Early research on motivation, especially achievement motivation, was based on a dynamic model which focused on enduring affective dispositions growing out of early childhood experiences. Cognitive theory provided a way to reconceptualize achievement motivation in terms of achievement-related perceptions, thoughts, and meanings, and a framework for beginning to examine how changing circumstances possibly correlated with age might modify whatever turned out to be defined as achievement motivation. A research project was developed which focused heavily on the development of a workable approach to research in this area. It examined how age was related to meanings and in turn to personal investment. Results from preliminary data on approximately 3,000 adults in white-collar occupations seem to suggest that modest changes in personal incentives may occur with age and that goal directedness may vary with age. The results suggest that job satisfaction tends to increase with age, as does organizational commitment. The research found little evidence of age-related changes in achievement motivation. Motivational patterns appear to be minimally related to age during the working ages of 20 to 70 years of age. (NB)
Changes in Personal Investment in Adulthood

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Changes in Personal Investment in Adulthood

A number of years ago we (Maehr & Kleiber, 1980) called attention to emerging demographic trends, referred to as "The Graying of America," and suggested that such trends might portend a "Graying of Achievement Motivation" as well. That is, we raised questions about the future of the achievement ethic in an increasingly aging society. Therewith, we suggested the desirability--indeed, the necessity--of studying age-related changes in motivation, especially achievement motivation.

There are a number of reasons for studying age-related changes in motivational patterns. A first relates to the future of achieving patterns in our (and other) societies. Currently, there is pervasive concern that a "competitive edge" rests significantly on the quality of human resources (see, Thurow, 1983, 1987). If age is characteristically associated with lowered achievement motivation, can we expect an aging workforce, an aging leadership, aging human resources to be up to the challenges that are presented?

At the more personal level, there is reason to believe that in today's world individuals will increasingly find themselves in a situation where they can and must remain in the job market beyond the mythical age of 65 (cf. Butler, 1983). Will this accord acceptably with their predilections? Or, can we expect problems of motivation and morale? Will this occasion increased instances of job-related stress?
Aside from such economic reasons, there are quality of life reasons for studying motivation and achievement in older persons. There is some reason to believe that a high level of functioning is significantly dependent on accepting new challenges and pursuing new opportunities. Passivity is detrimental to such functioning. How does one retain and enhance such challenge-seeking in older persons (see, e.g., Monty, & Perlmuter, 1987)?

Finally, in taking a life-span perspective on motivation and achievement one inevitably confronts, in new and challenging ways, enduring theoretical and methodological questions. For example, a focus on achievement motivation throughout the life span suggests a reconsideration of the personality vs. situation argument. It most certainly will lead to new initiatives in research methods for it is reasonably clear that one cannot find and study older persons in the same way that we have become accustomed to studying children in standardized environments such as schools. At the very least, a life-span perspective should encourage an awareness of the degree to which previous models of achievement motivation are biased by the tasks and aspirations of youth.

In an earlier review of the literature, we (Maehr & Kleiber, 1981) noted that the evidence to that point did in fact imply a certain waning of what was customarily defined as achievement motivation. However, we suggested that the matter needed to be re-examined to determine whether this was perhaps a function of a limited definition of achievement motivation, a function of limited focus on what it was and where it could be found. In
short, the research evidence was limited and available theory and methods did not seem to do justice to the problems.

Since that time we (Kleiber & Maehr, 1985; Maehr & Braskamp, 1986) and others (e.g., Blackburn & Lawrence, 1986; Heckhausen, 1986; Hooker & Ventis, 1984; Raynor & Brown, 1985; Veroff & Smith, 1985) have devoted considerable effort to expanding the age range in which motivation is considered. This leads us to re-consider the issues associated with the "graying of achievement motivation. More specifically, the purpose of this paper is two-fold:

1) First, we intend to summarize the essence of the perspective that is emerging in our own work and suggest how it might meet some of our and others' earlier criticisms.

