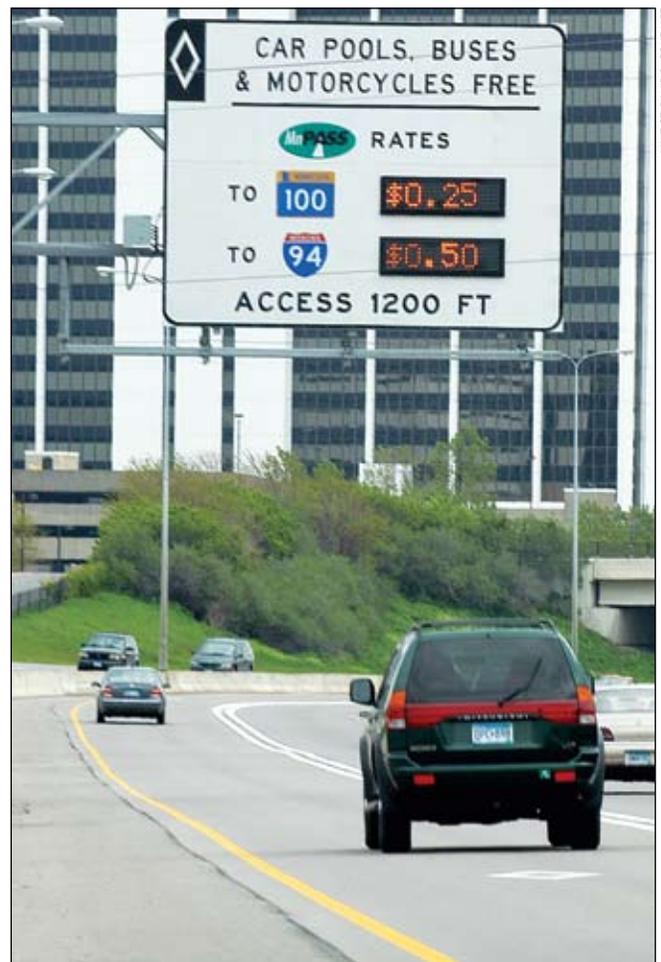
Geddes said: “Direct pricing of road services allows customers to face the full, true cost of using a particular road. When consumers face that cost, they will take it into account in their decisions about when and how to use the road.”

With an economics philosophy like that, Geddes and two other commissioners declined to approve the final report. Instead, they issued a 10-page minority report calling for “greater state responsibility and accountability, rational pricing, and market discipline” in the national transportation system. The three minority commissioners concluded with these words: “To simply modify historic methods of providing infrastructure, relying on increases in the federal fuel tax and inviting political earmarking, is a recipe for failure that we, as a nation, can no longer afford.”

Besides Geddes, the other two “minority” members were Mary E. Peters, the U.S. Secretary of Transportation, and Maria Cino, former deputy secretary in the U.S. Department of Transportation.

Who Needs Academics, Anyway?

Regarding Geddes's role as the lone academic on the commission, the project's executive director, Federal Highway Administration Deputy Associate Administrator Susan Binder said, “The perspective that Professor Geddes



MINUDOT, DAVID R. GONZALEZ

brought was very useful because he can look, objectively, at components of the transportation industry and find parallels in other sectors of the economy. With his fresh eye and experience with regulation in postal services and in electrical systems, he was able to say: ‘Wait a minute, let’s step back and learn from other models.’”

More modestly, Geddes said his value to the project “was that I was not beholden to other interests.” The other commission members included representatives of state and city transportation departments, construction contractors, railways, shipping, and retail business.

Returning to Ithaca between his many road trips, Geddes was eager to incorporate his national-level experiences in his teaching (including PAM 334 Corporations, Shareholders, and Policy and PAM 341 Economics of Consumer Law and Protection). He tells his students that value pricing of transportation services is not some radical scheme that works only in Minneapolis. Indeed, William Vickery, who shared the 1996 Nobel Prize in Economics with James A. Mirrlees, became famous for his work on value pricing in transportation.

Per-gallon fuel levies are “the most regressive kind of tax—a tax that hits the poor the hardest,” Geddes observed. He doubts that major increases in the federal tax will pass in Congress, because the legislators’ constituents would be outraged. Some of those constituents benefited from the more than 6,300 transportation earmarks that lawmakers attached to related—and sometimes vaguely related—legislation. Federal formula funds, which return fuel tax revenues to states on the basis of road mileage, population, and other metrics in each state, are supposed to ensure more equitable and rational financing of projects, according to Geddes. Increased federal tax revenue would fuel more pork barrel projects that states neither want nor need, he said.

In-Demand Academic

Geddes’ work wasn’t over, however, when the commission report was released on January 15, 2008. Besides giving news-media interviews, he was summoned to testify before the House of Representatives’ Committee on Transportation and Infrastructure. Preparing his two minutes of oral remarks (in addition to lengthier written testimony that was entered in the record), Geddes was savvy enough to avoid terms like “pork barrel” and “earmarks.” But that didn’t stop congressmen from grilling the professor on certain aspects of the minority report that might not resonate favorably in their home districts.

Then came an invitation to speak at the National Governors Association meeting, where the organization’s Economic Development and Commerce Committee included leaders of states with serious transportation problems, such as California governor Arnold Schwarzenegger. This time Geddes got to talk for 10 minutes before the questions started flying.

As the reauthorization bills move through Congress next year, Geddes expects more requests to speak with the media and to legislative committees. He will evaluate each request before deciding. He’s already turned down one high-level summons—to testify before a U.S. Senate committee.

“I couldn’t miss an important meeting that day,” Geddes said, “with my daughter’s kindergarten teacher.” ● ● ●

Sometimes Regulators Listen: How PAM’s Sharon Tennyson Helped Massachusetts Drivers

If there’s one industry consumers love to hate, it is the insurance industry. Insurers like state regulation of their industry even less, as evidenced by all the insurance lobbyists in state capitols. And insurance ratepayers aren’t always so pleased with the states’ regulatory record, either.

Into the fray, like a calm police officer investigating a five-car fender-bender, comes Sharon Tennyson. The associate professor of policy analysis and management can analyze insurance policies, of course, even the fine print. But this economist’s real expertise is the big picture: the impact of laws and government regulation on insurance firms, consumer behavior, and the organization of the insurance market.

After Tennyson’s detailed study and comprehensive analysis of automobile insurance under state regulation, she has issued her “police report,” in a recent series of articles, book chapters, and presentations, on one wreck that is no accident: At fault, Tennyson finds, is way too much state regulation.

Speaking on the topic “Efficiency Consequences of Rate Regulation in Insurance Markets” at a conference last year, Tennyson cited a large body of scholarly research to support the conclusion that “insurance markets function in a workably competitive manner in the absence of rate regulation.” Prices and profits in unregulated insurance markets are not excessive, Tennyson said, because of competition among numerous firms that do business in unregulated states.

In Tennyson’s opinion, the dubious distinction of the most “interventionist” automobile insurance regulatory systems goes to the Commonwealth of Massachusetts. Besides setting uniform rates that must be charged by all companies, Massachusetts regulates virtually all aspects of the market’s operation there—from vehicle-risk ratings to conditions for policy cancellation. If a fed-up insurer disagrees, Massachusetts also sets conditions for exiting the market.

Tennyson shared that opinion in May 2007 hearing before the Massachusetts Division of Insurance, testifying: “I strongly conclude that moving away from the fixing and establishing of rates in 2008 will benefit Massachusetts drivers—by increasing competition and reducing market and incentive . . . distortions fostered by the fixed-and-established rating system.”

