Jennifer L. Jolly, Ph.D.

Lewis Terman: Genetic Study of Genius—Elementary School Students

"If I am remembered very long after my death, it will probably be in connection with my studies of gifted children [and] the construction of mental tests" (Terman, 1930a, p. 330).

Although the field of gifted education generally recognizes the foundational work of Lewis Terman, rarely does one stop to examine the details of his longitudinal study and their connection to present-day gifted education. This column reexamines the beginnings of Terman's longitudinal study with a focus on elementary-school-aged children.

In 1910, Lewis Terman arrived at Stanford University to begin a tenure that would last the remainder of his academic career. He originally moved to California for health and financial reasons, taking a position as a high school principal, and only found himself at Stanford after a stint at Los Angeles Normal School and a confluence of factors that had worked to his advantage. Stanford was an institution where he aspired to work but never believed he would find a position. At the age of 33, he worried that securing a good university position was quickly slipping from his grasp (Terman, 1930a). Shortly after his arrival at Stanford, he began to establish himself as leader in intelligence testing with his membership on the Committee on the Psychological Examination of Recruits during World War I, along with his work on the revision of Binet's intelligence test (Seagoe, 1975). His documented interest in individual differences and intelligence, originating with his dissertation entitled "Genius and Stupidity: A Study of Some of the Intellectual Processes of Seven 'Bright' and Seven 'Stupid' Boys," set the stage for Terman's eventual study of gifted children. Within a decade of his appointment at Stanford, Terman began to collect data for the most extensive and enduring longitudinal study on identified gifted children (Chapman, 1988; Minton, 1988).

Although the longitudinal study of gifted children was a defining feature of Terman's career, so too, was his work with intelligence tests. However, a strict line of demarcation cannot be drawn between the two areas because Terman's definition of giftedness was so closely tied to that of intelligence. In 1913, building on Stern's transformation of Binet's mental age to Intelligence Quotient (IQ), Terman sensed that further validation of the Binet-Simon scale would have "great importance for the educational treatment of . . . talented children" (Terman, 1913, p. 104). He called for further research "for the purpose of ascertaining more definitely what performances may rightly be expected of . . . 125 percent intelligence at the various age levels" (Terman, 1915, p. 537). In addition, Terman proposed that the use of intelligence tests could go far beyond that of mere categorization, and important insights could be made concerning race, the behavior of intelligence over time, genius, and mental stability (Lagemann, 2000).

Since 1911, Terman had received reports of gifted children and conducted his own case studies. This work was conducted on a small scale and disrupted by Terman's contribution to World War I's Army Alpha and Beta tests. However, in 1921, Terman was presented with an opportunity to

engage in a large-scale study of gifted children, thanks to a grant from the Commonwealth Fund. At the time, the Commonwealth Fund earmarked $100,000 for educational endeavors. One fifth, or $20,000, of the funds was awarded to Terman to advance the study of gifted children. The main study questions included

> whether gifted children are as well endowed physically as others, what their hereditary antecedents are, what the influence of environment upon them has amounted to, how their superior ability is evidenced in school, in play, and in spontaneous activities, what kinds of tests will most readily reveal their superiority, whether it is permanent or ephemeral, what difficulties such children encounter in adapting themselves to their surroundings, and so on. (Unknown correspondent, 1921, p. 695)

Fortified with the grant from the Commonwealth Fund, and methods and instruments from the science of psychology, Terman began his *Genetic Studies of Genius: Mental and Physical Traits of a Thousand Gifted Children* (1925), which was to become the most comprehensive compilation of empirically gathered data on gifted children of its time (more than 600 pages). According to Terman, a confluence of factors had hindered "the inauguration of research in this field" (Terman, 1925, p. vii). He identified these factors as

> . . . the nature of superstitions, regarding the essential nature of the Great Man . . . moved by forces which are not to be explained by (a) the natural laws of human behavior; (b) the widespread belief, hardly less superstitious in its origin, that intellectual precocity is pathological; (c) the vigorous growth of democratic sentiment in . . . America . . . which has necessarily tended to encourage an attitude unfavorable to a just appreciation of native individual differences in human endowment; and (d) the tardy birth of the biological sciences, particularly genetics, psychology and education. (Terman, 1925, p. vii)

