

111-1

INVOICE CHECK LIST

NIKUMRA Subproject

At Date of Original Authorization	Period Covered	Time Extended To	Allotment Number	Amount of Obligation
20 April 1960	1 year		0525-1002-4912	14,000.00

Additional Authorizations	Period Covered	Time Extended To	Allotment Number	Amount of Obligation
# 2 (ref. 61)	1 yr		1125-1392-582	5,222.91
# 3 (ref. 61)	1 yr		2125-1392-3922	7,272.69

Invoice Number	Date	Amount	Balance
# 1	25 April 1960	\$ 14,000.00	0
# 2	1 July 60	5,222.91	0
# 2	1 July 61	7,272.69	
# 3	17 July 61	7,272.09	0
REMARKS:			

111-1

[REDACTED]

Purpose: To study levels of motivation as related to certain personality characteristics (MKULTRA III).

Initiated: Funds obligated 14 July 1961. (Second year of support for work expected to take three years.)

Contractor: [REDACTED] as a grantee of the [REDACTED]

Cost: \$13,000.00 (Previous year's budget was \$14,000.00).

Status: Continuing on schedule.

~~SECRET~~

B & C

111-1

Sub 111

Balance in a/c 150 per run 23,500.00
Per our ledger -0-

We have accty for period 1 June 60 - 31 May 62
acknowledges receipt of \$27,000
Passed to Grantee

Aug 61	3,500.00
Nov 60	3,500.00
Jan 61	3,500.00
Jul 61	5,000.00
Aug 61	1,680.00
Mar 62	3,340.00
Jul 50 62	3,167.50
	<u>23,687.50</u>
Oct - Dec 62	3,167.50
	<u>26,855.00</u>
Jan - Mar 63	6,335.00
	<u>33,190.00</u>

C

111-1

(11)

58.11

Aug. 1960	3500
Nov. 1960	3500
Jan. 1961	3500

July 1961	5000
Aug 1961	1680
Mar. 1962	3360
July - Sept. 62	317.50

350000
 350000
 350000
 500000
 168000
 334000
 310750
 2366750
 350000
 2716750*

1400000
 572791
 727209
 2700000*

Feb. 4, 1963

[Redacted] account

June 1, 1960 through May 31, 1962	Received			<u>\$27,360.00</u>
<u>Expended</u>	<u>1961</u>	<u>1962</u>	<u>Total</u>	
Salaries	9,352.00	4,793.60	14,145.60	
Wages	3,841.60	5,964.00	9,805.60	
Maintenance	417.20	607.60	1,024.80	
Totals	13,610.80	11,365.00	24,974.00	
Overhead 2 years			<u>1,302.00</u>	
Total expended				<u>26,278.00</u>
	Balance			<u>\$ 82.00</u>

Includes A 7272.09

This is a true statement of accounting as translated from [Redacted] as submitted to the Fund.

[Redacted]

Prepared by [Redacted]

INV	3	7,272.09
	2	5,727.91
	1	14,000.00

I have examined and approved the submitted expenditures.

[Redacted Signature]

Chief
TSS/Chemical Division

Date: *2/8/63*

A, B, C, F

111-1

[REDACTED]

March 26, 1962

[REDACTED]

The enclosed is for your [REDACTED] file. We cannot expect on accounting until the end of his second grant year. Meanwhile, I am making plans to renew this grant out of our current funds.

Am looking forward to chatting with you about

[REDACTED]

[REDACTED]

[REDACTED]

Enclosure

B c

111-2

PROGRESS REPORT

1st June, 1961 - 31st May, 1962.

THE MEASUREMENT OF MOTIVATION

Grant from

[REDACTED]

B

During the past year one experiment has been finished on the main part of the investigation, namely, the study of reminiscence as a measure of drive. Using over 600 high drive and low drive subjects it was demonstrated that for the low drive groups reminiscence scores on the pursuit rotor remain at a relatively low level irrespective of the length of pre-rest practice whereas for the high drive group reminiscence scores increased in a linear fashion as a function of the logarithm of the length of the pre-rest practice period. Pre-rest periods of two minutes, 3 minutes, 6, 8, 12 and 15 minutes, have been used so far, and even with the fifteen-minute period there is no sign of any approach to an asymptote. These results are in line with prediction and show that reminiscence is indeed an excellent measure of drive.

Results are contrary to prediction as far as performance is concerned, however, there being no performance differences at all between the high drive and the low drive groups. This finding is quite contrary to what would have been expected on any psychological theory, and accordingly during the second part of the past year the whole study was repeated on another group of approximately 800 high drive and low drive subjects. This study differed from the previous one in two respects: further pre-rest practice periods were introduced, and the rest pause was lengthened from six minutes to ten minutes, to investigate the possibility that the dissipation of reactive inhibition during the rest pause might not have been complete. Analysis of these results is not yet finished, but there seems to be no doubt that the data strongly support the conclusions derived from the original

study.

It was hypothesized that the failure to discover differences in performance between high and low drive groups on the pursuit rotor was a function of the task involved, and several other tasks have been employed during the past year. The most important of these are (1) eye-blink conditioning; (2) self-paced multiple reaction time determinations; (3) easy and difficult clerical-type crossing out experiments of numbers and letters; (4) learning of paired associates on the memory drum. Some but not all of these experiments have been completed, but analysis is still in progress. It is proposed to add to these in the coming year further tests, including (5) GSR conditioning; (6) measures of perceptual thresholds; (7) suggestibility (body sway); and (8) mirror drawing. Arrangements have been made for these tests to be given, but approval is awaited for the continuation of the grant for a third year.