Massachusetts regulators apparently listened to the Cornell economist. Under a new (April 2008) “managed competition” scheme, insurers can set their own rates—subject to approval of the Division of Insurance. Massachusetts even set up a web site to help drivers compare rates and shop for discounts.

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For more information:

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U.S. Department of Health and Human Services



U.S. Department of Health and Human Services



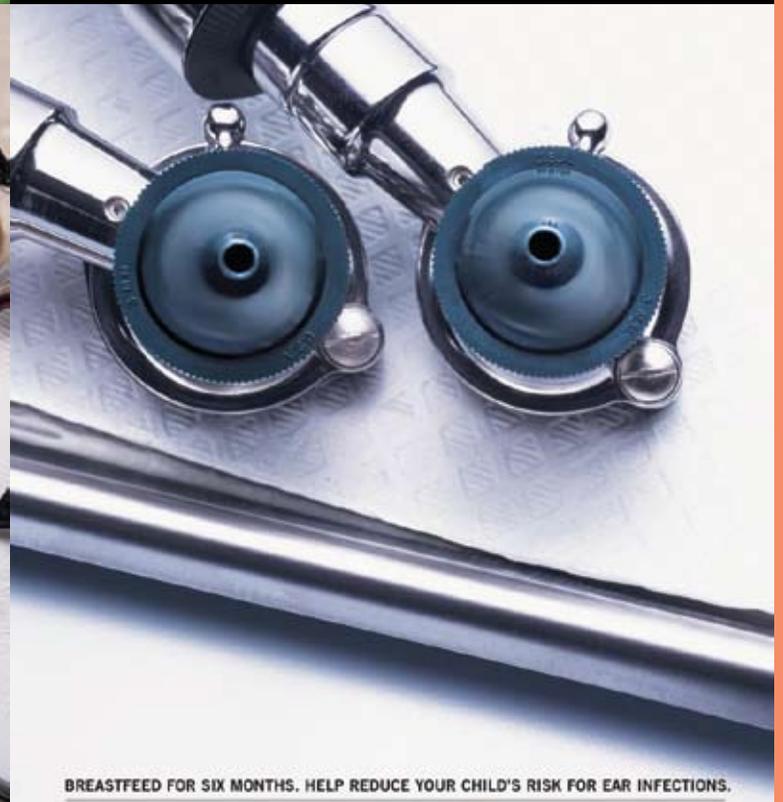
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Recent studies show you can lower your child's risk of ear infections by breastfeeding exclusively for six months. Call 800-994-WOMAN or visit www.4woman.gov to learn more. Or talk to your healthcare provider.

Babies were born to be breastfed.



U.S. Department of Health and Human Services



The type of research-based outreach being done in the College of Human Ecology not only helps more people, it generates new knowledge.

Putting Research into Practice: Cornell Tries the “Bandura Model”

BY ROGER SEGELKEN

The simplicity of the message belies the sophistication of the public health campaign that rents the roadside billboards: “Babies Are Born to Be Breastfed.”

Behind the outdoor advertising (and other forms of communication) is the breastfeeding awareness initiative, one part of the Healthy Start Partnership that is organized in New York State by extension faculty members in Cornell’s Division of Nutritional Sciences and the College of Human Ecology.

And behind the initiative’s strategies and tactics is much research—conducted at every step of program development and implementation. Once upon a time, after extension specialists had translated university-based research into understandable terms and communicated that information, their job was done.

Not so fast, said Stephen F. Hamilton, professor of human development and Cornell University’s associate provost for outreach. Dissemination of research-based information remains “a necessary element of contemporary outreach, but it is no longer sufficient.”

Writing about “Research-Based Outreach: Albert Bandura’s Model” in the February 2008 issue of *Journal of Extension*, Hamilton calls for six other forms of research: research to help establish priorities among problems and to identify target audiences; etiology (the study of the cause of diseases) and incidence research to yield empirically validated knowledge about the problems, knowledge that can be incorporated into outreach programs; research on how people think and what influences their behavior, to guide the design of outreach efforts; querying of specific audiences, for additional design guidance; research on communication and diffusion, which is used in implementing the program design; and evaluation research to gauge impact and diffusion—changes in attitude and behavior, for instance, and the nature and size of the audience—to aid in refining and improving the outreach program.

Albert Bandura, Stanford University professor and one of the world’s most distinguished psychologists, entered the picture at Cornell when he delivered the 2007 Henry Ricciuti Lecture, which honors the emeritus professor of human development, and when >>>

Bandura consulted with Associate Provost Hamilton, among others. The author of *Social Foundations of Thought and Action*, Bandura gave his Cornell listeners several examples of what Hamilton calls research-based outreach (and Bandura calls “translational research”). One was the determination that radio broadcast “serial dramas” (like North America’s soap operas and Latin America’s telenovelas) can effect behavior change when outreach messages are deliberately incorporated into the scripts. Enrollment in literacy programs in Mexico rose from 100,000 to a million a year when TV characters learned to read, according to Bandura. And radio dramas about HIV-AIDS in Tanzania led to increased condom distribution and reductions in numbers of sexual partners. As a rigorous test of their impact, safe-sex broadcasts were limited initially to one half of the country, Bandura noted. Subsequent broadcasts to the other half of Tanzania yielded the same behavioral changes.

Outreach so thoroughly infused with research is not only better outreach, according to Hamilton, but it also generates new knowledge. “Findings about attitude change from large-scale experimental interventions often have greater ‘ecological validity’ than those from engineered laboratory experiments,” he said, crediting Human Ecology’s late professor of human development and psychology Uri Bronfenbrenner (1917–2005) with that insight.

Large-scale interventions to change attitudes and behavior are what planners have in mind for the Breastfeeding Awareness Initiative. Well before the 2007 passage of New York State’s Nursing Mothers in the Workplace Act, nutrition researchers at Cornell (and other institutions) had shown how breastfeeding promotes healthy weights among mothers and their children.

Testing a coordinated social marketing approach, the Healthy Start Partnership tried several ways to get out the message, that “Babies Are Born to Be Breastfed.” Besides renting billboards, Cornell Cooperative Extension educators and specialists worked with partners in upstate New York counties to distribute posters in community sites such as grocery and drug stores, mailings to area businesses to promote breastfeeding through “Babies to Work” human resources policies, and public service announcements for radio and television. The partnership also sent breastfeeding education and promotion information packets to schools and school nurses and to obstetric, pediatric, and family practice providers. Public presentations were organized to encourage acceptance of breastfeeding in the communities, according to Nutritional Sciences professor Christine M. Olson, one project leader.

At the same time the Healthy Start Partnership was pilot testing nutrition education materials in clinical settings for WIC (women, infants, and children) programs in three New York counties (Madison, Herkimer, and Otsego). Newsletters, checklists, and other kinds of information would, the Healthy Start Partners hoped, give low-income pregnant women the tools they need to gain an appropriate amount of weight in pregnancy and to eat well and be physically active in pregnancy and beyond.

Of course they didn’t call it “ecological validity” research at the county level, but that was the intent. Before brochures and other educational materials were distributed, interviews were conducted in Chenango County to collect information on residents’ current behaviors and beliefs regarding physical activity. One result of that research was development of a directory and map of all physical activity opportunities in that county. Follow-up surveys were planned to measure the influence of the interventions: Did residents learn about new opportunities to be active? And did they take advantage of the new knowledge—and actually increase their physical activity?