The basic purpose of his research was to determine to what degree the gifted child varied from the average child of normal intelligence. In the grant application submitted to the Commonwealth Fund, Terman articulated the purpose in much more succinct terms: (a) increase the number of subjects to 1,000, (b) administer two intelligence tests to each subject, (b) collect achievement data on four to five school subjects, (c) administer specialized ability tests to a small number of subjects, (d) revise methods of collecting trait ratings and demographical data, and (e) follow-up on subjects over a 10-year period. In 1922, the Commonwealth Fund awarded Terman an extra $14,000 to collect additional medical, anthropometric, and psychological data. Stanford University matched these funds with $14,000 in both money and services (Terman, 1924a, 1924b, 1925). Combined with the initial award from the Commonwealth Foundation, Terman had nearly $50,000 to begin his study. In today's money, this would equate to $619,938 (U.S. Department of Labor, n.d.). Field assistants and volunteers initially collected nine data points from each subject, including the following:

1. two intelligence tests (Stanford-Binet and National [Intelligence Test] B) [both authored by Terman and Terman and Yerkes, respectively];
2. a two-hour educational test (The Stanford Achievement Test) [also authored by Terman];
3. a fifty-minute test of general information in science, history, literature, and the arts;
4. a fifty-minute test of knowledge of and interest in plays, games, and amusements;
5. a four-page interest blank to be filled out by the children;
6. a two-months reading record to be kept by the children;
7. a sixteen-page Home Information Blank, to be filled out by parents, including ratings on twenty-five traits;
8. an eight-page School Information Blank to be filled out by the teachers, including ratings on the same twenty-five traits as were rated by the parents; and
9. when possible, ratings of the home on the Whittier Scale for home grading. (Terman, 1925, p. 8)

The additional grant money from the Commonwealth Fund and Stanford University allowed for seven further data points to be collected, including medical examinations, anthropometric measurements, character and personality tests, interest tests, organization of a reading guide for gifted children, study of specialized abilities, and the biographical study of eminent individuals similar to the works of Galton, Cattell, and Yoder (Terman, 1925, 1930b). In total, Terman identified 16 data collection points from which massive amounts of data were accumulated. The categories ranged from Racial and Social Origin,

to Test of Character and Personality Traits.

The number of subjects reached 1,444 in 1924, with several control groups of 600 to 800 children. Terman's assistants scoured the state of California for gifted children. Los Angeles, San Francisco, Oakland, Berkeley, and Alameda were the main cities of interest, with the heaviest concentration of children in the Bay Area near the Stanford University campus. Students were initially selected by teacher nomination and age-grade status (youngest children in the class). Candidates were given the National Intelligence Test, and those who scored in the top 10% were then administered an abbreviated version of Stanford-Binet. A nonlanguage version also was used to account for children with foreign-born parents. The siblings of already nominated students also were tested to identify additional subjects. Accidental discoveries were made when the nominated child was absent and another child was sent in his or her place, or in some cases the child messenger took the wrong child to the field assistant (Terman, 1924a, 1924b, 1925). Although teacher nominations were used, the final criteria for inclusion of subjects in the main experimental group consisted of those subjects who scored an IQ of 140 or above. Table 1 shows how many boys and girls were in each of the gifted groups.

Terman's initial comments centered on the greater number of boys than girls identified in the sample. He concluded that the findings directly supported the hypotheses that males are more variable than females, which in turn provided evidence that "exceptionally superior intelligence occurs with greater frequency among boys than girls" (Terman, 1925, p. 54).

Table 1
Classification of the Gifted Groups

	Boys	Girls	Total
Main Experimental Group (I)	370	314	684
Outside Binet Group (II)	197	159	356
Outside High School Group (III)	257	121	378
Special Ability Group (IV)	10	16	26

Note. From Terman (1925), p. 39.

Student Data

Family Background

The majority of students came from Western Europe of Caucasian or Jewish ancestry, as noted: 30.7% English, 15.7% German, 11.3% Scotch, 9.0% Irish, and 5.7% French, and 10.5% Jewish. Terman noted the excess of children from Scotch and Jewish heritages. Ethnic origin was determined from a child's grandparents' origin. Groups lacking representation despite their presence in the general population included African American, Italian, Portuguese, and Mexican. Chinese children at the time attended "oriental schools" (Terman, 1925, p. 56) and were not included in the study (Terman, 1924a, 1925). There also were several children in the sample from ethnically mixed marriages, including a Japanese American family whose 4 out of 5 children qualified for Terman's study. Terman described them as "a remarkable family, and the fact that it is the result of a mixed marriage makes it doubly interesting" (Terman, 1925, p. 107).

