112-1

[redacted]

INVOICE CHECK LIST

MKULTRA Subproject

At

Date of Original Authorization	Period Covered	Time Extended To	Allotment Number	Amount of Obligation
21 MAR 1960			825-1809-1902	6,056.66

Additional Authorizations	Period Covered	Time Extended To	Allotment Number	Amount of Obligation

Invoice Number	Date	Amount	Balance
Att #1	20 July 1960	6,056.66	6,056.66
#1		6,026.66	-0-
REMARKS:			

[redacted]

112-2

[redacted] B A [redacted]

February 21, 1962

C [redacted] B

C Dear [redacted]

Following is a report on your grant made to [redacted] C

C [redacted]

Grant		$6,056.66
Expenditures		
Salaries		
[redacted]	$1,555.56	
	400.00	
C [redacted]	1,000.00	
	1,025.00	
Hourly help	1,116.89	5,097.45
Travel		70.00
Supplies		113.20
Equipment		78.00
Indirect Costs		790.00
Total Expenditures		6,148.65
Balance		$ -91.99

Sincerely,

[redacted] C

[redacted] C

This is a true statement of the expenditures on the grant to [redacted] C as shown by the University.

[redacted] C

I have examined and approved the submitted expenditures.

[redacted]

Chief
TSS/Chemical Division A

Date: 4/5/

112-3

[redacted]

No. 106

Cost Account 1525.109.1102

Object Class

Date	Remarks and References	Obligations Incurred	Obligations Liquidated	Unliquidated Balance
20 JUL 1960	Mfr letter Sub 112	6056.66		6056.66

[redacted]

112-4

[redacted] 24 . ch 1960

MEMORANDUM FOR: COMPTROLLER

ATTENTION : Finance Division

SUBJECT : MKULTRA, Subproject 112

Under the authority granted in the Memorandum dated 13 April 1953 from the DCI to the DD/A and the extension of this authority in subsequent memoranda, Subproject 112 has been approved and $6,056.66 of the over-all Project MKULTRA funds have been obligated to cover the subproject's expenses and should be charged to Allotment ~~0183-1009-1902~~ 1525-1009-1902.

[redacted] A
Chief
TSD/Chemical Branch

APPROVED FOR OBLIGATION
OF FUNDS:

[redacted] A
Research Director

Date:

I CERTIFY THAT FUNDS ARE AVAILABLE 20 JUL 1960
OBLIGATION REFERENCE No. 106
CHARGE TO ALLOTMENT No. 1525-1009-1902
AUTHORIZING OFFICER

Distribution:
Orig & 2 - ADDRESSEE
1 - TSD/OC
1 - TSD/FASS

[redacted]

[redacted]

(When Filled In)

CONFIDENTIAL FUNDS POSTING VOUCHER

VOUCHER NO. 7-12 | DATE 2-6 | VOUCHER NO. 7-12

DESCRIPTION-ALL OTHER ACCOUNTS 13-33 / DESCRIPTION-ADVANCE ACCOUNTS 13-27	29-33 V/A NO. / P.O. NO. / 36-39 OTP	34-39 STATION CODE / PROP. NO. / PROJECT NO.	40-42 EXPEND CODE / FY	43 FUNDS	45-46 PAY PER. LIQ. CODE	47-52 ORLIG. REF. NO. / APPV. NO. / EMP. NO.	53 CA YR	54-57 GENERAL LEDGER ACCT. NO.	58-67 ALLOT. OR COST ACCT. NO.	62-67 CA. NO. / X REF. NO.	68-70 DUE DATE / OBJECT CLASS	71-80 AMOUNT DEBIT	71-80 AMOUNT CREDIT
[illegible]	[illegible]		[illegible]			[illegible]		[illegible]		[illegible]		[illegible]	
											TOTALS		

EXPLANATION OF ENTRY

[illegible]

DATE	PREPARED BY	DATE	REVIEWED BY	CERTIFIED FOR PAYMENT OR CREDIT	
[illegible]	[redacted]			DATE	SIGNATURE OF CERTIFYING OFFICER

FORM 10-59 606 USE PREVIOUS EDITIONS. (10-49)

[redacted]

112-6

[redacted]

20 July 1960

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : TSD/Budget Officer

SUBJECT : MKULTRA, Subproject 112, Invoice No. 1
Allotment 1525-1009-1902

1. Invoice No. 1 is attached covering the above subproject. Payment should be made as follows:

Cashier's Check in the amount of $6,056.66, drawn [redacted] payable to the [redacted]

2. Please forward the check to Chief, TSD/Research Branch through TSD/Budget Officer by Wednesday, 3 August 1960.

3. This is a final invoice. However, since it is anticipated that additional funds will be obligated for this project, the files should not be closed.

[redacted]
Chief
TSD/Research Branch

Attachment:
Invoice & Certifications

Distribution:
Orig & 2 - Addressee

1 - TSD/FASS

2 - TSD/RB

TSD/[redacted] (20 July 60)

[redacted]

112-6

[redacted]

INVOICE

For services $6,056.66

[redacted] B

CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 1 applying to Subproject No. 112 of MKULTRA, that performance is satisfactory, that services are being accomplished in accordance with mutual agreements, that a detailed agenda of the payments and receipts is on file in TSD/RB, that this bill is just and correct and that payment thereof has not yet been made.