“Linking research so closely with outreach enables scholars not only to apply what they have discovered but also to test those discoveries, advancing knowledge in the process.”

Stephen Hamilton, Associate Provost for Outreach,
Cornell University

Rather than dictate a one-size-fits-all program from Ithaca, Cornell’s Healthy Start Partnership members worked with educators and communicators in the field to learn what works best and where. In Madison County, for example, one effective means turned out to be lunchtime visits to the offices of obstetric, family practice, and pediatric providers. Instead of listening to drug company

representatives pushing pills, health care providers learned about current research on the benefits of breastfeeding.

Then, while ecological validity research was conducted to determine the effectiveness of the social marketing campaigns, something else happened: Bills were debated in the New York State Legislature that would add New York to 13 other states that support nursing in the workplace. New York’s rules, which took effect in August 2007, require employers to make a “reasonable effort” to provide private space where women can express milk or nurse their children, for up to three years following the birth of the child. Furthermore, employers are forbidden to discriminate against employees who exercise that right. That’s when the Healthy Start Partnership research became more than purely academic. Results of the field evaluations helped planners to refocus the breastfeeding awareness initiative, selecting the media and the messages that most audiences can use.

One of the most effective, all-purpose media turned out to be the billboards. Now, anyone passing by—be they new parents, health care providers, employers, or co-workers who wonder why nursing women get “special privileges” in the workplace—will know: Babies are born to be breastfed.

With more than 30 years’ extension work to his credit, Hamilton knows better than most that the research-based outreach model he proffers has been tested and proven at Cornell. Numerous other programs and some of his own have demonstrated, in Hamilton’s words: “Linking research so closely with outreach enables scholars not only to apply what they have discovered but also to test those discoveries, advancing knowledge in the process.”

Rather, the inspiring, energizing visit to Cornell by Albert Bandura, who is 82 years of age, moved Hamilton to recommend research-based outreach to all who do extension work, at Cornell and at other institutions. The Bandura Model is not for loners and one-man bands, Hamilton said: “No single scholar can hope to approximate this ideal. Even large-scale team projects will usually fall short in some aspects. But the rich mutual reinforcement of research and practice that he (Bandura) described should inspire all of us to link research more tightly with outreach, and to do so at multiple points.” ● ● ●

Bringing Research to the Real World

Real Hands-on Outreach

One of the longest-running and most productive research-extension programs in Human Ecology's Department of Fiber Science & Apparel Design involved both science and design. The Personal Protective Equipment (PPE) program has preserved the health of countless pesticide applicators and others who must work with toxic substances. Led by Professors S. Kay Obendorf and Susan Ashdown, teams of extension specialists and Human Ecology graduate students conducted field studies and wear tests to make sure that Cornell's PPE garments were useful and comfortable protection for the workers themselves. Feedback from the field tests led to refinements in technology for coveralls and other garments, but the Cornell researchers were hearing another kind of gripe: The heavy rubber gloves required for pesticide application were hard to don and doff. CRGs (chemical-resistant gloves) made workers' hands sweaty, leading to dermatitis and painful breaks in the skin where toxins would enter the body. Why,



the pesticide applicators wondered, can't we wear absorbent, cotton glove liners under the CRGs? Prohibitive regulations—by the U.S. Environmental Protection Agency—kept chapped hands in CRGs for seven years while extension specialists at Cornell and Iowa State tried their best. They examined the comfort and utility of glove liners with dozens of interviews and questionnaires. Back in the laboratory, used glove liners were tested for contaminants at four vulnerable spots (thumb, forefinger, palm, and cuff) with HPLC (high-performance liquid chromatography) and gas chromatography analyses. At last, the EPA relented and agreed to allow the use of disposable cotton glove liners. Never a pleasant task, pesticide application is now at least a little easier on the hands.



The Very Youngest Scientists

Professor of Human Development Wendy M. Williams had a widely acclaimed—and thoroughly research-based—curriculum in the National Science Foundation-sponsored "Thinking Like a Scientist" series. High school students discovered for themselves the challenge of forming hypotheses, collecting and analyzing data, and reaching conclusions in age-relevant modules with titles like "Self-Esteem: Does It Come from Success, Or Is It the Other Way Around?"

And as co-director of the Cornell Institute for Research in Children, Williams included plenty of research throughout the implementation and evaluation phases of the high school curriculum—a feat attested to by Albert Bandura when he examined "Thinking Like a Scientist" last year. Williams was picking up her daughter from class at Ithaca's Cayuga Heights Elementary School one day when she discovered a stellar teacher. Laurie Rubin not only had second graders doing real science with scant resources—predicting and taking measurements (temperature, velocity, depth, etc.) from a nearby creek throughout the seasons, for instance—but the kids were eager for more. Now the Cornell professor and the veteran elementary school teacher are collaborating to adapt "Thinking Like a Scientist" for the 8- to 11-year-old set. Teaching science to elementary schoolchildren has been a career-long experiment for Rubin, who repeatedly tried different approaches, evaluated results, and adapted to changing times. Not unexpectedly, there's more research to come for the advocates of "Thinking Like a Scientist."

The Oldest Parents

The bottom line for Rachel F. Dunifon, associate professor of policy analysis and management, is the well-being of children—wherever they're raised. So she looks into the full range of family living arrangements: single-parent households, unmarried cohabitation, the traditional "Leave It to Beaver" families, and everything in between. When she noticed more and more people raising kids



getting awfully grey around the temples, Dunifon decided to focus on grandparents who—for a variety of reasons—must care for their children's children. Lacking first-hand experience in that role herself, but with a William T. Grant Foundation award to study "The Role of Grandparents in the Lives of Adolescent Grandchildren," Dunifon and her colleagues interviewed hundreds of so-called relative caregivers. They asked: Why is this child living with you? (In 53.7 percent of cases, the child's mother had a drug problem.) And, what kind of community resources or services are needed to help raise this child? (Two-thirds of the grandparents and other relative caregivers identified multiple services they needed.) Thanks to research-based outreach, help is on the way.

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Across the College of Human Ecology, students in different departments are coming up with innovative designs for senior living.

LEAP Curriculum Leads to Improved Living Conditions for Older Adults

BY SHERI HALL

The entranceway of the McGraw House senior apartments in downtown Ithaca used to be dark and drab-looking. A single-file row of benches made it difficult for residents sitting outside to chat with each other. And no one paid much attention to a small grassy area nearby.