Terman also classified students according to their father's occupation. Classifications for the sample were 31.4% professionals, 50% semiprofessional/business, 11.8% skilled labor, and 6.8% semiskilled and unskilled labor. Drawing from previous research, Terman connected the high correlation of adult achievement and social class to show that it also was correlated to early childhood (Terman, 1924a). "Our data show that individuals of the various social classes present these same differences in early childhood, a fact which strongly suggests that the causal factor lies in original endowment rather than in environmental influences" (Terman, 1925, p. 66).

Terman also would argue that, despite the occupation levels held by the fathers, few families were wealthy. The yearly mean income was $4,705 and the median income was $3,333, with 35.3% of the families reporting an income below $2,500. However, this was well above the reported average annual salary of $1,236 in 1925. Several of the families lived in what Terman considered poverty (Terman, 1925).

Home ratings were conducted using the Whittier Scale for Grading Home Conditions. Criteria included necessities, neatness, size, parental conditions, and parental supervision, which were rated on a scale from 1 to 6. Unselected homes had a mean of 20.78, whereas homes of the gifted scored 22.94. The largest deviation was revealed when comparing the homes of the gifted with homes of delinquent students whose mean score was 13.91. Parental supervision reflected for the largest discrepancy between scores (Terman, 1925).

At least one fourth of the gifted students had a parent who had graduated from college, and the mean for grades completed was 12 with a SD of 3.5. For grandfathers, the mean was 10.8 and 9.7 for grandmothers. On average the parents of the gifted children had completed twice as much schooling as the average adult (Terman, 1925).

This initial demographic data yielded a population that was White, middle class, and with parents holding advanced schooling when compared to the average population, and an overrepresentation of children of Jewish heritage. Terman attributed this "indirect evidence that the heredity of our gifted subjects is much superior to that of the average individual" (Terman, 1925, p. 83).

At least one fourth of the gifted students had a parent who had graduated from college . . . On average the parents of the gifted children had completed twice as much schooling as the average adult (Terman, 1925).

Another point of interest concerned the prevalence of superior relatives in children's family trees. Several families could identify relatives who were Presidents or Vice-Presidents of the United States, writers, generals, statesmen, and Supreme Court justices. Terman saw this as evidence to support Galton's theory of the heritability of genius. However, he also recognized the limits of these data and believed more exact data would be needed to "reveal the laws by which superior mental ability is transmitted" (Terman, 1925, p. 111).

Health and Hygiene

Vital statistics were gathered from 91 families for comparison against statistics compiled by Galton and Cattell. Mothers reported 3.35 births, which was lower than the 4.7 Galton reported nearly 50 years earlier. Infant mortality was generally low. Fathers' average age at the birth of a gifted child was 33.63 years (SD $\pm$ 7.70) whereas mothers' age was 29.01 (SD $\pm$ 5.64). Cattell's study reported an average of age 35 for fathers and 29 for mothers, and Galton's study reported 36 years of age of fathers and 30 for mothers. The most salient figures focused on birth order, which showed nearly exact agreement with Cattell's study. Cattell and Terman both found that gifted children were more likely to be first-born in families of two or more. This evidence also supported previous studies that first-born children also had higher levels of achievement in adult life. "The fact that superiority of the first born registers in childhood early as clearly as in the achievements of adult life suggests that the causes are to be sought in native endowment rather than in the environment and education" (Terman, 1925, p. 134).

Dr. Bird T. Baldwin headed up the team that gathered the anthropometric measurements of the children. Thirty-seven measurements were taken on each child, totaling 21,978 measurements for 594 children. The compiled and analyzed data revealed that gifted children from California measured better in weight and height in comparison to the best averages for American children. (Comparison groups of gifted children were from Oak Park, IL, and the Horace Mann School in New York.) Up to the age of 12, boys exceeded girls in all measurements taken. However, after 12 years of age, girls surpassed the boys in height, weight, chest and hip measurements, and stem length. The coefficients of correlation for all measurements were high for both age and gender, which ranged from .322 to .851 (Terman, 1924b, 1925). "The results of this investigation show that the gifted group is, as a whole, physically superior to the various groups used for comparison" (Terman, 1925, p. 171).