It is further planned to pursue certain theoretical points by comparing the performance of high drive and low drive groups on the pursuit rotor under conditions of spaced practice; this is hoped to throw some light on the puzzling problem on the failure of performance to differentiate the two groups.

There has been some delay in delivery of the apparatus requested in last year's anticipated budget (electronic tape data recorder), and it has been necessary to continue most of the time with borrowed equipment. Preliminary data suggest that a very detailed analysis of performance during a continuous tapping task makes possible measurement of drive and motivation along quite novel lines. In this work we measure to the nearest 1000/sec.

the duration of each tap and also the duration of the interval between taps; when these data are plotted (particularly the intervals between taps) involuntary rest pauses due to inhibition stand out very clearly and their frequency and distribution can be related to degree of drive. It is hoped that in the coming year a definitive study along these lines can be completed.

Below are given the publications so far resulting from the study under this grant. In view of the large amount of material available the writer has contracted with the [redacted] to publish the main results in book form under the title [redacted] at the end of what is hoped to be the third year of this grant. For this reason much of the material that could have been published has not in fact appeared in article form.

References

1. [redacted]
[redacted]
[redacted]
2. [redacted]
[redacted]
[redacted]
[redacted]
3. [redacted]
[redacted]

B t c

4. [REDACTED]

The measurement of motivation through the

[REDACTED]

5. [REDACTED]

[REDACTED]

6. [REDACTED]

[REDACTED]

7. [REDACTED]

[REDACTED]

8. [REDACTED]

[REDACTED]

9. [REDACTED]

[REDACTED]

B & C

111-2

5.

Anticipated Budget

In the last year of the research the budget should provide for two Research Psychologists at a salary of [REDACTED] and one technician at a salary of [REDACTED] making a total salary bill of [REDACTED]. To this should be added 10% Institute overheads, equal to [REDACTED] making a total of [REDACTED]. There are a further [REDACTED] for secretarial assistance, fares, test materials, analysis of data and other components, bringing the total up to [REDACTED]. This is slightly in excess of the amount anticipated originally but there have been negotiated increases for salaries, et cetera, which could not have been foreseen.

F

111-2

RECEIPT

Receipt is hereby acknowledged of the following:

Treasurer's Check No. 184886, dated August 15, 1961, drawn on
the [REDACTED]
in the amount of \$7,272.09, payable to the [REDACTED]

[REDACTED]

Date: August 17, 1961

B

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E

110-2

RECEIPT

Receipt is hereby acknowledged of the following:

Treasurer's Check No. 267152, dated July 18, 1961, drawn on
the [REDACTED]
in the amount of \$5,727.91, payable to the [REDACTED]

[REDACTED]

Date: 7-24-61

B

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E

111-2

~~SECRET~~

Date: 11 July 1961

MEMORANDUM FOR: THE COMPTROLLER
ATTENTION : Finance Division
SUBJECT : MILTRA, Subproject 111
Additional Authorization #3

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the OD/A, and the extension of this authority in subsequent memoranda, Subproject 111 has been approved, and \$7,272.09 of the over-all Project MILTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 2125-1390-3902.

[Redacted]
Chief
TSD/Research Branch

APPROVED FOR OBLIGATION
OF FUNDS:

Original signed by
[Redacted]

Research Director

I CERTIFY THAT FUNDS ARE AVAILABLE

OBLIGATION REPORT E.N. 141

CHARGE TO ALLOTMENT NO. 2125-1390-3902

AUTHORIZING OFFICER

Date: 14 JUL 1961

Distribution:

Original & 2 - Addressee

1 - TSD

2 - TSD
[Redacted]

SECRET

(When Filled In)

CONFIDENTIAL FUNDS POSTING VOUCHER

VOUCHER NO. 7-12

DATE 2-6

VOUCHER NO. 7-12

DESCRIPTION - ALL OTHER ACCOUNTS 13-22 ADVANCE ACCOUNTS 13-27	34-39 STATION CODE		40-42 EXPEND CODE		43-46 PAY PER. LIO. CODE		47-52 OBLIG. REF. NO.		53-57 GENERAL LEDGER ACCT. NO.		58-67 ALLOT. OR COST ACCT. NO.		68-70 DUE DATE		71-80 AMOUNT
	PROP. NO.	PROJECT NO.	EXP. CODE	PER. LIO. CODE	ADVANCE EMP. NO.	CA ACCT. NO.	ACCT. NO.	OBJECT CLASS	DEBIT	CREDIT					
1411 6440 25-1390 5902 452 701209															
72-1100 268															
EXPLANATION OF ENTRY															
TOTALS															
See attached															
184886															

DATE

PREPARED BY

DATE

REVIEWED BY

CERTIFIED FOR PAYMENT OR CREDIT

SIGNATURE OF CERTIFYING OFFICER

DATE

111-2

17 July 1961

MEMORANDUM FOR: Chief, Finance Division

VIA : TSD/Budget Officer

SUBJECT : MKULTRA, Subproject 111, Invoice No. 3
Allotment No. 2125-1390-3902

1. Invoice No. 3 is attached covering the above subproject.
Payment should be made as follows:

Cashier's check in the amount of \$7,272.08 drawn on a
bank, payable to the

2. The check should be forwarded to Chief, TSD/Research
Branch, through TSD/Budget Officer, no later than 11 August 1961.

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.

Chief
TSD/Research Branch

Attached:
Invoice & Certifications

Distribution:
Orig & 2 - Addressee

CHECK # 111/286 IN THE AMOUNT OF \$7272.08
RECEIVED.