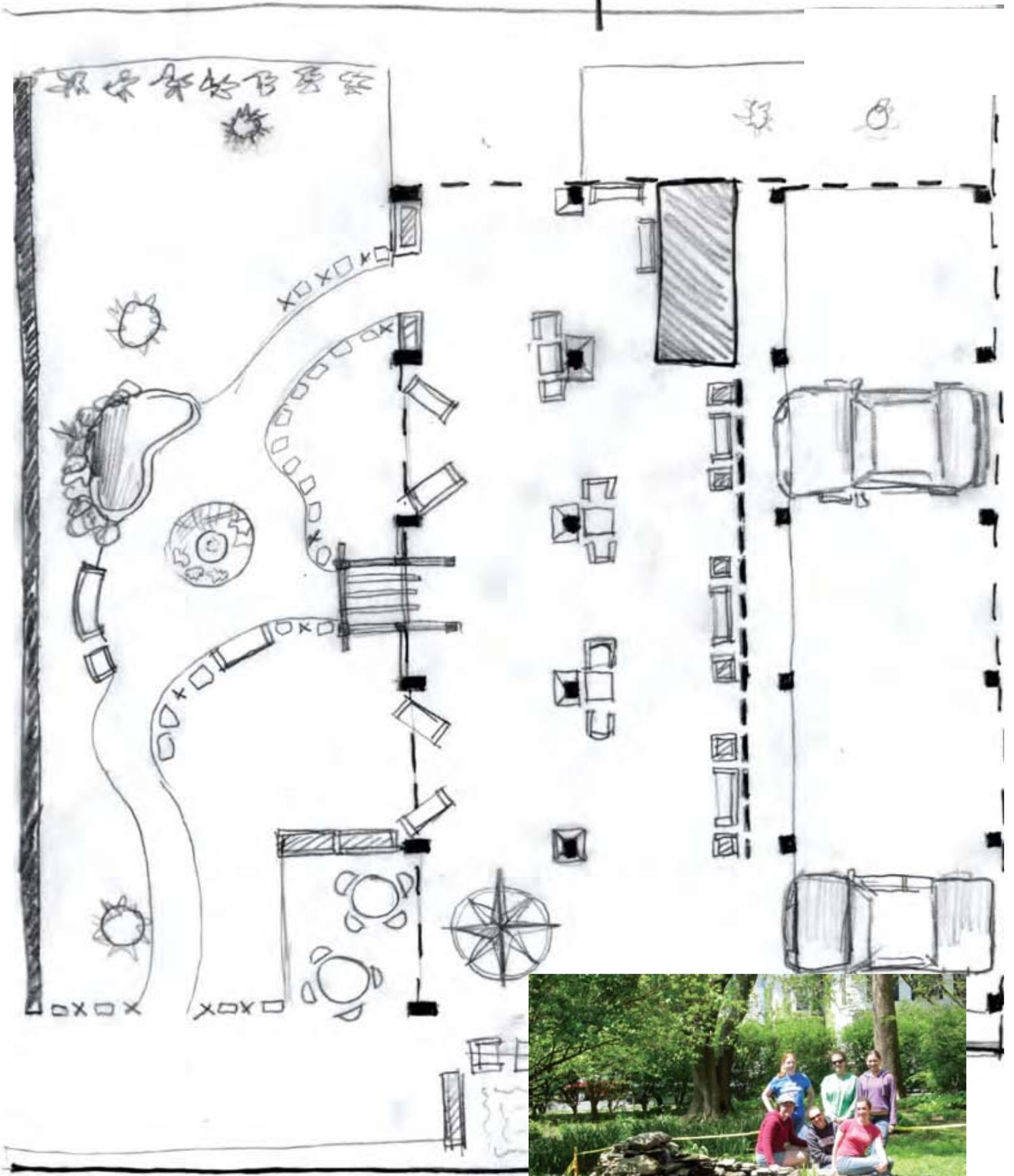
Enter DEA 472 Environments for Elders. Associate professor Nancy Wells and her students—on a mission to improve an environment used by older adults—worked with residents and the management to completely redesign the space.

Now if you pull up outside of McGraw House on a balmy day, you'll find residents chatting in new outdoor sitting areas furnished with wooden glider chairs, or strolling by the new goldfish pond next to the entrance.

"It's a new lease on life for our residents and the building," said Carol Mallison, executive director of McGraw House. "We even have people sitting out there who never come out. All of a sudden, this whole new social interaction just happens."

That project was part of the Living Environments Aging Partnership, or LEAP—a three-year effort to bring together Human Ecology students and local retirees to improve environments for older adults. It is funded by the Foundation for Long Term Care based in Albany, N.Y., and the Corporation for National and Community Services. They're funding similar projects at four other New York colleges to encourage multigenerational learning experiences and improve the day-to-day living for older adults. >>>

A sketch of a design proposed for the McGraw House by students in Professor Nancy Wells' Environments for Elders course. Students in the class built a goldfish pond and designed seating areas for the senior citizen community in downtown Ithaca.





Students from DEA 472 *Environments for Elders* refurbish the formerly drab sitting area at Ithaca's McGraw House.

In 2006, there were 37.3 million Americans age 65 years or older. They represented more than 12 percent of the U.S. population. And by 2030, their ranks are expected to nearly double to 71 million. Yet despite the growing number of older adults, modern construction, design, and product development often does not take into account the needs of senior citizens.

Improving an environment could mean anything from developing innovative clothing and furniture to designing a large physical space, such as the entranceway to McGraw House.

To date, there have been six Human Ecology classes with LEAP curriculums—everything from Furniture as a Social Art to Textiles, Apparel, and Innovation. They each follow a similar model that begins with listening to problems that older adults face, and then designing solutions for them. Local older adults are recruited to consult with the classes.

“We make an effort to involve older adults with a range of abilities. There are very active seniors who participate, and also some people who live in nursing homes,” said Wells, who is the LEAP director and associate professor of Design and Environmental Analysis. “Sometimes we’re working with a real environment and making real products. Other times we’re working on more conceptual projects.”

Innovative Designs

Now halfway through its three-year grant, LEAP has chalked up several successes.

The Textiles, Apparel, and Innovation class—led by Juan Hinestroza, assistant professor of fiber science & apparel design (FSAD)—ended up with two that are so innovative that the students are applying for patents.

One is a walker that also serves as a chair, cane, and handbag and includes an emergency call button and GPS tracking device in case the elder becomes lost. The other is an oversized electronic, interactive pillbox that reminds users of the time and dosage of their medicines. The device also incorporates memory foam for arthritic hands, fiber optics to offer visual

alarms, and multiple sensors to detect touch for turning alarms off.

There have been dozens of other innovative designs as well: a garment that is wired to contact a doctor in case of a medical emergency, a coffee table with a music box table in the top of it, and a woven armchair designed around the ergonomics of an older adult.

Two classes—Environment and Social Behavior taught by Professor Gary Evans and Design Studio V taught by Professor Paul Eshelman—teamed up to redesign the dining room and cafeteria at Kendal of Ithaca, a local retirement community, to improve the traffic flow and make the space feel less institutional.

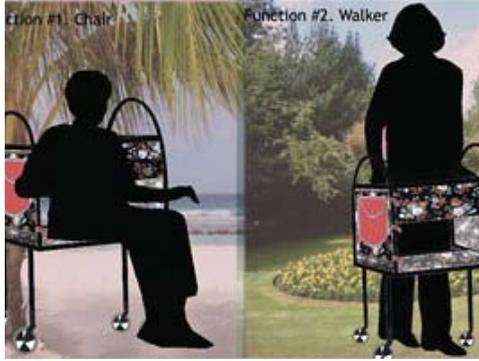
Their proposals included adding a cart designed to look like a street-market vending cart to house silverware, napkins, and condiments; installing modular seating specially designed so elderly residents can sit down and get up with minimal effort; and adding noise-reducing screens to make the dining spaces feel more intimate. Kendal is implementing the designs this spring.

Louise Watt, an older collaborator on the walker project, got a lot out of her experience in LEAP. She moved into a skilled nursing facility less than two years ago when she had operations on both her legs. After intense physical therapy, she can now walk with a walker and was glad to help students design a better one.

“I tried to give them my expertise,” she said. “I’m very interested in this. It’s given me some new thoughts up here,” she said, pointing to her head. The class also has inspired her, she said, to resume her lifelong hobby of painting, which she had abandoned since her surgeries.

