

# A Longitudinal Examination of Life Choices of Gifted and Talented Young Women<sup>1</sup>

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## Abstract

The present study examines the reported achievements of 126 gifted and talented young women approximately 14 years after being identified by Project CHOICE staff. The examination is undertaken from an ipsative as well as a nomothetic perspective. The results indicate that (a) the educational and career attainment of these young women compare quite favorably both with other cohorts of gifted women and with criteria reflecting social expectation; (b) personal and relational accomplishments are identified almost as frequently as educational and career accomplishments as being their "greatest achievements"; and (c) a substantial number of these young women at age 29 have yet to achieve the educational, career, and lifestyle aspirations they identified in adolescence. Implications for counseling gifted young women are discussed.

When examining the lives of gifted and talented women, the primary recurring theme of concern has been the degree to which gifted women have or have not realized their potential over the course of the lifespan. In their review of the current status of gifted women, Reis and Callahan (1989) conclude that "bright women are clearly adult underachievers" (p. 102). Despite interventions designed to decrease the negative impact of external and internal barriers to the realization of potential and research documenting the decline of gender differences among the general population in specific ability areas, the educational and career achievements of gifted women suggest substantial unrealized potential.

Traditional theories of achievement behavior and career development have, for the most part, failed to provide adequate explanatory power for understanding the life choices of gifted women. Through the decade of the 80s, a number of reasons for this failure have been set forth. Spence and Helmreich (1983), observing that the study of achievement has traditionally been limited to academic and vocational attainments, argue for a broadened definition of achievement. According to Eccles (1986), the traditional definition of achievement is not only narrow but also stereotypically masculine. She further suggests a "choice rather than deficit perspective" (p. 15) when examining the achievement behavior of women. From this perspective, the question to be answered is not why women avoid succeeding in traditionally masculine arenas of academics and career but rather why they make the choices that they make.

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Traditional theories of career development are similarly limited in focusing on career pathways in isolation rather than in relationship to other life arenas. As early as 1966, Ginzberg noted the complexity of women's career paths. More recently, researchers focusing on women's career development have emphasized the need to consider the context of women's lives and recognize the interrelatedness of career decisions and choices related to the realities of other life spheres (Farmer, 1985; Tittle, 1983). Furthermore, this more comprehensive view must consider the sociopolitical context which defines women's "structure of opportunity," the nature and extent of external barriers to choices made (Astin, 1985).

From a more global perspective, Belenky, Clinchy, Goldberger and Tarule (1986), Gilligan (1982; Gilligan, Ward, & Taylor, 1988), Josselson (1987) and others have suggested that women simply have a different "worldview" and speak in "a different voice" than do their male counterparts. Women's orientation to the world is relational in nature, an orientation which influences academic, career, and all other life choices. For women, the impact of decisions or choices on significant others plays a central role in the decision-making process. Such a worldview

## Putting the Research To Use

A primary concern among parents as well as educators working with gifted children is the degree to which the gifted, especially gifted girls and young women, will realize their full potential. Although seldom defined explicitly, the recurring phrase "realization of potential," as commonly used in the gifted literature, refers to the gifted individual's achievement of societally valued and normatively defined "high level/high status" educational and career goals commensurate with his or her talents and abilities.

The present study examines the degree to which Project CHOICE participants have "realized their potential" as assessed by this commonly understood definition. Alternative approaches to assessing this construct were examined by (a) comparing their educational and career achievements in relationship to their idiographically defined goals and aspirations from adolescence and (b) examining what these gifted young women define as their three most significant life achievements. The findings underscore the need for those working with gifted young women to go beyond the traditional paradigm of societal expectations for achievement to an understanding of the individual's own unique aspirations, goals, and definitions with respect to achievement.

further suggests that women may define "achievement" or "success" in ways substantially different from the traditional masculine definitions. From a relational vantage point, the growth and maturing of a significant relationship may well rival in importance and value a promotion to a corporate vice-presidency. Given this worldview, a complete "re-visioning" of career development theory may be required (Marshall, 1989).

Understanding why gifted women "underachieve" may therefore necessitate going beyond examination of the existing external and internal barriers that thwart gifted women's realization of potential. In doing so, the focus would be on what gifted women do achieve, including nontraditional as well as traditional arenas of achievement, and what they themselves define as their own accomplishments.