Further medical examinations were given to 783 gifted children, of whom 591 belonged to the main experimental group, in order to obtain current medical information. Dr. Moore (Los Angeles Region) and Dr. Bronson (San Francisco/Bay Area Region) were responsible for the medical examina-

tions and write-ups for each, taking one and a half hours per child; considerable time was given to this endeavor. Examination was made of the skin, head, ears, eyes, nose, mouth, neck, chest, abdomen, genitals, back, extremities, bones, joints, muscles, tendons, cranium, endocrine glands, urine, blood, blood pressure, radiographs, and basal metabolism. General conclusions by both doctors were that gifted children were physically superior when compared to children of the same age in the general school population.

> [Dr. Moore:] In regard to a general comparison of this group with unselected children, it is my opinion that major and minor defects are much less common in the former. In my opinion the physical superiority of the gifted group is indicated by the higher average of nutrition and by superior stability, physical and mental. (as cited in Terman, 1925, p. 251)

> [Dr. Bronson:] The examinations of the gifted group were the most satisfactory of any series of examinations I have conducted. The quickness of these children in comprehending what was desired of them in the various tests was a delight. Physically, also, the gifted child ranked above the average child of the community. (as cited in Terman, 1925, p. 251)

Educational Progress

School progress and educational history were natural topics for data collection. Terman argued that individual differences directly affected schooling for gifted students (Terman, 1919). School progress, or progress quotient (P.Q.), was determined by dividing the standard age of the child's grade by the child's age at midterm. Terman determined the average P.Q. for gifted children was 114, which meant that on average gifted children were accelerated 14% when compared to unselected children. He also noted that the gifted child was 48% above the norm in intelligence but accelerated only 14%, thus leaving the child 34% underpromoted. At age 9 this translated to being retarded three grades and by age 12 this expanded to four grades. Although 85% of the children had been promoted one grade, their teachers claimed that 82% warranted further promotion. By calculating mental age, a discrepancy of 2.8 years was formed for first graders when compared to chronological peers, and by fifth grade this discrepancy grew to approximately 5 years (Terman, 1924a, 1924b, 1925).

Educational history was gathered from teachers and parents of children in the experimental group. Teachers generally rated the work of gifted students as superior to those in the same grade. Gifted students also report changing schools at least twice before age 8 and three times by age 11. The majority of parents indicated that their children enjoyed school and learned to read before starting school. Nearly 20% reported that their child learned to read before the age of 5. Seventy percent of the parents did not place restrictions on a child's advancement in school with 20% lobbying for rapid advancement and only 10% holding a child back. Six and a half hours a week were devoted to private lessons and practice in subjects such as music, language, or dance, and 2 hours per week were devoted to completing homework. Parents reported signs of superior intelligence at age 3½ (Terman, 1925). Superior intelligence was described as "quick, understanding, insatiable curiosity, extensive information, retentive memory, early speech, unusual vocabulary, etc." (Terman, 1925, p. 287). Most of the parents did not report any contrived means of child training but let their children's intellectual development grow naturally, by generally answering questions and helping a child to develop his or her interests. With these data Terman furthered his argument that superior intelligence is caused by heritability rather than intelligence training (Terman, 1925).

In order to gather a more precise measurement of educational achievement, the Stanford Achievement Test and its subtests were administered to 543 children of the main experimental group in elementary science, hygiene, and geography; language and literature; history and civics; and the arts. Test results were compared to the test scores of unselected school children. Across all ages and sexes, gifted children scored between three and four standard deviations above unselected school children on measures of achievement. On average, the gifted child exhibited mastery of subject matter 40% above his or her chronological age while only being promoted 14% above the norm for his or her chronological age. Children's test scores were appreciably higher than the teachers' ratings presented in the educational progress section (Terman, 1925). Terman attributed this to teacher underestimations or "low marks as a penalty for lack of application to the set tasks of the school" (Terman, 1925, p. 306). No correlation was shown between number of years of school and educational achievement. Terman also described the Stanford Achievement Test as "an excellent test for use in the identification of gifted children" (Terman, 1925, p. 306).

