

PROJECT ADMINISTRATION DATA SHEET

ORIGINAL REVISION NO. _____

Project No./(Center No.) G-42-625 R6010-3A0 GTRC/~~GTR~~ DATE 12 / 12 / 86

Project Director: Dr. Christopher K. Hertzog School/~~KAT~~ Psychology

Sponsor: DHHS/PHS/NIH/National Institute on Aging

Agreement No.: Grant No. 2 R01 AG06162-03

Award Period: From 12/1/86 To 11/30/87 (Performance) 2/29/88 Reports

Sponsor Amount:	<u>New With This Change</u>	<u>Total to Date</u>
Contract Value: \$	_____	\$ <u>138,577</u>
Funded: \$	_____	\$ <u>138,577</u>

Cost Sharing No./(Center No.) _____ Cost Sharing: \$ _____

Title: Short Term Change in Memory/Metamemory in the Elderly

ADMINISTRATIVE DATA

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Military Security Classification: N/A
 or) Company/Industrial Proprietary: _____

ONR Resident Rep. is ACO: _____ Yes X No
 Defense Priority Rating: _____

RESTRICTIONS

See Attached NIH Supplemental Information Sheet for Additional Requirements.

Travel: Foreign travel must have prior approval — Contact OCA in each case. Domestic travel requires sponsor approval where total will exceed greater of \$500 or 125% of approved proposal budget category.

Equipment: Title vests with Georgia Institute of Technology

COMMENTS:

Continuation of G-42-615

COPIES TO:

SPONSOR'S I.D. NO. 02.108.001.86.022

Project Director
 Research Administrative Network
 Research Property Management
 Accounting

Procurement/GTRI Supply Services
 Research Security Services
 Contract Support Div.(OCA)(2) *Handwritten initials*
 Research Communications

GTRC
 Library
 Project File
 Other Newton

SPONSORED PROJECT TERMINATION/CLOSEOUT SHEET

Date 4/8/88

Project No. G-42-625 School/~~Lab~~ Psychology

Includes Subproject No.(s) N/A

Project Director(s) C. K. Hertzog GTRC/~~GXX~~

Sponsor DHHS/NIH/NIA

Title Short-Term Change in Memory/ Metamemory in the Elderly

Effective Completion Date: 11/30/87 (Performance) 2/29/88 (Reports)

Grant/Contract Closeout Actions Remaining:

- None
- Final Invoice or Copy of Last Invoice Serving as Final
- Release and Assignment
- Final Report of Inventions and/or Subcontract:
Patent and Subcontract Questionnaire sent to Project Director
- Govt. Property Inventory & Related Certificate
- Classified Material Certificate
- Other _____

Continues Project No. G-42-615 Continued by Project No. G-42-604

COPIES TO:

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 Other _____

SECTION IV PROGRESS REPORT SUMMARY		GRANT NUMBER AG06162-04	
PRINCIPAL INVESTIGATOR OR PROGRAM DIRECTOR Christopher Hertzog		PERIOD COVERED BY THIS REPORT	
APPLICANT ORGANIZATION Georgia Institute of Technology		FROM 12/01/1986	THROUGH 11/30/1987
TITLE OF PROJECT (Repeat title shown in item 1 on first page) Short Term Change in Memory/Metamemory in the Elderly (SEE INSTRUCTIONS)			

1. Plans for next year of support:

(a) Enter, verify, and conduct statistical analysis of questionnaire data from 2-year retest of Anville Validation Study (AVS) participants (estimated N = 250). Code, enter, and verify text recall data from the AVS.

(b) Enter, verify, and conduct statistical analysis of questionnaire data from independent cross-sectional sample, AVS (see below). Code, enter, and verify text recall data from this sample.

(c) Complete data collection for 3 remaining intraindividual panel study (p-technique) subjects. Complete data entry and verification for all 7 p-technique subjects. Conduct preliminary descriptive analysis on 4 remaining p-technique subjects and full multivariate data analysis for all 7 pilot subjects.

(d) Conduct event memory experiment, delayed from Year 03 of the project (see below).

2. Description of current studies.

(a) age differences in metamemory. We completed and published a study of age differences in multiple dimensions of metamemory (knowledge and beliefs about one's own memory functions). This reference is Hultsch, Hertzog, & Dixon (1987) in the publication list below. Previous work was inconsistent on whether there are age differences in metamemory. Our analysis showed that the inconsistencies are attributable to (1) substantial individual differences in metamemory; (2) different age patterns for different dimensions of metamemory (age differences are most likely for current memory self-efficacy beliefs, and for perceived change in memory self-efficacy from past to present); (3) greater likelihood of significant differences when college students are compared to adults; and (4) differential sensitivity of two commonly used metamemory questionnaires. Specifically, the Dixon/Hultsch Metamemory in Adulthood Questionnaire (MIA) is more sensitive to age differences than the Gilewski/Zelinski Memory Functioning Questionnaire (MFQ).