Chief, TSD/Research Branch

Date:

(2) It is hereby certified that this invoice applies to Subproject No. 112 of MKULTRA which was duly approved, and that the project is being carried out in accordance with the memorandum of 13 April 1953 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda.

Research Director

Date:

[redacted]

112-6

RECEIPT

Receipt is hereby acknowledged of the following check:

Official Check No. 043049, dated July 29, 1960, in the amount of E
$6,056.66, drawn on the [redacted] B
payable to the [redacted]
B [redacted]

[redacted] C

Name

[redacted] C

Date

[redacted] 112-7

TO: TSS/OC

1. Date of Obligation: N/A

2. Purpose of Project: [redacted]

3. Progress to Date: Satisfactory [redacted]

4. Expiration Date: N/A

5. Project Monitor [redacted]

FROM: TSS/CD Priority # 6

[redacted]

[redacted]

112-8

[redacted]

DRAFT/[redacted] A
24 March 1960

MEMORANDUM FOR: THE RECORD

SUBJECT: MKULTRA, Subproject 112

1. It is requested that Subproject 112 be approved to support the research program of [redacted] C-B in his study of [redacted] C [redacted] in accordance with the attached proposal.

2. This type of grant is clearly consistent with the overt aims and purposes of the [redacted] B and will serve to support the [redacted] need for cover. Agency interest B is connected with the current problems of vocational guidance with possible application to the selection of technical and scientific careers.

3. Funding and monitoring of this project will be handled by the [redacted], in the regular manner. Accounting for the funds expended will be according to the procedures previously established by the [redacted]. It is not anticipated that any permanent equipment will be required for the project. Travel funds will be accounted for in a manner consistent with the established practice of the [redacted] B

4. The total cost of the project for a period of one year is estimated to be $6,056.66 as indicated in the attached budget. Charges should be made against Allotment ~~0525-1009-1902~~ 1525-1009-1902.

[redacted]

5. No cleared or witting persons are concerned with the conduct of this project.

[redacted] A
Chief
TSD/Chemical Branch

APPROVED FOR OBLIGATION OF FUNDS

[redacted] A
Research Director

6 MAY 1950

Date:

Attached:
Proposal and Budget

Distribution:
Original only

112-8

SUMMARY OF PROPOSAL

Name: [redacted]

Position: [redacted] B+C

Study Title: [redacted]

Objectives:

This research is first of all intended to probe the development of young children's understanding of occupational roles within their society, and the awareness which they have developed of the way in which a prestige or status system is associated with work. Second, it seeks to explore the degree to which personal contact, vicarious contact (via television) and limited contact with occupational roles are influences on the degree of learning about such occupational concepts. Third, it attempts to assess the influence of the child's background factors, such as age, sex, social class and intelligence, on his learning about the relationships between work and status.

Methods

The research will involve interviewing and testing, with instruments designed for the purpose, random samples of children in grades one through eight in the [redacted] B
The 3,801 children currently enrolled represent both rural and town children, as well as a wide range of socioeconomic levels. In addition, a systematic content analysis of children's television programs will be conducted to establish the nature of occupational portrayals on this mass medium. Statistical tests of hypotheses, quantitative measurement, and numerical treatment of data will be used wherever possible throughout the research. An extended Research Plan has been prepared which outlines the methods involved in each phase more completely.

Completed Phases and Projects in Progress

The most significant progress to date has been the development of and partial testing of the Occupations Test for young children. This test consists of 18 cards, each portraying a common occupation in graphic or cartoon-like form. These drawings were prepared by a professional artist, and they will be used to test occupational concepts in the samples studied.

From the point of view of the child, the Occupations Test appears to be a "game" which they play with the interviewer. Each of the eighteen cards contains a carefully selected occupational role. The cards are divided into three sets of six cards each, on the basis of the kind and degree of contact the ordinary child has had with the occupations

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in the set. That is, each set represents a set of roles with which the child has had either personal, vicarious (via T. V.), or limited contact. Within each set the occupations are status-graded such that prestigious and humble occupations are represented with intermediate categories arranged in-between.

With the use of this instrument, it has been possible to obtain a Roles score (indicating the extent to which the subject is familiar with the actual functions performed by the occupations) and a Status score (indicating the degree to which the subject understands the position occuppied by the occupational categories in the prestige hierarchy).

This instrument also includes pictorial representations of common status symbols. For example, houses (ranging from a mansion to a shack) and cars (ranging from a limousine to a jalopy) are shown. The child subject is asked to indicate which occupation would possess which of these status criteria. More abstract criteria such as authority, education, dress and wealth will also be explored.

Although the measurement techniques have been partially pretested, they need further refinement before actual research begins. A pilot study is now being started for the purpose of refining instruments, improving interview techniques, and developing sampling procedures. Preliminary tests of several hypotheses will be available from this study when it is completed.

Time Required to Complete the Work for Which Aid is Sought:

It is anticipated that the support could be scheduled as follows: (1) Aid would start in the summer of 1960, (2) continue during the 1960-61 academic year, and (3) terminate at the end of the summer of 1961. These three periods would provide for: (1) further planning and pretesting, (2) a major data-gathering period, and (3) an analysis and writing period, respectively.

