

Focus

Volume I

Number I

ON RESEARCH & CREATIVE PROJECTS



MOREHEAD STATE UNIVERSITY 1990-92

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FOCUS, a point to which something converges or from which something diverges, illustrates the ideals at Morehead State University for bringing the best research together and encouraging new efforts in distinctly different areas. The goal of FOCUS is to recognize faculty and professional staff involvement in sponsored research and creative projects and to illustrate diversity in the University's mission of teaching, research and service to the people of Eastern Kentucky. Through the combination of teaching with research, scholarship and creative activities, an environment in which knowledge may be discovered, integrated, and disseminated to educate students is created. FOCUS is intended to illustrate the breadth of research within the University and thus describes only a few of the ongoing projects underway in a variety of areas.

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Is Alcoholism Apparent?

Alcoholism is a disease that effects millions of Americans every year, but what about their children, spouses, and relatives? For many of them alcoholism is a way of life even though they've never taken a drink.

Thanks to a three-year grant from the Alcoholic Beverage Medical Research Foundation at Johns Hopkins University, Dr. Rudy's research has centered not on users of alcohol, but on the "Adult Children of Alcoholics Movement (ACOA Movement)."

The ACOA Movement is a "grass-roots" movement which includes support groups and treatment programs for children of alcoholics, adult children of alcoholics, and their families. The movement is led by many therapists, psychologists and social workers, some of which Dr. Rudy says are genuinely interested in helping people and some whose main goal is selling products (treatment programs).

He said the movement began in the late 70s or early 80s and was heightened by Janet Woititz's book *Adult Children of Alcoholics*, published in 1983. When first published, the book was sold primarily through mail order - book stores were not interested. In 1987, sales of the book soared and *Adult Children of Alcoholics* hit *The New York Times* bestseller list and remained there for nearly a year. It is important to realize the book was never promoted or marketed illustrating the "grassroots" factor.

According to Dr. Rudy, social movements tend to develop when people feel tensions, needs, or frustrations and share them with others. From this perspective the ACOA Movement developed because millions of people came to understand and define their lived experiences as children of alcoholics as pivotal in explaining current issues and troubles in their lives, he wrote in a 1991 research article. The identification and sharing of this need along with the social organization that pursued resolutions to the need, are the essential features of social movements in their formative stages.

The main purpose behind Dr. Rudy's work is to chronicle the movement's development and growth and to interpret it within the context of American society. "I really got interested in this topic about four or five years ago at a conference held in San Diego, sponsored by the National Institute on Alcohol Abuse and Alcoholism and the University of North California at San Diego," Dr. Rudy said. "During one of our informal discussions, the subject of ACOA's was brought up and it was obvious that nobody was doing any broad based research explaining ACOA's as a social movement." Stem-

ming from this interest, he produced a chapter for a book entitled *Society, Culture, and Drinking Patterns Reexamined*, published by the Rutgers Center of Alcohol Studies in 1991.

What Dr. Rudy has found in his research is that there are some major factors in contemporary America that have made the time ripe for this movement to flourish. "From the 1960s forward, there has been a push in social work and psychology to look at and study micro systems, and, in this case, that system was the family," Dr. Rudy stated. "Not only were the consequences of alcoholism examined on the alcoholic and co-alcoholic or spouse, but on other family members as well."

A second factor identified in the research is that the United States is going through a new "temperance" movement, typified by a decline in alcoholic beverage consumption and an increase in health consciousness. This environment also produced an emphasis toward "problem maximization," that is, "more and more behaviors and problems are being attributed to drinking."

"Another factor that influenced the development of the movement is that the majority, or about 70 percent, of the peo-

ple in counseling positions were themselves either recovering, or recovered substance abusers," said Dr. Rudy. From their experiences, they wanted to see more attention and services directed toward spouses and children of alcoholism.

A fourth reason is that changes in the funding and the ideology of treatment have transformed alcoholism treatment into a very competitive business, a problem that hosts a number of concerns.

"Due to increasing health consciousness and shorter hospital stays, hospitals are experiencing higher vacancy rates. This situation has prompted hospitals and other health-care facilities to develop treatment programs for substance abusers, co-dependents, and other family members. Some facilities advertise aggressively, make incredible promises and manipulate potential patients and their families with guilt. Needless to say, sometimes treatment motives conflict with profit motives."

To halt these problems, Dr. Rudy suggests being just as careful about claims in advertisements as alcoholic advertisements are in mentioning the dangers of drinking. "We need to be more critical in evaluating advertising claims that are doing good as well as



those causing harm," he says. "The assumption that all treatment is good is wrong. All treatment isn't good but unfortunately people can not distinguish between many of the treatment programs."

Some programs are free standing while others are attached to hospitals or alcoholism treatment centers. Individual therapy, group therapy, role playing, dramatic presentations, workshops, recreational camps and inpatient hospitalization are possibilities for treatment depending upon the locale and payment scheme. According to Dr. Rudy, literature doesn't indicate a difference in the success rates among programs. There is not much variation in the success rates of programs compared with the success rates of those who overcome their addiction with no treatment whatsoever. "Most people get by without treatment," he said, "but some advertisements pushing treatment programs have created a strong misconception that everyone needs treatment." There is also a wide discrepancy with costs. Some programs are cost free and brief while others advertise two or three years of weekly sessions with significant fees.

"Advertisements such as 'If you don't get help at Charter Ridge, get help somewhere' lead people to believe that there is no hope unless they get help. People can get help from their family, a minister or from within themselves." Another focus of Dr. Rudy's work is examining the claims and the claimsmakers in the ACOA and co-dependency arenas. "We know alcoholism and substance abuse can cause serious problems for the family, but researchers also know that family members, especially children, are



far more resilient than some claimsmakers would have us believe."

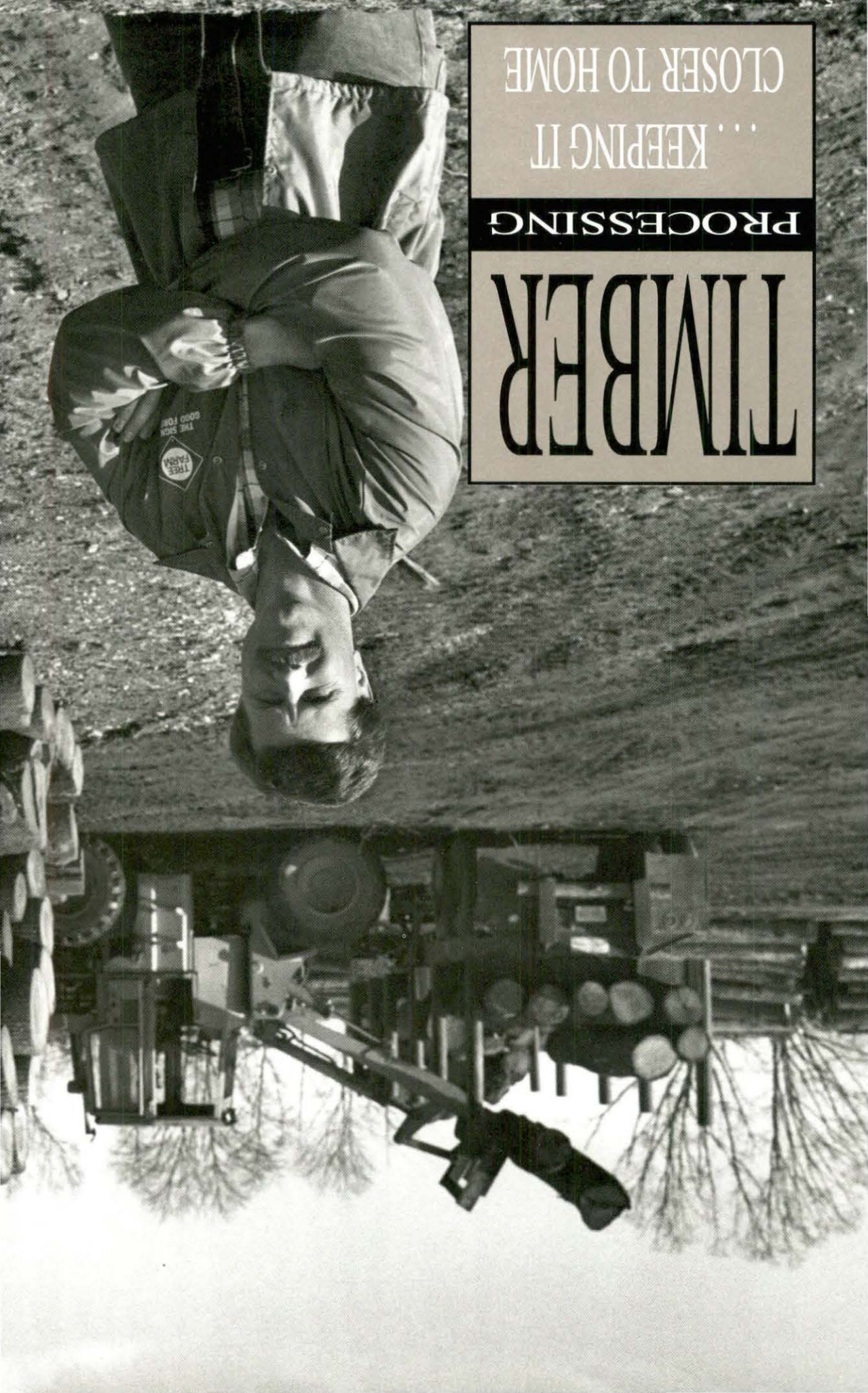
He says he will always stay interested in the alcoholic movement and that he will be involved in the ACOA Movement for at least another four or five years, if not the rest of his career. According to Dr. Rudy, there is a wealth of information to be reported in this area and eventually he may publish a book based on his research findings.

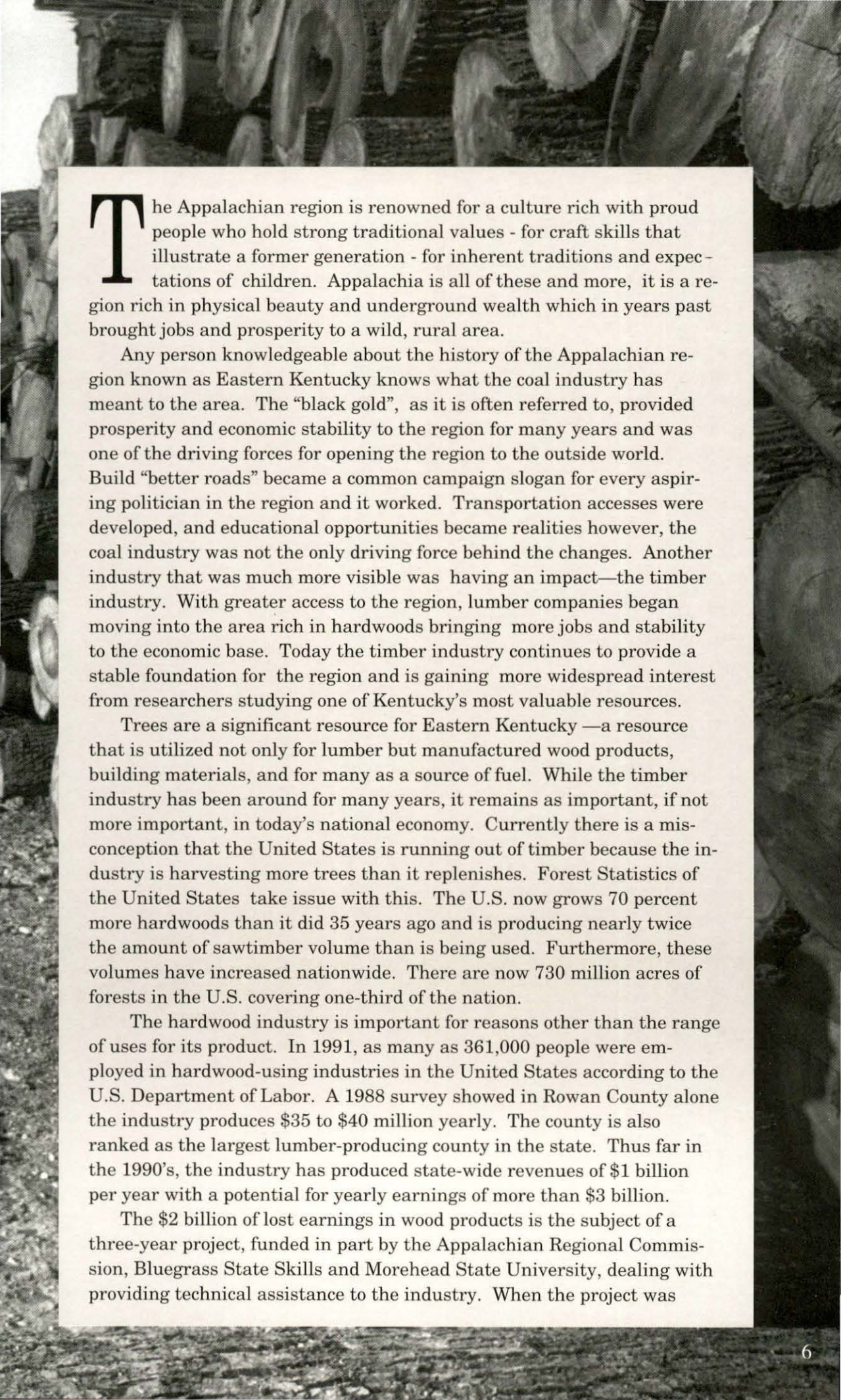
While there is widespread recognition that alcoholism is a disease, there are varied opinions on the treatment of it for both the alcoholic and those affected by the alcoholic. In contrasting beliefs and claims with research data, Dr. Rudy ultimately hopes to demonstrate that our society's beliefs about alcoholism and about alcoholism treatment sometimes contribute to increasing and stabilizing the very problems that we hope to diminish.

5
CLOSER TO HOME
... KEEPING IT

PROCESSING

TIMBER





The Appalachian region is renowned for a culture rich with proud people who hold strong traditional values - for craft skills that illustrate a former generation - for inherent traditions and expectations of children. Appalachia is all of these and more, it is a region rich in physical beauty and underground wealth which in years past brought jobs and prosperity to a wild, rural area.

Any person knowledgeable about the history of the Appalachian region known as Eastern Kentucky knows what the coal industry has meant to the area. The "black gold", as it is often referred to, provided prosperity and economic stability to the region for many years and was one of the driving forces for opening the region to the outside world. Build "better roads" became a common campaign slogan for every aspiring politician in the region and it worked. Transportation accesses were developed, and educational opportunities became realities however, the coal industry was not the only driving force behind the changes. Another industry that was much more visible was having an impact—the timber industry. With greater access to the region, lumber companies began moving into the area rich in hardwoods bringing more jobs and stability to the economic base. Today the timber industry continues to provide a stable foundation for the region and is gaining more widespread interest from researchers studying one of Kentucky's most valuable resources.

Trees are a significant resource for Eastern Kentucky—a resource that is utilized not only for lumber but manufactured wood products, building materials, and for many as a source of fuel. While the timber industry has been around for many years, it remains as important, if not more important, in today's national economy. Currently there is a misconception that the United States is running out of timber because the industry is harvesting more trees than it replenishes. Forest Statistics of the United States take issue with this. The U.S. now grows 70 percent more hardwoods than it did 35 years ago and is producing nearly twice the amount of sawtimber volume than is being used. Furthermore, these volumes have increased nationwide. There are now 730 million acres of forests in the U.S. covering one-third of the nation.