In addition to helping older adults, the classes provide tangible benefits for students.

“It’s an extremely rich learning environment,” said Eshelman, professor of design and environmental analysis who teaches Furniture as a Social Art. “It’s a good mechanism for tapping into intrinsic motivation. The students look forward



Schematic of high-tech walker (left); McGraw House resident Nancy Hall-Thompson discusses details with Mayra Alatorre '09, left, Laurel Detweiler '09, right, and Korean visiting scholar Kyung Ja Paek, as part of FSAD 466; a student from Professor Nancy Wells' DEA 472 Environments for Elders class explains a project idea to citizens of the McGraw House, a senior citizen community in downtown Ithaca.

to talking to the community participants about their ideas, and therefore they put a lot of energy into their work. And it certainly leads to details the students wouldn't come up with on their own."

Mayra Alatorre '09, a FSAD major with a concentration in product development, said her LEAP course was one of the best she's taken at Cornell—not only because it required a wide range of skills but because of the connections to seniors.

"The hands-on experience we had in working with the seniors was wonderful," she said. "I believe they have a great need for innovative products. Collaborating with them was very gratifying."

Next Steps

With three semesters of success under her belt, LEAP director Wells is now looking for ways to expand the program.

"Can we connect with other departments or stretch toward more consistently patenting products?" she said. "Ultimately, we'd like to get a more long-term grant so this program can be part of the institution."

Part of that stretch involves collaborating with other schools. There are talks with the Weill Cornell Medical College and biomedical engineering departments to collaborate on tools to assist seniors with walking.

Wells is also working to broaden the scope of designs so they work for all ages. "If we design products well, they work for everyone," Wells said. "The levered door knob is a great example. It is designed well for people with hand and wrist problems, but it's also easier to use for everyone—whether it's a small child or someone carrying groceries.

"It's not really just elder design," she adds. "It's about universal design, which makes environments better for everyone." ● ● ●

LEAP Courses

FSAD 466 Textiles, Apparel, and Innovation

DEA 472 Environments for Elders

DEA 430 Furniture as a Social Art

DEA 250/660 Environment and Social Behavior

DEA 301 Design Studio V

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A new program seeks to reduce obesity among children and to provide education about healthy lifestyles.

Choose

BY METTA WINTER

For 12 days this past summer, 360 4-H club members strapped on pedometers and logged 5,923 miles tromping around the New York State Fair in Syracuse, N.Y.

It was, after all, a matter of pride.

“The kids went all out to see who could walk the most steps for their county,” said Barbara Schirmer, New York State program leader for 4-H Youth Development, one of the master minds behind the Choose Health walking challenge. “At the end of every day the county totals were posted in the 4-H building for all to see.”

Capitalizing on the naturally competitive nature of young people as a way to get them moving is one of the strategies employed in Choose Health, a Cornell Cooperative Extension 4-H program aimed at reducing childhood obesity and educating children about healthy lifestyles.

Josh Skorton and his dad, David, the president of Cornell University, took the challenge, too.

“The time to make changes is early in life, and this is a great motivational tool,” Skorton, a cardiologist who works with children, told reporters at the fair. “So many things in our lives conspire against us being healthy. People can make the fair a healthy experience by walking around a lot and choosing wisely what they eat. It’s an uphill battle we all have to fight, and the 4-H program is making it easier.”

It took a Genesee County 4-H member with a passion for global positioning systems (GPS) to figure out how to help people eat smarter at a fair notorious for its calorie-laden temptations. Emma Long, a high school junior, and her crew visited all the concessionaires and created an interactive map with pulldown menus that listed the locations of nutritious options from fruit smoothies and tossed salads to roasted corn and Maryland-style crab cakes. The map was up and running on banks of computers inside the 4-H building for fairgoers to consult.

In the United States today the rates of obesity for children from preschool age to their teens has nearly tripled since the late 1970s. Scientists estimate that if >>>



I pledge my head to clearer thinking

my heart to greater loyalty

my hands to larger service

and my health to better living for my club, my community, my country, and my world

—4-H pledge

Health!

current trends are not reversed, one in three children born in the United States in the year 2000 will become diabetic. Although a focus of 4-H activities for more than 100 years, health, the fourth “H” in the pledge, has become more important than ever.

“Although we’ve done many things over the years in Cornell Cooperative Extension programming with young people, the incidence of childhood obesity has continued to rise,” Schirmer said. “We’re working hard to retool, to develop strategies that reach more people and will be more effective.”

Research presented at the Ecology of Obesity Conference convened by the College of Human Ecology in June 2005 shows that taking a proactive approach, emphasizing physical activity, healthy eating, and changes in the home, school, and community environments has the best chance for success, explains Josephine Swanson, assistant dean in the college and associate director of Cornell Cooperative Extension (CCE). The approach to Choose Health—the name was coined by 4-H members and adopted by CCE’s statewide healthy lifestyles initiative—is based on the idea of making health the default, Swanson said. She cites research findings presented in a recent issue of the *Journal of Law, Medicine, and Ethics*, in particular the article “Actions Necessary to Prevent Childhood Obesity: Creating a Climate of Change.”

“The idea is that rather than chiding people by saying ‘Lose weight!’ or ‘Don’t be so sedentary!’ we need to create a climate in which choosing healthy behaviors becomes the norm,” Swanson said. “And we need to make changes not only in the home and in schools but also in communities as well so that it’s easier to choose health.”

Helene Dillard, director of Cornell Cooperative Extension, has authorized funding to support a CCE nutrition leader in each extension office across the state to take the Division of Nutritional Sciences online course Preventing Childhood Obesity: An Ecological Approach. In the course, nutrition leaders learn how to identify, prioritize, and address the underlying factors contributing to childhood obesity in their community.

“The information in this course will better equip our nutritionists to work in communities at a preventive level

using an approach that makes healthy choices easier,” Swanson said.

The course, which is taught by Christina Stark, an

extension associate in the Division of Nutritional Sciences, has been shown to help professionals take this new approach. For example, 90 percent of participants who

“The idea is that rather than chiding people by saying ‘Lose weight!’ or ‘Don’t be so sedentary!’ we need to create a climate in which choosing healthy behaviors becomes the norm.”

Josephine Swanson, Associate Director, Cornell Cooperative Extension

completed a post-course survey felt fairly or extremely confident in their ability to develop an action plan to address childhood obesity in their communities, compared with 29 percent before taking the course. In addition, 92 percent of participants reported confidence in their ability to develop effective community collaborations that support healthy eating and active living, compared with 25 percent before. Follow-up survey results show that six months later, 78 percent had applied what they learned in the course, and 70 percent had implemented at least some of their action plans.

In August 2007, CCE convened a statewide childhood obesity prevention mini-summit that resulted in 14 multi-county action plans. The planning groups are seeking funding from foundations and other competitive sources to support these comprehensive activities, as well as state funding that may become available through partnering with the New York State Department of Health. Meanwhile

CCE maintains its commitment to reducing the incidence of childhood obesity through its ongoing programs across the state and in New York City. In November 2007 Schirmer’s office held a statewide health forum for 4-H adult and teen volunteers to focus on ways to implement Choose Health. Wendy Wolfe, a research associate in the Division of Nutritional Sciences who co-chairs the Healthy Lifestyles Program Work Team, reviewed research-based strategies that 4-H can use for reversing the child obesity trends. In her keynote address she recommended that 4-H members get involved in advocating for low-cost physical





Cornell Cooperative Extension director Helen Dillard (left) and Cornell president David Skorton speak with Jane Amstey, 4-H program leader in Monroe County, N.Y., at the August 2007 New York State Fair.

activity programs available to all, as well as creating more walk-friendly communities, including safe ways to walk or bike to school. Youth can also join with adults to sponsor farmers' markets and community gardens. Patricia Thonney, an extension associate within the division who provides leadership for 4-H Youth Development, and others conducted workshops on the wide range of curriculum and resources available to 4-H leaders. Among the most powerful ideas were the most straightforward.

