

APPLICATION OF PSYCHOLOGY TO EVERYDAY LIFE

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I would like to thank Chris Fry BSS Program Chair and Lennie Poon for organizing this symposium and inviting me to participate. Virtually every year that I have attended GSA, my students and I have focused our energies on presenting our most recent, hopefully significant, research findings. This yearly grinding out of new research findings has unfortunately left too little time for considering our research within a historical perspective. Along with the GSA, I am personally approaching the big 50 and taking a historical perspective is much needed and appreciated.

Just a few years ago, Nancy Denney, a leader in this area, wrote "In **recent years** there has been increasing interest in the study of naturalistic everyday problem-solving behavior in adulthood. . . The **recent interest** in everyday problem solving has occurred as a result of developing concern over the validity of our traditional laboratory measures of problem solving when these measures are used with middle-aged and older adults." (Denney, 1989, p. 330).

In her excellent chapter on applied cognitive aging, Denise Park has written in a similar vein " The emergence of applied adult cognition as a substantive research area is an exciting and well-timed development in the study of cognitive aging. Although the cognitive aging knowledge base is far from complete, basic researchers have begun to develop a sufficient understanding of the aging cognitive system and its underlying mechanisms so that this work can not be used to impact positively on everyday cognitive challenges which confront elderly adults." (Park, 1992).

Most of us involved the study of everyday cognitive have written similar statements regarding what to us is a new area in the study of cognitive aging. However, in 1957, over thirty years ago Demming and Pressey published an article titled "Tests "Indigenous" to the adult and Older Years." They wrote "Most people are obviously better informed and more sagacious (to use a term suggested by Wechsler) at forty than twenty. These last characteristics are doubtless products of intellectual capacity plus experience. But they

would seem worth better appraisal than present test provide. . . The present project sought to construct tests with content and tasks more natural or "indigenous" to adult life, and obtain results with these tests. . . to see whether some reformulation of concepts regarding adult abilities might be suggested." (Demming & Pressey, 1957).

Fig 3
Fig 4
A test similar to the one used by Demming and Pressey, the Social Intelligence Test, was published in 1948, close to 50 years ago. It contains items strikingly similar to some of the everyday cognitive measures now in vogue. There is a subtest for Names and Faces --- the style of clothing and haircuts have changed but tapping the same cognitive abilities. Another subtest deals with making judgments in social situations. Although the context of some of the items seems dated, problem solving regarding social situations is one of the most frequent forms of everyday problem solving reported by adults and has been the focus of recent research, such as that by Cornelius and Caspi (19). The item regarding communism reflects the concerns of the Joe McCarthy era in the late 40's and early 50's.

Fig 5
Table 1 presents findings from the Demming and Pressey study, comparing the proportion of middle aged adults who performed above the median of the young adult group -- with comparisons being made for traditional intelligence tests versus Demming and Pressey's "indigenous" adult-relevant measures. The authors are not at all apologetic for their use of a prison sample. In commenting on how cooperative adults subjects were in taking the new measures, the authors wrote "In fact, one major groups was literally captive and had little choice - inmates of the Ohio State Penitentiary - the writers' tests being given for several weeks as part of the admission routine." (Demming & Pressey, 1957, p. 145). The authors conclude "The standard tests showed the progressive decrease in scores from the young to the older adult ages obtained by other investigators. In contrast, the writers' tests showed a rise through the middle and even into the older adult years." (Demming & Pressey, 1957, p. 147).

Fig 6
If we fast forward 20 years to 1977, the Gardner and Monge article

Fig 7
 becomes of interest. Again, adults performance on traditional laboratory measures and adult-relevant measures are compared. The Gardner and Monge adult-relevant test focused on knowledge in practical domains including transportation, disease and medical matters, financial matters, religion, pastimes and hobbies, sports, and current affairs. On the transportation subtest, scores increase from the 20's to the 30's and were relatively flat until the late 60's. When adjusting for education, differences in level were found but little age-related differences until the 60's. In the footnote to their article, the authors thank the 1968-71 Syracuse Department of Psychology's Adult Development Study staff, including David Hultsch, Mary Ann Lewis, and Ilene Siegler.