Qualifications of the Organizations of Individuals Involved:

[redacted]

My fields of specialty have been Social Psychology and Research Methods. I teach a variety of courses at all levels from freshman to graduate. These include Mass Communication, Research Methods, Social Psychology, Public Opinion and Propaganda, Graduate Seminars, Introductory Sociology, etc. I have published a number of research articles and monographs in such fields as attitude measurement, human ecology, race relations, mass communication and others. (See attached vita).

The project will require one graduate student assistant, who will work either on a part time basis or for short periods on a full time basis. This person will assist with technical work such as sampling, pretesting, interviewing, abstracting of previous research, etc. Also,

during the major data-gathering period supplementary help, paid on an hourly basis, will be required.

Previous Support

Although this particular project has had no previous support, the research grew out of a study recently completed by [redacted] myself. This previous study investigated the recruitment of faculty children into academic life. That study was supported by funds from the [redacted]

112-8

ESTIMATED BUDGET

Salary	$1,466.66	Salary of Principal Investigator for the Summer of 1961. (If an increase in base pay from present $6,600 occurs, this will be adjusted to conform to 2/9ths of actual base pay at the time.)
	$1,600.00	Salary of graduate student research associate who will assist with planning, interviewing, pretesting, tabulation, statistical analysis and related problems. (This will be either half time for 1960-61 or full time for summers of 60 and 61 or some combination of part and full time for these periods.)
	1,000.00	Salary for additional interviewers during major data-gathering period.
	250.00	Salary for student content analysts; 200 hours at $1.25 per hour.
	500.00	Salary for part time clerk-typists. About 400 hours will be needed at $1.25 per hour. This will involve typing, mimeographing, sorting, coding, and some simple statistical computation.
	275.00	Fees and costs involved in the preparation of drawings, cartoons and photographic reproductions for the Occupations Test and related instruments. These must be done by professional artists and photographic technicians.
Travel	75.00	Travel of Principal Investigator and/or assistant for purposes of interviewer supervision and related problems. The sample area involves rural areas.
Supplies	100.00	Mimeograph paper, typing paper, stencils and miscellaneous materials.
	$5,266.66	Total expenses
	790.00	Indirect overhead expenses, payable [redacted] for administration of funds, work space, machines, etc.
	$6,056.66	Grand Total

B

112-4

[redacted] C

A Research Plan

Introduction

The American Society is one characterized, for the most part, by an open class system coupled with a strongly emphasized cultural theme of upward mobility. The primary avenue to such upward mobility is through an occupational career.[1] From the standpoint of the individual, the selection of and entrance into an occupational specialty can be one of the most significant processes occurring in his life cycle. Just as animals lower than man must be suited by biological structure, inherited capacity or learning ability, to occupy a particular niche in the web of life, the human individual in an industrial society must occupy a position in the web of work. To do this he must be equipped, by the time occupational selection is made, with attitudes, motivations and information about his chosen occupational role, so that he can successfully adjust to the way of life which a particular occupational category will imply.

At the level of the individual, the occupational career will determine in many ways the life pattern which will be followed. For example, a man's work is an important determiner of his position in the class structure of his local community. Many studies have shown that the impact of the community, and indeed the larger society, is to a sizable extent mediated by the individual's position in this

[1]This is most true of American males, but it is becoming increasingly true of women as the status of females in our society continues to change.

class structure. The distribution of justice, education for offspring, material comforts, life and health expectancy, exposure to the artistic heritage, and even political and religious beliefs have been shown by past research to be closely bound to the social class hierarchy; consequently to be related to the prestige hierarchy of occupations. In short, perhaps few other decisions have the significance that the decision of occupational choice has for the individual attempting to relate himself to an industrial society.

The importance of occupational choice and occupational prestige can also be discussed at the societal level. The survival of any society in the complex balance of modern international relations may be closely linked to that society's ability to recruit capable individuals into a variety of key occupations. The widely discussed innovations in scientific and technical education which have occurred in the Soviet Union may pose a problem of survival for the American society. Unless techniques can be discovered for inducing potential recruits to enter vital job categories, the American society may find itself badly outstripped in decades to come. This is true not only of occupations which have potential military significance, but of those which are central to the continued existence of a peaceful society. At present, we not only lack sufficient engineers and scientists for the rocket race, but we lack enough teachers, physicians, nurses and other professionals to provide basic services to all levels of our population.

Given the importance of occupational choice for both the individual and his society, it is difficult to understand why so little is known about the learning process whereby children form conceptions of

the occupational world. These undoubtedly play an important part in determining choice. Those who deal with occupational guidance of youngsters, say at the high school level, frequently complain that the determination of the occupational choices or preferences of children is an extremely difficult task. In particular, many children are ill-informed about the many occupational roles which may be open to them. Others have in mind unrealistic goals. Some, who should by virtue of capacity, be looking forward to carreers as hewers of wood and drawers of water, envision themselves in professional or managerial roles. Still others seem to select or avoid a given occupation on the basis of positive or negative stereotyped beliefs about the field which it represents. For example, a six year old child being interviewed about the characteristics of occupational roles recently commented to the author, "I wouldn't want to be a scientist because they work in places which are likely to blow up at any minute."