A B

S167

111-2

17 July 1961

MEMORANDUM FOR: Chief, Finance Division

VIA : TSD/Budget Officer

SUBJECT : MKULTRA, Subproject 111, Invoice No. 3
Allotment No. 2125-1390-3902

1. Invoice No. 3 is attached covering the above subproject.
Payment should be made as follows:

E Cashier's check in the amount of \$7,272.09 drawn on a
~~bank~~ bank, payable to the ~~bank~~

2. The check should be forwarded to Chief, TSD/Research
Branch, through TSD/Budget Officer, no later than 11 August 1961.

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.

~~Signature~~
Chief
TSD/Research Branch

Attached:
Invoice & Certifications

Distribution:
Orig & 2 - Addressee

1 - TSD
2 - TS

A & B

1961

111-2

[REDACTED]

INVOICE

For Services

\$7,272.09

[REDACTED]

CERTIFICATIONS

(1) It is hereby certified that this is Invoice 3 applying to sub-project No. 111 of MCOLTRA, 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 111 of MCOLTRA 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:

B

[REDACTED]

TO: [redacted] /00

111-2

This is a continuation of sub-project #111.

1. Purpose of Project: Studies
of the measurement of motivation

2. Project Monitor: [redacted]

Room [redacted]

A

G

[redacted]

[REDACTED]

3 April 1961

111-3

MEMORANDUM FOR: THE RECORD

SUBJECT : Continuation of MKULTRA, Subproject 111

1. The purpose of Subproject 111 is to support the research program of Prof. [REDACTED] in his studies of the measurement of motivation. This work has progressed in a highly satisfactory fashion for a period of one year. At least four research articles, stemming directly from the past year's grant support, have been submitted for publication in professional journals. [REDACTED] progress report is attached.

2. [REDACTED] is a highly competent investigator whose recent work has been directed toward resolving some unusually knotty problems in the field of human motivation. In addition, he is making a highly promising start towards relating important variables in the domains of learning and personality assessment to quantitative measures of motivation. Unquestionably, his work will, as it has in the past, stimulate additional research in the field.

3. Although [REDACTED] studies have no immediate relevance for Agency needs, their results appear to be unusually promising for satisfying long-term requirements in assessment of human motivation and personality measurement via indirect means. In addition, this grant will continue to lend prestige to the [REDACTED] as a worldwide funding organization.

4. Funding and monitoring of this project will be handled by the [REDACTED], Accounting for funds

A, B, C

111-3

expended shall adapt to procedures established by the [redacted] Any permanent equipment required for the project will become the property of the [redacted] in lieu of higher overhead charges.

5. The estimated cost of this project for an additional year will be \$13,000.00. However, at the present time the project will only be extended for a period of approximately six months. The cost of this project for this period will not exceed \$5,727.91. Charges should be made against Allotment 1125-1390-3902. It is anticipated that the remainder of the funds for the project year will be made available from FY-162 money when available.

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

[redacted signature]

Chief
TSD/Research Branch

APPROVED FOR OBLIGATION OF FUNDS:

[redacted signature]
Research Director

Date: 20 JUN 1961

APPROVED FOR ADDITIONAL OBLIGATION

OF FUNDS: (\$7,272.09 against Allotment 2125-1390-3902

[redacted signature]
Research Director

Date: 14 JUL 1961

A
B

Attachment:
Progress Report
Distribution:
Orig only

111-3

PROGRESS REPORT

1st June, 1960 - 31st May, 1961

THE MEASUREMENT OF MOTIVATION

Grant from _____



B

The series of investigations carried out during the past year may be grouped in several distinct categories. The first of these categories is concerned with the follow-up of the original observation which caused me to approach the [REDACTED] for a grant, namely, experimental confirmation of the hypothesis that reminiscence scores on the pursuit rotor were monotonically related to drive within certain limits. In the original study pre-rest work periods of three and eight minutes had been used, and it had been found that under these conditions high drive and low drive groups were significantly differentiated. The data and the theory, taken together, suggested that with a two-minute pre-rest work period, there would be no differentiation between low and high drive groups. At the upper end it seemed likely that a linear increase in reminiscence would occur as pre-rest practice increased from six to eight minutes, and accordingly in the first experiment carried out under the grant, high and low drive groups were tested with either two or six minutes of pre-rest work on the pursuit rotor. The findings bore out the prediction, no difference being observed for the two-minute groups, and a somewhat smaller difference for the six-minute groups than the eight-minute groups. A study is under way using still longer pre-rest work periods in order to discover the limit of growth of reactive inhibition and drive.

B

It will be remembered that the method for inducing differences in drive used by us consists essentially of either having the test included in a battery of selection tests for a much-coveted industrial apprenticeship (high drive) or else giving it to already accepted apprentices under low motivating instructions. This same situation was used for studying the efficacy of a perceptual test as a measure of motivation, using for the purpose of measurement the length of the rotating spiral after effect (2,3). Two separate studies were carried out for this purpose, and in addition to drive we studied the direction of rotation and the massing of practice. Both studies agreed that under conditions of high motivation, length of after effect was reduced.

In another study, also making use of the same high and low drive groups, serial nonsense syllable learning at two levels of difficulty was investigated. It was found that, as predicted, learning was more efficient under conditions of high drive than under conditions of low drive, but contrary to expectation, no interaction effects were found with difficulty level (4). Two preliminary studies were carried out in the hope that tests of persistence and pain tolerance would be useful for the objective measurement of drive. In the first of these studies very high correlations were found between tolerance for pain, using the thermo-stimulator, and personality (particularly extraversion). This correlation indeed was so high as to throw doubt on the usefulness of the test as a measure of drive independent of personality (5). In

a study of persistence (dynamometer pressing at constant ratio of maximum pressure) this relationship of persistence and extraversion was again found (6).