So we now fast forward another 18 years to 1995 and consider the field of everyday cognition today. Are we yet again reinventing the wheel, with similar questions as those addressed by Pressey and Gardner and Monge but with items suitable for the 1990's?

Fig 8
 There are I believe five trends in the current research on everyday cognition that bode well for the future.

Increase in Volume of Research

Fig 9
 The past decade has been marked by a dramatic increase in the number of studies and the number of investigators conducting research. I examined the number of citations in PsychInfo that could be broadly construed as everyday cognitive research. This includes research across the lifespan, not only in adulthood. A surprising finding is the number of different terms used to describe the field. Figure 9 shows the six most common keywords identified to describe the field. There were 120 references that included the term everyday memory in the title or abstract. 78 references using the term everyday problems, 61 references on tacit knowledge, 44 references to practical intelligence, 35 references to everyday problem solving, and 25 references to everyday cognition. Terms such as everyday reasoning (19), everyday intelligence, (5), and everyday competence had fewer citations (5). This at first seem surprising, until I

Major Vol
 Sinnott
 Paon Rubin Wilson
 Puckett & Rice
 Sternberg & Warr

examined the titles of chapters in some of the edited volumes on everyday cognition. Many chapter titles did not include these key terms in the title. Perhaps we need to ask ourselves what this ambivalence or heterogeneity regarding terminology means.

*Sternberg +
Wagner
Poon, Kabin
+ Wilson*

Left the Laboratory and Moved beyond Paper and Pencil Tests

Although a significant advancement in content, both Demming and Pressey and Gardner and Monge's measures were still versions of paper and pencil tests. A second very significant trend is that research in the 1990's is increasingly being conducted outside the laboratory. Measures include everyday behaviors, such as the medication compliance work done by Denise Park and colleagues, computer literacy by Roger Morrell, driving behaviors by Karlene Ball, and Bingo playing by Iseli Krauss.

Age Dif

*Manfred Diehl:
observation →*

Salience of Noncognitive Factors in Everyday Cognition

Another trend is the growing recognition of the need to include noncognitive factors as mediating variables in understanding problem solving in the real world. The work of Gisela Labouvie-Vief and Fredda Blanchard-Fields has contributed to our understanding of social cognition and to the role of emotion in decision making tasks. The work of Cindy Berg on perceptions of competence and naive theories of intelligence has made an important contribution. Margie Lachman's research on the role of self efficacy in memory functioning has been very useful.

Evaluative

*Error
analyses*

Focus on Domain-Specific Problem Solving

Early measures of everyday cognition typically involve a potpourri of substantive domains -- social situations, taking medications, finances, what to do when the refrigerator failed in the middle of the night, etc. These were important first attempts to map out the field of everyday cognition. However, currently some very important research is evolving that focuses in depth on a specific substantive domain. This includes Denise Park's work on medication compliance, and Karlene Ball's research on driving. These intensive research efforts in a specific domains will provide important information regarding individual differences, generalizability, and

Fig 10

Back Fig

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longitudinal change in everyday problem solving.

Multidisciplinary Efforts

Once we got outside of the laboratory, beyond paper-and-pencil measures and acknowledge the salience of noncognitive factors, we have begun to recognize the need for multidisciplinary teams in systematic programs of research. Study of everyday behaviors such as medical decision making, medication compliance, driving require consultation and collaboration with colleagues in medicine, engineering, and health psychology.

Well, its been a very interest first 50 years of research on the application of psychology to activities in the real world, beyond the laboratory. We look forward to the next few decades.

Fig. 1

"In **recent years** there has been increasing interest in the study of naturalistic everyday problem-solving behavior in adulthood. . . The **recent interest** in everyday problem solving has occurred as a result of developing concern over the validity of our traditional laboratory measures of problem solving when these measures are used with middle-aged and older adults." (Denney, 1989, p. 330).

" The emergence of applied adult cognition as a substantive research area is an exciting and well-timed development in the study of cognitive aging. Although the cognitive aging knowledge base is far from complete, basic researchers have begun to develop a sufficient understanding of the aging cognitive system and its underlying mechanisms so that this work can now be used to impact positively on everyday cognitive challenges which confront elderly adults." (Park, 1992).