The purpose of the present paper is to examine the life choices and concomitant "achievements" of gifted and talented young women whose developmental phases coincided with significant sociohistorical events identified by Bardwick (1990). For this cohort, the "gender salience" of adolescence in the early to middle 1970s coincided with the peak of the Women's Movement and a recession that resulted in many women returning to the work force. For those following a traditional timeline, college graduation in 1983 coincided with another economic recession, a climate predictive of an orientation to traditional values (see Bardwick, 1990). Whether in graduate or professional schools or starting families or careers, their mid to late twenties coincided with what Bardwick describes as the traditionality of the latter half of the 1980s. Given this sociohistorical context, the present study, as part of a longitudinal study of the career development of gifted and talented young women begun in 1976 when these individuals were 16-17 years of age, examines the following:

- 1) the traditional and nontraditional achievements of these gifted and talented young women to date as well as the nature of their "achievements" as they define them in "their own voice";
- 2) their accomplishments from a traditional nomothetic perspective comparing their achievements with other cohorts of gifted women at a similar developmental phase and against societal expectations based on their general ability;
- 3) their accomplishments from a nontraditional ipsative perspective comparing their "achievements" to date with their own aspirations in adolescence as well as their own definitions of personal achievement reported in adulthood.

### Methods

**Sample.** The sample consisted of 126 gifted and talented young women ranging in age from 27 to 29 years of age. Each woman had been originally identified as gifted and talented during her sophomore year of high school and had been invited to participate in Project CHOICE, a career development program for gifted and talented female adolescents (Fleming & Hollinger, 1979). In the identification process, the broad, multidimensional definition used 14 traditional (e.g., aptitude, academic

achievement) and nontraditional (e.g., employment, home-related achievement) indices of talent and giftedness. With respect to the present sample, 46% scored 132 or above on one or more aptitude measures, and 45% scored 116 to 131. On standardized measures of achievement, 60% of the present sample scored at the 90th percentile or above in verbal, and 55% scored at the 90th percentile or above in mathematics. While many of the young women scoring above 132 on aptitude measures and/or in the 90th percentile in achievement also evidenced talent in one or more of the nine talent dimensions, 20% of the present sample did not meet the typical academic criteria for selection but were selected on the basis of their ratings on one or more of the talent dimensions (e.g., state/national recognition in athletics or the performing arts). The present sample represents 47% of the original sample which had been selected from six metropolitan schools, two all-female parochial, two all-female private, and two co-ed public. With respect to racial composition, the sample (89.7% Caucasian, 7.1% Black, and 3.2% Asian or Hispanic) closely paralleled that of the original project sample (85%, 12%, and 3%, respectively). The sample came from 39.3% upper, 40.2% middle, and 20.5% lower socioeconomic backgrounds compared with the 35.9% upper, 37.1% middle, and 26.9% lower representation characteristic of the original sample. With respect to school-control, 29.3%, 11.1%, and 59.4% of the respondents graduated from parochial, private, and public schools, respectively as compared with the 32.2%, 11.9% and 56% characteristic of the original sample.

**Procedure.** Following their 10th year high school reunion, school officials were contacted to obtain address corrections for the 1984 follow-up mailing list. Each participant was sent a 12-page questionnaire that contained many of the same items and scales used in the 1976-1977 identification/assessment battery as well as new items designed to assess aspects of their lives in their current developmental phase. Unlike the majority of original items, many of the new questionnaire items were open-ended so as to enable qualitative analysis of the responses.

Items assessing educational and career attainment and lifestyle were coded according to the same schema used in the pretest assessment of educational, career, and lifestyle aspirations. Coding of educational aspirations/achievements ranged from 1 = postdoctoral/professional degree education to 11 = high school diploma. Career aspirations/achievements were coded from 1 = Hollingshead Level I: Higher Executives, Proprietors of Large Concerns and Major Professionals to 7 = Hollingshead Level VII: Unskilled Employees and 8 = "not working outside the home." Their lifestyle aspirations/current status was rated on a 5-point rating scale from 1 = to be a full-time homemaker to 5 = to follow a full-time career. Relational status was coded 1 = married; 2 = engaged, divorced or "living with significant other"; and 3 = single. Although there are obvious limitations to this scoring schema, a dichotomous married-single schema was unacceptable, failing both to reflect current lifestyle alternatives and realities and to recognize the relational

investment of such alternatives.