Two studies have been completed but not yet finally analyzed; in these an effort was made to induce drive in school children by either praise or blame. The task used was pursuit rotor learning, and the score used was a) performance and b) reminiscence. Subjects were selected on the basis of a specially constructed questionnaire, in such a way that children, high or low on extraversion-introversion and neuroticism were chosen and assigned to the various cells of an analysis of variance design. The experiment was carried out in one school and replicated in another. It was believed that the equivocal results of reports in the literature using this method of manipulating drive were due to the use of performance as an index of motivation rather than reminiscence.

Below are listed the papers which have resulted from the work done hitherto.

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]

C

- 4. [REDACTED]
- [REDACTED]
- [REDACTED]
- 5. [REDACTED]
- [REDACTED]
- 6. [REDACTED]
- [REDACTED]

C

[REDACTED]

Date: 11 July 1961

MEMORANDUM FOR: THE COMPTROLLER

ATTENTION : Finance Division

SUBJECT : MULTRA, Subproject 111
Additional Authorization #3

Under the authority granted in the memorandum dated 13 April 1953 from the DCI to the OD/A, and the extension of this authority in subsequent memoranda, Subproject 111 has been approved, and \$7,272.09 of the over-all Project MULTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 2125-1390-3902.

[REDACTED]
Chief
TSD/Research Branch

APPROVED FOR OBLIGATION
OF FUNDS:

A

Research Director

Date:

Distribution:

Original & 2 - Addressee

1 - TSD

1/2-TSD

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

(When Filled In)

No.

2378

Cost Account

1155-1390-3902

Object Class _____

Date	Remarks and References	Obligations Incurred	Obligations Liquidated	Unliquidated Balance
30 JUN 1961	<i>Multimedia Subject III</i>	5,127.91		5,127.91
11 JUL 1961	<i>Pay #2</i>		5,127.91	—

(When Filled In)

SECRET

Date: 29 June 1961

MEMORANDUM FOR: THE COMPTROLLER
ATTENTION : Finance Division
SUBJECT : MOUTRA, Subproject III

Under the authority granted in the memorandum dated 13 April 1951 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject III has been approved, and \$5,727.91 of the over-all Project MOUTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 1125-1390-3902.


Chief
TSD/Research Branch

APPROVED FOR OBLIGATION
OF FUNDS:

Original signed by


Research Director


I CERTIFY THAT FUNDS ARE AVAILABLE:
OBLIGATION REFERENCE No. 2378
CHARGE TO ALLOCATION No. _____

AUTHORIZING OFFICER

Date: 30 JUN 1961

Distribution:

Original & 2 - Addressee

1 - TSD 

2 - TSD 

SECRET

6 July 1961

MEMORANDUM FOR: Chief, Finance Division

VIA : TSD/Budget Officer

SUBJECT : MKULTRA, Subproject III, Invoice No. 2
Allotment No. 1125-1390-3902

1. Invoice No. 2 is attached covering the above subproject.
Payment should be made as follows:

E Cashier's check in the amount of \$5,727.91 drawn on a
bank, payable to the

2. The check should be forwarded to Chief, TSD/Research
Branch, through TSD/Budget Officer, no later than 17 July 1961.

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.

Chief
TSD/Research Branch

Attached:
Invoice & Certifications

Distribution:
Orig & 2 - Addressee

CHECK # 267152 IN THE AMOUNT OF \$5727.91
RECEIVED

B
A + C

7331

6 July 1961

MEMORANDUM FOR: Chief, Finance Division

VIA : TSD/Budget Officer

SUBJECT : MKULTRA, Subproject III, Invoice No. 2
Allotment No. 1125-1390-3902

1. Invoice No. 2 is attached covering the above subproject.
Payment should be made as follows:

Cashier's check in the amount of \$5,727.91 drawn on a
[redacted] bank, payable to the [redacted]

2. The check should be forwarded to Chief, TSD/Research
Branch, through TSD/Budget Officer, no later than 17 July 1961.

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

Attached:
Invoice & Certifications

Distribution:
Orig & 2 - Addressee

1 - TSD [redacted]

2 - TSD [redacted]

A F B

[redacted]

[redacted]

~~SECRET~~
INVOICE

For Services

~~SECRET~~
\$5,727.91

~~SECRET~~
CERTIFICATIONS

(1) It is hereby certified that this is Invoice 2 applying to sub-project No. III 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 III 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: _____

B

~~SECRET~~

Chen

Date: 29 June 1961

MEMORANDUM FOR: THE CONTROLLER
ATTENTION : Finance Division
SUBJECT : MULTRA, Subproject III
Additional Authorization #2

Under the authority granted in the memorandum dated 13 April 1961 from the DCI to the DD/A, and the extension of this authority in subsequent memoranda, Subproject III has been approved, and \$5,727.91 of the over-all Project MULTRA funds have been obligated to cover the subproject's expenses and should be charged to cost center 1125-1390-3502.

[Redacted]
Chief
TSD/Research Branch

APPROVED FOR OBLIGATION
OF FUNDS:

A

Research Director:

Date:

Distribution:
Original & 2 - Addressee
1 - TSD
✓ 2 - TSD

SECRET

24 March 1960

MEMORANDUM FOR: COMPTROLLER

ATTENTION: Finance Division

SUBJECT: MUKLTRA, Subproject 111

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 111 has been approved and \$14,000.00 of the over-all Project MUKLTRA funds have been obligated to cover the sub-project's expenses and should be charged to Allotment 0525-1009-4902.