Life Outside of School

Terman also was interested in gifted children's familiarization and interest in playing. The general belief was that gifted children deviated tremendously from the norm in this area, spending the majority of their free time reading in solitude. Approximately 1,200 gifted children were administered an eight-page booklet that delineated 90 games into three categories: solitary games (e.g., riding a bike), games that were social but not always competitive (e.g., follow the leader), and games that were somewhat social and quiet (e.g., checkers). Children were asked if they had ever played the game and if they played it well or not. They were also given a multiple-choice section, in which a game was described and the child had to identify what game it was. Further information was obtained from the Home and School Blanks. Gifted children preferred activities that required thinking and were somewhat social and quiet. However, a high correlation was found among group members of the same gender (.80) with unlike genders' correlation very low (.18–.35). A significant number of gifted children had imaginary playmates or lived in imaginary countries. Gifted children were sought out as companions in school at the same rate as control group children despite being much younger than their classmates (Terman, 1925).

Children and parents also were asked to report on the children's reading interests and hours spent reading (other than school work). Responding to these questions were 429 gifted and 401 control children. Many gifted children were reported to be voracious readers from as early as the age of 5. Additional data included a reading record mailed from 511 gifted children and 808 control children. Children were asked to keep a reading log for two months including all books read. Results indicated that gifted children read a greater variety of books than did control group children; however, of the 20 best-liked books, all but one was fiction. Only five books appeared on the best-liked list for each gender, including *Treasure Island, Call of the Wild, Ivanhoe, Three Musketeers,* and *A Tale of Two Cities*. Girls were more likely than boys to read a book more than once. One unsurprising fact was that gifted children simply read more books than control group children (Terman, 1925).

Terman's Legacy

Terman hoped that this body of work would be considered a "foundation of established truth" (Terman, 1925, p. 474) and would dispel the myths and superstitions surrounding gifted children. Educational reform could now be undertaken based on scientifically verifiable facts. This reform would include the identification, preservation, and development of gifted children's exceptional abilities (Burks, Jensen, & Terman, 1930).

Terman's study represented the most ambitious and detailed gathering of information regarding gifted students. That work continues today with surviving subjects entering their 90s. Between 1921 and 1928, Terman was able to gather a multitude of information and make comparisons covering intellectual and achievement scores, home and school environments, family heredity, social interests, and personality measures. He supplemented this information with case studies to provide a more detailed picture of gifted children apart from a pure numbers perspective. Terman also argued that the individual differences exhibited by gifted students directly impacted the kind of education they received. Terman (1924a) declared,

> . . . the desirability of more rapid advancement of the bright child. This is important. But grade skipping is far from an ideal or complete solution of the problem. The real need is for a differentiation of the curriculum and of methods such as will give to every child the type of diet from which he can derive the maximum nourishment. (p. 364)

Like any pioneering endeavor, Terman's longitudinal study was flawed and has therefore experienced its share of criticism. Criticisms lodged against Terman's study are valid and some of these same issues continue to trouble the field. Beginning with the title of his work, *Genetic Studies of Genius*, few of Terman's subjects could be labeled geniuses. Genius was considered 180 IQ and above (Terman, 1930a). And, as his subsequent longitudinal work revealed, many of his subjects were highly accomplished but never achieved eminence in their field (Keating, 1991). Terman equated the greater number of males identified for the study as evidence to support his theory that males were more variable than females. This result may have been due to students initially being identified by teachers who generally favored boys (Jolly, 2005). Data later showed that females did just as well as males in academic concerns but in different subject areas (Burks et al., 1930). This initial study also overlooked the effects of sexism, discrimination, societal expectations, stereotypes, and available opportunities for females (Jolly, 2005).

Terman's unyielding belief in science, perhaps led him to ignore some

obvious discrepancies in his findings. Terman held steadfast to the idea of hereditability rather than environment (or a combination of the two) to explain superior intelligence or giftedness. On average, families in the study reported higher annual incomes and had completed twice as much schooling than the average adult. Due to their financial status and education, one can assume that gifted subjects' environments were more enriched and that they were provided experiences outside of the home.

Many of Terman's conclusions were contradictory to even his own upbringing. One may assume that Terman was gifted in his own right, considering that he had been promoted three grades within the first 3 months of formalized schooling at the age of 6. In addition, due to his family's farming obligations, he was only able to attend school 5 to 6 months out of the year. He readily admitted to being from unremarkable ancestry, unlike many subjects in the longitudinal study who could name relatives that held places of prominence in politics and academia. His great faith in nature over nurture is also contradicted by his childhood home environment, which was filled with a great number of books (150–200 by his estimation). Also, as one of 14 siblings, his older siblings and their interests greatly influenced him (Terman, 1930b).