Personal achievements were elicited by an open ended question: "What do you consider to be your three greatest achievements since you graduated from high school?" Responses were coded for traditionality of achievement area mentioned in the following manner: 1 – relational achievement areas such as marriage, home/family, friendships, and so forth; 2 = personal achievement areas such as personal growth and development, avocational pursuits, travel, and so forth; and 3 – traditional achievement areas of education, career, and finances.

Coding of educational and occupational achievements was done with reconciliation by two psychology graduate students who had no prior involvement with Project CHOICE. The more complex task of coding responses to the open-ended question regarding personal achievements was coded by the first author and a third graduate student in psychology. The interrater agreement on this task was 94%.

**Data Analysis.** Descriptive statistics were calculated for all items. Examination of relationships between educational, occupational, and lifestyle aspirations reported in adolescence and educational, occupational, and lifestyle attainments in young adulthood employed chi square analyses which provided not only row, column, and cell frequencies and percentages but also concomitant tests for strength of association. Spearman correlation coefficients were calculated between levels of educational aspirations and educational achievements and between levels of occupational aspirations and occupational achievements; Pearson product-moment correlation coefficients were calculated between ratings of lifestyle aspirations and current lifestyle. All analyses were conducted by the SAS statistical package (SAS Institute, 1988).

**Results**

The distributions of educational and career achievement are presented in Tables 1 and 2. Twelve individuals (9.6%) reported no postsecondary degrees or certificates; 57 (45.6%) continued their education beyond the bachelor's degree, with 14 young women (11.2%) having completed doctoral or professional degrees. Consistent with Marshall's (1989) description of the nonlinearity of women's career pathways, the number of women achieving postsecondary degrees is depressed by the fact that 25 (19.8%) report degrees in progress. For 15 of these young women, the "degrees in progress" are bachelor's or master's degrees, degrees which if pursued in a linear, sequential fashion "should" have already been completed.

In terms of level of career attainment, 25 young women (19.8%) have achieved the highest level, that of major professional or corporate executives in major businesses, with 64 (50.8%) having attained the second highest level, that of managers and lesser professionals. Only 2 of the entire sample reported never having worked outside the home.

**Table 1**  
**Educational Attainment of Gifted Young Women**

Educational Level	N	%	Cumulative %
Postgraduate/Professional Education	4	3.2	3.2
Graduate/Professional Degree	10	8.0	11.2
Post Master's Education	8	6.4	17.6
Master's Degree	24	19.2	36.8
Post-Bachelor's Education	11	8.8	45.6
Bachelor's Degree	44	35.2	80.8
1-3+ Years of College	6	4.8	85.6
Associate Degree	4	3.2	88.8
Trade/Technical Certificate	2	1.6	90.4
Nondegree Coursework	4	3.2	93.6
High School Diploma	8	6.4	100.0

**Table 2**  
**Career Attainment of Gifted Young Women**

Hollingshead Level	N	%	Cumulative %
I. "Higher Executives . . . Major Professionals"	25	19.8	19.8
II. "Business Managers . . . Lesser Professionals"	64	50.8	70.6
III. "Administrative Personnel . . . Minor Professionals"	27	21.4	92.0
IV. "Clinical and Sales . . . Technicians . . . Owners of Little Businesses"	8	6.4	98.4
V. "Skilled Manual Workers"	0	—	—
VI. "Machine Operators and Semi-Skilled Employees"	0	—	—
VII. "Unskilled Employees"	0	—	—
VIII. Not working outside the home	2	1.6	100.0

Examination of relational achievements revealed that 61 (48.4%) of the sample were married. This percentage is low given their developmental phase, but it should be noted that two thirds of the sample had or have had established relationships. Of those not married, 3.6% have been divorced, 6.3% are engaged, and 7.9% reported living with a significant other, a reflection of changes in relational pathways in recent decades. Although 52% of the sample are or have been married, only 27% have children.

The question "What do you consider to be your three greatest achievements since you graduated from high school" elicited a total of only 336 (of a possible 378) responses since 21 of these young women identified only two, one, or no achievements (see Table 3). Of the identified achievements, 55% were traditional in nature (i.e., educational, vocational, or financial), 25% were relational in nature (i.e., spouse/significant other, children/home, friends, or relationship with God), and the

remaining 21% were of a personal or agentic nature (i.e., political action, personal growth, independent travel, fitness or avocational skill development, and so forth). The nature of the achievements that these young women identified and the frequency of their occurrence suggest that limiting "achievement" to traditional life arenas accounts for a little over half of their life accomplishments as they define them.