2) Second, we intend to report preliminary research showing the applicability of this perspective to the study of older persons. While we will not claim that our results are definitive, we believe they are interesting and suggestive.

RE-CONCEPTUALIZING MOTIVATION AND ACHIEVEMENT

Early research on motivation, especially achievement motivation, was based on a dynamic model which focused especially on enduring affective dispositions growing out of early childhood experiences (McClelland, 1961). The role of changing situations and circumstances and the interpretations of these by the individual was not the focus of attention. With the surge of interest in cognitive processes, the time was right to re-conceptualize achievement motivation in terms of achievement-related perceptions, thoughts and meanings—and to a
considerable extent that has been and is currently being done. This re-conceptualization is at least as important for the study of motivation and aging as for the study of any other area. In particular, cognitive theory provided a framework for beginning to examine how changing circumstances possibly correlated with with age, might modify whatever turned out to be defined as achievement motivation. Additionally, this re-conceptualizing opened up the possibility of utilizing a wider array of research methods.

Building on these trends, we have attempted to formulate an interpretation of motivation which does not assume that either one is or is not motivated. Rather it is assumed that all are essentially motivated, albeit in different ways. Thus, in describing motivation we are inclined to use the metaphor of "personal investment." Presumably individuals possess a certain amount of motivational resources, and the problem for the motivation researcher is to determine how they choose to invest these resources at any given point. Further, re-interpreting choice and decision theory with the tools of more recent cognitive theory, we suggest that such choices are determined by the "meanings" that a person holds in any given situation. A summary of this perspective and these associated constructs is presented in Figure 1.

Insert Figure 1 about here
A PROGRAM OF RESEARCH

Given this working perspective, we have carried out a program of research which, although it has focused heavily on the development of a workable approach to research, has also yielded an interesting pattern of findings. This research program can thus be described as consisting of two overlapping and inter-related phases. First, there was a developmental phase in which we concentrated on specifying constructs and methods for measuring them. Second, there was and is an application phase which, in addition to putting the developmental work to a test, has yielded preliminary results regarding changing patterns of motivation with age. In this paper we will comment on both phases, but concentrate especially on preliminary results of significance.

Development of Theory and Procedure

Our research began with the assumption that certain "meanings" of the situation to the person would be important in determining Personal Investment. Through a long and tortuous period of experimentation and exploration (see, for example, Maehr & Braskamp, 1986) we defined a set of meanings that appeared to have some relevance in this regard. Briefly summarized, we tentatively concluded that three types of meanings are of special relevance: Personal Incentives (or Goals), perceptions of Self and Perceived Options. In essence these constructs summarize the perceptions of self and the situation that are assumed to be especially relevant in guiding personal investment in that situation. These categories of meaning are
defined further and illustrated in Table 1 (see also, Maehr, 1984; Maehr & Braskamp, 1986). These three types of constructs are the major linchpins in the theory which guides the research that we are currently conducting. Parenthetically, however, it may be noted that we do not wish to argue that this is a complete and perfect list of such meanings. In particular we would make a special point of the fact that the range and type of personal incentives may vary a bit from domain to domain. In our own research and that of our colleagues, for example, the list of personal incentives that have been derived from factoring various item responses, varies slightly when work, leisure or classroom learning is the focal activity (see, for example, Duda & Tappe, 1987a; Steinkamp & Kelly, 1986). The list presented here was derived from our major focus of activity: adults in the world of work. Moreover, whereas we have developed psychometric procedures for assessing these (Braskamp & Maehr, 1985), we have reason to believe that other methods (e.g., telephone interviews), can also be employed.

Insert Table 1 about here

Description of Studies

Given this working set of tools, we have begun to examine how age is related to meanings and in turn to personal investment. While research has been conducted in a variety of settings to answer such questions as why individuals do or do not
participate in exercise programs (Duda & Tappe, 1987b), various leisure activities (Steinkamp & Kelly, 1986) or invest themselves in school learning (Fu, 1987), we will concentrate here principally on personal investment in the world of work.