Thus, lack of information, stereotyped beliefs or shared misunderstandings concerning the requirements, duties and rewards of various occupational categories pose serious problems for both individuals and their society.

The General Problem

For the reasons outlined in the previous paragraphs, the understanding of occupational roles which children develop during the formative years needs careful study. A child's understanding of the kinds of work involved in various occupations, their relative prestige,

and the personal rewards connected with each, may be important determiners of the occupational choices which he will later make as a young adult. In addition, his knowledge of occupational roles and their relative status will undoubtedly influence the way in which he relates himself to others who occupy such occupational roles. The general problem of the proposed research can be stated very simply as follows:

> The major purpose of the study is to probe the development of children's understandings of occupational roles in their society, and the awareness which they have developed of the occupational status or prestige system.

The present problem then, is one of tracing the early development of occupational and social class concepts. It should be emphasized that this is to be a "basic" study of children's growing awareness of the significance of work, and not an "applied" study of actual recruitment. On the other hand, the study assumes as a premise that early conceptualization may be related to later occupational choice. However, before this premise can be fully accepted as fact, empirical verification of this proposition needs to be made. Such empirical verification must await the outcome of studies (such as the present) which first seek to establish the nature of children's work and prestige concepts.

In addition to the general problem above, a number of subsidiary problems will receive attention. These concern the sources of learning and the functioning of background variables which may facilitate or inhibit adequate development of occupational conception. Thus, the influence of such variables as social class, age, intelligence, the mass media, and cultural themes upon the conceptions which children

develop of the world of work will be explored. These influences are discussed in greater detail in a set of hypotheses which is described in a later section.

In general, there are three problems of measurement which constitute the heart of the research. Of these measurement problems, the most difficult is the probing of the children's understanding regarding roles and status as described above. This can be accomplished by a special research instrument which the author has been developing and pretesting on children in grades 1 through 4. This research instrument, in the form of a "game" which children play while being interviewed, is described in detail in a later section. Briefly stated, it consists of sets of cards with pictorial, stylized portrayals of occupational categories and status symbols. These serve as a basis for discussing occupations and occupational status with the child. The device is intended to yield numerical scores indicating the extent of knowledge which a child possesses concerning a selected set of occupations, and the degree to which he can correctly rank them in a prestige hierarchy.

Another measurement problem is concerned with refining the above instument, which at present has been only partially pretested. This requires a content analysis of television programs which children view. The purpose of this procedure is to gain an accurate picture of the television screen as a learning source through which children can acquire understanding about occupational roles and status. On the basis of preliminary investigation it appears that television content provides children with a "unique perspective" in that it tends to distort the level of prestige of certain occupational

categories.

Still a third measurement problem involves assessing the background of each child in terms of social class, age, sex, intelligence, that is, the variables discussed above in the paragraphs describing subsidiary problems.

The research will be conducted in two phases. The first of these has been started. Phase one is a limited exploratory study of approximately 100 children of grades 1 and 4. The purpose of this study is basically to perfect technique. The instruments, hypotheses, sampling and interviewing procedures will be developed during this pilot study. Phase two will be a more extended study of approximately 200 to 300 children selected randomly from our list of children in grades 1 through 8 in the [redacted] B

In short, the research would probe and test the extent of children's concept formation in the area of role and status knowledge concerning occupational categories. It would also seek the variables which seem to increase or limit this knowledge. Thus, the influence of personal contact with an occupation, vicarious contact (via mass media), intelligence, class, cultural themes and age will be investigated as a starting point. It is firmly believed that other variables and learning sources will be discovered which influence this important (but little studied) aspect of the life of the child.

Background Literature

In the child's development of thought and reasoning, according

to Piaget,[2] the external world is not innate in the child but is gradually evolved and built up by a slow process. The "self" is felt to be absolute in early reasoning as the child sees everything from his own point of view; to which the term "egocentricity" is applied. Progression in the child's development is gradual and cumulative with significant differences in logical reasoning among children of different ages, until finally there is an appearance of more non-egocentric reasoning.

With the evolution of increasingly complex sign behavior into the development of language, the child acquires a skill which enables him to communicate the features of the situation to which he is responding. Through the ability to communicate, the advancement of the socialization of the child progresses rapidly.

The composition of concepts which the child formulates is defined by Vinacke[3] as "cognitive organizing systems which serve to bring pertinent features of past experience to bear upon a present stimulus object which the child perceives; thereby evoking processes where the object is interpreted and linked with the other concurrent activities of the organism in a systematic and consistent manner."

Children's notions of social relationships begin to mature as their thinking evolves from the egocentric. There is no exact agreement on a definite numerical age; however most experimenters have

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[2]Piaget, Jean, The Child's Conception of the World, pp. 166-168.

[3]Vinacke, C. L., "Concept Formation in Children of School Age," Education, vol. 74, pp. 527-534.

have been widely studied. For example, studies related to the acquisition of racial attitudes and the race concept have been quite numerous. One of the earliest by Clark and Clark[5] found that racial identification in children of ages 3 to 7 years, was to a large extent influenced by the concrete fact of their own skin color. This would indicate that at an early age the frame of reference of the child is not abstractive and objective. The extent to which children interiorize adult norms along these lines was studied by Horowitz and Horowitz.[6] Considerable effort in this study was devoted to examining the adult community in order to establish what norms existed; following which the children were tested. The results indicated that the attitudes of children were assimilated as a function of the development of social awareness and not simply as a function of mental development.