**Table 3**  
**Areas of Achievement Reported by Gifted Women**

	First (n)	Second (n)	Third (n)	Total N	%
<b>TRADITIONAL</b>					
Education	51	31	12	94	28
Career	25	32	20	77	23
Finances	1	5	7	13	4
Total	77	68	39	184	55
<b>PERSONAL</b>					
Fitness/Avocation	1	3	5	9	3
Social/Political Issues	1	3	3	7	2
Personal Growth	12	13	18	43	13
Travel	4	2	4	10	3
Total	18	21	30	69	21
<b>RELATIONAL</b>					
Home/Spouse/ Significant Other	11	12	19	42	13
Family/Children	9	9	9	27	8
Interpersonal/Friends	0	2	8	10	3
Spiritual	3	1	0	4	1
Volunteer Work/Service	0	0	0	0	0
Total	23	24	36	83	25

Although the present sample was not selected along a single dimension of aptitude or scholastic performance, their individual profiles of general and academic ability were predictive of educational attainments beyond the baccalaureate as well as Level I or II career attainment. With respect to these two idiographically defined criteria, 57 (45.6%) and 89 (70.6%) of the present sample "realized their potential." Given the multidimensional identification procedure originally employed and the diversity of talent identified, these two criteria for realization of potential are quite stringent. It should further be noted that educational attainment is not a direct linear prerequisite for career attainment. For example, those young women who majored in engineering, business, and other math/science areas have attained high career status without education beyond the baccalaureate degree.

Nomothetically, the traditional achievements of these gifted women compared favorably with other samples of gifted women in particular and women in general. For the Project Talent sample (Card, Steel, & Abeles, 1980), the women's mean

educational attainment by the age of 29 was slightly less than a bachelor's degree. In Kerr's (1985) sample, 75% had completed a bachelor's degree, and only 25% had achieved graduate or professional degrees by the age of 29. Among all women in the U.S. graduating from high school in 1980, only 19.2% completed bachelor's degrees (Statistical Abstract, 1990). In comparison, 80% and 46% of the present sample had completed the bachelor's degree and graduate/professional degrees, respectively. Similarly, the present sample's 20.6% and 50% attainment of Level I and II careers compares favorably with Kerr's sample where only 8% and 33.3% attained similar career status.

Forty eight per cent of the present sample was married compared with the Kerr (1985) and the Rodenstein and Glickauf-Hughes (1979) samples where 58% and 61% of the gifted women, respectively, were married by the age of 29. However, an additional 17.8% of the present sample is divorced, engaged, or living with a significant other, suggesting significant investment in establishing, maintaining, and, in some instances, terminating relationships. In recognizing relational arrangements beyond the traditional institution of marriage, these young women's relational status is comparable to those of other gifted samples. These statistics might also be viewed in comparison with general population statistics which indicate that 22.8 years is the median age of marriage for the same chronological cohort (Statistical Abstract, 1990).

**Table 4**  
**Discrepancy Between Adolescent Aspirations and Adult Achievements Among Gifted Women**

	N	%
<b>EDUCATION</b>		
Achievement > Aspiration	27	21.8
Achievement = Aspiration	33	26.6
Achievement < Aspiration	64	51.6
Total	124	
<b>CAREER</b>		
Achievement > Aspiration	28	22.2
Achievement = Aspiration	30	23.8
Achievement < Aspiration	43	34.1
No specific career aspiration	25	19.8
Total	126	
<b>LIFESTYLE</b>		
Career Involve > Aspiration	54	50.5
Current = Aspiration	26	24.3
Career Involve < Aspiration	27	25.2
Total	107	

A significant correlation coefficient of .25 ( $p < .01$ ) was found between educational aspirations expressed at 15 years of age and adult educational attainment. For 60 women (48.4%), adult educational achievements equaled or surpassed their

adolescent aspirations; 64 (51.6%) had yet to achieve the postsecondary educational levels to which they aspired (Table 4). As mentioned earlier, however, a substantial number of graduate and professional degrees are still "in progress."

For 58 gifted women (46.0%), the level of career attainment in adulthood has already equaled or surpassed their adolescent aspirations as compared to 43 (34.1%) whose career level was lower than their aspirations. Further, of the 25 women with no specific career aspirations as adolescents, 72% were in Level I or II careers. It should be noted that a nonsignificant correlation of  $-.01$  was found between adolescent career aspirations and current career level.