The hardwood industry is important for reasons other than the range of uses for its product. In 1991, as many as 361,000 people were employed in hardwood-using industries in the United States according to the U.S. Department of Labor. A 1988 survey showed in Rowan County alone the industry produces \$35 to \$40 million yearly. The county is also ranked as the largest lumber-producing county in the state. Thus far in the 1990's, the industry has produced state-wide revenues of \$1 billion per year with a potential for yearly earnings of more than \$3 billion.

The \$2 billion of lost earnings in wood products is the subject of a three-year project, funded in part by the Appalachian Regional Commission, Bluegrass State Skills and Morehead State University, dealing with providing technical assistance to the industry. When the project was



implemented in October 1988, funding was used to create the position of wood technologist in the University's College of Applied Science and Technology and forester Bob Bauer was hired to implement the program.

Bauer's primary goal is to help develop the industry that is already established. Accordingly he says improvement and increased investment in the hardwood industry will help the economy of Eastern Kentucky. The advantage would be an added value to lumber and other products, an increase in the number of jobs, as well as "increased skill levels and a better trained work force."

Bauer, a forester for more than 10 years, said he believes more investors will be interested in Eastern Kentucky resources in the future. Trend thinking expounds on three primary areas for the

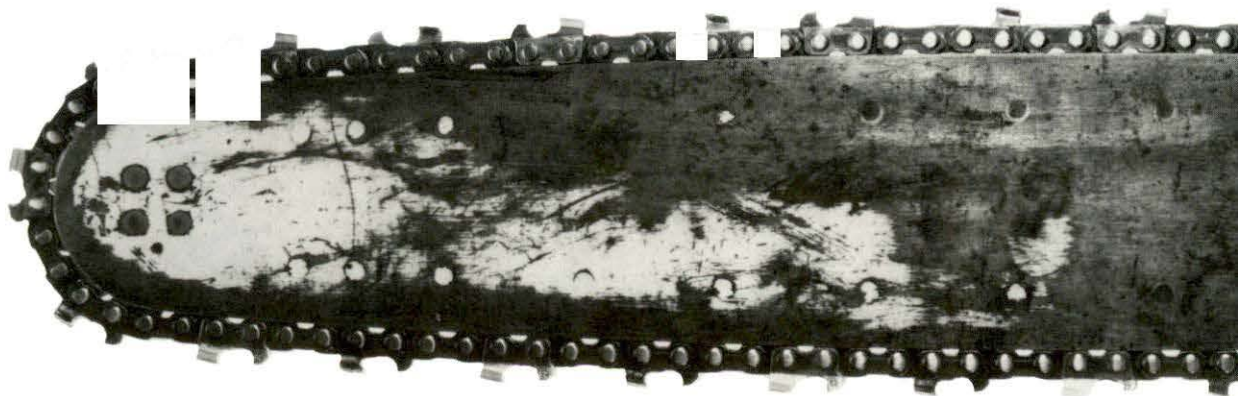
industry to expand—bringing in
secondary manufacturers, creating
more jobs
and revenue
in
the

present industry, and simply improving products already on the market. While many proponents encourage bringing in new industry, many economic factors would come into play that would not be significant to someone already established. Because of these factors, expansion areas are concentrating on the lumber resources leaving the state and how those can be utilized more effectively to maintain revenues in Kentucky.

"The hardwood industry in Kentucky produces high quality lumber, but almost 70 percent of the highest lumber grades are shipped out-of-state for processing into value-added products," Bauer stated. "What we would like, and need to see is a higher percentage of the processing occurring in Kentucky."

To this end, he has worked with mills and businesses throughout Eastern Kentucky suggesting ways to improve the products they are presently producing. One major trend already occurring in the regional mills is the addition of the "kiln drying process". Although an added process above shipping rough-cut timber out of the region, kiln drying makes the product more valuable to the processors it is shipped to. Beyond that, it creates opportunities for the mills to use the dried lumber for secondary uses within the region and that in turn adds value to the products, and jobs to the local economies, Bauer said.

Another vehicle to increase profits and productivity in the region would involve establishing further additional processes which can be done at the mills. In the past, the majority of the lumber has been shipped out as rough-cut lumber with the processing plants preparing the lumber for secondary markets. According to Bauer, the idea is to establish operations, such as a moulding operation, that can create products, e.g. trim and baseboards, at the local mills in Eastern Kentucky and market the product to contractors and



others with special needs . Presently the operations making the most profit are the out-of-state processors who utilize the resources of Eastern Kentucky. Additionally, some mills now have the capabilities of drying and are investigating the potential to produce dimensional parts for the furniture and cabinet industry. Even though the products are made out of state, more and more companies are buying the lumber sized-to-order, thus increasing the value of the product produced in Kentucky. "Of course, some of the companies that have expanded are not marketing their products on a major scale at this time due to the size of their operation," Bauer said. "But, they have the capability of making special order products and will eventually move into larger markets as they learn the details of secondary processing.

If the task of improving Kentucky's



hardwood industry is to move forward, the problem of waste by-products must be addressed. Currently, saw mills must deal with three major problems; wood chips, tree bark, and sawdust. The reality is that the procedure and ability for disposing of these three items can prevent mills from maintaining a full-production schedule.

Initially, the problem of wood chips can be solved by selling this by-product to paper mills operating in adjacent areas. Generally companies can more than break even using this method, providing the cost-per-ton and shipping expenses remain constant. The two remaining problem areas, tree bark and sawdust, must also be dealt with in order for the companies to remain in full production and be profitable. Although important, this is not a major issue because bark can be shipped out with the effect of no losses. One local saw mill has added a separate plant to process the bark into mulch. This procedure has been so successful that the mill has bought additional supplies from other mills to meet the demands.

"In addition to grinding the bark, the mills age and enrich it to meet the needs of a variety of landscaping firms in the Cincinnati area," Bauer said. "The mulch is sold in bulk and the company has turned what was a liability into an asset."

Sawdust, unlike other wastes that go to industrial users, has proven to be the major enemy of the mill operator. To that end, a tremendous amount of research has gone into possible alterna



tive uses. Currently, by an area power company to examine the feasibility of burning a mix of sawdust and coal in their boilers. If successful, even with the 10% mixture of sawdust to coal, almost 70,000 tons would be disposed of annually. Other alternatives are being researched, but to date no alternatives have been developed to utilize large quantities of the material.

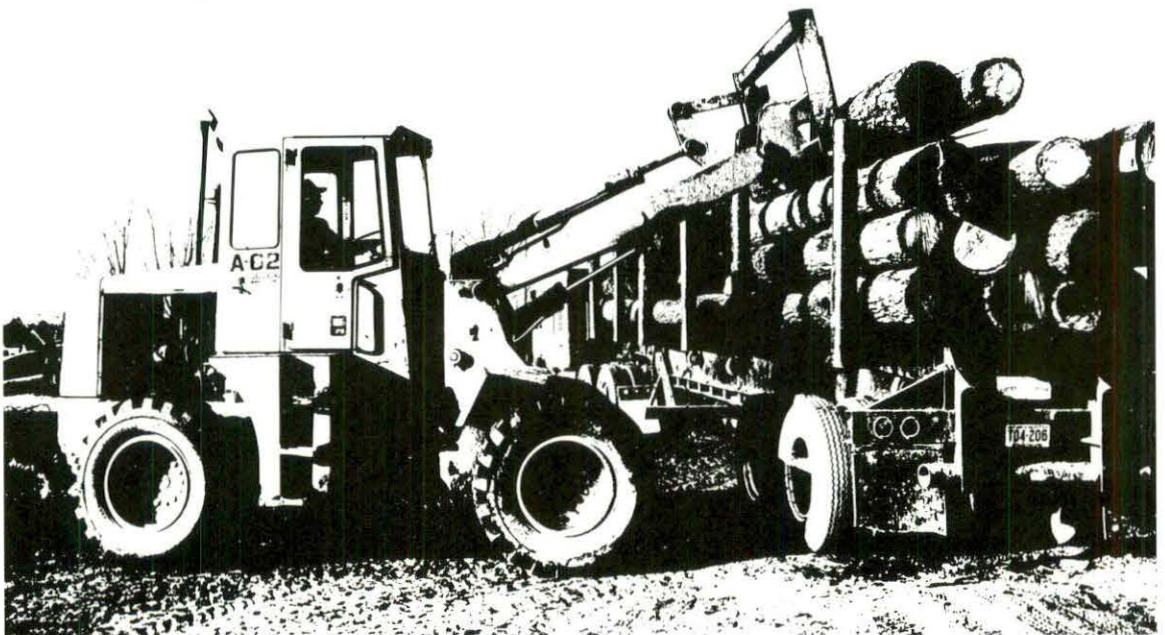
One area high school, Rowan County High School, burns sawdust but because of the high quantity produced they use less than one percent of one saw mills volume. The type of project aimed to solve the problem of sawdust waste needs to consume large quantities in order to be effective. Bauer believes one of the best uses for the product is to use it massively for fuel. The technology is available and the economics are improving to this a distinct possibility in the future.

How effective has the work with upgrading the industry been? Through the efforts of MSU's Technical Assistance Program, 117 direct jobs and 120 logging support jobs were either created or saved resulting in \$4.6 million in invest-

ments in Eastern Kentucky. "It has always been our contention that mills that run more efficiently and have more diversity will be more productive and will employ more workers," Bauer stated. "So far, our results have confirmed that."

Another major function for Bauer is to help coordinate the efforts of local groups such as area development districts and private development corporations who deal with potential investors. "Our office often functions as a clearinghouse for information on the wood industry for our entire service area," he stated. "We get a lot of questions referred to us on the species and grades of lumber in certain areas from companies that are considering moving in. We also assist with the evaluation of the proposals for government agencies."

Even though the decision to expand is in the hands of the mill owners, Bauer feels that his position as advisor is now more important than ever. "Many times mill owners will ask us to do an evaluation with expansion in mind, often this involves bringing in a consultant to determine what can be done to make an operation





more profitable,” he said.

“We want to do all we can, but we also have to be realistic with people who want to get into the business and immediately do the sales and production volume of mills that have been in operation for 50 years. Even though it is a solid business and has a potential for growth, the mills already in operation have an advantage. It’s our job to tell potential investors all the facts so they can make an accurate choice.” He said he believes his research will continue to be successful in upgrading the industry. By researching materials, regulations and the finances involved, his office speeds up a mill’s process of development. This “gets the red tape out” and allows companies to spend less time making calls.

Bauer is involved with the annual logging show (now called Kentucky Wood Expo), held during alternate years at the Derrickson Agricultural Complex near Morehead. The show allows the regional wood industry to see new technology and learn how modern equipment can increase productivity and profit.

Bauer and his team are also promoting the *Timber Bridge Initiative*

Program, a nationally funded program which focuses on developing bridges made of wood instead of concrete. The wood meets federal standards, is treated (lasting 50 to 100 years), is less expensive and will hold up better than concrete in certain circumstances.

Kentucky was one of five or six states that hadn’t demonstrated these bridges. Bauer’s project team currently have people involved in the highway department and forest service meetings in the state to further these initiatives. According to him, 50 percent of the proposed bridges have been funded, and two have been funded for Eastern Kentucky. He said the program has “shown increasing promise.”

For the timber industry in Eastern Kentucky promise is a by-word. It has been an industry that has helped the region meet its needs and provided stability to an uneven economic base. While both the coal industry and timber industry have played significant roles in the overall economic development of Eastern Kentucky, the timber industry has one major advantage—if properly maintained, the forests can regenerate themselves, making the supply of wood almost limitless.



Dopamine

Too Much? Too Little?

Just Right.

In recent years there has been a tremendous increase in the elicited or recreational use or abuse of behavioral stimulants such as cocaine and amphetamine among children, teenagers and young adults. Although a variety of sociological, psychological, and physiological factors have undoubtedly contributed to this increase in stimulant drug abuse, the potent effects of these agents on brain dopamine systems is a critical factor.

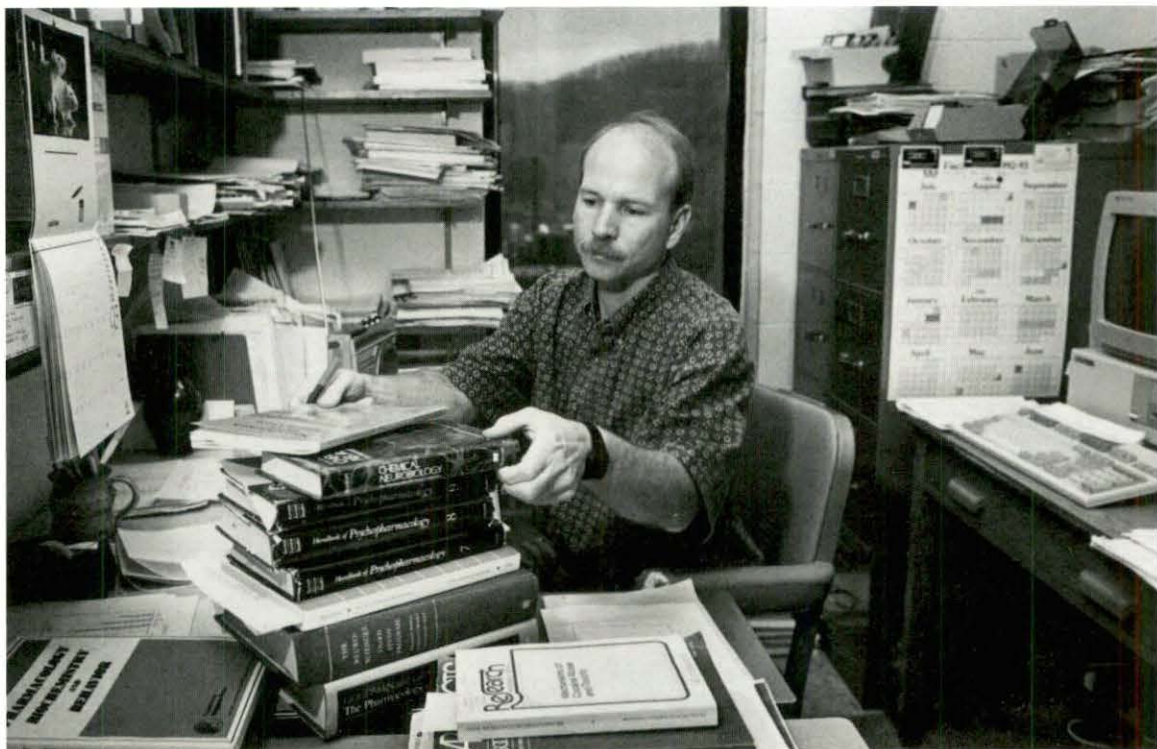
Additionally, the chronic use of drugs such as cocaine can result in the appearance of a number of severe and relatively permanent behavioral side-effects. Research by Dr. Bruce Mattingly, professor of psychology at Morehead State University, in collaboration with Dr. Michael Bardo, associate professor of psychology at the University of Kentucky, has been directed at determining the neurobiological basis for these chronic drug-induced behavioral changes.

According to Dr. Mattingly, neurons, or nerve cells, communicate through chemicals called neurotransmitters. Slight modifications in the balance of neurotransmitters in the brain can result in profound changes in behavior. Thus, nearly all drugs that affect behavior do so by altering specific neurotransmitter mechanisms. Dopamine, a neurochemical intimately involved in such diverse functions as motor coordination and the experience of pleasure, is one neurotransmitter that is crucial to normal brain functioning and many drugs, both therapeutic (e.g., anti-

psychotic, anti-parkinsonian drugs) and drugs of abuse (e.g., amphetamine, cocaine) act on dopamine neurons. While dopamine shortages in certain brain regions cause Parkinson's disease, nobody knows why these shortages occur. And while some schizophrenia drugs antagonize the dopamine system, scientists still don't know why these drugs help.