Racial and religious conceptions of children were investigated by Radke, Trager, and Davis.[7] The results showed a more prevalent impact of dominant cultural values than individual variations in environment and personality. There was a high level of understanding of racial and religious ideas among children of ages 5-8 years, but there were also many misconceptions and distortions. Therefore, it was concluded, prejudices developed from the kind of learning the children were exposed to.

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[5]Clark, K. B. and Clark, M. P., "Racial Identification and Preference in Negro Children," Readings in Social Psychology, pp. 81-88.

[6]Horowitz, E. L. and Horowitz, R. E., "The Development of Social Attitudes in Children," Sociometry, vol. 1, pp. 301-338.

[7]Radke, M., Trager, H., and Davis, H., "Social Perceptions and Attitudes of Children," Genetic Psychology Monographs, vol. 40, pp. 329-340.

Concept learning studies have likewise investigated the areas of money[8] and the flag.[9] These studies have dealt with ascending levels of knowledge of the concept from the concrete recognition of the concept to a more abstractive, deductive application of the concept. Each stage of advancement presumes certain prerequisite learning prior to later development. Many studies of concept development have been concerned mainly with descriptions of what children of various ages know about a certain concept. For example, Stendler[10] in a study of the children of Urbana, Illinois, illustrated how the knowledge of social class gradually becomes more discriminative and systematic. The awareness of social class differences was found to develop slowly, passing through four stages. These were a pre-awareness, beginning of awareness, acceptance of adult stereotypes, and recognition of individual differences in social class.

Specific Hypotheses

In attempting to study the child's concept of occupational roles and awareness of the occupational status system, it is not intended to illustrate the prerequisite learning stages necessary in concept formation. The children will be tested directly for knowledge of occupational roles. This will include recognition of the occupations, definitions, functions, and locations of the various occupations. In

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[8]Schuessler, K. and Strauss, A., "A Study of Concept Learning by Scale Analysis," American Sociological Review, vol 156, pp. 752-762.

[9]Weinstein, B., Development of the Concept of Flag in Children of Kindergarten and Grade School Age, M. A. Thesis 1951, Indiana University.

[10]Stendler, C. B., Children of Brasstown.

testing awareness of the occupational status system, which is defined as the grouping of occupations into categories according to the type of work or activity, ranked along a scale of prestige superiority and inferiority, certain "status symbols" for each level will be selected to be associated with the occupational category.

The hypotheses listed below, which state possible relationships among these factors, must be regarded as tentative. They represent preliminary propositions which will be tested with data gathered in the exploratory phase of the research.

A. From evidence in related studies, it has been shown that the chronological age of the child is closely related to his level of concept learning. Therefore, learning regarding the included occupational concepts will increase with the age of the child.

B. A child must possess the knowledge of the concrete facts of a concept before he is able to relate this to a more abstract application of a concept. Consequently, a knowledge of the occupational roles precedes the development of a knowledge of the occupational status hierarchy.

C. From our society's strong middle class emphasis on status and upward mobility there will be certain effects on the children of this class. The class membership of the child will therefore influence the awareness of the occupational roles and particularly the occupational status system, producing more and earlier awareness among middle class children.

D. Close and personal contact with an object will result in a more acute awareness of the object. Consequently, direct personal

contact with specific occupational roles will facilitate the acquisition of knowledge concerning these roles in contrast to occupations of slight or vicarious contact.

E. In producing more awareness of an object, contact of a vicarious nature is important also, as it increases familiarity with an object. It follows that the exposure to occupations through a mass medium of communication, i.e., T.V., will produce relatively greater familiarity with certain occupational roles as opposed to others which are not vicariously contacted.

F. Due to cultural themes and socialization emphasizing the male necessity of choosing occupational roles, male children will be more aware of these roles. Therefore, a difference in the knowledge of the two sexes will result because of the cultural roles assigned to each.

G. Intelligence being a factor in the learning process of children; the less-bright children will not develop the concepts as fully or as early as those of average and superior intelligence. Accordingly, the intelligence of the children will influence their development of knowledge of occupational roles and occupational status. (A rating of the children's intelligence is available, i.e., I.Q. tests, therefore it is possible to use and test this hypothesis.)

Method

Stated in overview, the study will involve a pretesting phase, a later more elaborate phase, and one or two minor phases. To carry out these studies, samples of children will be selected, a test of

knowledge of occupational roles and status will be administered to the samples (along with background questionnaires), and the parents will be interviewed for additional information. With these data, the hypotheses stated earlier will be tested with quantitative statistical procedures. Some of this work has already been started. The procedures involve a number of methods which are discussed below.

The selection of samples of children for study has been greatly simplified by some work which has been already completed. A list has been obtained showing each child in grades one through eight enrolled in the [redacted] This B district includes rural as well as town children; in addition, a number of social class levels are well represented in this population.

