

**SUMMARY REPORT OF GRANTS FUNDED
BY THE FACULTY RESEARCH COMMITTEE**

July 1, 1980 – June 30, 1981

**Compiled by the 1981–82
Faculty Research Committee**

**Morehead State University
Morehead, Kentucky
May, 1982**

FACULTY RESEARCH COMMITTEE

1980-81

Applied Sciences and Technology
Benjamin Harmon
Donal Hay

Business and Economics
Anna Burford
Joe Copeland

Grants and Contracts
Carole Morella

Education
Frank Osborne
Dean Owen

Sciences and Mathematics
James Chaplin
David Saxon (Chairperson)

Social Sciences
Roland Burns
Robert Bylund

Graduate Programs
Reedus Back

Humanities
Roger Jones
Frederick Mueller

Planning, Information Systems,
and Computing Services
Charles Hicks

1981-82

Applied Sciences and Technology
Benjamin Harmon
Donal Hay

Business and Economics
Joe Copeland
Daniel Lockhart

Grants and Contracts
Carole Morella

Education
Frank Osborne
Dean Owen

Sciences and Mathematics
James Chaplin
David Saxon (Chairperson)

Social Sciences
Roland Burns
Robert Bylund

Graduate Programs
Reedus Back

Humanities
Roger Jones
Frederick Mueller

TABLE OF CONTENTS

Faculty Research

Robert J. Franzini	1.
<i>An Investigation into the Monotype-ink Resist/Relief Etching Technique</i>	
Kent E. Freeland and George E. Dickinson	2
<i>Social and Academic Conditions Among Blacks and Whites in a Rural Southern Desegregated School System</i>	
Richard L. Hunt	4
<i>Analytical Chemistry of Shale Oil</i>	
Bruce A. Mattingly	5
<i>Serotonergic Involvement in the Behavioral Effects of Septal Lesions</i>	
David R. Rudy	6
<i>Social Cocoons: Organizations for the Transformation of Identity</i>	
Sharon Wolf	7
<i>Conformity and Innovation</i>	

REPORT OF GRANT FUNDED
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: Robert J. Franzini

Department: Art School: Humanities

Title of research: An Investigation into the Monotype-ink Resist/Relief Etching Technique

Date of final report: January, 1981 Date grant was funded: November, 1980
(Mo./Yr.) (Mo./Yr.)

Amount for which grant was funded: \$677.00

Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.

Objectives of the Research:

In terms of the printmakers craft, the monotype-ink resist/relief etching technique is a new approach. It provides a fluid and direct method of printmaking growing as it does out of the monotype process. The objective of this project is to investigate all elements of the technique, and to discover what works best, and why. Following this, the intention is to disseminate the knowledge to the artistic community at large through publication or other method.

Because this project involves a technique in the visual arts, the product of the research will not entirely be written information. New techniques in the printmaking field produce unique visual and tactile qualities in the product. Thus, this project will produce the experimental data, the conclusions, and the physical product; the plates and the proofs pulled from them.

Research Summary:

Forty copper plates were utilized during the investigation into the monotype-ink resist/relief etching technique. The most functional and predictable ink resist was determined to be a hand made combination of bone and vine pigments with No. 3 burnt plate oil. Commercial inks proved unpredictable due to the dryers and dispersal agents which were added at manufacture. Heating the plate to bake on the resist proved at best a haphazard process. Often the image lost fine line and textural articulation due to ink spreading, and on occasion the ink resist peeled off the plate during etching.

By allowing the ink resist to air dry, one could achieve almost perfect results. Ink grounds air dried from three to ten days proved to be excellent acid resists, able to withstand the action of the acid for up to twenty-five hours. Nine to one Dutch mordant acid was determined to be the most suitable acid due to its less corrosive character and its tendency to bite vertically. Iron perchloride acid was found to be too corrosive for delicate etching, but excellent for open biting large areas.

Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?

Project results are being submitted to Print News, Southern Graphics Council Newsletter, and other printmaking publications for publication consideration.