In humans, the continued use or abuse of dopamine stimulants such as cocaine changes the nature of the stimulant experience, and psychiatric disorders, such as anxiety, panic attacks, depression, and paranoid psychosis often appear. Although the drug-induced symptoms generally dissipate if the drug is discontinued, evidence indicates that these symptoms may reappear as many as ten years later in times of stress or if the drug is reinstated. Thus, the chronic use of these drugs over time appears to produce some relatively permanent alterations in central nervous system functioning.

In animals, dopamine stimulants such as cocaine and apomorphine produce a progressively greater behavioral reaction with repeated treatments (i.e., behavioral sensitization). The similarity between drug-induced psychosis in humans and behavioral sensitization in animals has led many researchers to conclude that these phenomena are due to alterations in the same neural systems. Consequently, understanding the neural mechanisms underlying the development of behavioral sensitization in animals may provide in-



sight into the neural substrates of both drug-induced and idiopathic psychosis.

Over the past few years, Dr. Mattingly has studied the development of behavioral sensitization to the direct dopamine agonist apomorphine. Like amphetamine and cocaine, apomorphine stimulates dopamine receptors in the brain and induces behavioral sensitization. According to Dr. Mattingly, drugs like cocaine, amphetamine, and apomorphine produce many of their behavioral effects by their action on dopamine receptors in areas of the brain responsible for arousal and reward (pleasure centers). His research, therefore, has been directed at determining what neural and biochemical changes take place in these brain areas after chronic drug exposure.

Funded by the Kentucky Experimental Program to Stimulate Competitive Research (EPSCoR), Dr. Mattingly's research has thus far determined the effects of chronic stimulant administration on dopamine synthesis, metabolism, and receptors in various areas of the rat brain.

Perhaps our most important behavioral finding to date, is that even a single

treatment with a low dose of a dopamine stimulant can induce a long-lasting change in an individual's sensitivity to these drugs. Our most important neurochemical finding so far is that repeated use of the dopamine stimulant apomorphine results in long-lasting increase in dopamine synthesis in areas of the brain involved in the expression of motivation and emotions. We are currently studying the role of this biochemical change in the development of sensitization. In addition, we have begun to extend our work with apomorphine to cocaine and other stimulants.

Besides drugs of abuse, drugs that stimulate dopamine receptors are also used therapeutically. For example, L-DOPA is an indirect dopamine stimulant used in the treatment of Parkinson's disease. Like cocaine, chronic treatments with L-DOPA can also lead to a number of side-effects. These side-effects appear to be due to the chronic overstimulation of dopamine receptors. In other words, while L-DOPA supplies dopamine where insufficient levels exist, it also supplies it to areas which contain normal levels of

dopamine thus causing them to be overstimulated.

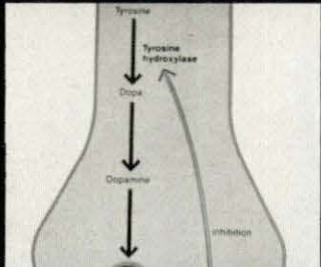
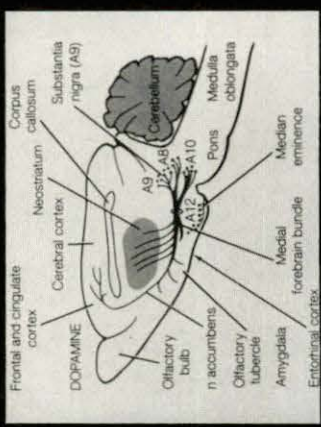
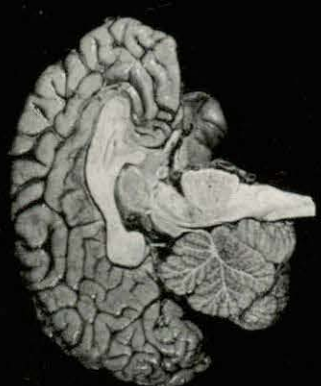
The ultimate goal of my research is to understand the basic behavioral and neurochemical mechanisms that underlie the development of behavioral sensitization. Hopefully, an understanding of the neurochemical changes that take place with chronic drug use or abuse will lead to better prevention, treatment, and rehabilitation programs.

Dr. Mattingly's research on behavioral stimulants has been on-going for nearly seven years through various grants and awards and he has published more than 20 articles on this topic in national and international journals. He stresses the importance of student involvement in the research. "We have as many as five to 10 students volunteering to work on the project each semester and they get extremely involved. They've presented papers on our work at state and regional conferences and have co-authored some pieces," he said. In addition, many of his undergraduate students have gone on to graduate school and completed Ph.D. programs. At present two of Dr. Mattingly's students are in graduate school. James Rowlett, for example, is completing his dissertation at the University of Kentucky with Dr. Bardo and will receive his doctorate in May 1993.

"This is probably the best research experience I've ever had," said Karen Lim, a second-year graduate student who has worked three semesters in the lab. According to her, Mattingly spends a lot of timeworking with the lab assistants, making sure they understand the rationale behind what they're doing.

Lim described Mattingly in this way: "He is a very charismatic teacher and fosters independent thought. He wants us to think." She added, "He's excited about his own work and wants other people to be excited too. The University is lucky to have him."

Lim said her lab experience has been



beneficial to her in many ways. "The quality of work he has done has helped me recognize the deficiencies of some studies in the literature. I can raise question about these studies. I am able to make criticisms of other experiments and realize which experiments are good. I realize the value of research."

Although the research takes a long time, Lim says it is because "the brain is so complex you have to try to understand it in pieces." Although she prefers clinically-based research, she says she will apply research skills she learns here to doing good research of her own.

Tamara Hart, another graduate student said she also benefits from working in the lab. She has been exposed to different fields in psychology, has gotten to work with faculty at MSU and UK and will be more likely to get in a Ph. D. program in a growing field with a competitive market because she has had research experience and works published.

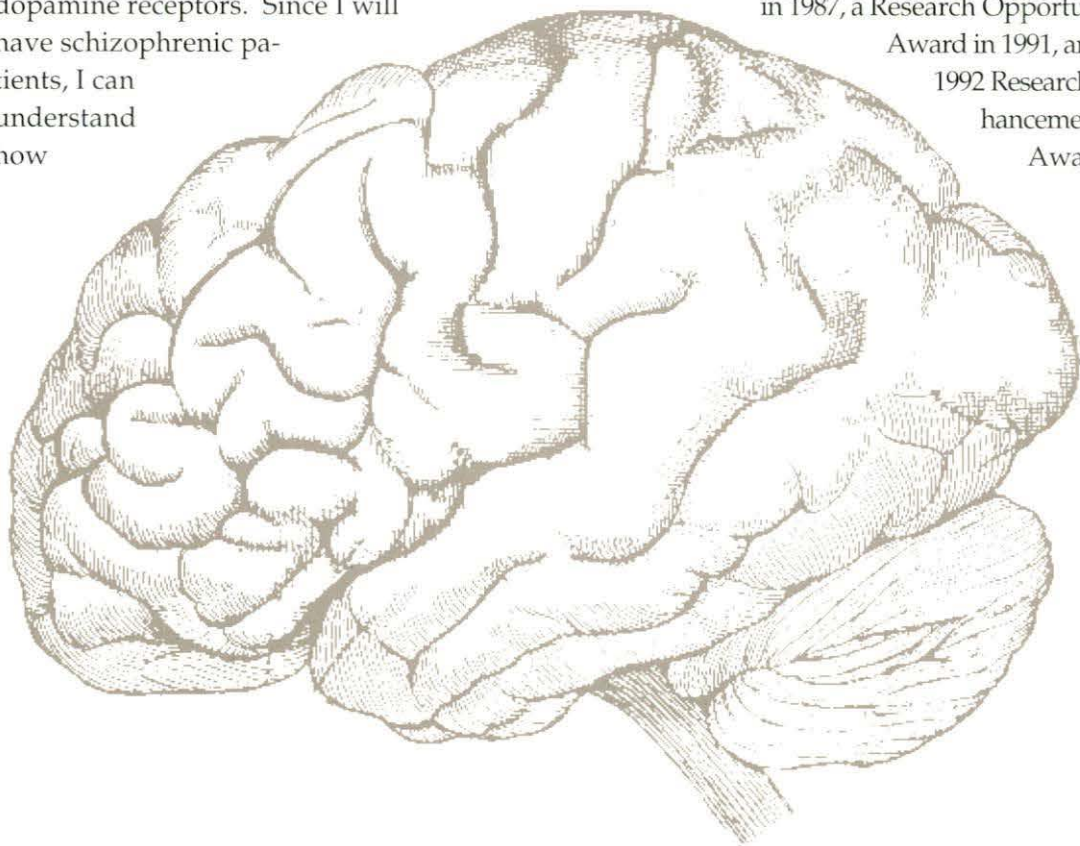
As a clinical psychologist, she said she can use results from his research. "All drugs that treat schizophrenia work on dopamine receptors. Since I will have schizophrenic patients, I can understand how

their medication is treating them." She said the research using rats is beneficial because researchers can't look at how drugs affect the brains of humans until they are dead. With this research, data can be used to find better cures for diseases. Hart said she feels MSU's research program is a "real benefit to Eastern Kentucky."

Students take their cue from Dr. Mattingly who says he believes research at small universities, such as MSU, serves a very important teaching function. "Students get much more excited about their field if they can get some hands-on-experience. Reading about research is no substitute for the real thing. If our nation is to stay on the forefront of knowledge in a variety of fields it is essential that we continue to encourage bright young students to enter research fields. I believe that the best way to do this is by getting them involved in the research enterprise during their undergraduate education."

Three grants from the Kentucky EPSCoR committee with funds from the National Science Foundation have been awarded to Dr.

Mattingly including a Visiting Scholar Grant in 1987, a Research Opportunity Award in 1991, and a 1992 Research Enhancement Award.



POLITICS

and

POETRY

A Textual Analysis

Dr. Michelle Boisseau, associate professor of English, received a summer research fellowship to study sexual and racial politics in contemporary poetry. During her work Dr. Boisseau discovered that "while many poets have good intentions of using the forum of poetry to expose injustices in American culture, a deep textual analysis of the poems reveals many internal tensions."

She said, first the poems she examined suggest the poets' discomfiture in handling political issues: in this way, the poets reflect the dominant culture. Second, beneath their well-meaning surfaces, the poems suggest sexism and racism. While this may seem an outrageous claim, she said a reader must take into account the paradoxical position that the open-minded speakers of the poems she studied place themselves in. They want to sympathize with all parties involved: both those who suffer from sexism and racism and those who express those feelings.

According to Dr. Boisseau, the struggle between contradictory impulses is particularly strong in Southern poets. Their work expresses anguish over racial injustices in the South while recognizing that those injustices were often committed by people just like them, their ancestors or their parents. Dr. Boisseau said she found that this struggle over political correctness is most evident in the poems' closure strategies. As the poets attempt to resolve the tensions and find resolution, they employ convolved metaphoric and syntactic solutions which only intensify the conflicted sexual and racial politics within the poems.

Dr. Boisseau presented her work at the South Central Modern Language Association meeting and, with further refinement, hopes to submit the study for publication. She believes it is important for students of literature to understand how to use close textual analysis to read deeply into literary texts and shares both her findings and her techniques with her advanced courses.







"Building Japanese Cars in North America"

Lean Production and the Future of Organized Labor

During the past decade, nine Japanese automobile assembly plants were built across the industrial heartland of North America from Smyrna, Tennessee to Alliston, Ontario. Six American states and two Canadian provinces invested millions of dollars in incentives to recruit these transplants. After the assembly plants began operation, Japanese cars began to capture larger slices of market share from the Big Three domestic automakers, a feat the Japanese firms said they were able to accomplish by employing the lean production techniques they had used successfully at home.

Japanese production management (JPM) or lean production techniques have become the subject of heated debate within the business, organized labor, and scholarly communities. Some scholars, including James Womack, Richard Florida, and Martin Kenney, have extolled the virtues of lean production and argued that its team-based assembly line techniques, its concept of kaizen or continuous improvement, and its just-in-time parts supply system are the wave of the future for both labor and management. In fact, Womack's *The Machine That Changed The World* is considered by many to be the final word in praise of the Japanese lean production system.

Dr. William Green, professor of government at Morehead State University and recipient of the University's 1991 Distinguished Researcher Award, is not willing to accept Womack's arguments

as the final word because they disregard any meaningful role for organized labor. He finds the work of scholars such as Barry Bluestone, Alain Lipietz, and Lowell Turner insightful and provocative, because they expose the limitations of pro-JPM studies and the illusory claims of lean production and design production models which preserve a critical role for organized labor. In fact, Professor Green believes that the Clinton administration is likely to be receptive to Bluestone's argument in *Negotiating the Future* (1992) that American industry's international competitiveness will be enhanced if management is willing to share the responsibility for business decisions with organized labor.

Professor Green's interest in lean production began with *The Politics of Industrial Recruitment* (Greenwood Press, 1990), a study of mid-American state government recruitment of Japanese automobile manufacturers he co-authored with Dr. Ernest J. Yanarella, professor of political science at the University of Kentucky. Collaborating once again, Professors Yanarella and Green began their study of lean production and organized labor with a project entitled: "East Asian Automobile Investment in Canada and the United States." Funded by grants from MSU, the University of Kentucky, the Canadian government and the province of Quebec, the project involved field study in Canada at four sites where Japanese and Korean auto plants have been constructed.



This research, conducted in the summer of 1991, has already resulted in one article on labor, community, and environmental participation in Japanese industrial recruitment in Canada scheduled for the May 1993 issue of *Economic Development Quarterly*. "Two other manuscripts," he added, "have been accepted by professional journals subject to revision on the basis of reviewer comments. We have responded to those comments, revised and resubmitted those manuscripts, and fully expect them to be published in the near future."

"After conducting this research and writing these articles," Professor Green stated, "we decided that our research should focus on organized labor. We also decided that our participation in this scholarly debate should take the form of a North American comparative cross-national study of labor relations in the Japanese automobile transplants and their joint ventures with the Big Three automakers."

"Our point of departure in this debate," he went on to say, "is our contention that under lean production, workers do not have the protection they need from unfair management practices and from injury on the job. We believe that a labor union is necessary for worker protection, even in the Japanese system. In spite of what Womack and other cheerleaders for lean production say about the harmony of interests," he continued, "one must always remember that labor and management do not always share the same goals. The relationship

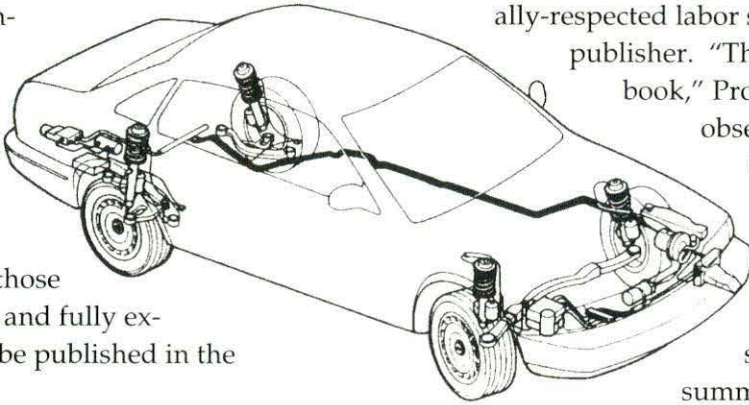
between labor and management doesn't always have to be adversarial, but a labor union has a positive role to play in protecting the health and safety of men and women who toil on the shop floor."

