# Gender, Self-concept, and Reading Disabilities

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## Abstract

This study of highly successful men and women with reading disabilities uses a developmental approach to investigate how, and under what conditions, males and females with reading disabilities develop high literacy levels and resilient self concepts. Participants in the study with reading disabilities include a Nobel laureate, a member of the National Academy of Sciences, and other leaders and professionals in a variety of careers that require extensive reading (i.e., medicine, law, business, and the arts and sciences). The study uncovers significant gender differences that carry important instructional implications. The analysis explores new questions: What is the relationship between sociocultural meanings of gender and academic/career aspirations of males and females with reading disabilities? And, how can teachers engage students in reading through their preferred interests and genres without perpetuating gender stereotypes?

## INTRODUCTION

Children develop concepts of gender early. By the age of 3, they already know most cultural stereotypes of gender and behave accordingly (Best et al., 1977; Haugh et al., 1980; Urberg, 1982). Studies show that children prefer to act in gender stereotyped ways (Carter & Levy, 1988; Signorella et al., 1993), suggesting that being male or female is central to the core self-concept and understanding of our place in the world. Apparently, defining ourselves as male or female seems to trigger a developmental process with major implications for our intrinsic sense of who we are and which of our abilities and interests we choose to engage.

Sociocultural theories of gender assume that gender is a construct that is transmitted and constantly changing (Butler, 1989). We learn gender meanings, desires, and beliefs from the external environment, developing a sense of selfhood based in large part on social conventions transmitted through cultural values and belief systems that become internalized. Embedded in these belief systems are constructions of gender that explicate what it means to be male or female at a particular time and place. Recently, the meaning of gender in our society has been undergoing reinterpretation. Since the 1960s, traditional conceptualizations have begun to move away from binary male/female views, leading to more fluid ideas of maleness and femaleness. Yet, despite apparent changes, traditional notions of gender persist, and patriarchal beliefs regarding males' rights of dominance and privilege continue to exert powerful influences on perceptions of self and others' expectations.

In the present study, I explore gender conceptualization and literacy development in light of an emerging body of research that questions earlier beliefs regarding a 3 or 4:1 male:female sex ratio in individuals with learning disabilities (Finucci & Childs, 1981; Flynn & Rahbar, 1994; Levine & Edgar, 1994; Mellard & Byrne, 1993; Naiden, 1976; Nass, 1993; Scarborough, 1989; Shaywitz et al., 1990; Vogel, 1990; Vogel & Walsh, 1990; Young et al., 1998/1999). Evidence from several recent studies suggests that reading disabilities (RD) affect both sexes in equal proportions (Anderson, 1997; Leinhardt et al., 1982; Wadsworth et al., 1992). The higher ratio of males:females in the school-identified RD population has been attributed to teacher reporting bias, one explanation being that teachers refer males for diagnosis more frequently than females because males "act out" more (Anderson, 1997; Shaywitz et al., 1990). Another possible explanation relates to the "invisibility" and silencing of women and girls in American classrooms (Sadker & Sadker, 1994), regardless of disability status. Studies show that teachers of both genders give males disproportionately more attention than females at all educational levels (Sadker & Sadker, 1994). In a comprehensive review of the literature, Vogel reported that females with RD who were referred for clinical diagnosis and remediation had more severe cognitive deficits than males (Vogel, 1990), suggesting that, for females with RD to receive services, they had to have more serious learning problems than males. Recently, Young and his colleagues concluded that gender bias in the field of learning disabilities puts females "at a distinct disadvantage" academically and economically, during traditional school years and into adulthood (Young et al., 1998/1999).

A burgeoning literature on adults with learning disabilities has emerged (Blalock, 1981; Bruck, 1990; Feldman et al., 1993; Felton et al., 1990; Fink, 1992, 1993, 1995/1996, 1998a, 1998b; Finucci et al., 1985; Fowler & Scarborough, 1993; Gerber et al., 1992; Gerber & Reiff, 1992; Rawson, 1968; Scarborough, 1984; Vogel & Reder, 1998a, 1998b). Successful adult outcomes as well as pervasive continuing difficulties have been reported (Bruck, 1992; Fink, 1998a, 1998b; Roffman, in press; Vogel, 1985; Vogel & Reder, 1998a, 1998b). In his work on successful adults with learning disabilities, Gerber created a social/ecological framework to understand successful achievement and adaptive adjustment in adulthood. Gerber's model emphasized locus of control and interpersonal relationships for understanding adaptive adjustment in adults with learning disabilities (Gerber et al., 1992).

Using different research designs, Vogel and Reder (1998a, 1998b) and Fink (1998a) independently documented achievement of high literacy in some adults with RD. Vogel and Reder found no significant main effect of gender on literacy, concluding that men and women overall did not perform differently on the National Adult Literacy Survey (Vogel & Reder, 1998b, p. 163). This finding was consistent with results reported earlier by Kirsch et al. (1993). To date, few studies have analyzed gender, literacy, and self-concept development in adults with RD from a developmental perspective (Fink, 1998a, 1998b; Vogel & Reder, 1998a, 1998b). The current study uses a developmental lens to examine gender conceptualization and literacy development in successful adults with RD. Analyses focus on development of literacy, development of self-concept, imagination of self and others' life possibilities, and formation of academic and professional goals.