REPORT OF GRANT FUNDED
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: Kent E. Freeland and George E. Dickinson

Department: Curriculum and Instruction, and Sociology,
Social Work and Corrections School: Education and Social Sciences

Title of research: "Social and Academic Conditions Among Blacks and Whites in a Rural Southern
Desegregated School System"

Date of final report: August, 1981 Date grant was funded: November, 1980
(Mo./Yr.) (Mo./Yr.)

Amount for which grant was funded: \$1205.00

Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.

Objectives of the Research:

Does the attitude of black and white students in a desegregated system correspond to the attitude of the teachers and administration in that school district?

Research Summary:

Students, teachers and administrators in a Northeast Texas community were given questionnaires in 1981 to ascertain information on social and academic conditions among blacks and whites (student body is one-third black and two-thirds white) after desegregation in 1970. The return rate from the fourth, fifth, and sixth grades (n=483) was 91 percent and 69 percent from teachers and administrators (n=133). It was concluded that desegregation does not improve academic performance of students. Interracial contact was limited between the races, especially outside of school. Blacks tended to take a more active part in initiating an integrated situation. Teachers and administrators suggested more involvement of parents in making desegregation a more positive experience academically and socially.

(Continued on next page.)

Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?

A manuscript entitled "Student, Teacher and Administrative Attitudes Toward School Desegregation 1964-1981" was submitted in May, 1981 to *Integrated Education* for publication consideration.

A proposal for presentation consideration at the 1982 Conference of the Association for Childhood Education International in Atlanta, GA entitled "Social and Academic Conditions Among Blacks and Whites in a Rural Southern Desegregated School System" was submitted in May, 1981.

Dr. Kent Freeland and Dr. George Dickinson - Research Summary - Continued

From previous studies in this school system by the authors, adolescent black students' opinions on attending school with another race did not change over time (less than 10 percent objected to desegregation in both 1964 and 1979), whereas whites' opinions changed significantly as over 75 percent objected to desegregation in 1964 and less than 15 percent objected in 1979. Ninety percent of elementary black students in 1981 like going to school with both black and white students while less than two-thirds of white students like this arrangement. Seventy-nine percent of the teachers and administrators like working in a desegregated school system. It is suggested that contact between the races has reduced the negative stereotypes of blacks held by whites.

REPORT OF GRANT FUNDED
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: Richard L. Hunt

Department: Physical Sciences School: Sciences and Mathematics

Title of research: Analytical Chemistry of Shale Oil

Date of final report: April, 1982 Date grant was funded: January, 1981
(Mo./Yr.) (Mo./Yr.)

Amount for which grant was funded: \$2615.00

Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.

Objectives of the Research:

1. Develop analytical methods for the products of Eastern shale batch retorting for tract metals and molecular composition.
2. Analyze typical products by the analytical methods developed.
3. Characterize process products as a function of retorting conditions.

Research Summary:

GLC, NMR, IR, and distillation studies of some Eastern shale oil samples were carried out. These gave only a characteristic profile for each sample, but were not adequate for detailed molecular characterization. Process "water" studies were plagued with non-reproducible sample problems. However, very low trace metal contents were indicated in all samples and high levels (above 1%) of uncharacterized and easily oxidized organic compounds were noted. These organic materials are most likely to be predominantly phenolic.

Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?

These results are not adequate for publication, nor useful enough to be disseminated. They have and will serve as the basis for writing research proposals.

REPORT OF GRANT FUNDED
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: Bruce A. Mattingly

Department: Psychology School: Education

Title of research: Serotonergic Involvement in the Behavioral Effects of Septal Lesions

Date of final report: April, 1981 Date grant was funded: November, 1981
(Mo./Yr.) (Mo./Yr.)

Amount for which grant was funded: \$1300.00

Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.

Objectives of the Research:

Following damage to the septal area of the limbic forebrain, there is a significant reduction in the levels of brain serotonin. It has been suggested that this decrease in brain serotonin levels is responsible for many of the behavioral effects of septal lesions. The present study investigated this hypothesis in three experiments.