The objective of their research is a forthcoming book entitled *Other People's Cars: Organized Labor and the Crisis of Fordism*, presently being considered by the University of Illinois Press, a nationally-respected labor studies

publisher. "The idea for the book," Professor Green observed, "began to take shape during our conversations with Canadian scholars in the summer of 1991."

Subsequently, we decided to have all the contributors first present their essays as convention papers at two professional conferences: the 1992 Annual Meetings of the Midwest Political Science Association and the Southern Political Science Association. The value of this approach," he continued, "is that the papers will have a more uniformly high and even quality and give the volume greater theoretical coherence."

The proposed volume will begin with two essays by Professors Yanarella and Green on lean production's challenges to organized labor and its legal foundations. Within this framework, the volume will then focus on five case studies. Their case study of Saturn, GM's innovative lean production venture, will be joined by four others written by Canadian and American labor studies scholars. Charlotte Yates of McMaster University who has written the definitive history of the Canadian Auto Workers union will study GM-Canada. Christopher Huxley and James Rinehart



of the University of Windsor and the University of Western Ontario and also members of the Canadian Auto Workers Research Team on CAMI will summarize the findings of their just completed two year study of the GM-Suzuki joint venture's lean production practices. Steve Babson of Wayne State University who has been involved as a labor studies advisor to the UAW-Mazda local union will analyze the conflicts within the union local and its adversarial relationship with Mazda management. And finally, Laurie Graham of Indiana University who worked on the line as a hidden participant observer at Subaru-Isuzu will reveal her findings of the automaker's recruitment and production practices. The volume will close with two essays on organized labor's lean production future: one by Professor Yanarella and one by Don Wells of McMaster University and author of a well-respected critical study of team-based management and the labor movement.

Overall, the essays will examine the

use of lean production methods in Japanese automobile transplants and joint ventures with the Big Three automakers, the challenges lean production has presented to union labor, and labor's response to these challenges. "The principal questions which the essays will address," said Professor Green, "will focus on the organizing, collective bargaining, and shop floor representation experiences of the two North American automobile labor unions, the United Auto Workers (UAW) and Canadian Auto Workers (CAW).

The UAW and CAW represent workers at the Big Three auto plants, but the unions have encountered stiff opposition from the automakers in organizing workers at the six Japanese transplants. The UAW broke off an organizing drive in 1985 at Honda in Marysville, Ohio and its two-to-one loss at Nissan in Smyrna, Tennessee has discouraged the UAW, so far, from initiating organizing drives at either Toyota in Georgetown, Kentucky or Subaru-Isuzu in Lafayette, Indiana. The CAW's organizing efforts have met with



similar results. Toyota in Cambridge, Ontario, Honda in Alliston, Ontario, and Hyundai, the South Korean automaker, in Bromont, Quebec continue to have nonunion work forces. "The essays ask why both unions have faced obstacles in organizing the Japanese auto transplants," Professor Green stated, "and how the automakers' recruitment methods, greenfield locations, and high wages explain worker resistance to unionization."

At the Big Three-Japanese joint ventures where the UAW and CAW represent the production employees collective bargaining has met with limited success. The CAW negotiated a contract with CAMI, a General Motors-Suzuki joint venture in Ingersoll, Ontario. The UAW has contracts with three U.S. plants: Mazda, a Mazda-Ford joint venture in Flat Rock, Michigan, Diamond-Star, initially a Mitsubishi-Chrysler joint venture in Bloomington-Normal, Illinois, and NUMMI, a General Motors-Toyota joint venture, in Fremont, California. "The essays will inquire about the nature of the collective agreements the unions

have negotiated," Professor Green said, "and how these agreements have modified the rights of organized labor and lean production practices." Yet any collective agreement will mean little if it is not aggressively enforced on the shop floor. "Here the essays will examine the challenges the UAW and CAW have confronted in enforcing their collective agreements in these modified lean production work places," Professor Green said. "We will be particularly interested in explaining the successes and impediments the unions have encountered with workers and management in addressing and resolving worker discipline and grievance issues," he added.

Professors Green and Yanarella believe *Other People's Cars* will provide for the first time a comprehensive analysis of the impact of Japanese productions management techniques on organized labor's limited success in organizing auto-workers, in negotiating collective agreements, and in shop floor representation. As Professor Green concluded: "The use of Japanese production management techniques makes this a difficult time for organized labor in assuring fair treatment for automobile workers. And a North American Free Trade Agreement will mean that the labor movement will face this challenge from highly mobile multinational automobile corporations on a hemispheric stage. We hope that *Other People's Cars* will be an important contribution to understanding whether and how a North American labor movement whose legal rights are rooted in a system of mass production will be able to successfully confront a changing international and hemispheric political economy increasingly dominated by lean production."



A Neo-Durkheimian Theory of Ritual

Dr. Edward Reeves, associate professor of sociology, is developing an extensive cross-cultural data base to test and refine theoretical propositions derived from noted French sociologist Emile Durkheim.

Objectives of the project include developing a data base on communal rituals for Murdock's Standard Cross-Cultural Sample (SCCS) and testing hypotheses derived from what he refers to as a "neo-Durkheimian theory of ritual." Dr. Reeves says he intends to reformulate Durkheim's ideas about the ritual construction of social solidarity in light of recent advances in rational choice theory.

"Particularly, I hope to demonstrate that as community size and density increase, the frequency, diversity, and elaborateness of communal rituals also increase," he said. The theoretical explanation he offers is: (1) in larger and denser communities individuals find more opportunity to free-ride and generally to behave in a self-interested manner; thus, (2) rituals are instituted to suppress this tendency through their functions of modeling and stimulating solidary commitments and other-regarding behavior.

Dr. Reeves says he expects that competitive markets will be found to lessen ritual activity, since markets function by orchestrating self-interested behavior rather than reducing it, as is the case with ritual. However, he continued, "I suspect political differentiation will be shown to intensify ritual activity that dramatizes legitimacy claims.

General assumptions for the project are:
(1) Human beings are powerfully moti-



Emile Durkheim

vated to put their own desires and interests ahead of those of others, especially when the stakes are high.

(2) The tendency for egoistic behavior creates a lasting problem for group life. The problem grows in severity as the costs of monitoring and sanctioning the behavior of group members increases.

"There are other considerations of the study," he said, "for instance the division of labor within

a community changes its configuration of solidarity and as a result, communal rituals become focused on the solidarity of various subdivisions as well as on the overarching solidarity of the community as a whole."

Another consideration is that "status differences within the ritual-practicing group are dramatized and legitimated in ritual performance. The more these status differences correspond to broad aggregates (e.g., aristocracy versus peasants) the more ritual becomes a field of political discourse for legitimating competing claims of these aggregates," he said.

"Although this project may seem very esoteric, its potential practical importance should not be overlooked," he noted. "The rise of fierce ethnic conflict in recent years in Eastern Europe is evidence in part of a failure of the ritual mechanisms of the state to foster lasting inter-ethnic solidarity. In effect, the rituals of religious identification - Christian versus Muslim, for example - have overpowered the secular rituals of nation-state unity. To understand rituals is to understand how modern political systems hold together or come apart."



... A WAR OF WORDS

Linda Goodman, of West Liberty, can pick up a book and almost finish it, has her driver's license and can walk in a restaurant and order her choice from a menu. Although these may seem like small feats to most, to Goodman, they are major accomplishments. Before she joined the Adult Learning Program at Morehead State University's Licking Valley Extended Campus Center in West Liberty, she could only read her name and those of her children.

Goodman has come a long way. She no longer has to ask for rides or order what someone else orders at a restaurant with the excuse of not having her glasses. Nor does she fear talking to people, as she once did.

What is unusual about Goodman's story is that her family didn't know she couldn't read or write; even her husband didn't know until two years after they were married. She said her handicap was often very trying, particularly when her children were sick and she couldn't read the medicine bottles. "You'd be surprised at the people who can't read and write and keep it hid all their life," she said. Goodman is now taking adult basic education classes and soon hopes to obtain her GED. Since she has been learning to read, she says it's a "whole different world."

Kentucky is filled with others who have many different backgrounds but, like Goodman, are learning to read at advanced ages. "When you can't read or write, it makes you feel lonesome, unwanted and unloved — you don't know what to do when you

meet somebody. You are ashamed to tell them you can't read," said Dolly Russell, a 63 year-old woman whose mother didn't send her to school because she said all she needed to do was "grow up, get married and have babies."

Russell, who can now read and write, talks about meeting someone in the army years ago and telling him she "didn't write letters to people" when her new acquaintance asked her to write to him. She then told him they "ought to call the whole thing off." "I called off many relationships because I couldn't read or write. I was too ashamed to tell anyone," she admits.

Although her daughter said she was "too old to learn," Russell says the best day of her life was when she entered a reading program. Now, she can happily say, "I guess I wasn't too old to learn after all. I can read."

Artie Williams, a 61 year-old housewife who is learning to read, was born into hard times as the third of 13 children. She never had the opportunity to go to school because her father wanted her to work. "Sometimes the truant officer would come out to see why we didn't come to school. Daddy would run him off with a gun. Then we would move over to the next county before the law came." "We moved a lot," reported Williams. She added, "I always wanted to go to school but didn't get to. I've had a hard time, with no education. I am glad for a chance to learn."

The ability to read and write, or literacy, is a skill that many people who live and work on a college campus take for granted. The truth, as found in MSU's 22-county service region of Eastern Kentucky, is often very different.

According to the 1990 U.S. Census report, the percentage of Kentuckians in the MSU service region who are 25 years or older and have completed eight years of education or less are as follows:

Bath—36.1%	Boyd—13%	Lewis—38.8%	Magoffin—40.4%
Breathitt—34.8%	Carter—29.5%	Martin—35.3%	Mason—19%
Elliott—37%	Fleming—31.1%	Menifee—34.8%	Montgomery—25.7%
Floyd—31.3%	Greenup—18.6%	Morgan—39.1%	Pike—31.5%
Johnson—28.1%	Knott—35.9%	Rowan—27.4%	Wolfe—38.8%
Lawrence—36%	Letcher—33.6%		

The overall percentage for Kentucky is 19%.

Of course, the problem exists on a national level as well. According to the U.S. Department of Education, one of every five American adults is functionally illiterate, and the high school dropout rate in the United States is 27 percent, significantly higher than in either Japan which has a rate of five percent or in the former Soviet Republics where the rate is two percent. Furthermore, 50 percent of American adults are unable to read an eighth grade book, reports Jonathan Kozol, author of *Illiterate America*.

Although the literacy problem is not a new one, many Eastern Kentuckians are not aware of the role Morehead and Rowan County play in the fight against illiteracy or how early the efforts began. In 1911, people became more aware of the literacy situation and began to develop programs to combat it. The "general"

in that fight was Cora Wilson Stewart, a former student at Morehead Christian Normal School, a predecessor of MSU, and teacher in a one-room school house in Rowan County.

Twice elected as county superintendent of schools and the first woman elected as president of the Kentucky Education Association, Stewart launched an experimental adult program, the "Moonlight School," to help Kentuckians ac-

quire reading skills. The program received its name because students traveled to the schools at night with only the moonlight to guide them.

With her volunteer teachers expecting 150 students at the first meeting, 1,200 arrived. The following year 1,600 enrolled. The program was not only a success but became a model for adult education throughout the world.

To commemorate her work, MSU acquired and restored the "Little Brushy School" a one-room school house built when Stewart was county school superintendent, and re-named it the Cora Wilson Stewart Moonlight School. Today it stands as a museum and monument to her work and achievements.



Cora Wilson Stuart

A further tribute to Stewart's work has been created by MSU Artists-in-Residence Laura Lee Duncan O'Connell and her husband and acting partner Michael Duncan O'Connell. The two have used funding from numerous sources to produce an interpretive performance entitled "Miss Cora: The Moonlight Lady" based on Stewart's life.

"It was a goal of Cora Wilson Stewart to make a difference in her home county," stated Laura Duncan O'Connell. "In her own mind, she tied in the sickness and bloodshed around her to illiteracy and made a decision to do something about it." Like Stewart, several MSU faculty have devoted their time to the development of programs in Eastern Kentucky to continue the fight against illiteracy.

According to Dr. Harold Rose, professor of education at MSU, the problem of adult literacy in Kentucky is a serious one. "People do not realize the extent of the problem of adult literacy in this state," Dr. Rose stated. "Until this year when it moved to 49th, Kentucky ranked 50th in the nation in this area. You really can't be attractive to industry if your work force is uneducated."

Both the state and federal governments have taken



Jonell Tobin

steps through the years to work with the problem, and the University has been actively involved since 1963 when then Dean C. Nelson Grote hosted one of the first adult education workshops funded by the federal government. However, statistics compiled by Tobin indicate that, in the six counties comprising the Licking Valley Center's service region — Breathitt, Elliott, Magoffin, Menifee, Morgan and Wolfe, 65 percent of the residents over the age of 18 are non-high school graduates.

The big push for MSU came in 1967, when the federally-funded Appalachian Adult Education Center, headed by George Eyster, was created. "Our assigned area was the entire Appalachian region," stated Dr. Rose. "We reviewed and funded programs from surrounding states for about six years."

During the time the Appalachian Adult Education Center

was operating, MSU implemented a graduate degree program in adult education that today remains the only degree of its type offered in the state. In 1971, the Appalachian Adult Education Center started the MSU Adult Learning Center, a facility where adults can receive assistance in pursuing a high school equivalency through the GED program. This program continues today.



Dr. Harold Rose

Numbers from the Licking Valley Center are similar. In 1991, 306 people were served through a variety of programs offered at the Adult Learning Center. Thirty-one of the adult students completed the requirements and earned GED diplomas.

At the Licking Valley Center, the literacy program has been slow to get started, but this year's total of students involved are up to 44 from 17 in 1990-91, an increase of 158%.



"I guess I wasn't too old to learn after all. I can read."

- Dolly Russell, age 63

"It's been very hard to get the literacy program started because admission of the problem is an embarrassment for the individual," stated Jonell Tobin, director of the Licking Valley Extended Campus Center in West Liberty. "One must remember that people in this area have a great deal of pride, and sometimes

that's tough to deal with."

When a person is referred to the center, they are greeted by an instructor, given the Test of Adult Basic Education, provided with suitable materials for study and, most importantly, individualized instruction. According to Tobin, many of the students in the literacy program are placed in the Job Opportunities and Basic Skills (JOBS) program. However, a provision of the program includes continuing with their studies.

Another program designed to address literacy is a unit in family literacy administered through the Volunteers in Service to America (VISTA) program and funded by ACTION, a federal government program. VISTA has a family literacy program coordinator and others who travel to sites in public school buildings and to Whiting Manufacturing, centrally located between Wolfe and Morgan counties to work with those enrolled in the program.

Family literacy involves both parents and pre-school age children in a way that promotes reading and writing in the home. The program is designed to help parents who are low in literacy and to influence children at an early age to be active in education. This "intergenerational" approach to literacy is being used with more than 25 families in Morgan County, and, according to Charlotte Hall, the VISTA volunteer in charge of the program, it is quite successful.

"We have family reading day once each week at the Licking Valley Center," she stated. "Other than that, all of our work is done in the home. It has been proven that learning begins at home, and the way these parents and children work together, we know it makes a difference."