Tests of "Indigenous" to the Adult and Older Years

J. A. Demming and S. L. Pressey

Journal of Counseling Psychology, 1957

"Most people are obviously better informed and more sagacious (to use a term suggested by Wechsler) at forty than twenty. These last characteristics are doubtless products of intellectual capacity plus experience. But they would seem worth better appraisal than present tests provide. . . The present project sought to construct tests with content and tasks more natural or "indigenous" to adult life, and obtain results with these tests. . . to see whether some reformulation of concepts regarding adult abilities might be suggested." (Demming & Pressey, 1957).

"The standard tests showed the progressive decrease in scores from the young to the older adult ages obtained by other investigators. In contrast, the writers' tests showed a rise through the middle and even into the older adult years." (Demming & Pressey, 1957, p. 147).

George Washington University Series

SOCIAL INTELLIGENCE TEST

FIRST SHEET—MEMORY FOR NAMES AND FACES

Study each of the twelve faces very carefully and try to remember the name that goes with it, for later you will have to recognize these faces in a larger group and remember their names. You will have four minutes to study this sheet.



Howard Jones

Mike Bailey

Lee Higgins

Sid Smith



George Cook

Ben Elliott

John Moore

Chester Sims



Tom Edwards

Fritz Wagner

Jake McDonald

Clifton Clark

SOCIAL INTELLIGENCE TEST

(1949)

TEST 1. JUDGMENT IN SOCIAL SITUATIONS

Assume that you are a professor of economics in a large university and Smith, one of your students, complains that Jones, another student, is a communist. You should:

- A) Send for Jones and tell him that Smith has complained about his communistic belief.
- B) Ask some of the students to try to convince Jones of his error.
- C) Call Jones and prove to him that communism won't work.
- D) Tell Smith to pay no attention to Jones' talking.

A young man invites a young lady to go to a show with him. On approaching the theater he discovers he has left his pocketbook at home. It would be best to:

- A) Try to get tickets on credit by offering to leave his watch as security
- B) Try to find some friend from whom he can borrow money.
- C) Decide with her on a course of action.
- D) Find some plausible excuse and go home and get his money.

Percentages of Subjects in Other Age Groups
Scoring Above the Medians for Those 20-24

Test	Age					
	15-19	20-24	25-29	30-39	40-49	50-up
Army Beta		50	41	34	20	5
Otis (Intermediate)		50	47	44	17	15
Minnesota Paper Form Board		50	48	39	27	18
Bennett Mechanical Comprehension		50	48	52	53	49
		—	—	—	—	—
Average Number of Cases		65	66	150	91	73
Telephone		50	57	77	78	75
Common Legal Terms		50	41	50	56	67
Occupations		50	57	85	75	86
		—	—	—	—	—
Average Number of Cases		18	33	61	24	11
		College, Evening School, and Golden Age Club Members				
Telephone	25	50	73	92	86	66
Common Legal Terms	27	50	65	80	72	71
Occupations	16	50	73	76	95	30
	—	—	—	—	—	—
Average Number of Cases	261	342	69	40	15	35

Fig. 5

Fig. 6

Adult Age differences in cognitive abilities and Educational Background

Eric F. Gardner and Rolf H. Monge

Experimental Aging Research, 1977

A large sample of men and women between the ages of 20 and 79 years were given specially devised, adult-relevant tests of vocabulary and information as well as portions of the ABLE test of educational achievement. The familiar patterns of decline with age was found in the ABLE subtests, but not in the adult-relevant tests, which lends support to the position that age trends in tests of cognitive abilities depend significantly upon test contents