Research Summary:

Major findings were: (a) Rats injected with para-chlorophenylalanine (PCPA), a compound which depletes brain serotonin, are less active than saline control rats during an aversive conditioned stimulus (CS), whereas septally-lesioned rats are more active during an aversive CS (Experiment 1); (b) rats injected with PCPA learn as quickly as control rats to press a lever to escape shock whereas septally-lesioned rats are severely deficient in shock escape learning (Experiment 2); and (c) the administration of 5-hydroxytryptophan, a compound which increases brain serotonin levels, does not improve the performance of septally-lesioned rats in a leverpress shock escape task (Experiment 3). These results indicate that the reduction of brain serotonin following septal lesions cannot account for all of the observed behavioral effects of septal damage in aversive learning situations.

Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?

A total of four papers based upon this research were presented at the meetings of the Kentucky Academy of Sciences (3 papers) and the Southeastern Psychological Association (1 paper). In addition, two manuscripts are in preparation for submission to two international journals : Physiology and Behavior and Pharmacology, Biochemistry and Behavior.

REPORT OF GRANT FUNDED
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: David R. Rudy

Department: Sociology School: Social Sciences

Title of research: Social Cocoons: Organizations for the Transformation of Identity

Date of final report: September, 1981 Date grant was funded: December, 1980
(Mo./Yr.) (Mo./Yr.)

Amount for which grant was funded: \$1300.00

Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.

Objectives of the Research:

The major objectives of this research are to identify, describe, and analyze the structural and processual features of organizations for the transformation of identity and to build a general model of identity transformation.

Research Summary:

Using participant observational data from Alcoholics Anonymous groups and secondary ethnographic data from therapeutic drug programs, religious cults, rehabilitation programs, and self-help organizations, a general theory of identity transformation was developed. The central dynamic in identity transformation is the process of coming to see oneself and one's world from the perspective of a new reference group. The major structural feature of identity transformation is encapsulation. Through encapsulation, organizations construct physical, social, and ideological barriers constricting and regulating contact between affiliates/converts and discrediting significant others. Finally, identity transformation is facilitated by various commitment mechanisms including: rewards, sunk costs, mortification, and sanction systems.

Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?

"Social Cocoons: Organizations for the Transformation of Identity," (with Larry Greil). Paper presented at the annual meeting of the Society for the Scientific Study of Religion. Winter 1981.

"Therapeutic Drug Programs as Social Cocoons: Commitment and Identity Transformation," (with Larry Greil). Paper presented at the annual meeting of the Society for the Study of Social Problems. Fall, 1981.

Organizer and discussant of "Identity Transformation." Annual meeting of the Southern Sociological Society. Spring, 1981.

REPORT OF GRANT FUNDED
BY THE FACULTY RESEARCH COMMITTEE

Name of grant recipient: Sharon Wolf

Department: Psychology School: Education

Title of research: Conformity and Innovation

Date of final report: August, 1981 Date grant was funded: December, 1980
(Mo./Yr.) (Mo./Yr.)

Amount for which grant was funded: \$403.00

Use the space below for a single-spaced abstract of approximately 100 words. This should be a narrative summary of the final report of your grant.

Objectives of the Research:

The proposed research will explore social influence processes in group situations. Specifically, it will permit a quantitative comparison between social influence produced by a majority and that produced by a minority, in the context of a single experiment. At present, there is a rift in theorizing about social influence processes that has arisen from the failure of researchers to study majority and minority influence together. The proposed research is intended to help bridge the theoretical gap and to integrate the findings of two separate research traditions.

Research Summary:

A study was designed to permit quantitative comparisons between majority influence (conformity) and minority influence (innovation), to assess group cohesiveness and behavioral style as mediators of each form of influence, and to test the hypothesis that whereas majorities produce more manifest influence than minorities, minorities produce more latent influence than majorities. The study employed a 2x2x2 design, varying source status (majority or minority), group cohesiveness (high or low), and behavioral style (high or low consistency), and assessed influence on both the manifest and latent level. Results confirmed the greater influence of majorities on a manifest level but not of minorities on a latent level.

Final use of project results, e.g., Where was it published? At what professional meeting was it presented? How was it disseminated to the academic or regional community?

It is too early to know if the paper will be read at a professional meeting or if it will be published. It will most likely be combined with a subsequent replication and presented as part of a multi-study report.