~~XXXXXXXXXX~~
Chief
TSD/Chemical Branch

APPROVED FOR OBLIGATION
OF FUNDS:

~~XXXXXXXXXX~~
Research Director

Date: 20 APR 60

Distribution:

Orig & 2 - 441
1507

> 1 - TSD

(When Filled In)

CONFIDENTIAL FUNDS POSTING VOUCHER

VOUCHER NO. 7-12			DATE 2-6				VOUCHER NO. 7-12														
DESCRIPTION-ALL OTHER ACCOUNTS 13-23 ADVANCE ACCOUNTS 13-27	24-29 STATION CODE		40-42 EXPEND CODE		43 F U N D		45-46 PAY PER. LIG. CODE		47-52 OBLIG. REF. NO. ADVANCE ACCT. NO. EMP. NO.		53 CA LEDGER ACCT. NO.		54-57 GENERAL ACCT. NO.		58-67 ALLOT. OR COST ACCT. NO.		68-70 DUE DATE		71-80 AMOUNT		
	P.O. NO.	DIV.	SPY	D	N	S													DEBIT	CREDIT	
Subtotal M. Inv. I			88.05						002109			6010	25100149002	179	19 000 00					19 000 00	
MULTI																					
EXPLANATION OF ENTRY																TOTALS					
See attached =																					
H																					

DATE: 28 April
CERTIFIED FOR PAYMENT OR CREDIT: [Signature]

25 April 1960

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA : T&D/Budget Officer

SUBJECT : NGULTRA, Subproject III, Invoice No. 1
Allotment 0525-1009-b902

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

Cashier's check in the amount of \$14,000.00 drawn on a local bank, payable to the [redacted]

2. Please forward the check to Chief, T&D/Chemical Branch through T&D/Budget Officer by Monday, 9 May 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
T&D/Chemical Branch

Attachment:
Invoice & Certifications

Distribution:
Orig & 2 - Addressee

I CERTIFY THAT FUNDS ARE AVAILABLE
OBLIGATION REFERENCE NO. 2109
CHARGE TO ALLOTMENT NO. 0525-1009-b902
AUTHORIZING OFFICER

CHECK # 49165 FOR THE AMOUNT OF \$14,000.⁰⁰
RECEIVED [redacted]

3 May 60

A

7111

RECEIPT

Treasurer's Check No. 249965 in the amount of \$14,000.00,
dated May 2, 1960, drawn on [REDACTED]
[REDACTED], payable to [REDACTED]

Date: May 2, 1960

B
L
F



INVOICE

For services

\$14,000.00



CERTIFICATIONS

(1) It is hereby certified that this is Invoice No. 1 applying to Subproject No. 111 of MQUltra, 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/CB, that this bill is just and correct and that payment thereof has not yet been made.

Chief, TSD/Chemical Branch

Date: _____

(2) It is hereby certified that this invoice applies to Subproject No. 111 of MQUltra 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: _____

B



25 April 1960

MEMORANDUM FOR: CHIEF, FINANCE DIVISION

VIA 1 TSD/Budget Officer

SUBJECT 1 MOULERA, Subproject 111, Invoice No. 1
Allotment 0325-1009-4902

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

Cashier's check in the amount of \$14,000.00 drawn on a local bank, payable to the

2. Please forward the check to Chief, TSD/Chemical Branch through TSD/Budget Officer by Monday, 9 May 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.

Chief
TSD/Chemical Branch

Attachment:
Invoice & Certifications

Distribution:
Orig & 2 - Addressee

1 - TSD/FASS

2 - TSD/CB

TSD/CB/ (25 April 1960)

SECRET

111-3

24 March 1960

MEMORANDUM FOR: COMPTROLLER

ATTENTION: 1 - Finance Division

SUBJECT: 1 - MKULTRA, Subproject 111

Under the authority granted in the Memorandum dated 13 April 1959 from the DCI to the DD/A and the extension of this authority in subsequent memoranda, Subproject 111 has been approved and \$14,000.00 of the over-all Project MKULTRA funds have been obligated to cover the sub-project's expenses and should be charged to Allotment 0525-1009-4702.

~~██████████~~
 chief
 TSD/Chemical Branch

APPROVED FOR OBLIGATION
 OF FUNDS:

 Research Director

Date: _____ *A*

Distribution:
 Orig & 2 - Addressees

1 - TSD/OC

1 - TSD/PASS

2 - TSD/CB

TSD ~~██████████~~ (24 March 1960)

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~~██████████~~

111-4

DRAFT
24 March 1960

MEMORANDUM FOR: THE RECORD

SUBJECT : MKULTRA, Subproject 111

1. The purpose of this project is to support the research work of [REDACTED] in his study of [REDACTED] proposal is attached.

2. Although it is only indirectly indicated in the proposal much interest is in the non-cognitive aspects of personality theory and personality measurement which is in accord with TSD/CB's long term interest in indirect assessment.

3. [REDACTED] is one of the most skillful and productive psychologists on the international scene today and a grant to him would, in fact, add to the prestige of the [REDACTED]. This project will also be in accordance with the plan of developing [REDACTED] as a world-wide organization.

4. 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]. Any permanent equipment required for the project will become the property of the Institute in lieu of higher overhead charges.

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[REDACTED]

111-4

5. The estimated cost of this project will be \$14,000.00 for a period of one year. Charges should be made against Allotment 0525-1009-4902. It is noted that [redacted] proposal and budget figures are for a period of three years but it is felt that approval should be limited to one year and then renewed if results are satisfactory.

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

[redacted]

Chief
TSD/Chemical Branch

APPROVED FOR OBLIGATION
OF FUNDS:

[redacted]

Research Director

Date: 4/20/60

A

Attachment:
Project Proposal

C

Distribution:
Original only

[redacted]

The Measurement of Motivation.