For each of the 3,801 children on this master list, data are available as to age, school, grade (and of course, sex). In addition, each of these children has recently taken a group type intelligence test and these scores are available. Since this list is but a few months old, it should be basically correct by the time the major phases of the study are undertaken. However, it is anticipated that some minor distortions may be introduced by migration. If pretesting indicates that the list contains errors, it will be brought up to date, and additional intelligence tests will be administered where needed. Discussion with school authorities has indicated that this should not be too extensive a problem.

For the pretest or first phase of the study, approximately a hundred children will be selected from one of the larger schools on the list. This first phase has already been started. After the

completion of this preliminary phase, during which instruments and techniques will be refined, the major study of two to three hundred children will be undertaken.

Each child will be given the Occupations Test. This test yields two measures, a Roles Score and a Status Score. With these data and the information on social class, intelligence, age, etc., which will also be gathered for each subject, the hypotheses outlined earlier can be tested. However, a detailed description of the present form of the main measuring instrument will be helpful.

The Occupations Test

The Occupations Test currently consists of three sets of cards. Each of these three sets has six cards, upon which six particular occupations are represented. These occupational portrayals are in the form of schematic drawings, something like cartoons, each of which shows a man clothed in the garb typical of a particular occupation. For example, a "miner" is shown on one card with pick in hand, wearing overalls, boots and a light on his hat. Others portray occupations such as architects, bookkeepers, barbers, ministers, etc. In the three sets of cards, a total of eighteen occupations are portrayed. All are male occupations, each portrayal is rather stylized and simplified, and the same "man" appears in each.

The three sets represent occupations with which the child is likely to have had different degrees of contact. One set includes six typical occupations with which the ordinary child has had personal contact (i.e., physician, minister, teacher, postman, barber and

janitor).[11] Another set includes typical occupations with which the ordinary child has had vicarious contact, primarily through T.V. (i.e., scientist, airline pilot, singer, sheriff, bartender and ranch hand). The third set of cards portrays occupations with which the ordinary child has had very limited or no contact, either personally or vicariously. (These include stockbroker, architect, building contractor, bookeeper, telephone lineman, and miner). Thus, the three sets of cards correspond to three degrees or types of contact by means of which the average child could acquire knowledge about such occupational roles.

Another feature of the Occupations Test is that each set of cards represents occupations at six different levels of occupational prestige. For example, the physician and janitor represent opposite ends of a prestige continuum for personal contact occupations. The remaining four occupations within this set have been graded to represent intervening increasing levels of status. A similar situation prevails within each of the three sets of cards. Thus, six general levels of occupational prestige are represented in the entire test.

These cards, or rather the occupations which are portrayed, were selected with the use of a number of criteria. First, the six prestige levels correspond roughly to the six levels of social class enumerated by W. Lloyd Warner[12] in his classic Social Class in America. These be labelled:

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[11] All occupational selections are tentative and subject to revision.

[12] Warner, W. Lloyd, Meeker, Marchia, and Eels, Kenneth, Social Class in America, Chicago, Science Research Associates, 1949.

Upper-upper class
Lower-upper class
Upper-middle class
Lower-middle class
Upper-lower class
Lower-lower class

After a number of candidate occupations had been selected to represent these various social class levels, the list was reduced by reference to the North-Hatt[13] scale of occupational prestige. This device is based upon a nationwide survey and reports the relative prestige rankings assigned to a large number of occupations by American adults. A still further screening was made by submitting the surviving occupational categories to a panel of judges. These judges were "experts" in the field of mass communication, children's television, social stratification, and child behavior. The final list of occupations for the degrees of contact and for the status levels was as follows:

Status level	personal contact occupations	vicarious contact occupations	limited contact occupations
6 (highest)	physician	scientist	stockbroker
5	minister	airline pilot	architect
4	teacher	singer	building contractor
3	postman	sheriff	bookkeeper
2	barber	bartender	telephone lineman
1 (lowest)	janitor	ranch hand	miner

[13] See Opinion News, Vol. IX (September 1, 1947). See also, Deeg, Maethel, and Paterson, Donald G., "Changes in Social Status of Occupations," Occupations, 25, No. 4, 1947.

To test the child, one of the three sets of cards is presented first. In random order, the cards are given to the child one at a time. The child is asked to name the occupation represented and then to tell about "what kind of work" the role involves. With probing and questioning the extent of the child's understanding of each of the six roles is determined. Later, his responses are compared to an official role description obtained from the Dictionary of Occupational Titles, and an accuracy score is obtained.

The next step is to have the child arrange the six occupations in such a way that the least prestigious is on the left and the most prestigious is on the right, with the others arranged in between. Simple instructions are capable of conveying this idea to first graders. The tester then arranges an identical set of six cards (face down) next to the child's arrangement. The child can then turn up the face-down cards to see if his arrangement matches the correct sequence. The child gets a reward (penny or candy) for each matching card. This indicates the degree to which the child can effectively arrange the occupations in a status hierarchy. A status score is derived, based upon the degree to which his card placement departs from chance.

Each of the sets is treated in this manner for a given child. At the conclusion he is shown status-graded pictures of houses and cars and asked "which man lives here?" or, "which man drives this car?" Thus, his matching of occupational roles and status symbols provides further data on status conceptions.