Other criticisms lodged against Terman include an overreliance on genetic factors to account for intelligence; the fact that socioeconomic status was not controlled for; the sample, being predominantly White, middle-class, and Jewish, was not representative of the overall population in California at the time; and the use of a limited definition of giftedness with a narrow focus on IQ scores (Davis & Rimm, 2004; Feldhusen, 2003; Robinson & Clinkenbeard, 1998). Although strides have been made to broaden the definition of giftedness, the student population remains predominantly White and often does not reflect the greater student population. His recommendations for a differentiated curriculum have been heeded by those in the field but find resistance when asked to be put into practice by administrators and teachers.

Despite inconsistencies and flaws, Terman's work gave gifted education a foothold in academia and was recognized as a legitimate field of study. Over the past 80 years, his work has given those in the field direction and continues to shape research studies and classroom practices. GCT

References

Burks, B. S., Jensen, D. W., & Terman, L. M. (1930). *Genetic studies of genius: Volume III. The promise of youth: Follow-up studies of a thousand gifted children.* Stanford University, CA: Stanford University Press.

Chapman, P. D. (1988). *Schools as sorters*: *Lewis M. Terman, applied psychology, and the intelligence testing movement, 1890–1930.* New York: New York University Press.

Davis, G. A., & Rimm, S. A. (2004). *Education of the gifted and talented* (5th ed.). Boston: Allyn & Bacon.

Feldhusen, J. F. (2003). Lewis M. Terman: A pioneer in the development of ability tests. In B. J. Zimmerman & D. H. Schunk (Eds.), *Educational psychology: A century of contributions* (pp. 155–170). Mahwah, NJ: Lawrence Erlbaum Associates.

Jolly, J. L. (2005). "The woman question": An historical overview of the education of gifted girls. In S. K. Johnsen & J. Kendrick (Eds.), *Teaching and counseling gifted girls* (pp. 3–8). Waco, TX: Prufrock Press.

Keating, D. P. (1991). Curriculum options for the developmentally advanced: A developmental alternative to gifted education. *Exceptionality Education Canada, 1*(1), 53–83.

Lagemann, E. C. (2000). *An elusive science: The troubling history of education research.* Chicago: University of Chicago Press.

Minton, H. L. (1988). *Lewis Terman: Pioneer in psychological testing.* New York: New York University Press.

Robinson, A., & Clinkenbeard, P. R. (1998). Giftedness: An exceptionality examined. *Annual Review of Psychology, 49,* 117–139.

Seagoe, M. V. (1975). *Terman and the gifted*. Los Altos, CA: William Kaufmann.

Terman, L. M. (1913). Psychological principles underlying the Binet-Simon Scale and some practical considerations for its correct use. *Journal of Psycho-Asthenics, 18,* 93–104.

Terman, L. M. (1915). The mental hygiene of exceptional children. *Pedagogical Seminary, 22,* 529–537.

Terman, L. M. (1919). *The intelligence of school children.* Boston: Houghton Mifflin.

Terman, L. M. (1924a). The conservation of talent. *School and Society, 19,* 359–364.

Terman, L. M. (1924b). Tests and measurements of gifted children. *Washington Education Journal, 3,* 172–190.

Terman, L. M. (1925). *Genetic studies of genius*: *Volume I. Mental and physical traits of a thousand gifted children*. Palo Alto, CA: Stanford University Press.

Terman, L. M. (1930a). Autobiography of Lewis M. Terman. In C. Murchison (Ed.), *History of psychology in autobiography, Vol. 2* (pp. 297–331). Worcester, MA: Clark University Press.

Terman, L. M. (1930b). Talent and genius in children. In V. F. Calverton & S. D. Schmalhausen (Eds.), *The new generation* (pp. 405–423). New York: The Macaulay Company.

Unknown correspondent. (1921). The study of gifted students. *School and Society, 13*, 694–695.

U.S. Department of Labor. (n.d.). *Inflation & consumer spending*. Retrieved November 5, 2007, from http://www.bls.gov