With respect to lifestyle, for 26 (24.3%) of the gifted women, their current lifestyle description was identical to that of their adolescent aspirations: 54 (50.5%) indicated greater career involvement than they had aspired to in adolescence, with 46 of these women describing their lifestyle as "full-time career commitment." Only 25% of the young women described their current lifestyle as having less career investment than they had aspired to in adolescence. As with career attainment, a nonsignificant correlation of  $.11$  was found between adolescent lifestyle aspirations and current lifestyle.

### Discussion

When only traditional definitions of achievement are considered, the present sample of young women compare "quite well" to both externally defined criteria for achievement and to other samples of gifted and talented women. In both the educational and the career arenas, the present sample of gifted and talented women have attained levels of societally defined achievement substantially beyond that of earlier cohorts. Furthermore, their accomplishments, as assessed in this educational/career level approach, represent a somewhat depressed estimate of their actual achievements in two ways. First, stereotypically feminine careers tend to be assigned lower status (Gottfredson, 1981). For example, a stereotypically masculine career such as engineering is assigned a Level I status and a stereotypically feminine career with a lower income such as teaching is a Level II career, despite the fact that both require the same amount of postsecondary education. Second, the sample was selected using a broad definition of gifted. As a result, a number of young women did not require advanced degrees in order to "realize their potential." The artists and musicians in the sample are selling their work, producing their films, and playing with symphony orchestras without traditional education beyond the bachelor's degree. Thus, from a societal definition of achievement, the majority of these young women have realized their potential quite well.

Despite their accomplishments in traditional areas of achievement, these gifted young women, when defining their own achievements, also report personal and relational areas of achievement. In addition to educational degrees attained and career advancements achieved, many of these gifted young women also include personal and/or interpersonal growth or

accomplishments in their list of three greatest achievements. Similar to the diversity of definitions of success reported by Terman's (Terman & Oden, 1959) sample when in their middle years, very few women limited their self-defined achievements to traditional areas alone. Their responses indeed validated the need for an expanded definition of achievement that includes not only educational, career, and financial accomplishments but also accomplishments that fall within other personal and interpersonal lifespaces.

However, when their aspirations from adolescence are compared with their adult achievements, there may well be reason for concern. A substantial number of these young women have realized neither their educational nor their occupational aspirations. For some, these unrealized aspirations may simply be a reflection of chronological age rather than an abandonment of the aspirations of youth. Unfortunately, how these young women currently perceive and evaluate their own unrealized aspirations of adolescence is not known. Clearly, the next follow-up must expand the present ipsative examination of achievement by including items such as those used by Post-Kammer and Perrone (1983) to assess the degree to which these gifted women feel they have or have not realized their potential.

As with any longitudinal study, the present results are at the very least constrained by the sociohistorical context through which this particular cohort has passed. While the present study did not attempt to identify the impact of sociohistorical events, the nature of that context must be considered before one makes comparisons with other samples and the longitudinal data reported. The social realities experienced by, for example, the women in Terman's (Terman & Oden, 1947, 1959) study were certainly different. The influence of those differences is unknown and certainly beyond the scope of the present study. Comparisons with other samples are further limited by initial definition/identification of gifted and talented. The present sample is quite diverse with respect to gifts and talents, especially when compared with Kerr's (1985) and Card's (Card et al., 1980) samples.

It is most important to note that this examination has been a "within gender" study, more specifically, a "within gender gifted" study. Parallel research conducted with comparable samples of gifted and talented men is essential, as is research focusing on the differences between gifted women and the population of women in general. Such questions, although beyond the scope of the present study, are nonetheless of critical importance if the unique needs and developmental issues of the gifted and talented are ultimately to be understood.

Finally, although some of the young women in this sample have charted a unidimensional life course, investing either in the establishment of home and family or in the pursuit of educational and career goals, this "either-or" pattern is not characteristic of the majority. As they approach their 30s, most of these gifted and talented young women have pursued educational, career, and relational goals though many have yet to achieve the level of attainment they had aspired to in adolescence. Although

reasons for individual differences in life patterns are yet to be identified and the consequences of unfulfilled aspirations yet to be known, the results have several implications for those working with gifted young women. First, diversity of life pathways needs to be recognized and valued. Second, for helping professionals, the need to emphasize the development of strategies for coping with multiple role demands is confirmed. Third, concepts such as "achievement" and "realization of potential" must be examined, clarified, and, if they are to be congruent with women's worldview, broadened. For gifted women, and to an unknown degree gifted men as well, "achievement" is not limited to educational degrees and career status but includes personal and interpersonal or relational achievements as well.