Introduction. Psychologists have succeeded reasonably well in measuring abilities, learning, and even some personality traits; they have not made much progress with the measurement of motivation or drive. The inviting possibility of using the Hull-Tolman formulation of performance as a function of drive and habit for the measurement of drive has not given useful results with human subjects because of the difficulty of equating habit strength (and also differences in ability.) This general failure to subject drive or motivation to a proper quantitative analysis affects large areas in psychology, both on the theoretical and on the practical side, and constitutes one of the most fundamental weaknesses of modern behaviour science. It also has obvious implications for other disciplines, such as psychiatry, psychoanalysis, and sociology. The research project proposed here is intended to investigate the possibility of subjecting the drive concept to experimental investigation, with the hope that a useful quantitative measure of motivation would emerge.

Theory. The proposed index of drive is closely related to the concept of reminiscence, and through it to that of reactive inhibition (Hull, 1943.) The most explicit form of the theory to be used has been put forward by Kimble (1949), and accordingly it will be referred to in this proposal as the Hull-Kimble theory. There is much support for the general theory, although certain parts of it are either of doubtful value, or

definitely contrary to fact, have indicated certain possible improvements elsewhere. To put it quite briefly, the theory maintains that during massed practice of any perceptual, motor or cognitive task reactive inhibition is being generated; this is conceived of as a kind of neural fatigue which counteracts performance, acts as a (negative) drive, and dissipates during rest. It grows up to the point where it equals in quantity the positive drive which is responsible for the fact that the organism performs at all; when this happens performance stops for a short time, and an involuntary rest period (I.R.P.) occurs. During this rest period inhibition dissipates, until it is sufficiently below the level of the positive drive for performance to begin again; it builds up again until another I.R.P. is produced, and so on ad infinitum.

If now a long rest pause (10 min. or so) is introduced into this cycle, all or nearly all of the reactive inhibition which has accumulated will dissipate, and performance will be much better after the rest pause than it had been before. This improvement is often referred to as "reminiscence." It will be seen from the little that has been said that under favourable circumstances this reminiscence effect may be used as a measure of drive. Inhibition builds up until it equals drive; consequently there will be a monotonic relation between inhibition and drive. Reminiscence is an index of the amount of inhibition which has been accumulated and dissipated, and if there is a monotonic relation between inhibition and drive, then reminiscence will also be an index of drive. This proposition can be tested by postulating that groups at a high and low level of drive respectively should differ with respect to reminiscence, and some rather inconclusive evidence

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has been given on this point by Kimble (1950) and Tasserman (1951.) (Their researches, while of considerable interest, suffered from the rather small differences in drive introduced by their experimental procedures.)

performed a rather more stringent test of the hypothesis by postulating that not only should high and low-drive groups differ with respect to reminiscence, but also that this difference should be much larger after a long period of practice than after a short period. It follows from the general theory that reminiscence will reach an asymptote when the point has been reached where inhibition = drive; this point should be reached earlier for the low drive group than for the high drive group. Consequently, if reminiscence is measured at the point where the low drive group has reached its asymptote, the high drive group will still be at a point well below its asymptote; consequently the difference in reminiscence between the two groups would continue to grow until the high drive group also had reached its asymptote; at this point the difference in reminiscence should stabilize. (See Fig. I.)

The experiment performed made use of the pursuit rotor, because from previous work we had much information on relevant parameters. Pre-rest performance contrasted 3 min. and 8 min. practice periods, as after 2 min. or so the low-drive group was predicted to have reached its asymptote; the high-drive group was assumed to have approached its asymptote after 6 min. or so. Drive was manipulated in the following way. We tested engineering apprentices, some of whom (high drive group) took the test as part of an entrance examination, not knowing that the scores on this test would not in fact be counted towards their entrance examination. The other subjects (low drive group) were tested after they had already been accepted and when the

knew that their performance could in no way affect their acceptance or future rating. Under these conditions, there was no difference in the reminiscence scores of the low drive groups after short and long practice respectively ($R = .54$ and $.51$ respectively.) There is, however, a very considerable difference for the high drive group for the two conditions ($R = .80$ and 1.50 .) It will also be noted that as predicted the high drive group scores are higher on both occasions, but particularly on the latter. The positive outcome of the experiment, highly significant for all predicted differences, suggests strongly that reminiscence may with advantage be investigated as a quantitative measure of drive.

It is interesting to note that the pre-rest performance of the high- and low-drive groups was very similar, with a slight advantage for the high-drive group. This reinforces the writer's belief that under ordinary conditions of learning performance is a poor measure of drive; it also points up another advantage of using reminiscence as a measure of drive, to wit its independence of level of performance. Thus differences in ability or habit strength become relatively unimportant, affecting as they do equally the pre-rest and the post-rest performance scores the difference between which determines reminiscence.

Research. The research proposed here constitutes in essence an extension and amplification of the research design described above. Differences in drive will be produced in the manner outlined above, by reference to real life goals of considerable strength; it is obvious from the literature that drives of this strength cannot be produced in the laboratory. It is also planned to work with smaller drive differences, such as can be produced by

rewards and punishments (cigarettes and sweets; shocks.) In this way the linear dependence of reminiscence on drive could be investigated.

The main research tool will continue to be the pursuit rotor, although some work will also be done with other perceptual and motor tasks (inverse alphabet printing; spiral after-effect); this will serve to show that conclusions are of general validity and not dependent on one particular type of apparatus. It will, however, be necessary to construct a new type of pursuit rotor for this work in view of the demonstration by Bahrick, Pitts and Briggs (1957) that the typical on-off scores of pursuit-rotor performance, even when integrated over time, do not show a linear relation to learning.