"Most of all, we want 4-H participants to model good behaviors," Schirmer said, "so at 4-H club meetings we are encouraging that nutritious snacks be served and some type of fun physical activity be included."

As Swanson is quick to point out, it is not enough to encourage healthy choices at home—4-H needs to be involved in schools and in the communities as well. To this end, 4-H is developing a Choose Health Ambassador program by which young people reach out to other young people.

"We believe that teenagers who have been trained in delivering messages about healthy eating and physical activity can have a special impact on younger children," Schirmer said. A case in point is the game where teens have third-graders guess how much sugar is in different beverages by piling sugar cubes next to glasses of soda, fruit punch, and fruit juice. It's pretty eye-opening. Invariably the elementary schoolers underestimate how much sugar each beverage contains.



One can of Coke contains the equivalent of 16 sugar packets.

"This is a graphic way that kids help other kids think about the choices they make," Schirmer explains. Outside the classroom, 4-H club members can be influential with school officials to rid unhealthy choices from vending machines and offering healthy snacks at sporting events.

Meanwhile, plans are fully under way for new Choose Health activities at the state fair. This year fairgoers can take a multicultural look at how crops common to New York State—corn being one—are prepared in healthful ways by other cultures within the United States and abroad.

"On the activity side we plan to have dance groups from different countries teach us some new ways of moving," Schirmer said. "It'll give Choose Health a new flavor." ● ● ●

"The obesity epidemic is the result of a modern-day mismatch between our biology and our environment, which has created a perfect storm," explained James O. Hill, professor of pediatrics and medicine and director of the Center for Human Nutrition at the University of Colorado, in a keynote address at the Ecology of Obesity Conference convened by the college in June 2005. "The focus must be on prevention because prevention is the most efficient way to address obesity." For a full report of research presented at the conference, see *Human Ecology* 33:3.

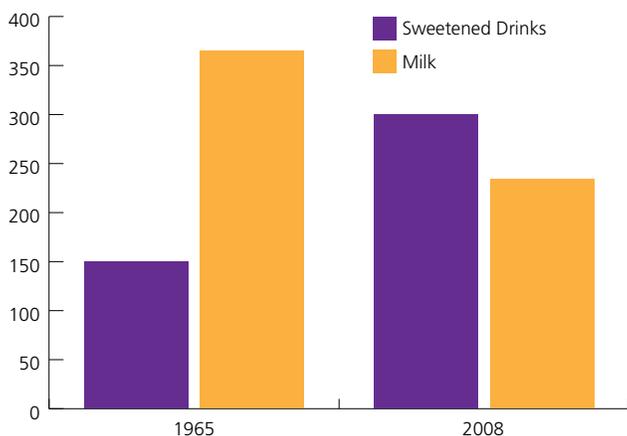
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Teens drink over 200 percent more sweetened drinks than in 1965 and 36 percent less milk.

Choosing Health Is Simple

"Today, to eat healthfully in America, you have to eat abnormally. Unhealthy eating and nonactive lifestyles are the norm," said Wendy Wolfe of the underlying causes of today's obesity epidemic among children. Wolfe, a research associate in the Division of Nutritional Sciences who has provided input to the 4-H Choose Health initiative, points to research-based behaviors that can make a real difference in reversing current trends. These include:

- Replace soda, fruit drinks, lemonade, ice tea, and other sweetened beverages with water and low-fat milk.
"Research shows that drinking fewer sweetened beverages is the most effective dietary strategy to decrease excessive weight gain in children and teens."
- Limit screen time to one to two hours per day.
"On average, teens spend 4.5 hours per day watching television and playing video games. There is strong evidence that reducing screen time is one of the most effective ways to reduce obesity."
- Remove TVs from bedrooms and turn the family set off at mealtimes.
"TVs in bedrooms are associated not only with obesity but also with doing more poorly in school. Research shows that youth eat better when the TV is turned off."
- Include at least one fruit or vegetable at every meal and snack.
"This is the only way to get the recommended daily allowance of 3 ½ to 5 cups of vegetables and fruits a day. Although research linking fruit and vegetable consumption to obesity is indirect, current consumption is well below recommendations, and eating more is linked to prevention of cancer and other chronic diseases."
- Have more family meals, even if it's takeout.
"Research shows that youth tend to eat better when they eat meals with their families."
- Make moving more a part of daily life.
"Today only 13 percent of youth walk or bike to school. While structured exercise is fine, it's more effective to make physical activity a part of everyday life than a special activity."

Obesity Research in the College

"Faculty in the College of Human Ecology are increasing their research activities so as to provide Cornell Cooperative Extension with more knowledge regarding the causes, prevention, and impact of obesity," said Josephine Swanson, assistant dean and associate director of Cornell Cooperative Extension. Among those studies:

John Cawley, an associate professor in the Department of Policy Analysis and Management, studies health economics, particularly the economics of obesity. In a major study Cawley found that "weight lowers wages for white females. An additional 65 pounds is associated with 9 percent lower wages." As the prevalence of obesity is rising in the United States there is also a dramatic increase in the caseload of the Disability Insurance Program, Cawley notes.

Christine Olson, a professor in the Division of Nutritional Sciences, is interested in finding out the factors that contribute to the development of obesity in child-bearing women and their children. In one study she found that excessive pregnancy weight gain in women is related to increased risk of overweight in the children at age three years.

Jamie Dollahite, an associate professor in the Division of Nutritional Science and the New York State leader of Food and Nutrition Education in Communities, is an expert in creating nutrition education for limited-resource audiences that prevents obesity and disease. She and her team have created a new intervention program that promotes healthy food choices and active play among children by working with parents and other adults who influence children and shape the environments where children live, learn, and play. Parent education integrates supportive parenting with nutrition and activity skills.

Jennifer Wilkins, senior extension associate with the Division of Nutritional Sciences, in collaboration with Dollahite, is evaluating the impact of an integrated classroom-cafeteria educational approach to elementary student acceptance of New York State fruits and vegetables and student knowledge about fruit and vegetable intake and healthy weight.

Nancy Wells, an associate professor in the Department of Design and Environmental Analysis, is an environmental psychologist. She is currently evaluating the consequence of participating in a weekly outdoor nature program on the physical activity level of low-income, mostly minority, pre-teen children. In other studies she is examining the effects of neighborhood design features on physical activity and the relation between the availability and affordability of healthy foods and individuals' diets.

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CURxED Program Guides Seniors Through Medicare Maze

An effort to help New York senior citizens wade through the myriad of choices in Medicare's prescription drug benefit has expanded from a pilot project in only five counties to a statewide effort reaching all of New York's 57 counties.

The program—called Cornell University Resource Education on Medicare Part D or CURxED—offers clear, unbiased information to help eligible residents choose which Medicare drug plan is best for them. In New York alone, three million eligible residents have to choose from 57 different plans—all with different drug prices, deductibles, premiums, and pharmacy networks.