Since the "Moonlight School" program was created, educating disadvantaged adults in Eastern Kentucky has been a priority. But, what began as an effort to simply teach people to read has turned into much more. Currently, efforts are being made to get people through the GED program and into a better life.

One of the biggest changes Rose has seen over the years is in the number of available delivery systems for adult courses. "When I first came to Kentucky, all adult education was done in a traditional classroom arrangement," he stated. "Since then, Learning Centers have been added, as well as a system of para-professional instructors who



cat

serve as individual tutors and the GED on Kentucky Educational Television (KET).” The main improvement with all of these new systems is that the instruction is individualized for the specific needs of a particular student.

The GED ON TV program, funded by Kentucky Educational Television, has operated at MSU for the past six years and is designed to allow high school dropouts who are 18 years of age or older to participate in a GED preparation course of study at home. Through programs such as this, adult education is now available to groups never before served.

“Sometimes the truant officer would come out to see why we didn’t come to school. Daddy would run him off with a gun.”

- Artie Williams, age 61

MSU’s KET Student Services Office develops and maintains the support system for each GED ON TV enrollee. Extensive promotions are conducted and adults call for information on four 800 telephone lines. Each potential student is interviewed, screened and advised on an academic course of study based on their current skills. After a student is pre-tested and enrolled, they study with 43 instructional GED programs, complete lessons in three accompanying workbooks and get encouragement and individualized advice from the MSU program staff.

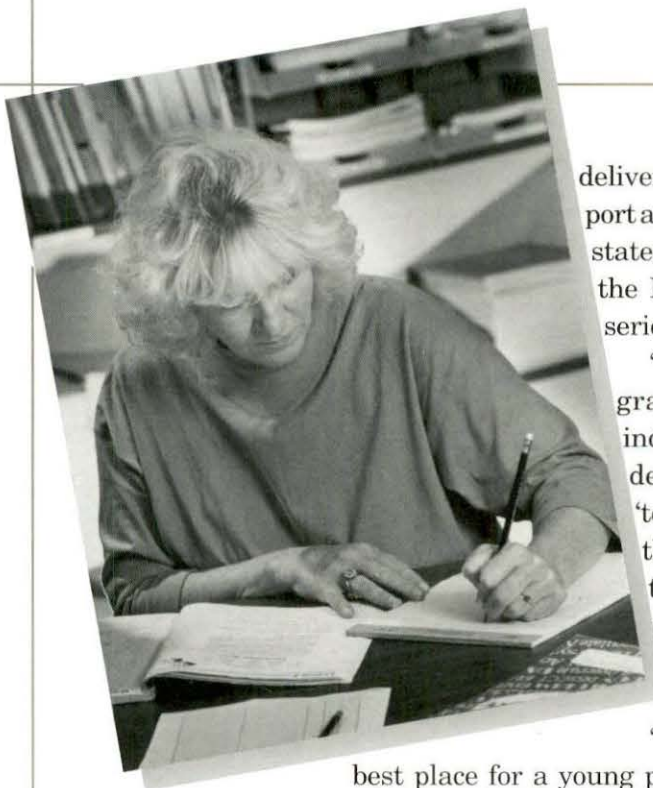
The MSU office now offers five sessions per year. According to Sharon Jackson, Director of the GED ON TV Program, the statewide program originating on MSU’s campus provides services to the “largest GED class in the nation,”



Sharon Jackson

numbering between 1,100 and 2,800 adults each year. In addition, 3,000 to 6,000 adults are referred to local adult education programs annually. Since the state-wide program began, there have been 48,700 callers yielding 34,700 adults referred, 15,300 adults enrolled and more than 6,000 GED graduates. The GED ON TV student passing rate for the GED exam is higher than the rate in Kentucky and the nation overall. In 1992, the office also added an additional ‘Math Basics’ support service and enrollment program. ‘Math Basics’ is a new KET series for adults who are working on pre-GED level math skills.

The program provides a service to those adults who could not attend traditional classes or learning centers because of transportation, child care problems, work schedules or a need for privacy. Many adults desire to continue their education but simply do not have access to the needed information, the means, or the chance to achieve their educational goal. Kentucky has approximately 1,300,000 adults age 18 and above without a high school diploma, and the existing adult education programs are serving only about 40,000 adults per year. The GED ON TV program is a compliment and a supplement to the existing adult education programs. It is succeeding with its efforts in improving the educational level of Kentucky’s adults and has tremendous growth potential in Kentucky and across the nation. This innovative system of adult education



delivery and student service support at MSU serves as a model to 19 states and Canada who are using the KET GED ON TV program series.

"With the KET-GED program, one must be a more independent learner, as the student does not truly have a 'teacher,'" said Rose. "But for that segment of the population that may lack transportation or have small children, the program can be very effective."

"High school is definitely the best place for a young person's education," Jackson noted. "Yet, there are so many adults who did not have the opportunity, privilege, health or family support to continue in high school, and these adults are bright, have many talents and have much to offer society."

"The GED is not the end for any student, it is just a step," stated Dr. Rose. "It opens doors that will allow the student to pursue other avenues such as vocational or higher education, or jobs in industry. According to Dr. Rose, Morehead State must play an important role in meeting the overall educational needs of Kentucky. "It is my feeling that MSU, as a regional university, should provide leadership in adult education," he said. "It may not be a major mission, but, as an educational leader, we can't ignore the problem of adult literacy."

"I never really knew how exciting and fulfilling reading could be. It has enriched my life," said Sue Gray, a 46 year-old who wants to become a nurse's aide. "I see the world in a different light. Reading has helped me to respect and understand not only myself better, but also the people around me. There is so much to be learned — so much knowledge waiting to be explored."

Glenda Barrett, who is now learning to read, shares the same sentiment. She says, "I love Kentucky and what they're doing for people like us. Thank you, God, for the ones that care. And thank you for literacy."

So, the work started by Cora Wilson Stewart and her volunteer instructors some 81 years ago continues — not in one-room school houses, but in homes and modern classroom facilities, through delivery systems that once were only a dream and through the work of people like Cora Wilson Stewart who are committed to the fight and who are willing to dedicate the time and effort for illiterate adults. In this instance, the longer the 'war' lasts the more winners there will be.

COLD CAST

BRONZE

Stephen Tirone, associate professor of art, received two grants to create life-sized figurative sculptures using "cold cast bronze," also known as "bonded bronze" technology. The cold cast process is called "cold cast" because there is no hot melt casting foundry involved. Bronze, in a powdered form, is mixed with liquid epoxy to form a paste mixture which is then placed into a negative mold of the sculpted figure.

The cold casting technique, which is relatively new, is proving to be a very satisfactory alternative to the traditional hot melt process. According to Tirone, these sculptural works would have been extremely difficult to execute if the hot melt bronze casting technique was used with MSU'S available studio facilities.

The total process involves sculpting a figure from plasticene or modeling clay then making a mold of it with polyisone rubber to capture the details of the work. The rubber is then covered with plaster of Paris to give rigidity. The pieces (15 or more in a life-sized figure) are removed from the original sculpture resulting in a hollow figure. Tirone presses the bonded bronze mixture into the rubber and then reassembles the figure starting with the head and seaming the pieces with additional bonded bronze on the inside. For additional strength, he also seals the bronze with an epoxy fiberglass mat covering the entire inside of the figure. After the entire figure is assembled, he removes the plaster of Paris and then the rubber to reveal the completed cold cast bronze sculpture.

According to Tirone, the process is very lengthy because the various materials used can only be mixed in small batches. Tirone's interest in the technique began four years ago when he had the opportunity to work with Sam McKinney, who was commissioned to create a life-sized sculpture of Carl Perkins. Tirone says, "I became so interested I applied and received two grants to complete three life-sized figures."

He is now in the finishing stages of a one-third size figure and intends to continue working with the technique. Tirone exhibited his completed works in a faculty show and plans to show them this fall in other exhibitions.



Steve Tirone



ARMY. . . SOLDIER. . . *Family?*



When troops are mobilized and deployed, as happened in Operation Desert Shield/Storm, hundreds of thousands of soldiers are moved, along with their equipment. It's something that no soldier looks forward to, but all are trained for.

One group of people directly affected by this deployment, but not always trained to deal with it, however, are the families of military personnel.

According to Dr. Barbara Quigley, assistant professor of psychology at Morehead State University, how those families deal with the stress of separation often determines whether or not a soldier stays in the service when his or her enlistment is up, and, to a certain degree, how they perform in the field.

In order to help determine "Family Factors in the Retention and Performance of Soldiers," Dr. Quigley spent 12 weeks on a Department of Defense grant studying the problem first hand.

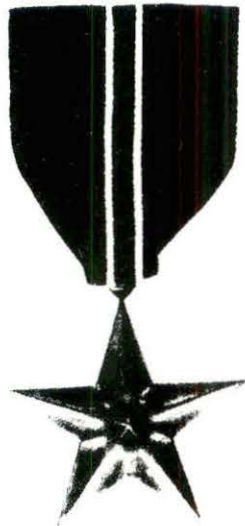
In fact, she said events in the Middle East made the research even more meaningful, as troops returning from a major military action, Operation Desert Storm, specifically to Ft. Stewart, Ga., could be surveyed and questioned as to the problems faced by both soldiers and families.

"It is obvious that in retention, not only must the soldier be happy with

their career, but their spouse must be happy with the military as well," she stated. In Desert Storm, the general feeling was that the troops adjusted well to combat while the spouses at home did not. Unfortunately, this occurrence causes good soldiers to change careers.

Many other factors were considered by Dr. Quigley in her research because they directly affect the family when the soldier is both away from home and in a combat situation.

One of the main problems experienced by spouses during Desert Storm was that of communication. Even though a special effort was made to get mail to the troops in Saudi Arabia (faxes to the fox hole, express mail, etc.), once it got there,



it was put into the general mail system and delays occurred.

Becoming frustrated with the mail system, many people relied on telephones as their primary means of communication and made numerous calls. However, the calls were expensive and many troops were stationed in rural areas and didn't have access to telephones.

According to Dr. Quigley, telephone communication between husbands and wives posed additional problems, though different from what you might expect. All too often, a spouse contacted their husband or wife to complain about situations the soldier could do absolutely nothing about. The end result was that the troops, and in some cases, their superior officers, were distracted from the business at hand, which was completing the mission and staying alive.

Another area of consternation lies with deployment support programs. Funded by the Army, many of these programs are only open to spouses of deployed personnel. Unfortunately, these programs are not made available to parents, fiancées, ex-wives with dependent children and others. All of these people are affected and, according to Quigley, should be included in the programs.

Quigley said there can be no doubt that the safety and well-being of the family is a major factor in the performance of a soldier. In fact, 35 percent of the people in the Ford Clemency Program following the Vietnam Conflict cited family problems as their reason for leaving. Even as early as the 1860s and the War between the States, soldiers would stay on the lines only as long as their families were safe and well-fed, so this isn't

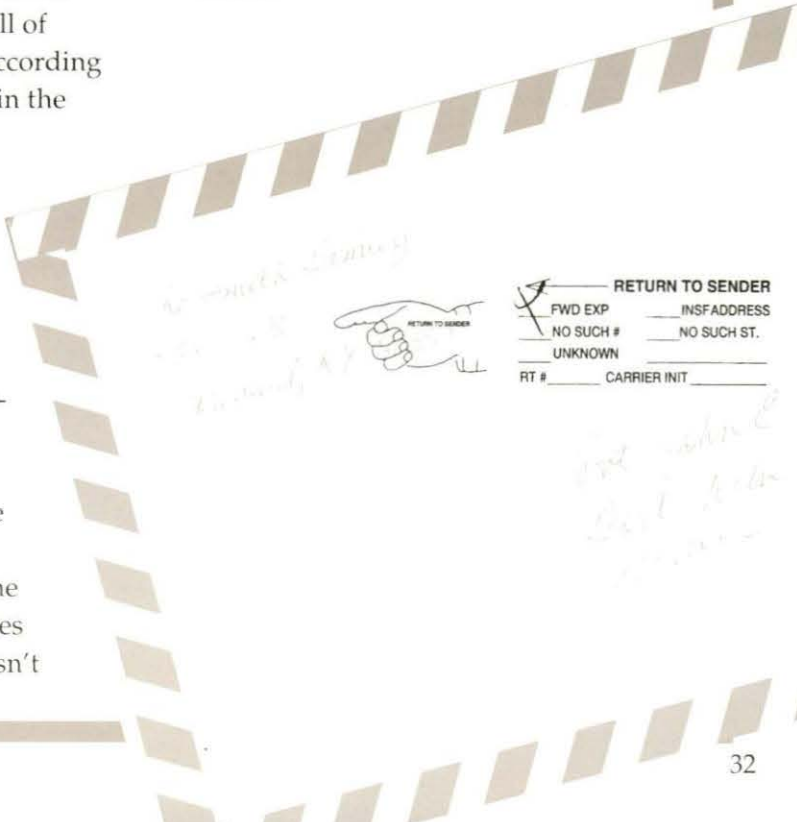
anything new to the fighting soldier.

In the 1700s, the Army had the attitude that, if you needed a family, they'll issue you one. Over the years, the Army has made great strides in taking care of both soldiers and families. The key was doing research as to what the families really needed, Dr. Quigley stated.

Unlike many organizations that do internal research, the military is quick to change, based on the findings of the project.

Even though some people think the Army has a limited definition of what the family is, Quigley said the Army wants to provide the services that are most beneficial to families during times of maximum stress, such as a large-scale deployment. If something is shown to be needed, a program will usually be implemented.

For the military, Dr. Quigley said it is important to keep the highly trained, motivated soldiers in the Army. Through research, a determination can be made as to how the attitude of the family affects the soldiers' performance in the field, and, to a greater extent, if the soldier will be staying in the service at all.



PROJECTS IN BRIEF

New Era in Library Services

In the spring of 1991, Larry Besant received a grant from the National Library of Medicine (NLM) which funded major improvements in seven member-hospital's in the Eastern Kentucky Health/Science Information Network (EKHSIN).

The grant, designed to improve the hospitals information access capabilities, allowed computerization of all library bibliographic records enabled users to search the collection by subject, title, author, or date by entering a query from the keyboard. Online searching, provided through the software package Grateful Med., allows the user to access tens of thousands of annotated journal citations held in the NLM database.

Online searches may be conducted using medical subject headings, or by author, title, text word, or title fragment. Once selected the appropriate citations are faxed to the holding library and in many cases articles may be received by the requesting physician in less than an hour.

In addition to new hardware, software and services, EKHSIN members have added new volumes to their library collections to provide better on-site, up-to-date reference materials for physicians and staff. In five of the seven cases entire new library facilities have been developed and built using the NLM grant hardware as the central focus. Through implementation of the grant, EKHSIN member libraries have considerably more capabilities in state-of-the-art information services for all hospital staff.

Drug Education Institute

Morehead State University received a \$63,238 grant from the U.S. Department of Education to fund a Summer Counseling Drug Education Institute. The Institute is designed to assist school counsel-

ors, school psychologists, school nurses and school social workers in Kentucky, and more specifically in rural Appalachian Eastern Kentucky and the 22 counties in MSU's service region, in addressing the growing problem of substance abuse.

The one-week program encompasses a broad background in the theory, assessment, intervention, treatment, recovery process, prevention, and preventive intervention of substance abuse practices in the schools. The Institute is directed by Dr. Paul Turgi, assistant professor of education, with Dr. Judy Oakes, associate professor of health, physical education and recreation (HPER) and Dr. Debra Sutton, assistant professor of HPER serving as co-director and evaluation coordinator for the grant.

The grant is sponsored 100 percent by the U.S. Department of Education through the Drug Free Schools and Communities Act.