Finally, the issue of unfulfilled aspirations needs careful examination. At 29 years of age, many of these young women are still very much in the process of realizing their potential and achieving their aspirations of youth. Although some may have foreclosed on their aspirations, external assignment of a label of "unrealized potential" or "unfulfilled aspirations" would be premature.

### References

- Astin, H. S. (1985). The meaning of work in women's lives: A sociopsychological model of career choice and work behavior. *Counseling Psychology, 12*, (4), 117-126.
- Bardwick, J. M. (1990). Where we are and what we want: A psychological model. In R. A. Nemirow & C. A. Colanusso (Eds.), *New dimensions in adult development* (pp. 186-211). New York: Basic Books.
- Belenky, M. F., Clinchy, B. M., Goldberger, N. R., & Tarule, J. M. (1986). *Women's ways of knowing*. New York: Basic Books.
- Card, J. J., Stead, L., & Abeles, R. P. (1980). Sex differences in realization of individual potential for achievement. *Journal of Vocational Behavior, 17*, 1-21.
- Eccles, J. S. (1986). Gender roles and women's achievement-related decisions. *Educational Researcher, 15*, (6), 15-19.
- Farmer, H. S. (1985). Model of career and achievement motivation for women and men. *Journal of Counseling Psychology, 32*, 363-390.
- Fleming, E. S., & Hollinger, C. I. (1979). *Project CHOICE: Creating her options in career exploration*. Boston, MA: Educational Design Corporation.
- Gilligan, C. (1982). *In a different voice: Psychological theory and women's development*. Cambridge, MA: Harvard University Press.
- Gilligan, C., Ward, J. V., & Taylor, J. M. (Eds.). (1988). *Mapping the moral domain*. Cambridge, MA: Harvard University Press.
- Ginzberg, E. (1966). *Lifestyles of educated women*. New York: Columbia University Press.
- Gottfredson, L. S. (1981). Circumscription and compromise: A developmental theory of occupational aspirations. *Journal of Counseling Psychology, 28*, (6), 545-579.
- Josselson, R. (1987). *Finding herself: Pathways to identity development in women*. San Francisco: Jossey-Bass.
- Kerr, B. A. (1985). *Smart girls, gifted women*. Columbus, OH: Ohio Psychology Press.
- Marshall, J. (1989). Re-visioning career concepts: A feminist invitation. In M. B. Arthur, D. T. Hall, & B. S. Lawrence (Eds.), *Handbook of career theory*. London: Cambridge University Press.
- Mednick, M. T. (1989). On the politics of psychological constructs: Stop the bandwagon, I want to get off. *American Psychologist, 44*, 1118-1123.
- Post-Kammer, P., & Perrone, P. (1983). Career perceptions of talented individuals: A follow-up study. *The Vocational Guidance Quarterly, March*, 203-211.
- Reis, S. M., & Colohan, C. M. (1989). Gifted females: They've come a long way—or have they?. *Journal for the Education of the Gifted, 12*, (2), 99-117.
- Rodenstein, J. M., & Glückauf-Hughes, C. (1979). Career and lifestyle determinants of gifted women. In N. Colangelo & R. T. Zafra (Eds.), *New voices in counseling the gifted* (pp. 370-381). Dubuque, IA: Kendall/Hunt.
- SAS Institute. (1988). SAS. Cary, NC: Author.
- Spence, J. T., & Helmreich, R. (1983). Achievement related motives and behaviors. In J. T. Spence (Ed.), *Achievement and achievement motives: Psychological and sociological approaches* (pp. 7-74). San Francisco: Freeman.
- Statistical Abstract of the U.S. (1990). Washington, DC: U.S. Government Printing Office.
- Terman, L. M., & Oden, M. H. (1947). *The gifted child grows up: Twenty-five years' follow-up of a superior group*. Stanford, CA: Stanford University Press.
- Terman, L. M., & Oden, M. H. (1959). *The gifted group at mid-life: Thirty-five years' follow-up of the superior child*. Stanford, CA: Stanford University Press.
- Tittle, C. K. (1983). Studies of the effects of career interest inventories. *Journal of Vocational Behavior, 22*, 148-158.