The core of the program is a set of thick, white binders filled with lists of prices for nearly every prescription medicine available in the United States. It also offers computer tutorials, public awareness presentations, and a newsletter on Medicare Part D policy updates.

This fall, CURxED will again distribute updated information on Medicare plans to each of New York's 57 counties. The binders go to Health Insurance Information, Counseling and Assistance Program (HIICAP) coordinators—community educators sponsored by the New York State Office for the Aging to help older adults make decision about their health insurance. CURxED works closely with HIICAP to reach senior citizens.

The concept for CURxED came from the research of Kosali Simon, assistant professor in the Department of Policy Analysis and Management. She was setting up a project on Medicare Part D for her undergraduate health economics class when she realized she could

compile the same information to help senior citizens.

“What's clear is these are difficult choices that seniors need help with,” Simon said. “What we wanted to do is make sure we're not replicating resources that are already out there. We've consistently found there is no other resource like this.”

In New York, the program is making a real impact for many seniors. In a recent survey, program manager Robert Harris received positive feedback from the majority of community educators who participate in the program.

“The materials make it easier for seniors to get the Medicare Part D information, said Sarah Jane Blake, the HIICAP coordinator for Tompkins County. “Being able to show the information on paper rather than on a computer screen seems to make the process go smoother and it increases the likelihood that people who need to get into a plan will get a good fit.” ● ● ●

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Human Ecology students work independently to help solve local challenges.

Undergraduate Internships Unite College Initiatives



A new summer internship program recruits undergraduate students to apply the findings of Human Ecology research to communities in New York—ultimately bringing together the college’s education, research, and outreach initiatives.

Last summer, two students participated in the program—a partnership with Cornell Cooperative Extension. Julie Lundgren worked with Kosali Simon, assistant professor of policy analysis and management, on her efforts to explain the Medicare prescription drug benefit to area senior citizens. And Alissa Ritter worked with Christine Olson, professor of nutritional sciences, and Nancy Wells, associate professor of design and environmental analysis, on environmental factors that lead to obesity, particularly in pregnant women.

Unlike many other summer jobs, the program is set up to give students the opportunity to work independently to address a challenge facing central New York communities.

“The program was really a way to give students a chance to dive in and make a difference,” said Josephine Swanson, assistant dean and associate director of Cornell Cooperative Extension. “It’s a fantastic way to use our research to help local communities and educate our students at the same time.”

This summer, the college has plans to expand the program to include six interns in total, including positions to help with obesity in low-income children and to connect disadvantaged youth with nature. >>>

Helping seniors navigate Medicare Part D

Lundgren started her internship with a lofty task—trying to help seniors better understand the prescription drug benefit that's part of the federal Medicare program. The plan, which offers prescription drug coverage to millions of seniors who were previously not covered, involves dozens of New York-specific choices and complex benefits that start and stop at various times through the year.

Lundgren's main responsibilities included connecting with county offices interested in expanding their Medicare Part D education programs, and then creating brochures based to help educate seniors about the benefit.

"She served as our eyes and ears in the community, and really got a sense of what the counties needed," said Robert Harris, a registered pharmacist and project manager for the CURxED Medicare Part D enrollment project. "That allowed us to fill in those gaps."

Lundgren said the experience provided opportunities she's never had before—to work independently on a major social issue and have a chance to make a real difference in the lives of people.

"By raising awareness about Medicare Part D's complexities, we hoped to help seniors get the most out of the benefit and optimize its efficiency in the community," she said. "The idea was that by giving them a sense of the larger picture, they would make more educated choices."

There was one other lesson she learned over the summer—one that will stick with her for a lifetime. "I learned to start saving for retirement as soon as possible," she said.

Highlighting exercise opportunities

Alissa Ritter's charge for the summer was also an ambitious one: finding ways to encourage exercise in Chenango County, a rural community about 50 miles east of Ithaca. Her work was part of an initiative called Environmental Strategies to Reduce Obesity—an effort to examine ways to use local settings to encourage healthy lifestyles.

Working under the direction of Olsen and Wells, Ritter first took an inventory of the physical activity opportunities in Chenango County, then created a brochure with a map that encouraged local residents to take advantage of them.

In addition, she conducted a survey of 300 Chenango County residents to find out if they could name three places to be physically active. She found only two-thirds could name three places, and many participants named activities that would not classify as exercise within their rural communities.

"Their concept of physical activity was fairly skewed," she said. "There really weren't gyms, and a lot of people just didn't know where to go to exercise."

Keith Severson, executive director of Chenango County Cooperative Extension, also worked closely with Ritter to help make contacts in the community.

"We looked at her just as we would a regular employee," he said. "We spent some time introducing her to our network in the area, and then we just let her go. It was much different than our normal internships because she was responsible for a body of work that had a specific important influence."

For Ritter, the chance to build relationships in a community and help them to solve a serious problem was rewarding. "It's the most freedom I've ever had in an internship, and I really felt like I was making a difference." ● ● ●

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Expanding outreach

Human Ecology and Cornell Cooperative Extension will sponsor six interns for the summer of 2008. The internships, followed by the cooperating faculty members, are:

Internship in Breast Cancer and Environmental Risk Factors: Working on an intervention project to prevent weight gain in adult working women. (Carol Devine, associate professor, Nutritional Sciences)

Internship in Urban Forest Adventures: Connecting disadvantaged youth with nature. (Nancy Wells, associate professor, Design and Environmental Analysis)

Internship in Fiber Science and Apparel Design: Helping assess the impact of textiles and apparels—from design to production, distribution, and end-of-life—on the environment. (Charlotte Coffman, senior extension associate, Fiber Science & Apparel Design)

Internship in Nutritional Sciences: Improving the health of low-income children by focusing on parenting, physical activity, and food choice. (Jamie Dollahite, associate professor, Nutritional Sciences, and Katherine Dickinson, research associate, Nutritional Sciences)

Internship in Family Life Development: Designing and evaluating interventions for new parents to promote maternal well-being, effective care-giving, and healthy child development. (John Eckenrode, professor, Human Development, and Charles Izzo, research associate, Family Life Development Center)

Internship in Youth Mentoring: Linking youth with adult mentors in rural communities. (Stephen F. Hamilton, professor, Human Development, and Mary Agnes Hamilton, senior research associate, Human Development)



Biodegradable Composites Make Eco-Friendly Skateboards—and Create Local Jobs

Decks produced by Comet Skateboards look a little different these days. Instead of slick opaque finishes in bright colors, they have a transparent topcoat that shows the wood core below—either sustainably harvested maple, poplar, or bamboo.

What looks slightly different on the surface translates into a completely novel characteristic—the boards are completely biodegradable. When you're done using them, they can be ground up and turned into compost.

The innovation is thanks to the research of Anil Netravali, a professor in Fiber Science & Apparel Design who has developed biodegradable composites made entirely from plant fiber and a resin derived from soy protein. They are much more environmentally friendly than traditional composites, which are typically made of petroleum-based products and can't be reused or broken down at the end of their life-cycle.

In 2006, Netravali cofounded a company with Pat Govang called e2e Materials LLC to sell products based on his research. And that caught the eye of Jason Salfi '93, a cofounder of Comet Skateboards.

In fact, Salfi was so excited about the prospect of making eco-friendly skateboards that he moved Comet's manufacturing operation to Ithaca last fall.

"For us, it's a commitment to the environment," Salfi said. "This product is a great alternative to the glues that most other companies are using. Sharing space with e2e allows us to develop the technology a lot faster together."