KERA

The Kentucky Department of Education allocated a grant to Dr. John Duncan to conduct a comparative review of practices in school-based decision-making and to provide leadership training for principals of Eastern Kentucky.

The content focus of the project was two-fold. The comparative review of practices in school-based decision-making identified effective and ineffective practices in school districts, positive commonalities among practitioners, and established a collection of videotapes of school councils at work. The videotapes of council meetings and interviews with participants were used to aid councils in Eastern Kentucky. In addition, 200 school principals in Eastern Kentucky were trained in terms of the new role principals will be expected to perform under school-based decision making. The program used school districts in Maryland, Virginia, and Florida, where they have had lengthy experience in school-based decision-making, as comparative review sites.

The Appalachian Cherokee: Past and Present

A program designed to inform the people of Eastern Kentucky about Native American heritage was conducted by the Department of Sociology, Social Work and Corrections, and Bethany House.

Through a Kentucky Humanities mini-grant received by Dr. Judith Stafford, assistant professor of social work in MSU's College of Education and Behavioral Sciences, the Elder Healer of the Cherokee Nation Eastern Band, Hawk Littlejohn was brought to address the issue. The program spoke to the Cherokee culture (method of government, religion and education) and traditions (particularly healing and medicine). The program brought the largest audience Bethany House had ever assembled for a presentation and had an overwhelming positive response.

Fulbright Scholar in Residence Program

While more than 1000 visiting scholars come to the United States each year as part of the Fulbright Scholar Program, only 35 or 40 scholars participate in the Scholar-in-Residence Program under which U.S. colleges and universities submit grant proposals to host an international scholar for a semester or academic year. Dr. Judy Rogers successfully submitted such a proposal for the 1991-92 academic year and as a result, Victoria Carrasco, an artist and specialist in weaving and Ecuadorian folk art became the University's first Fulbright Scholar-in-Residence.

A scholar-in-residence with expertise in Latin American folk art was especially compatible because of the successful Folk Art Museum which houses folk arts and crafts from eastern Kentucky and because of the high level of interest on campus and in this region in crafts and folk art.

While at the University, Carrasco taught classes in weaving and folk art and demonstrated to her classes the methods of researching folk art are the same no matter what culture's art is the subject. She also remained actively involved on her enamels and tapestries, creating pieces for a spring exhibit in the University gallery that represents her view of the Kentucky landscape.

Teaching Culture in Context

Dr. Vicente Cano received a grant from the Kentucky Humanities Council to develop a sequence of one-day workshops for eastern Kentucky modern language teachers. The first workshop (spring '91), entitled "Teaching Language in Context:

Listening Skills" was directed by Dr. Cano, coordinator of foreign languages, with Dr. Eugene B. Hastings, assistant professor of Spanish, Mary Jo Netherton, associate professor of French, and Dr. John R. Secor, assistant professor of romance language, serving as co-directors.

The second workshop (spring '92), entitled "Teaching Culture in Context: Reading Skills," was directed by Dr. Hastings and Netherton, with Cano and Secor serving as co-directors. Two more workshops are planned to integrate the teaching of culture into foreign language writing and oral contexts. The content of all the workshops draws heavily from the concept of teaching languages in context and stresses two concepts: (1) that a language should be taught in context, and (2) that the study of a culture cannot be divorced from the study of its language. A series of literary passages, such as poems, excerpts of plays, and short stories are studied and analyzed.

Commonwealth Educational Opportunity Center

Dr. Dan Connell received grant funds from the U.S. Department of Education to initiate an Educational Opportunity Center at the University. The establishment of this program allows Morehead State to further its long tradition of serving the people of northern and eastern Kentucky. The Commonwealth Educational Opportunity Center was developed to assist low income and first generation adults with work in postsecondary education.

By collaborating with existing colleges, community colleges, vocational schools, secondary public schools, governmental agencies, business organizations, and civic groups, the Center hopes to increase the level of postsecondary education in the 20 county service region. Offices have been established in Ashland, Prestonsburg, Morehead, and West Liberty to better serve the entire region. During the first six months of operation the Center achieved 57 percent of its annual goal of serving 1,750 adults.

No Wetlands, No Seafood

Dr. Brian Reeder of the department of Biological and Environmental Sciences has been involved with the research of en-

vironmental problems. As part of a grant from the Kentucky Experimental Program to Stimulate Competitive Research (EPSCoR) from the National Science Foundation, he is investigating a coastal wetland bordering western Lake Erie — Old Woman Creek National Estuarine Research Reserve and State Natural Area and Preserve — which treats agricultural pollution. According to Dr. Reeder, these wetlands act as “nature’s kidneys,” treating and cleansing polluted waters, which inhibit the eutrophication of Lake Erie.

One area of Ohio adjacent to the western basin of Lake Erie was once known as the “Great Black Swamp”. When the natural wetlands were drained to provide fertile farmland, not only was the pollution to Lake Erie increased, but one of the possible solutions to the problem of lake eutrophication was removed. Through his research Dr. Reeder is determining what role one of the few remnants of this former wetland plays in keeping potentially harmful fertilizers from reaching the Great Lakes.

Another research project concentrates on the salt marshes of the North Inlet Long Term Ecological Research Site on the coast of South Carolina. As part of a second National Science Foundation grant, Dr. Reeder is seeking to establish what effects tides and sea level rise have on nutrient cycling in tidal creeks. These creeks change greatly in the role they perform as they are encroached by the ocean, thus effecting salt marsh food webs and nutrient cycles as they become more and more inundated by ocean water. Through their research, Dr. Reeder and his colleagues have designed new field equipment and computer simulation models to help monitor and predict the effects of global warming on our coastal wetlands. While one of wetlands most important roles is acting as a nursery for many species they can have a tremendous impact on other aspects of plant and animal life. According to Dr. Reeder, many people don’t realize that if wetlands don’t exist, seafood doesn’t either.

Reliability or Probability: What Will Occur?

As society has become more advanced, elements and resources utilized in everyday life have also become more complex and challenging. In order to gauge this ever changing cycle, a system for studying the reliabilites is needed.

Such is the work of Dr. Lloyd Jaisingh, associate professor of mathematics at Morehead State University. According to Dr. Jaisingh, systems of all levels of complexity must be studied to check for their particular level of reliability.

“Everything that functions is a system of components,” he said. “From the space shuttle to a simple transistor to the human body, all are systems that are subject to failure.” According to Jaisingh, one of the functions of reliability study is to determine the probability of a system surviving, using any number of combinations of internal and external factors. To that end, Dr. Jaisingh has completed a study funded by the Experimental Program to Stimulate Competitive Research (EPSCoR) entitled “Estimation of Parameters and Reliability for a Series System.”

In his research model, Dr. Jaisingh used two well known distribution systems, assuming the failure times for the components in the system had Weibull distribution, while the work environment was assumed to have an inverse Gaussian distribution.

“The use of both of these distributions in doing reliability studies is very common,” he said. “However, the uniqueness of this project was that we used them together.”

“Studies of this type are valuable to engineers and the private sector,” he added, “as they are the ones who must produce consumer goods that will last.”

Such studies are not limited to production lines. Insurance companies use studies in reliability all the time. “When a person buys life insurance, the company evaluates their age, lifestyle and personal habits to determine what kind of insurance risk you are” he stated.

The same thing is true of industry. Companies do extensive research to determine the life expectancy of a product they manufacture. By utilizing variables associated with a products environment, material make-up etc., they can determine outcomes that are meaningful to both the company and the consumer, he said. This allows the company to determine what warranty, if any, to put on a product.

Through his work in the field of reliability, Dr. Jaisingh has become an associate editor of the IEEE Reliability Society’s publication Transactions on Reliability. Dr. Jaisingh said his main interest is work that can be applied to the work place and which will help the human condition.

GRANTS SUMMARY

1990-91 External Grants

DIVISION OF ACADEMIC AFFAIRS

Larry Besant, "Supplemental Grant - Health Science Information Network Modernization." National Library of Medicine.

William DeBord, "Eastern Kentucky Health Science Information Network 1990-91." Highlands Regional Medical Center, Humana Hospital - Louisa, Our Lady of Bellefonte Hospital, Our Lady of the Way Hospital, Pikeville Methodist Hospital, St. Claire Medical Center.

William DeBord, "Eastern Kentucky Health Science Information Network Supplemental Grant." Meadowview Regional Hospital.

Gene Ranvier, "1991-92 Veteran's Education Outreach Program." U.S. Department of Education.

COLLEGE OF APPLIED SCIENCES AND TECHNOLOGY

Joe Bendixen, "Agriculture Teacher Workshops." Kentucky Department of Education.

Joe Bendixen, "Enrichment Activities for Agricultural Education." Kentucky Department of Education.

Charles Derrickson, "Administration and Coordination of Vocational Education Programs." Kentucky Department of Education.

Charles Derrickson, "Technical Assistance Forest Products Industry." Appalachian Regional Commission/Bluegrass State Skills Corporation.

Charles Derrickson, "Technical Assistance Forest Products Industry." Appalachian Regional Commission.

Charles Derrickson, "Vocational Education Title II-C." Kentucky Department of Education.

Joe Bendixen, "Agriculture Teacher Workshops." Kentucky Department of Education.

Robert Newton, "Enrichment - Field Base Education." Kentucky Department of Education.

Robert Newton, "Vocational Education Title II-C (Industrial Education and Technology)." Kentucky Department of Education.

Betty Porter, "Vocational Education Title II-C (Nursing and Allied Health Sciences)." Kentucky Department of Education.

Marilyn Sampley/Jane Ellington, "Enrichment Activities for Home Economics." Kentucky Department of Education.

Marilyn Sampley, "Vocational Education Title II-C (Home Economics)." Kentucky Department of Education.

Judy Willard, "Vocational Education Title II-C (Agriculture and Natural Resources)." Kentucky Department of Education.

COLLEGE OF ARTS AND SCIENCES

Larry Blocher, "1991 Summer Band Camp." Adair County High School, Harrison County High School, Lafayette High School, Male High School, Moore High School, Paintsville High School, Pikeville High School.

Vincente Cano/John Secor/Mary Jo Netherton/Eugene Hastings, "Teaching Culture Through the Four Skills." Kentucky Humanities Council.

Laura Duncan/John Philley, "Cora Wilson Stewart: A Pioneer Woman for Literacy." Kentucky Arts Council/Kentucky Humanities Council.

Don Flatt, "An Oral History of Morehead State University." Kentucky Oral History Commission.

Ben Flora, "Enhancement Program for Teachers of K-4 Mathematics 1991-92." University of Kentucky Research Foundation/National Science Foundation.

William Green, "East Asian Automobile Investment in Canada and the United States: Perspectives on Labor, Environmental, and Community Impacts in Ontario." Canadian Embassy.

William Green, "East Asian Automobile Investment in Canada and the United States: Perspectives on Labor, Environmental, and Community Impacts in Quebec." Quebec Government Office.

William Green, "Informed Consent of the Use of Contraceptive Drugs: The Legal and Ethical Lessons of Depo-Provera's Experimental and Unapproved Use." Southern Regional Education Board.

Ted Pass, "Bacterial Analysis of the Owenton Water Treatment System." Kentucky Department of Natural Resources and Environmental Protection.

Ted Pass, "Cave Run Clinic Waste Disposal Project, 1990." Cave Run Clinic.

Ted Pass, "Clark County Histoplasma capsulatum Assaying Project." Clark County Health Department.

Ted Pass, "Dr. Don Blair Waste Disposal Project, 1990." Office of Dr. Don Blair.

Ted Pass, "Franklin County, Tennessee, *Histoplasma capsulatum* Project." Office of County Judge Executive, Franklin County Tennessee.

Ted Pass, "Gateway District Health Department Waste Disposal Project, 1990." Gateway District Health Department.

Ted Pass, "Kentucky Department of Highways Histoplasma capsulatum Project." Kentucky Department of Highways.

Ted Pass, "Morehead Clinic Waste Disposal Project." Morehead Clinic.

Ted Pass, "Shay Dental Practice Waste Disposal Project, 1990." Shay Dental Practice.

John Philley, "91-92 Sciences and Math Alliance Project." Council on Higher Education.

Brian Reeder, "Sediment-Water Nutrient Flux in Tidal Creeks." National Science Foundation.

Tom Sternal, "East Kentucky Arts Consortium." Kentucky Arts Council.

Eugene Young, "Teaching of Writing in the Public Schools." Kentucky Department of Education.

COLLEGE OF BUSINESS

Wilson Grier, "1991-92 Ashland Small Business Development Center." Economic Development Corporation of Boyd and Greenup Counties.

Wilson Grier, "1991-92 East Kentucky District Small Business Development Center (Morehead/Pikeville/Ashland)." Small Business Administration/University of Kentucky Research Foundation.

Wilson Grier, "1991-92 East Kentucky District Small Business Development Center (State Grant)." Kentucky Commerce Cabinet.

Wilson Grier, "1989-90 East Kentucky District Small Business Development Center Supplemental Grant II." Small Business Administration/University of Kentucky Research Foundation.

Wilson Grier, "Supplement to the 1990-91 East Kentucky Small Business Development Center Program." Big Sandy Area Development District, Citizens Bank of Pikeville, First National Bank of Pikeville, Pikeville National Bank and Trust Company.

Sue Luckey, "Enrichment Activities for Business Teacher Education." Kentucky Department of Teacher Education.

Sue Luckey, "Vocational Education Title II-C (Information Sciences)." Kentucky Department of Education.

Beverly McCormick, "Real Estate Education Grant Program 1991-92." Kentucky Real Estate Commission

Green Miller, "1991 Economic Education Program." Kentucky Council on Economic Education.

COLLEGE OF EDUCATION AND BEHAVIORAL SCIENCES

John Duncan, "Principal Assessor Training." Kentucky Department of Education.

John Duncan, "Summer Institute for Principals." Kentucky Department of Education.

John Duncan/Randall Wells, "A Comparative Review of Practices in School-Based Decision Making in Seven School Districts." Kentucky Department of Education.

John Duncan/Randall Wells, "Site-Based Decision Making Training for Principals in Eastern Kentucky." Kentucky Department of Education.

James Gotsick/Lisa Kelly/Sylvester Kohut, Jr., "Minority Teacher Education Program." Council on Higher Education.

Robert Grueninger, "1990-91 Academic Year Food Service Program for the NCAA Sports Program." Kentucky Department of Education.

Robert Grueninger, "Extended National Youth Sports Program." National Collegiate Athletic Association.

Robert Grueninger, "1991 National Youth Sports Program." National Collegiate Athletic Association.

Robert Grueninger, "1991 Summer Food Service Program for NCAA Sports Program." Kentucky Department of Education.

Sylvester Kohut, Jr., "1991-92 Head Start Program." Gateway Community Services Organization, Inc.

Bruce Mattingly, "Dopamine Receptor Involvement in the Development of Behavioral Sensitization to Stimulant Drugs." National Science Foundation/University of Kentucky.

Debra Mattingly, "Child Development Associate Training Program." Bell/Whitley Head Start, Big Sandy Head Start, Bluegrass Head Start, Bourbon County Head Start, Boyd County Head Start, Gateway Head Start, Knox County Head Start, Kentucky River Head Start, Laurel County Head Start, Licking Valley Head Start, Lexington Head Start, Middle Kentucky River Head Start, Northeast Head Start, Williamstown Head Start.

Debra Mattingly, "Child Development Associate Training Program Supplemental #1." Licking Valley Head Start Program.

Judy Oaks, "Regional Training Center in Comprehensive School Health Education." U.S. Department of Education.