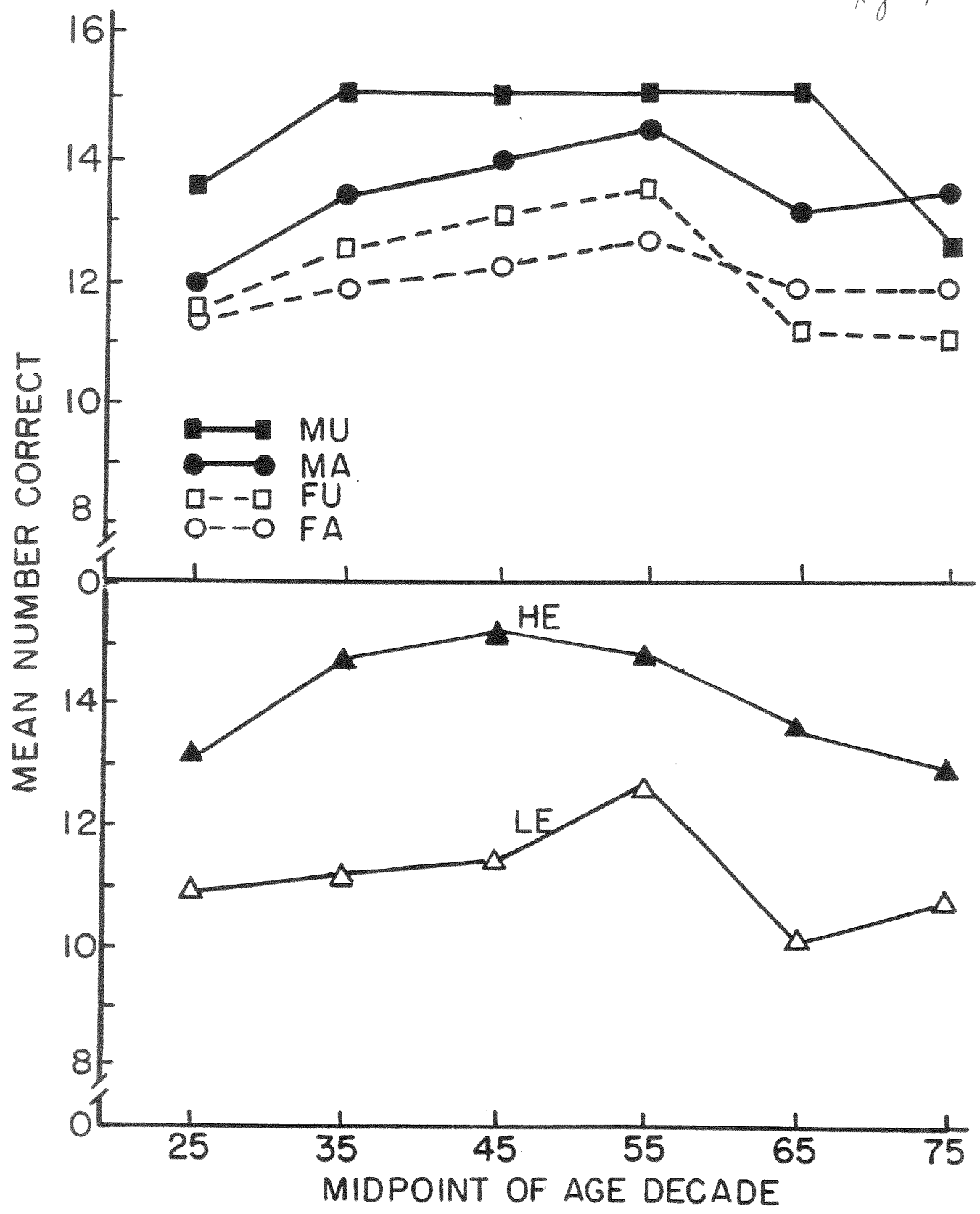


Fig. 2a. Performance on test TR-2 (Transportation) as a function of age, sex, and education. Male (M) and female (F) test scores unadjusted (U) and adjusted (A) for education level.