Pretest data has indicated that some of these occupations need to be changed. For example, children have in fact frequently seen the telephone lineman. His dramatic position up a pole catches their attention

and they demand explanation from parents. Thus, the Occupations Test needs more work, both in scoring procedures and in the selection of occupations. In particular, the set of occupations selected as representing vicarious contact needs revision. The a priori selection should be revised on the basis of a systematic content analysis of locally viewed television content. This, then, will be one research task.

The Content Analysis of Television Programming

As was explained above, the selection of occupational roles to be included in the Occupations Test has thus far been made on an a priori basis. The collective judgments of "experts" were used to select a set of graded occupations which are frequently presented on television for the "vicarious contact" set. These "experts" included first of all, a specialist in children's television, (an individual who for several years was responsible for highly successful children's programs on a local TV station. This individual designed various children's programs, appeared on them, and assessed their impact on the child audience.) The second expert was a professional sociologist specializing in social stratification and the study of social class. The third was a professional sociologist widely known for his contributions to the field of juvenile delinquency and the study of children. Finally, the fourth was a sociologist specializing in mass communications research. The list of occupations, at the various class levels, included in the test was compiled by these persons.

It should be recognized, however, that the judgments of experts are not an infalible guide to the most suitable list of occupations

to include for the purpose of assessing children's conceptions of occupational roles, and the relative prestige of occupational roles. It is in fact an empirical question as to which occupations are most frequently presented on television, and as to the qualitative characteristics of these occupational portrayals.

The selection of "vicarious" contact occupations to be included in the final version of the Test, therefore, will be made on the basis of empirical evidence indicating the relative frequency and characteristics of occupational portrayals on television programs viewed by children.

The determination of the way in which occupational roles are presented on television can best be made by a systematic audit of television broadcasting during those hours which are most popular with children in the age group under study. To accomplish this purpose, a content analysis of locally received programs will be undertaken.

To determine which hours are most popular and significant, a number of information sources will be utilized. These include parental reports of children's viewing habits; comments of sample children from the pilot study; the reports of television broadcasters who design programs for children; and the reports of commercial polling agencies who analyze local viewing audiences. These various data should reveal a good picture of the programs and hours most heavily viewed by the sample universe. These programs will then be viewed as potential learning sources from which children can obtain information about occupational roles and occupational prestige.

A random sample of time segments will then be devised. These will be audited in terms of (1) the occupational categories portrayed, (2) the role performances of the presentation (That is, what kinds of work or functions the occupational encumbent is shown as performing), and (3) the status characteristics of the portrayal. The third category will include implications of relative prestige, suggestions of high income, the possession of symbols of power or status, luxury goods, or exclusive interaction.

If possible, within the limits of budget, the content analysis will include attempts to assess the reliability of the categorizations. This can be accomplished by having two or more analysts rate some identical programs. Their degree of agreement would be one index of reliability.

This analysis of television content will greatly facilitate the selection of status-graded occupations with which children have "vicarious" contact. In addition, it will offer data of considerable interest in its own right concerning the perspective of television offered to the child audience.

Statistical Testing of Hypotheses:

This section lists the statistical procedures planned for the hypotheses enumerated earlier. It should be emphasized that these are hypotheses derived for the exploratory phase of the research. The more definitive phase may require revised hypotheses or others of greater complexity. A certain flexibility is necessary in this type of research to take account of emerging propositions. Thus, it is not possible at this time to spell out the precise relationships

that will be tested in the larger phase of the research. In general, however, it is anticipated that the larger study will follow the general line of inquiry implied in the preliminary hypotheses stated earlier, plus any new leads which emerge from pretest findings.

Each hypothesis involves testing the significance of differences between means. Such an array of hypotheses lends itself readily to a factorial type analysis-of-variance design. However, for simplicity of discussion, the author has chosen to describe the statistical testing of each hypothesis separately. In practice, these same tests may be somewhat more efficiently performed with analysis-of-variance techniques.

Hypothesis A. Let $\bar{X}_1$ = The mean age of children achieving Occupations Test scores above the mean of the Occupations Test distribution.

$\bar{X}_2$ = The mean age of the children achieving Occupations Test scores below the mean of the Occupations Test distribution.

Hypothesis: $\bar{X}_1 > \bar{X}_2$ (for both Roles Scores and Status Scores)

Statistical test: C.R. or t, one tailed test.

Hypothesis B. Let $\bar{X}$ = Mean score on the Roles Test.

$\bar{y}$ = Mean Score on the Status Test.

$\bar{d}_1 = \bar{X} - \bar{y}$ for first grade

$\bar{d}_2 = \bar{X} - \bar{y}$ for fourth grade

Hypothesis: $\bar{d}_1 > \bar{d}_2$

Statistical test: significance of difference between means (t-test, one tailed test)

Hypothesis C. Let $\bar{X}_M$ = Mean score on the Status Test for middle class children

$\bar{X}_L$ = Mean score on the Status Test for lower class children

Hypothesis: $\bar{X}_M > \bar{X}_L$

Statistical test: C.R. or t, one tailed

Corollary or derived hypothesis:
If hypothesis a is correct ($d_1 > d_2$, that is, if occupational role awareness precedes status awareness), and if hypothesis c is correct ($\bar{X}_M > \bar{X}_L$, that middle class children have higher status awareness), it follows that middle class children must have higher role awareness. That is:

$\bar{Y}_M$ = Mean score on Roles Test for middle class children

$\bar{Y}_L$ = Mean score on Roles Test for lower class children

Hypothesis: $\bar{Y}_M > \bar{Y}_L$

Statistical test: C.R. or t, one tailed test

Hypothesis D. Let $\bar{S}_L$ = The mean Roles Test subscore (for all the subjects on the Low Contact Occupations.