The results to be reported are based principally on a cross sectional sample which formed the basis for an initial study (N------>800). The sample was composed largely of white collar workers, ranging from the clerical/secretarial to the professional and upper management level. This rather heterogeneous sample is described more fully elsewhere (Maehr & Braskamp, 1986). Since we now have additional data on approximately 3000 adults with comparable background characteristics, an update on trends in research will be attempted—even though we have not completed our analyses.

Hypotheses about Age and Motivation

Given the preliminary nature of the results and the methods that have been employed, one is well advised not to talk so much about "findings" but about the emergence of viable hypotheses. In this regard, the results thus far seem to suggest the viability of the following hypotheses:

1) Modest Changes in Personal Incentives. There is some reason to suggest a slight increase in affiliation personal incentives. While one must be careful in arguing as the basis of negative evidence, it is nevertheless most interesting that we have found no evidence in changes in accomplishment with age.

An indirect basis for arguing that something like achievement drive is greater in the young possibly exists in an
early finding (Maehr & Braskamp, 1986). In this regard, it was found that younger persons experienced a greater difficulty in fulfilling personal incentives in and through their job roles. One could conceivably argue that this lack of fulfillment could be antecedent to different patterns of personal investment, but we, as yet, have no direct evidence to report in this regard.

2) It is in regard to the sense of self variables that we uncovered some interesting and potentially important variation with age: Goal Directedness does appear to vary with age. The general pattern of the results is illustrated in Figure 2 and it suggests an increase in the mid-career ages but a decline in the older age group.

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Insert Figure 2 about here

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Age and Personal Investment. Finally, in terms of the actual personal investment of older persons we can report two trends in our results which are of some interest. These relate to job satisfaction and organizational commitment.

Job Satisfaction tends to increase with age, a finding that finds support elsewhere in the literature (see e.g., Bourne, 1982; Doering, Rhodes & Schuster, 1983; Lawther, Gill, & Coppard, 1985). However, one should treat this finding with some caution since it could be more characteristic of certain vocational groups (e.g., white collar/professional) than others. The nature of these results are portrayed in Figure 3.
Organizational Commitment likewise increases with age. This may be in part due to the fact that the individual has fewer options as he or she gets older. But in any case, it seems clear that older persons are indeed more personally invested in the organization---and irrespective of the amount of time they have been in the organization. Of course, this finding too, is not altogether unexpected. (See Figure 4).

CONCLUSION

In reflecting on the results we have obtained thus far, several general comments seem warranted. First, and most obviously, changes in personal incentives, where noted, do not suggest a lessened concern with excellence, with doing things well, or with accepting or confronting challenges. In so far as this pattern is collectively related to "achievement motivation" we find little evidence of age-related changes in achievement motivation. The change in Goal-Directedness may represent an interesting exception to be explored further. But aside from
that, the picture that we can draw from our results is one in which motivational patterns are minimally related to age during the working ages (ca. 20 – 70). Of course, we are dealing with persons who are in fact doing quite well in work roles, work roles which tend to be "white collar" in nature. But our results are really part of a broader picture which seems to confirm a basic idea most clearly articulated in previous research on motivation and achievement: There is little basis for arguing that achievement motivation is the special province of the young unless one takes a very limited view of achievement motivation. There seems little to fear about the "graying of America" for the immediate future; it does not seem that it is any threat to a productive society. Perhaps to the contrary, we are finding some evidence of the maturing of achievement motivation in ways that bring it more in line with organizational commitment. With a burgeoning group of middle aged workers on the horizon a new ideal may have emerged reflecting a more organizationally focused, rather than individualistic, achievement orientation. In any case, such a hypothesis would require cautious empirical scrutiny. And, in the mean time, we may be well advised to consider such problems as how one can design the work place and work roles to make them more compatible with the capacities of older persons.
References