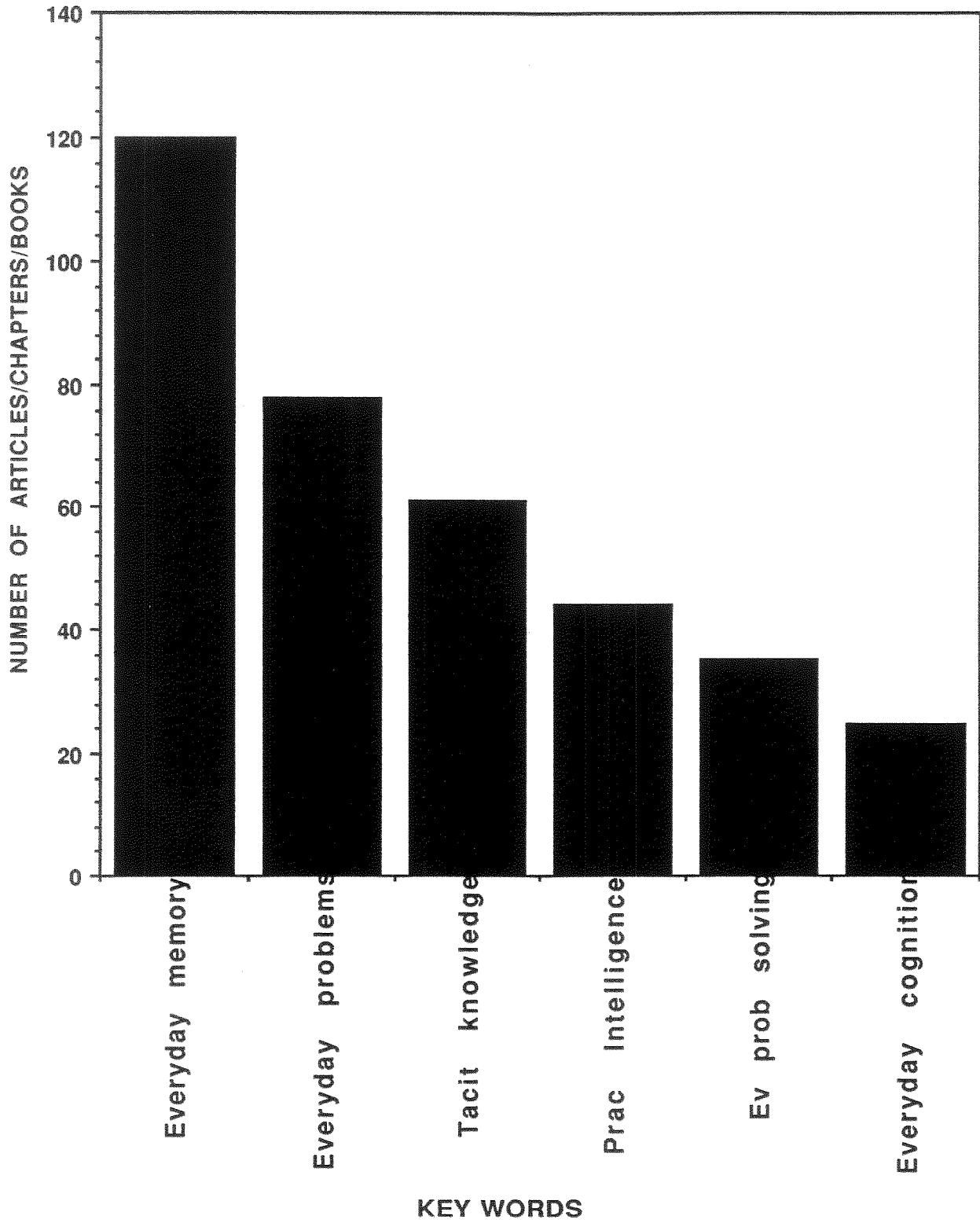
Fig. 2b. Performance on test TR-2 (Transportation) as a function of age and education level. High education groups (HE) and low education groups (LE) for scores averaged over the sex factor.

Fig. 5

Everyday Cognition Research in the 1990's

1. Increase in the Volume of Research
2. Researchers have left the Laboratory and Moved beyond Paper-and-Pencil tests
3. Salience of Noncognitive Factors in Everyday Cognition
4. Focus on Domain-specific Problem Solving
5. Multidisciplinary Efforts

NUMBER OF CITATIONS BY KEYWORD (1984 - NOVEMBER, 1995)



7/10/10

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