Barbara Quigley, "Army Family Research Program/Summer Faculty Research and Engineering Program." Battelle.

Harold Rose, "1991-92 Adult Basic Education JTPA Program." Kentucky Department of Education.

Harold Rose, "1991-92 Adult Learning Center and Volunteer Literacy Program." Kentucky Department of Education.

Harold Rose, "Food Stamp Employment and Training Program." Kentucky Department of Education.

Harold Rose, "GTE Adult Learning Center Literacy Program 1991." General Telephone Corporation.

Harold Rose, "MSU Adult Learning Center Literacy Program 1991-92." Kentucky Literacy Commission.

Mary Rudy, "Beginning Teacher Internship Evaluation." Kentucky Department of Education.

Mary Rudy, "1991-92 Kentucky Teacher Internship Program." Kentucky Department of Education.

Mary Rudy/Judy Oaks, "Safeguarding Kentucky Youth: A Program of Uniform and Coordinated Drug Abuse Education Training for School Personnel." Western Kentucky University.

Mike Seelig/Ted Marshall, "MSU Training Resource Center." Kentucky Department for Social Services.

Judith Stafford, "The Appalachian Cherokees: Past and Present." Kentucky Humanities Council.

George Tapp, "1991-92 Institute for Psychological Services Rehabilitation Partnership Grant." Carl D. Perkins Rehabilitation Center.

Paul Turgi, "MSU Drug Education Institute-Summer 1992." U.S. Department of Education.

OFFICE OF GRADUATE AND EXTENDED CAMPUS PROGRAMS

George Eyster/Catherine Riley, "Retired Senior Volunteer Program (RSVP) 1991-92." ACTION.

George Eyster/Catherine Riley, "Retired Senior Volunteer Intergenerational Mentor Program." ACTION.

George Eyster/Catherine Riley, "Retired Senior Volunteer Program for Montgomery County." United Way of the Bluegrass.

Shirley Hamilton, "91-92 ACTION Travel Grant." ACTION.

Shirley Hamilton, "Associate Degree Program 1990-91 Supplemental Grant." TENCO Service Delivery Area.

Shirley Hamilton, "Associate Degree Program 1991-92." TENCO Service Delivery Area.

Shirley Hamilton, "Medical Aide/Clerical/Retail Training 1990-91 Supplemental Grant." TENCO Service Delivery Area.

Shirley Hamilton, "Pharmacy Technician Training Program 1990-91 Supplemental Grant." TENCO Service Delivery Area.

Shirley Hamilton, "VISTA Volunteer Programs 91-92." ACTION.

Sharon Jackson, "KET GED-ON-TV." Kentucky Educational Television.

Jonell Tobin, "ABE/GED JOBS Service Instruction." Gateway Area Development District.

Jonell Tobin, "ABE/GED JOBS Service Instruction Supplemental." Gateway Area Development District.

Jonell Tobin, "ABE/GED JTPA Service Instruction." Kentucky Cabinet for Workforce Development.

Jonell Tobin, "ABE Student Recruitment Program Training Package Component." Kentucky Department of Education.

Jonell Tobin, "Adult Learning Center at MSU Licking Valley Educational Services Center." Kentucky Department of Education.

Jonell Tobin, "College Classes for JOBS Clients." Gateway Area Development District.

Jonell Tobin, "KLC/JOBS Literacy Program." Kentucky Literacy Commission.

Jonell Tobin, "Literacy Program - JOBS Service Contract." Gateway Area Development District.

Jonell Tobin, "Literacy Program - JOBS Service Contract Supplemental." Gateway Area Development District.

Jonell Tobin, "Literacy Program for Morgan County." Kentucky Literacy Commission.

Jonell Tobin, "Service Delivery System Proposal." Kentucky Department of Education.

Jonell Tobin, "Support Services for JOBS Clients." Gateway Area Development District.

OFFICE OF UNDERGRADUATE PROGRAMS

Jennifer Cady, "1991 Summer Food Service Program for Upward Bound Program." Kentucky Department of Education.

Jennifer Cady, "1991-92 Upward Bound Program." U.S. Department of Education.

Jennifer Cady, "1991 Upward Bound Supplement." U.S. Department of Education.

Dan Connell, "Destination Graduation - Bell South Supplemental Grant." Bell South Foundation.

Dan Connell, "Destination Graduation - Kentucky General Assembly Supplement Grant." - Kentucky General Assembly.

Dan Connell, "Destination Graduation - Year IV." U.S. Department of Education.

Dan Connell, "Educational Opportunity Center 91-92." U.S. Department of Education.

Dan Connell, "1991 MOAR Program (Morehead Occupational and Academic Retreat)." TENCO Service Delivery Area.

Dan Connell, "1991 MOAR Summer Food Service Program." Kentucky Department of Education.

Ruth Davis, "Student Support Services." U.S. Department of Education.

Carolyn Horn, "1991-92 Educational Talent Search Program." U.S. Department of Education.

Judy Rogers, "Morehead State University Scholar-In-Residence Program." Council for International Exchange of Scholars.

Judy Rogers, "Writing/Thinking Skills Assessment Project." Council on Higher Education - Kentucky Accountability Enhancement Programs.

DIVISION OF ADMINISTRATION AND FISCAL SERVICES

Larry Netherton, "90-91 National Program Production and Acquisition Grant." Corporation for Public Broadcasting.

Larry Netherton, "90-91 Radio Community Service Grant." Corporation for Public Broadcasting.

Joe Planck, "Engineering Design for Boiler Retrofit." Tennessee Valley Authority Kentucky Natural Resources and Environmental Protection Cabinet.

DIVISION OF STUDENT LIFE

James Morton, "Kentucky Work-Study Program." Kentucky Higher Education Assistance Authority.

James Morton, "Job Services Educational Assistance Program." Gateway Area Development District.

James Morton, "Student Financial Aid." U.S. Department of Education.

DIVISION OF UNIVERSITY ADVANCEMENT

Jan Burge, "Boys State - 1991." American Legion of Kentucky.

Jan Burge, "Horsemanship Camps I and III." Tamara McMillan.

Jan Burge, "Kentucky Dance Institute Conference-1991." Kentucky Dance Institute.

Jan Burge, "Kentucky DeMolay Conclave - 1991." Kentucky DeMolay Conclave.

Jan Burge, "Morehead State University Girls Basketball Camp - 1991." Each Camp Participant.

Jan Burge, "Morehead State University Golf Camp." Each Camp Participant.

Jan Burge, "MSU Athletic Trainer Camp." Each Camp Participant.

Jan Burge, "MSU Baseball Camp - 1991." Each Camp Participant.

Jan Burge, "Phil Simms Passing Camp." Each Camp Participant.

Jan Burge, "Summer Keyboard Experience - 1991." Each Camp Participant.

Jan Burge, "UCA Cheerleading Camp I, II and III - 1991." Universal Cheerleaders Association.

Internal Grants

ACCOUNTING AND ECONOMICS

Ishappa S. Hullur, "Expected Utility Maximization Model on Business Risk and Corporate Debt Use."

ART

David Bartlett, "Photogravure."

Robert Franzini, "A Preliminary Investigation of Monotype Transfer Techniques."

Stephen Tirone, "Cold-Cast Bronze Sculpture."

BIOLOGICAL AND ENVIRONMENTAL SCIENCES

Teresa Forsyth/Les Meade, "Estimation of Genetic Distance and Heterozygosity in Kentucky Populations of *Ambystoma jeffersonianum* and *Ambystoma tigrinum*."

Geoffrey Gerner, "Characterization of *Schistosoma mansoni* Mouse Immunoglobulin G Fc Binding Proteins."

David Magrane, "Effect of Steroids on the Viability and Protein Profile of Mouse Pre-Implantation Embryos."

Brian C. Reeder, "Hydrology, Productivity, and Phosphorus Cycling in an Eastern Kentucky Swamp: A Systems Approach."

David J. Saxon, "The Influence of Hypercholesterolemia on Thromboxane A₂-Induced Platelet Aggregation."

COMMUNICATIONS

Shirley Gish/Travis Lockhart, "Shouting the Glory."

ENGLISH, FOREIGN LANGUAGES, AND PHILOSOPHY

Michelle Boisseau, "The Uneasy Children of

Whitman and Williams: Contemporary Poetry's Discomfiture and the Politically Correct Poem."

Daniel S. Butterworth, "Wordsworth and the Excursive Imagination."

Elizabeth Cooley, "One Must Stop to Find a Word: Language and Communication in the Novels of Virginia Woolf and Voices from the Margin's Edge: Toni Morrison, Louise Erdrich, and Amy Tan."

Steven R. Cope, "Tentatively, Museum."

Ronald D. Morrison, "Christina Rossetti, the Critics, and the Canon."

John R. Secor, "Perfectivity in Old French Past Tense Verbs."

Thomas Stroik, "On The Distribution of Temporal and Locative NP Adverbials."

GEOGRAPHY, GOVERNMENT, AND HISTORY

Donald Flatt, "The History of Morehead State University, 1887-1997."

William C. Green, "The Odyssey of Depo-Provera: Judicial Risk Management and the Unapproved Use of a Contraceptive Drug" and "Canadian Government Recruitment of Japanese Automobile Manufacturers: A Comparative Constitutional Analysis."

Stuart Sprague, "The President and the General: Abe Lincoln and 'Beast' Burbridge, 1864-1865."

INDUSTRIAL EDUCATION AND TECHNOLOGY

Dennis Karwatka, "Garrett Morgan and the Gas Mask."

Wayne A. Morella, "An Inquiry into the Efficacy of 'Objective' versus 'Subjective' Examinations at the College Level - Phase I." (With R. Meadows)

Veeramuthu Rajaravivarma, "Three-Dimensional Image Processing."

Ronald D. Spangler, "Development of a Computer Animation Model to Teach Visualization Skills."

LEADERSHIP AND SECONDARY EDUCATION

Dan Fasko/Wayne Willis, "Values and Ethics in Education: Philosophical and Psychological Perspectives."

Stephen S. Young, "Friends and Folk," a Weekly WMKY Radio Program of Folk Music."

MANAGEMENT AND MARKETING

Robert E. Meadows, "An Inquiry into the Efficacy of 'Objective' versus 'Subjective' Examinations at the College Level - Phase I." (With W. Morella)

MUSIC

Larry R. Blocher, "Blueprint for Young Band: Sample Units of Study."

Paul Taylor, "An American in Italy: A Summer of Creative Activity."

NURSING AND ALLIED HEALTH SCIENCES

Pauline Ramey, "Investigation of Factors that Influence Rural Student Persistence in Higher Education."

PHYSICAL SCIENCES

Richard Hunt, "Interaction of Wood Waste and Soil."

Robert T. Lierman, "An Examination of Clay Mineral Assemblages from Lower Mississippian Age Rocks of Kentucky."

PSYCHOLOGY

Anna Demaree, "Hiring Experiences at Convention Placement Service."

Bruce Mattingly, "Behavioral and Biochemical Effects of Repeated Treatment with SKF 38393 in Rats" and "Neurochemical Involvement in the Development of Behavioral Sensitization to Stimulant Drugs."

David Olson, "The Role of Personality Characteristics in the Formation of Transient Mood States."

Frank Osborne, "Cognitive Learning Style and Academic Performance."

Barbara Quigley, "Why do People Help? Literature Review and Pilot Studies."

SOCIOLOGY, SOCIAL WORK, AND CORRECTIONS

Jacek Ganowicz, "Assessing the Impact of Feminism on Romantic Love."

Karl Kunkel, "The Politics of Business and Compassion: Preliminary Research on The Animal Rights Controversy in American Agriculture."

Edward B. Reeves, "Toward a Neo-Durkheimian Theory of Ritual: Coding the Cross-Cultural Data Base."

John Michael Seelig, "A Study of Child Welfare Systems in Addis Ababa and Shewa Administration Region, Ethiopia."

Patsy P. Whitson, "An Assessment of Vocational Rehabilitation for Patients With End Stage Renal Disease in Kentucky."

GRANTS SUMMARY

1991-92 External Grants

DIVISION OF ACADEMIC AFFAIRS

Larry Besant, "Data Conversion Grant-Year II -1991-92." Kentucky Department of Libraries and Archives.

Larry Besant, "Health Science Information Network Modernization-Year II." National Library of Medicine.

Larry Besant, "Data Conversion Grant—Year II—1991-92 Supplemental." Kentucky Department of Libraries and Archives.

William DeBord, "Eastern Kentucky Health Science Information Network 1991-92." St. Claire Medical Center, Our Lady of the Way Hospital, Highlands Regional Medical Center, Humana Hospital - Louisa, Pikeville Methodist Hospital, Our Lady of Bellefonte Hospital, Meadowview Regional Hospital, Northeast Kentucky Area Health Education Center.

Kathryn Mincey, "Poetry in Elementary Whole Language Learning." Witter Bynner Foundation for Poetry.

John Philley, "Sciences and Math Alliance Project—Year 7." Council on Higher Education.

John Philley/Virginia Wheelless, "Rural Allied Health and Nursing Program." Council on Higher Education.

Gene Ranvier, "1992-93 Veteran's Education Outreach Program." U.S. Department of Education.

COLLEGE OF APPLIED SCIENCES AND TECHNOLOGY

Joe Bendixen, "Enrichment Activities for Agricultural Education." Kentucky Department of Education.

Charles Derrickson, "Autotutorial and Microcomputer Laboratory Equipment." Kentucky Department of Education.

Charles Derrickson, "Administration and Coordination of Vocational Education Programs." Kentucky Department of Education.

Charles Derrickson, "Enrichment - Field Base Education." Kentucky Department of Education.

Charles Derrickson, "Vocational Education Title II-C (Continuation)." Kentucky Department of Education.

Scott Rundell, "Enhancing Undergraduate Programs: Development of an Educational Model for Environmental Concepts in Agriculture." U.S. Department of Agriculture.

Marilyn Sampley/Jane Ellington, "Enrichment Activities for Home Economics Teacher Education." Kentucky Department of Education.

James Smallwood, "Technology Education Workshop." Kentucky Department of Education.

Judy Willard, "Equine Workshop for Agriculture Teachers." Kentucky Department of Education.

COLLEGE OF ARTS AND SCIENCES

Ben Flora, "Enhancement Program for Teachers of K-4 Mathematics 1992-93 (Third Year)." University of Kentucky Research Foundation/National Science Foundation.

Benjamin Malphrus, "Morehead Radio Telescope." National Science Foundation.

Mary Jo Netherton, "Teaching Culture Through the Four Skills — Year II." Kentucky Humanities Council.

Ted Pass, "Dr. Don Blair Waste Disposal Project, 1991." Office of Dr. Don Blair.

Ted Pass, "Shay Dental Practice Waste Disposal Project, 1991." Shay Dental Practice.

Ted Pass, "Gateway District Health Department Waste Disposal Project, 1991." Gateway District Health Department.

Ted Pass, "Morehead Clinic Waste Disposal Project, 1991." Morehead Clinic.

Ted Pass, "Cave Run Clinic Waste Disposal Project, 1991." Cave Run Clinic.

Ted Pass, "Kentucky Department of Highways *Histoplasma capsulatum* Project." Kentucky Department of Highways.

Brian Reeder, "Sediment-Water Nutrient Flux in Tidal Creeks." National Science Foundation.

Brian Reeder, "The Role of Primary Producers in Treating Non-point Phosphorus Loading in a Great Lake Coastal Wetland." National Science Foundation/University of Kentucky Research Foundation.