TABLE 1
Definition of "Meaning" Constructs

<table>
<thead>
<tr>
<th>PERSONAL INCENTIVES</th>
<th></th>
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<tbody>
<tr>
<td><strong>ACCOMPLISHMENT</strong></td>
<td>Values doing interesting and challenging tasks</td>
</tr>
<tr>
<td></td>
<td>Strives for excellence</td>
</tr>
<tr>
<td></td>
<td>Demonstration of competence rewarding and satisfying</td>
</tr>
<tr>
<td><strong>POWER</strong></td>
<td>Enjoys social competition</td>
</tr>
<tr>
<td></td>
<td>Winning Important</td>
</tr>
<tr>
<td></td>
<td>Strives for influence over others</td>
</tr>
<tr>
<td></td>
<td>Leadership and authority positions valued</td>
</tr>
<tr>
<td><strong>AFFILIATION</strong></td>
<td>Cooperation with and faithfulness to others valued</td>
</tr>
<tr>
<td></td>
<td>Enjoys and relies on close social relationships</td>
</tr>
<tr>
<td></td>
<td>Values the importance of personal sacrifices to help others</td>
</tr>
<tr>
<td></td>
<td>Committed to social, civic and religious causes</td>
</tr>
<tr>
<td><strong>RECOGNITION</strong></td>
<td>Receiving acknowledgement from others important</td>
</tr>
<tr>
<td></td>
<td>Extrinsic rewards, praise and recognition important</td>
</tr>
<tr>
<td></td>
<td>Regards financial status as an indicator of success</td>
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</tbody>
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******************************************************************************

**SENSE OF SELF**

| **SELF-RELIANCE** | "I don't need any one to motivate me. I motivate myself" |
| **GOAL-DIRECTEDNESS** | "I aim my activities toward a future goal" |
| **SENSE OF COMPETENCE** | "I can succeed at anything I want to do." |

**NOTE:** Statements in quotes are items which loaded on this factor in a questionnaire employed (SPECTRUM; Braskamp & Maehr, 1985).
PERCEIVED OPTIONS

Perceived options refers to the behavioral alternatives or action possibilities that a person perceives to be available to him/her in any given situation. Examples of these in a particular work situation might be:

MARKETABILITY: The extent to which employees perceive that they can find good job or career opportunities.

ADVANCEMENT: The extent to which employees feel that they are not "stuck" at a certain level in the organization.
FIGURE 1
Theoretical Framework

Contextual Factors (e.g., job design)

MEANING

PERSONAL INVESTMENT

Enduring ("trait-like") Factors

MEANING = 3 cognitive constructs

Personal Incentives (goals or values)
Sense of Self (e.g., perceived competence)
Perceived Options (e.g., job opportunities)

PERSONAL INVESTMENT = MOTIVATED BEHAVIOR

Behavioral Direction (e.g., Choice, persistence, attitudes)
Performance Intensity (e.g., activity level)
Performance level (e.g., productivity, efficiency)
Average Scores on Goal Directedness Scale

<table>
<thead>
<tr>
<th>AGE GROUP</th>
<th>MEAN SCORE</th>
</tr>
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<tbody>
<tr>
<td>&lt;36</td>
<td>3.4</td>
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<td>36-44</td>
<td>3.7</td>
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<tr>
<td>45-54</td>
<td>3.8</td>
</tr>
<tr>
<td>&gt;54</td>
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Average Scores on Job Satisfaction

<table>
<thead>
<tr>
<th>MEAN SCORE</th>
<th>AGE GROUP</th>
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<td>3.7</td>
<td>45-54</td>
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<td>3.61</td>
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FIGURE 3
Figure 4

Average Score on Organization Commitment

Average Score

- Mean Score
- Score

Age Group

<36
36-44
45-54
>54

<36
36-44
45-54
>54

4.5
4.4
4.3
4.2
4.1
4.0
3.9
3.8
3.7