That's exciting news in terms of local business development. To start, Comet Skateboards has brought six new jobs to the area. And expanding their product line could mean many more jobs in the future.

In addition, the move is hard evidence that technology developed at Cornell can generate local jobs—a phenomenon that could give Ithaca a boost for years to come.

"It's a wonderful feeling that this is useful research and it's

also creating jobs in central New York where we have lost a lot of manufacturing jobs," Netravali said. "It would be nice to bring manufacturing jobs back to central New York. And manufacturing is real wealth creation."

The business community has signaled it believes e2e Materials can be an economic powerhouse. Last year, the company won the \$100,000 grand prize in the EssentialConnections.org Emerging Business Competition, which recognizes the most growth-oriented emerging business in central New York. The award is sponsored by the Metropolitan Development Association of Syracuse and Central New York, the region's primary business leadership organization.

Next on the horizon, e2e is working on an application to replace particleboard, the base material for much of today's low-cost furniture. Current materials are made with formaldehyde, a toxin that slowly releases into the environment. It's also made in large sheets and then cut to size, leaving a lot of waste.

e2e's material is three times stronger than products currently on the market. It doesn't release toxins into the air and it is formed to the exact size and shape needed, reducing waste and manufacturing costs. Oh, and it's biodegradable as well.

The company is still working on a deal that will launch the new particleboard in the marketplace. In the meantime, the company is working with Comet Skateboards on new products and looking at other applications as well. "In a word, business is good," Netravali said. ● ● ●

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Afterword

An Intuitive Approach to Risky Decision Making in Adolescence

BY VALERIE REYNA

Would you put a substance into your body that kills most people? Would you do something that your brother and two of the most important adults in your life did that resulted in their deaths? The answer is clearly “no” to both of these questions, if you are thinking rationally. But teenagers say “yes” to risks like these every day. Moreover, most of the death, disability, and suffering that occurs in adolescence can be prevented. And many of the leading causes of death in adulthood have their roots in habits begun in adolescence.

The goal of my work is to understand why young people make irrational choices and to develop programs to change their risky behavior. Much of my time is spent gathering resources to support this work, including support for students. I am spurred on by the knowledge that programs developed through scientific research can change the trajectory of young people’s lives.

For example, we have introduced evidence-based programs to reduce premature pregnancy and sexually transmitted disease in Arizona, Texas, and, now, New York. Our work in the Laboratory for Rational Decision Making follows in the footsteps of other successful programs to reduce unhealthy risk-taking: In 1964, the Surgeon General announced that cigarette smoking caused cancer, and smoking has declined greatly. Knowledge made a difference. But as anyone who has been a teenager or a smoker knows, knowledge is not enough.

A recent national survey showed that 54 percent of teenagers have tried smoking and 23 percent smoked cigarettes in the preceding month (Youth Risk Behavior Survey, 2005). Smoking, as these teens probably knew, causes heart disease and cancer, which together account for 62 percent of deaths in adults. Why would over half of young people do something they know is addictive and is a major killer?

Why would Rudy Galindo, a national champion in figure skating, who had everything to live for, risk death by having unprotected sex? It is not that Mr. Galindo was unaware of the consequences. As a survivor of the AIDS-related deaths of his brother and two coaches, he had seen the worst the disease can do. Nevertheless, on March 1, 2000, he tested positive for HIV. Rudy Galindo was quoted as saying, “I’ve made my mistakes,” but how many young people are making those same mistakes right now, knowing the consequences as he did?

In fact, HIV infection rates are rising in adolescents, and most adults contracted the disease as adolescents or young adults. Some risky choices claim lives quickly; 30 percent of deaths in youth aged 10 to 24 occur in motor vehicle accidents. Reckless driving and driving under the influence are common causes of motor vehicle death and debilitating

injury in adolescence.

Other risky choices, such as succumbing to tempting but unhealthy food, kill slowly.

Based on our research and that of others, we have reached a startling, highly counterintuitive conclusion: Young people take risks not because of a belief that they are invulnerable, but because they engage in too much calculation when making choices. Adolescents often overestimate key risks, such as HIV or lung cancer, and take chances despite knowing those risks. They mentally weigh the risks against perceived benefits. The risks are viewed as “worth it,” a dangerous perception. Adults, in contrast, tend to “go with their gut”—they don’t proceed down the slippery slope of trading off serious risks (such as HIV/AIDS or dying in a car accident) against immediate rewards (such as sex or approval of peers), and their choices are better as a result.

This research has informed our outreach programs, which differ from prior programs in that we stress mature “intuitive” thinking in risky situations. Our next goal is to strengthen research-community partnerships to accelerate the translation of research into practice, and, ultimately, establish a Center for Rational Decision Making. The center would develop and disseminate new scientific discoveries to promote healthy behaviors.

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Outreach Info Moves Online

Information compiled by the Human Development Outreach and Extension office is now available online in a new series of videos and brochures. Among the topics covered are: how neighborhood quality impacts child development; how to assess children’s court testimony; and how to help dyslexic children learn to read. Additional topics will be added regularly.

The project is supported by the Smith Lever funds from the Cooperative State Research, Education and Extension Service, U.S. Department of Agriculture.

To see the materials and subscribe to updates, go to www.human.cornell.edu/che/HD/Outreach_extension/Resources/cfm.

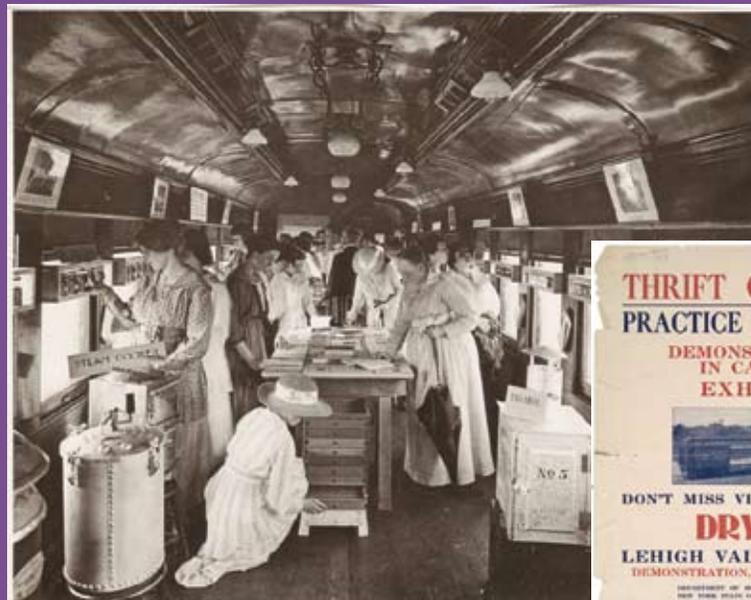
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Human ECOLOGY

NOTE:

This is the first
of two issues of
Human Ecology
Vol. 36, 2008.



One of the first outreach programs in the New York State College of Home Economics (today's College of Human Ecology) was developing traveling exhibits, lectures, and demonstrations in railroad cars that crisscrossed the state in order to reach rural communities. During World War I, the food conservation program was augmented by a fleet of "Victory Trains" such as the one that passed through the Lehigh Valley Station in Dryden, New York.

These gatherings were popular social events, effective in educating the public about important developments in food conservation and preparation, product and housing design, textiles, home management and budgeting, as well as emerging scientific ideas about child development.