Brian Reeder, "Nutrient and Plankton Dynamics in Grayson Lake." Kentucky Department of Fish and Wildlife.

Stuart Sprague, "Summer Seminar for College Teachers." National Endowment for the Humanities.

Adrian Swain, "Eastern Kentucky Arts Consortium 1992." Kentucky Arts Council.

Adrian Swain, "Creative Expression Project: GRASSROOTS ARTS EXHIBITION." Kentucky Arts Council.

Frank Tracz, "1992 Summer Band Camps." Campbellsville High School, Elkhorn City High School, Harrison County High School, Pikeville Independent High School, Highlands High School, Laurel County High School, Male Traditional High School, Moore High School, Western Hills High School.

Eugene Young, "Teaching of Writing in the Public Schools — 1992." Kentucky Department of Education.

COLLEGE OF BUSINESS

Wilson Grier, "1990-91 Small Business Development Center Supplement." Small Business Administration/University of Kentucky Research Foundation.

Wilson Grier, "91-92 Christian Appalachian Project." Christian Appalachian Project.

Wilson Grier, "91-92 Citizens Bank of Pikeville Project." Citizens Bank of Pikeville.

Wilson Grier, "91-92 Big Sandy Area Development District Project." Big Sandy Area Development District.

Wilson Grier, "91-92 First National Bank of Pikeville Project." First National Bank of Pikeville.

Wilson Grier, "91-92 Citizens National Bank of Paintsville Project." Citizens National Bank of Paintsville.

Wilson Grier, "91-92 Pikeville National Bank and Trust Company Project." Pikeville National Bank and Trust Company.

Wilson Grier, "1992-93 Ashland Small Business Development Center." Economic Development Corporation of Boyd and Greenup Counties.

Wilson Grier, "1992-93 East Kentucky District Small Business Development Center (Morehead/Pikeville/Ashland)." Small Business Administration/University of Kentucky Research Foundation.

Wilson Grier, "1992-93 East Kentucky District Small Business Development Center (State Grant)." Small Business Administration/University of Kentucky Research Foundation.

Sue Luckey, "Enrichment Activities for Business Teacher Education." Kentucky Department of Education.

Beverly McCormick, "Real Estate Education Grant Program 1992-93." Kentucky Real Estate Commission.

Green Miller, "1992 Economic Education Program." Kentucky Council on Economic Education.

COLLEGE OF EDUCATION AND BEHAVIORAL SCIENCES

Robert Grueninger, "1992 National Youth Sports Program." National Collegiate Athletic Association.

Robert Grueninger, "Supplement to 1990-91 National Youth Sports Program." National Collegiate Athletic Association.

Robert Grueninger, "1992 Summer Food Services Program for NYSP." Kentucky Department of Education.

Sylvester Kohut, Jr./Virginia Wheelless/Porter Dailey, "Proposal for Establishment of RSC VII at Morehead State University in Partnership with the Kentucky Educational Development Corporation." Kentucky Department of Education.

Sylvester Kohut, Jr., "1992-93 Head Start Program." Gateway Community Services Organization, Inc.

Sylvester Kohut, Jr., "Minority Teacher Education Program." Council on Higher Education.

Lisa Kelly, "A Continuing Educational Partnership to Provide Academic Opportunities for African-American Students with Emphasis on Science and Math." Council on Higher Education.

Bruce Mattingly, "Behavioral and Neurochemical Effects of Chronic Dopamine D₂ Receptor Stimulation." National Science Foundation/University of Kentucky Research Foundation.

Debra Mattingly, "Child Development Associate Training Program 1991-92." Bell/Whitley Head Start, Big Sandy Head Start, Bluegrass Head Start, Bourbon County Head Start, Boyd County Head Start, Gateway Head Start, Knox County Head Start, Kentucky River Head Start, Laurel County Head Start, Licking Valley Head Start, Lexington Head Start, Middle Kentucky River Head Start, Northeast Head Start, Williamstown Head Start, Laurel County Board of Education, Barbourville City School, Owsley County Head Start.

Judy Oaks, "Regional Training Center in Comprehensive School Health Education (Continuation — 2nd Year)." U.S. Department of Education.

Barbara Quigley, "Summer Research Fellowship Program." Battelle.

Ed Reeves, "A Neo-Durkheimian Theory of Ritual: Proposal to Develop a Cross Cultural Data Base for Hypothesis Testing." Southern Regional Education Board.

Harold Rose, "MSU Adult Learning Center JOBS Program — 1992." Kentucky Department of Education.

Harold Rose, "MSU Adult Learning Center JOBS Literacy Program — 1992." Kentucky Literacy Commission.

Harold Rose, "Postsecondary Classes for JOBS Clients." Gateway Area Development District.

Harold Rose, "1992-93 Adult Learning Center ABE/GED and Volunteer Literacy Program." Kentucky Department of Education.

Harold Rose, "Kentucky Homeless Adult Education Program Evaluation." Kentucky Department of Education.

Harold Rose, "MSU Adult Learning Center Literacy Program 1992-93." Kentucky Literacy Commission.

Harold Rose, "1992-93 Adult Learning Center JTPA Program." Kentucky Department of Education.

Harold Rose, "MSU Adult Learning Center JOBS Program — 1992 Supplemental." Kentucky Department of Education.

Harold Rose, "1991-92 Adult Basic Education JTPA Program Supplemental." Kentucky Department of Education.

Mary Rudy, "1991-92 Kentucky Teacher Internship Program Supplemental Grant." Kentucky Department of Education.

Edward Schatz, "REI 1991 Climbing Education Grant." Recreational Equipment, Inc.

Michael Seelig/Ted Marshall, "MSU Training Resource Center 1992-1993." Eastern Kentucky University.

George Tapp, "1991-92 Institute for Psychological

Services — Rehabilitation Center Partnership Grant Addendum." Carl D. Perkins Rehabilitation Center.

George Tapp, "1992-93 Institute for Psychological Services - Rehabilitation Partnership Grant." Carl D. Perkins Comprehensive Rehabilitation Center.

Patsy Whitson, "Dialysis Health Care Service Program 1990-91 Extension II." Dialysis Service Group, Inc.

Patsy Whitson, "Dialysis Health Care Service Program 1991-92." Dialysis Service Group, Inc.

Patsy Whitson, "Dialysis Health Care Service Program 1992." Dialysis Service Group, Inc.

OFFICE OF GRADUATE AND EXTENDED CAMPUS PROGRAMS

George Eyster, "Speakers Bureau: Emphasis on International Security Issues." OPTIONS.

Shirley Hamilton, "JTPA Associate Degree Program 1991-92 Supplemental." TENCO Service Delivery Area.

Sharon Jackson, "KET GED ON TV." Kentucky Educational Television, Inc.

Jonell Tobin, "Kentucky Literacy Commission Resource Center." Kentucky Literacy Commission.

Jonell Tobin, "KLC/JOBS Literacy Program 1990-91 Supplemental." Kentucky Literacy Commission.

Jonell Tobin, "Adult Learning Center ABE/GED Program at MSU Licking Valley Extended Campus Center." Kentucky Department of Education.

Jonell Tobin, "Literacy Program for Morgan County." Kentucky Literacy Commission.

Jonell Tobin, "Adult Learning Center JTPA Program at MSU Licking Valley Extended Campus Center." Kentucky Department of Education.

Jonell Tobin, "MSU Licking Valley Kentucky Literacy Commission JOBS Program." Kentucky Literacy Commission.

OFFICE OF UNDERGRADUATE PROGRAMS

Jennifer Cady, "1992-93 Upward Bound Program." U.S. Department of Education.

Jennifer Cady, "1992 Summer Food Service Program for Upward Bound Program." Kentucky Department of Education.

Dan Connell/Dail Howard, "Educational Opportunity Center 92-93." U.S. Department of Education.

Dan Connell, "Student Support Services 92-93." U.S. Department of Education.

Dan Connell, "1992 MOAR (Morehead Occupational and Academic Retreat) Program." TENCO Service Delivery Area.

Dan Connell/Catherine Riley, "Retired Senior Volunteer Program (RSVP) 1992-1993." ACTION.

Dan Connell, "Destination Graduation — Year V, 1992-1993." U.S. Department of Education .

Dan Connell, "1992 MOAR Summer Food Service Program." Kentucky Department of Education.

Dan Connell, "Destination Graduation Supplemental Summer 1992 Tutoring Budget." U.S. Department of Education.

Dan Connell, "Destination Graduation - Year IV (Supplemental)." University of Kentucky Research Foundation.

Carolyn Horn, "1992-93 Educational Talent Search Program." U.S. Department of Education .

Catherine Riley, "Retired Senior Volunteer Intergenerational Mentor Program in Rowan County." Rowan County Fiscal Court.

Catherine Riley, "Retired Senior Volunteer Program for Montgomery County." United Way of the Bluegrass.

Catherine Riley, "MSU Intergenerational Mentor Program in Rowan County." Rowan County Fiscal Court.

Judy Rogers, "Writing/Thinking Skills Assessment Project." Council on Higher Education.

Judy Rogers/Virginia Wheeless, "1992 Title III— Improvement of Academic Programs and Faculty Development." U.S. Department of Education.

Judy Rogers, "Native American Women: Models of Influence and Stability." Kentucky Humanities Council.

Judy Rogers/Virginia Wheeless, "CampusServe." Council on Higher Education.

DIVISION OF ADMINISTRATION AND FISCAL SERVICES

Larry Netherton, "91-92 Radio Community Service Grant." Corporation for Public Broadcasting .

Larry Netherton, "91-92 National Program Production and Acquisition Grant." Corporation for Public Broadcasting.

DIVISION OF STUDENT SERVICES

Fred Merritt, "Student Financial Aid." U.S. Department of Education.

Michael Mincey/Judy Krug, "Wellness Peer Educator Program." U.S. Department of Education.

DIVISION OF UNIVERSITY ADVANCEMENT

Jan Burge, "Boys State — 1992." American Legion of Kentucky.

Jan Burge, "UCA Cheerleading Camps I, II, III, and IV —1992." Universal Cheerleaders Association.

Jan Burge, "Ameri-Cheer Cheerleading Camp — 1992." Ameri-Cheer, Inc.

Jan Burge, "National Cheerleaders Association Camp —1992." National Cheerleaders Association.

Jan Burge, "Summer Keyboard Academy —1992." Each Camp Participant/Paul Taylor.

Jan Burge, "Michael Welch's MSU Volleyball Camp —1992." Michael Welch.

Jan Burge, "Kentucky Dance Institute Conference — 1992." Kentucky Dance Institute.

Jan Burge, "MSU Baseball Camp —1992." Each Camp Participant.

Jan Burge, "Elderhostels I, II, and III — 1992." Elderhostel/Each Participant.

Jan Burge, "Dick Fick Basketball Camps II, IV, and V —1992." Each Camp Participant.

Jan Burge, "Morehead State University Golf Camp —1992." Each Camp Participant.

Jan Burge, "Mountain Dulcimer Camp —1992." Elderhostel/Participants.

Jan Burge, "First Baptist Church Secretaries' Conference —1992." Each Participant.

Jan Burge, "Horsemanship Camp — 1992." Each Camp Participant.

Jan Burge, "Horseback Rider Mini Camps I and II — 1992." Each Camp Participant.

Internal Grants

AGRICULTURE AND NATURAL RESOURCES

Denise Jones, "Uterine Absorption of Procaine Penicillin G after Intramuscular Administration in Mares."

ART

Robert Franzini, "Multimedia: A Synthesis of Color Monotype and Relief Etching" and "A Preliminary Investigation into the Use of Kentucky Limestone for Lithographic Printing."

Christopher McDavid/Stephanie McDavid, "Two Large Scale Cast Bronze Sculptures."

BIOLOGICAL AND ENVIRONMENTAL SCIENCES

Teresa Forsyth, "Phylogenetic Profiling in *Drosophila* Species Using VNTR's."

Geoffrey W. Gearner, "A Pilot Survey of Northeastern Kentucky Arthropods for the Presence of *Borrelia burgdorferi*."

David Magrane, "Evaluation of Steroid Requirement in Mouse Preimplantation Embryos."

Brian Reeder, "Sedimentation in a Lake Erie Coastal Wetland."

David Saxon, "Hypercholesterolemia and Feedback Mechanisms in Platelet Aggregation Reactions Stimulated by Arachidonic Acid."

COMMUNICATIONS

John V. Modaff, "Philosophy of Creative Communication."

ENGLISH, FOREIGN LANGUAGES, AND PHILOSOPHY

Michelle Boisseau, "Poetry and Fiction Writing."

George E. Eklund, "An American Master on Hiding—A Week With Alan Dugan."

Joyce B. LeMaster, "The Place and Function of Blacks in Faulkner's Fiction."

Ronald D. Morrison, "Thomas Hardy's *Jude the Obscure* and *The Well-Beloved*: The Perversity of Idealism."

Sarah R. Morrison, "Jane Austen's Novels: Men on the Periphery."

Mary Jo Netherton, "Je Est un Autre: The Self as Other in the Works of Arthur Rimbaud."

John R. Secor, "Strasburg and Its Place in French Numismatic History."

Thomas Stroik, "Reversal in Psych-verb Constructions" and "On Case-making Infinitival Subjects."

GEOGRAPHY, GOVERNMENT, AND HISTORY

William Green, "The Odyssey of Depo-Provera: An Inquiry Into the Controversy Over a Contraceptive Drug" and "The Transformation of the National Labor Relations Act Paradigm: Labor-Management Relations in Post-Fordist Automobile Plants."

Lily Hwa, "Taiwan's Economic Miracle: Its Philosophical Roots (1949-1990)."

Oscar Rucker, "Location and Identification of Burial Grounds in the Valley of Brownie's Creek, Bell County, Kentucky."

Stuart Sprague, "African Americans of Eastern Kentucky and Maysville, 1864-1875" and "Kentucky's African-American Migrants to Kansas, 1870-1890."

HOME ECONOMICS

Carolyn D. Taylor, "Original Knit Product Designs Via Knitting Machine Technology."

INDUSTRIAL EDUCATION AND TECHNOLOGY

Raj Desai, "Technology Transfer."

Veeramuthu Rajaravivarma, "Artificial Neural Networks."

James E. Smallwood, "Investigation of Training Methods and Strategies Used in Successful Employee Involvement Programs."

MUSIC

Larry Blocher, "A Contemporary Curricular Model for Young Bands."

PHYSICAL SCIENCES

Michael Adams, "Synthetic, Structural, and Reactivity Studies of Diiron Phosphido-bridged Carbonyl Complexes."

PSYCHOLOGY

Bruce Mattingly, "Dopamine Receptor Involvement in the Development of Behavioral Sensitization to Cocaine" and "Presynaptic Dopamine Synthesis and the Development of Behavioral Sensitization."

David Olson, "Dysphoria and Self-Verification Processes" and "The Interpersonal Schema Questionnaire: Further Validation."

SOCIOLOGY, SOCIAL WORK, AND CORRECTIONS

Jacek Ganowicz, "Attitudes Towards Marriage and Dating Partners Among College Students."

Karl R. Kunkel, "LAW Enforcement, Social Organization, and Deterrence Among Edwin Sutherland's White Collar Crime Offenders."

John M. Seelig, "Intergrating International Social Welfare Concepts in the MSU Social Work Program Curriculum."

Neil Websdale, "Follow Up Pilot Study of Selected Spouse Abuse Shelters in Rural Kentucky" and "Recent Developments in the Policing of Domestic Violence in Rowan County, Kentucky."

S. Mont Whitson, "The Harrington/Krober Rivalry Relating to the American Indian."

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