A continuous-scoring pursuit-rotor has been designed in our work-shop, and several copies of this would be built and used. (The essential feature of this apparatus lies in the provision of several metal annuli around the central target disc. These are concentric, and insulated from each other and from the central disc; contact of the stylus with each annulus produces current inversely proportional to the distance of the ring from the disc. It is possible to integrate scores from the disc alone, or from disc and rings.)

Experimental conditions would emphasize (1) changes in length of pre-rest trials and (2) changes in length of rest pauses. The parameters chosen for the demonstration experiment quoted above are not likely to be optimal, and it would be one task of the experiment to provide information on this point. The theoretical argument regarding length of practice period has already been mentioned above; that relating to length of rest pause is essentially similar. Low-drive groups, having accumulated less inhibition, would dissipate the total amount of inhibition more quickly than high-drive groups, which would

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be more advantageous for obtaining marked differences in reminiscence scores between high- and low-drive groups.

A further set of experiments is planned involving the use of positive feed-back designs. In some previous research [REDACTED] has used relatively short (1' to 2') practice periods separated by 5' rest pauses to investigate the point where practice periods are long enough to produce I.R.P.s. This point is indexed by the appearance of a phenomenon believed to be due to the extinction of conditioned inhibition, which itself is produced by the reinforcement given by the I.R.P.s to the condition of "not working" or resting; extinction of conditioned inhibition shows itself by a pronounced up-swing in the work curve after the rest pause is over, and additional to the reminiscence effect. A suitable length of work period can in theory be chosen such that high-drive groups do not yet produce I.R.P.s, while low-drive groups do; thus the former would not produce conditioned inhibition, while the latter would. As conditioned inhibition is theoretically considered to be a habit which does not dissipate in time, it should be additive, and thus the low-drive group should become more and more differentiated from the high drive group. Again the precise time intervals involved would be the crucial point of the experiment, as only in this way can we construct the beginnings of a proper quantitative theory of drive.

A third set of experiment relates to a comparison of the present method of measuring drive with alternative methods. In particular, it would seem from some unpublished work done in this laboratory that performance may be useful for the measurement of drive under two rather different conditions.

(a) When performance is so practiced that there are no great differences

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habit strength, or ability, then differences in performance are in theory due entirely to differences in inhibition and drive. Performance decrements under these conditions would be indicative of strength of drive, if we are entitled to assume that randomly selected groups do not differ in rate of accumulation of inhibition. Greater drive strength should thus neutralise greater degrees of inhibition, so that low-drive groups should show earlier and greater decrements. The tasks chosen would be of the type known as "vigilance" tasks [REDACTED] and the point of the experiment would be to compare the amount of agreement to be observed between this and the preceding measure of drive under identical conditions, and with the same subjects.

(b) It is well known that high drive may have positive or negative effects on learning depending on certain characteristics of the task [REDACTED]. For easy tasks, where the prevailing habits are roughly correct already, high drive improves performance; for difficult ones, where prevailing habits are not adapted to the task, high drive, by energising the incorrect habits, makes performance more difficult. It is proposed to study pursuit rotor performance (1) under normal conditions and (2) with the subject working under conditions of reversed (mirror) vision; it is predicted that in the first instance high drive would facilitate performance, while in the second instance it would depress performance. Results of this experiment also would be compared with the outcome of the other two measures of drive outlined above.

It has been an essential feature of the writer's work in the field of reminiscence that there are considerable individual differences due to differential rates of build-up of inhibition, and differential rates of

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dissipation [REDACTED]. In particular, it has been shown that extraverts build up inhibition quickly and dissipate it slowly; this shows itself by their greater reminiscence scores when tested under identical conditions with introverts. It is clearly necessary to control this personality variable, and it is planned to devote special study to the interaction of the drive variable and the temperament variable.

Apparatus and equipment. The research would require three new-built pursuit rotors of the design described above. It would also require a high-speed recorder, with amplifier. The total cost of the equipment would be [REDACTED], to which should be added [REDACTED] for use of electronic computer for analysis of data, for purchase of cigarettes to be offered as incentives, and for miscellaneous expenses.

Personnel. Two graduate psychologists would be required to carry out and organize the work on this project. In addition, one full-time technician would be required to make and maintain the apparatus, carry out modifications, and transport and set up the apparatus in different industrial organizations. The salary for the two psychologists, inclusive of insurance and 10% overhead charge of the Institute for administration, would be [REDACTED] each; that of the technician would be [REDACTED]. Total cost for a three-year period would be approximately [REDACTED], or \$35,000.

Duration of grant. It is proposed to plan the work described in this application for a three-year period. It is impossible to be very specific as much depends on the actual outcome of the first few experimental investigations, and as much also depends on the degree of cooperation of the various industrial organizations where it is planned to carry out the work. Preliminary agreement has been obtained, but only actual experimentation will

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show the actual numbers of subjects forthcoming for testing.