(b) We completed an analysis of the convergent validity of the MIA and MFQ, using confirmatory factor analysis. This analysis is reported in part in a draft book chapter (Hultsch, Hertzog, Dixon, & Davidson), a paper presentation at APA (Hertzog, Hultsch, & Dixon), and in a manuscript currently in progress. The analysis showed that the two questionnaires converged to measure Memory Self-Efficacy (MSE) and Memory Strategies, as predicted. We found that the correlation of two MSE factors (one defined by the MIA, the other by the MFQ) was .9 or greater in four separate samples. This result shows that, in spite of the differential sensitivity reported in (a) above, the two questionnaires are measuring essentially the same metamemory constructs.

(c) We are now completing an analysis of the discriminant validity of the MIA and the MFQ from measures of personality, affective state, and locus of control. The study was designed to determine whether metamemory is indeed something different than these other, well-known, psychological constructs. The preliminary results of the analysis were reported in the APA paper cited above. We found that the MSE factor had a significant correlation with internal locus of control (.5) but relatively low correlations with measures of Neuroticism, Extraversion, and Psychological Distress (Anxiety, Depression, Psychological Well-Being). However, the MFQ MSE factor had significantly higher relationships to Neuroticism and Psychological Distress than the MIA MSE factor. This analysis suggested that asking people about memory problems, as does the MFQ, causes the responses to be more related to negative psychological attributes, including affective states.

(d) We are currently analyzing the relationship of metamemory factors to actual memory performance, using data from the two validation study samples.

(e) We completed data collection for 2 p-technique subjects. These individuals completed 100 sessions measuring metamemory, affective states, and memory performance, given once weekly over a two-year period. Descriptive data analysis is underway, with multivariate statistical treatment of the data to follow. We have continued to collect data on 4 additional p-technique pilot subjects. As of 23 September 1987, these individuals had all completed at least 60 occasions of measurement.

(f) We have been collecting data on a 2-year retest of all members of the Annville Validation Study who could be recruited for repeated participation. These individuals are being given the full set of instruments administered in 1985. At this point about 210 participants have been retested. We anticipate a final retest sample of about 250 individuals. Data entry has begun, as has scoring of their text recall data.

(g) We became concerned that data from the longitudinal retest might be compromised to some degree by temporal changes in perceived memory problems. The last several years has seen major changes in public awareness of Alzheimer's disease and other types of memory impairment that can accompany old age. We decided to change the project design from the one proposed by adding a new, independent cross-sectional sample to the validation study. These are members of the same medical family practice from which we drew our original 1985 sample. We have now tested about 250 individuals in this new sample, and hope to have tested at least 400 by the end of the funding cycle.

(h) Because we decided to devote resources to collection of a new cross-sectional sample, we were forced to delay the event memory experiment originally proposed for Year 03 of the project. This study will now be conducted in Year 04 (next year).

3. There have been no changes in Human Subjects protocols.

4. Not Applicable.

5. Publications:

Hertzog, C., Dixon, R. A., Schulenberg, J. E., & Hultsch, D. F. (1987). On the differentiation of memory beliefs from memory knowledge: The factor structure of the Metamemory in Adulthood Scale. Experimental Aging Research, 13, 101-107.

Hertzog, C., & Nesselroade, J. R. (1987). Beyond autoregressive models: Some implications of the trait-state distinction for the structural modeling of developmental change. Child Development, 58, 93-109.

Hultsch, D. F., Hertzog, C., & Dixon, R. A. (1987). Age differences in metamemory: Resolving the inconsistencies. Canadian Journal of Psychology, 41, 193-208.

Hultsch, D. F., Hertzog, C., Dixon, R. A., & Davidson, H. (1987). Memory self-knowledge and self-efficacy in the aged. Draft chapter prepared for M. L. Howe & C. J. Brainerd, (Eds.), Cognitive development in adulthood: Progress in cognitive development research.

Hertzog, C., Hultsch, D. F., & Dixon, R. A. What do metamemory questionnaires measure? A construct validation study. Paper presented at the 95th Annual Convention of the American Psychological Association, New York, NY, 1987.

Copies of these publications and papers are provided in Appendix A.