$\bar{S}_P$ = The mean Roles Test subscore (for all subjects) on the High Personal Contact Occupations.

Hypothesis: $\bar{S}_P > \bar{S}_L$ (This can also be tested with scores on the Status test)

Statistical test: C.R. or t, one tailed test

Hypothesis E. Let $\bar{S}_V$ = The mean Roles Test subscore (for all subjects) on the Vicarious Contact.

Hypothesis: $\bar{S}_V > \bar{S}_L$ (This can also be tested with scores on the Status Test)

Statistical test: C.R. or t, one tailed test

An additional hypothesis is possible, namely that $\bar{S}_V > \bar{S}_P$ (similarly tested).

Hypothesis F. Let $\bar{X}_M$ = The mean score on the Roles Test for the male subjects.

$\bar{X}_F$ = The mean score on the Roles Test for the female subjects.

Hypothesis: $\bar{X}_M > \bar{X}_F$ (This can also be tested with scores on Status Test).

Statistical test: C.R. or t, one tailed test

Hypothesis G. Since a measure of the subjects' intelligence is available, hypothesis G will be tested in a method similar to the preceding hypotheses.

Of course, the above procedures for testing the hypotheses may have to be altered according to any changes in the tests or in other methods.

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1129

PROPOSAL FROM: [redacted] C

[redacted] C

Comments of the reviewers and the individual scientists are as follows:

[redacted] C

There are many good ideas in this proposal. The test is a clever one and should be useful. The television survey would be worthwhile on its own merits if well done. I am wondering, however, whether [redacted] has worked much with children and is fully aware of some possible difficulties. I wonder just what he means by "With probing and questioning the extent of the child's understanding of each of the six roles is determined." (p. 17). Although the television survey is of value in its own right, it is not clearly a necessary part of the main study and one wonders why other influences (textbooks, movies) are not to be considered. Finally, the statistical methods proposed are not of the most efficient (but this is a minor matter). On the whole, this project deserves support, and we can help him over some of the rough spots through consultation.

[redacted] C

This study, in my opinion, definitely deserves support. It is in an extremely important area, the growth of occupational conceptions, and the research plan is sound and promising. The author shows considerable creative skill in his development of an "Occupations Test" and the design and plans for statistical treatment are all sound. The qualifications of the author are excellent.

The study definitely falls within the umbrella of studies which should be supported by the [redacted]. The distribution of attitudes and conceptions concerning occupations is a key problem of the ecology of attitudes.

I have no reservations of any kind about this proposal.

[redacted] C

I have noted the comments of [redacted] and [redacted], both of which are very good. I do feel that the proposal is in certain respects original, and I am inclined to favor the grant. The final value of the study, however, will certainly depend more than is sometimes the case upon the skill of those who do the actual work.

FINANCE ADVISER COPY

1/2-10

[redacted] B

OFFICE OF THE TREASURER

December 11, 1959

[redacted] B

Att: [redacted] - C

Gentlemen:

We are enclosing an application prepared by [redacted] of our [redacted] covering project entitled [redacted] We are also enclosing a letter from [redacted] concerning this request. C

We assure you that this application has the complete approval of both the academic and business administrations of [redacted] and we hope you find it possible to support it. B

Very truly yours,

[redacted] C

C [redacted]

Encl.

cc: [redacted]

112-10

[redacted]

November 20, 1959

[redacted]

Dear [redacted]

Some weeks ago at [redacted] I discussed with you a series of studies concerning children's conceptions of occupational roles and status. Since that time, I have continued preliminary work on the problem and have devised an instrument for measuring such concept formation in young children. In addition, I have formulated the objectives of the study, some preliminary hypotheses, sampling procedures, related measurement problems, and a proposed budget. Having completed much of this early planning, I would like to request financial support for the project. Enclosed are descriptions and explanations of the nature of the study.

Briefly stated, the study seeks to trace the development of children's conceptions of occupational roles and occupational status or prestige. The group under study will be younger children, beginning at the first grade level and going through about grade eight. It is my belief that information acquired during these formative years may play an important part in later occupational selection and adjustment. The occupational conceptions of children has received very little research attention, a situation which is not commensurate with their possible importance in terms of later adjustments required by an industrial society. I would like to emphasize, however, that my intent is to study children's early conceptions of work roles and the status hierarchy, and not their occupational preferences or later choices.

I have spelled out in two documents the purposes, methods and procedures which I would like to follow. The smaller document summarizes the research in a format which I believe your committee requires. The larger document discusses the purposes and plans of the investigation in somewhat greater detail. I hope that these materials will be helpful for your committee.

I would appreciate hearing from you, and I would, of course, be very grateful for any comment you might care to make concerning the objectives and methods of the study.

Sincerely,

[redacted]