References:

1)

[REDACTED]

[REDACTED]

[REDACTED]

2)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

3)

[REDACTED]

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4)

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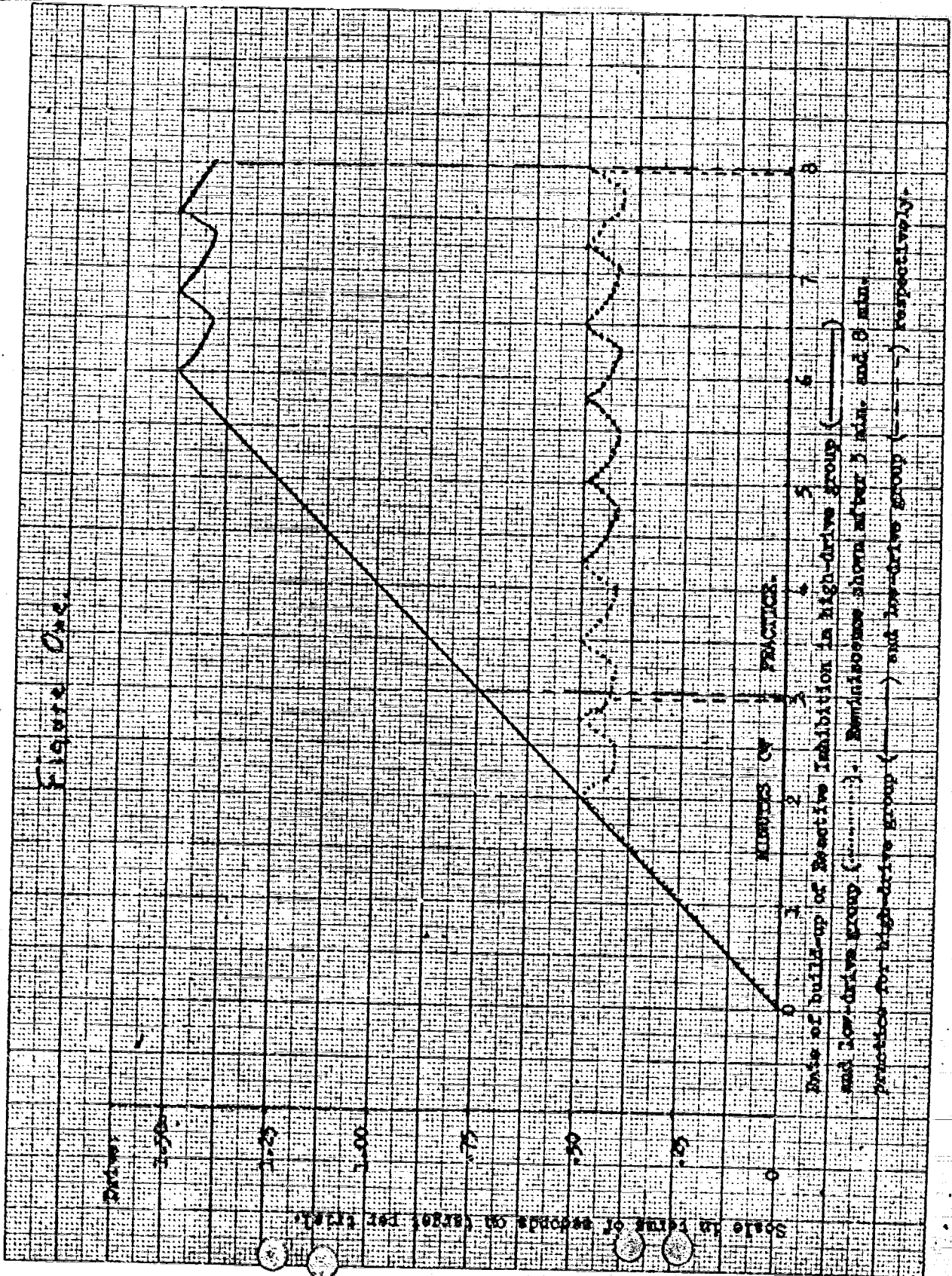
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Figure One.



2000

1500

1000

500

0

0

0

0

Scale in terms of seconds on target per trial.

NUMBER OF PRACTICE

1

2

3

4

5

6

7

8

Rate of build-up of reactive inhibition in high-drive group (—)

and low-drive group (-----). Reminiscence shown after 5 min. and 8 min.

practice for high-drive group (—) and low-drive group (-----) respectively.

PROPOSAL FROM [REDACTED]

111-4

"The Measurement of Motivation"

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

I think we should support this. [REDACTED] are doing important and basic work in integrating personality theory, learning theory, and the classic laboratory methods of experimental psychology. Although he is something of a controversial figure, his writings have stimulated a lot of work by others on both sides of the Atlantic. A grant to him, in fact, would add to the [REDACTED] prestige.

Would give him one year, but not three because of limited concept of motivation implied.

[REDACTED] one of my favorite controversial figures on the international psychological scene. Right or wrong, new idea or modification of old idea, he tells his story provocatively. The notion he presents is an interesting theoretical formulation. I doubt whether it will work out. But - the skill with which [REDACTED] and his collaborators will attack the problem will make the effort worthwhile. The budget is realistic and some preliminary work has been done.

I urge serious consideration and an affirmative decision on this proposal.

I have read the comments of [REDACTED] and [REDACTED]. I agree with all of them, including [REDACTED] suggestion that the research grant be limited to one year. If the results are satisfactory, consideration could be given to renewal.

FINANCIAL ADVISER COPY

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111-4

12th November 1959.

Dear [redacted]

Thank you very much for your kind letter of November 9th and the enclosed instructions for submission of a proposal. This was particularly welcome as I was just in the process of drawing up a proposal for transmission to the [redacted]. I have pleasure in enclosing a copy of the proposal and shall, of course, be happy to answer any queries that may arise from this.

I should perhaps add in this letter answers to one or two of the points mentioned in your instructions which are not answered in the proposal itself. No support has been requested from any [redacted] for the project, and the only similar project undertaken previously is a preliminary experiment described in some detail in the application itself. We have done a considerable amount of work on the measurement of reminiscence in relation to personality, but this has been our first experiment in which reminiscence was used as measure of drive or motivation.

With best wishes to yourself and Dr. [redacted]

Yours sincerely,

[redacted signature]

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[redacted address]