## METHOD

### Participant recruitment and selection

My goal was to identify successful adults with RD who would inspire others currently struggling with literacy. Therefore, I designed recruitment methods to identify adults with RD who had achieved high levels of success in diverse professions that require extensive reading, training, skill, and responsibility. Thus the sample was not random or representative but rather was selected based on: (1) educational and professional achievement level, (2) field of expertise, (3) gender, (4) age, and (5) socioeconomic level. Participants were considered "successful" if they supported themselves financially and demonstrated professional competence recognized by peers in an area of expertise that requires reading.

Selection criteria were guided by The International Dyslexia Association (IDA) research definition of dyslexia, (also called RD). Despite ongoing controversies (e.g. Aaron, 1997; Stanovich & Siegal, 1994; Stanovich, 1991), this definition maintains the classic notion of an "unexpected" reading problem or "discrepancy" between the person's potential (often measured by the Full Scale IQ) and actual reading achievement (often measured by standardized diagnostic reading tests). The IDA research definition conceptualizes dyslexia, or RD, as:

> ... characterized by difficulties in single word decoding, usually reflecting insufficient phonological processing abilities....Dyslexia is manifest by variable difficulty with different forms of language, often including, in addition to problems reading, a conspicuous problem with acquiring proficiency in writing and spelling (Orton Dyslexia Society Research Committee 1994, p.4).

In the present study, participants were included and considered to have RD if they reported having had difficulties learning to decode single words and/or learn adequate reading and spelling skills, beginning by first grade and continuing at least until third grade. Adults between ages 26 and 50 had been diagnosed with RD by learning disabilities professionals using established assessment instruments. For those older than 50 (educated when documentation was less common), a case history of early and continuing difficulties in reading unfamiliar words, spelling, and writing constituted the "diagnostic signature" of RD (Shaywitz et al., 1994, p. 7).

Initial means of locating participants included professional referrals, word of mouth, and notices distributed at professional conferences. I screened prospective participants in preliminary telephone interviews, excluding those with histories of inadequate schooling, poor vision, and other exclusionary criteria. I recorded and analyzed profiles of participants' language-based difficulties based on retrospective face-to-face interviews that I conducted individually with each participant. A case history of concommitant characteristics was noted, as shown in Table 1. Males and females were matched for problems and severity of RD, (see next page).

### Academic degrees

Despite histories of serious reading problems, 59 of the 60 adults with RD were graduates of four year colleges or universities. The majority had earned master's

### Table 1
### Self-reported Problems of the Individuals with RD*

| Problem** | # Males | # Females | Total |
|---|---|---|---|
| Single word decoding | 29 | 30 | 59 |
| Spelling | 30 | 29 | 59 |
| Discrepancy | 26 | 27 | 53 |
| Diagnosis/Remediation | 25 | 25 | 50 |
| Letter identification | 23 | 23 | 46 |
| Writing | 25 | 24 | 49 |
| Slow rdg. and/or wrtg. | 28 | 26 | 54 |
| Memory | 26 | 26 | 52 |
| Laterality (left-right distinction) | 16 | 22 | 38 |
| Second language | 27 | 28 | 55 |
| Fine motor (i.e., illegible handwriting) | 19 | 17 | 36 |
| Familial dyslexia | 22 | 26 | 48 |

*Mean Number of Problems Per Participant:

|  | Males | Females |
|---|---|---|
| Mean # of Problems (SD) | 9.9 (1.3) | 10.0 (1.3) |
| Range | 6-12 | 8-12 |

**There were no significant differences between males and females (t = 0.30, p =.767).

and/or doctoral degrees. The sample of adults with RD included 17 PhDs, 6 MDs, 4 JDs, 19 individuals with Master's Degrees, and 12 with Bachelor's Degrees. One adult with RD had attended but did not complete college. Currently, many of the participants with RD are outstanding professionals in the top echelons of their fields.[1] (Pseudonyms have been used in a few cases; however, most participants gave permission to use their real names in order to inspire others who currently struggle with RD).

A comparison group was matched on all criteria except RD and consisted of nondyslexic adults with high professional and educational achievements comparable to those of the men and women with RD. The comparison group, which included 5 Ph. D.'s, 1 M.D., 1 J.D., and 3 individuals with Master's Degrees, was limited to 10 participants due to limited resources. Like the men and women with RD, the comparison group participants were active professionals in fields that demand extensive reading. On average, the adults with RD and the comparison group in this study exceeded Gerber and Reiff's definition of "high success" (Gerber & Reiff, 1991, p. 34).

### Region, SES, and race

Men and women with RD from all regions of the United States participated, including 18 states and the District of Columbia. Most were reared in middle to upper-middle class families; however, a few came from working class origins. On average, they currently earn incomes in middle to high socioeconomic categories. The majority of participants were White middle class U.S. citizens. A small number of African-Americans and Latinos and Latinas participated, but their numbers were not proportionately representative of minorities in the U.S. population. Although additional members of minorities were sought, I had difficulty finding them, presumably because minorities are not proportionately successful in our society due to ongoing discrimination (Gadsden, 1991; Ladson-Billings, 1994).

### Self-report of middle-aged adults

Increasingly, self-report data are being used in disabilities research (Harter et al., 1999; Henderson, 1995; Vogel & Reder, 1998). Self-report of childhood reading difficulties by learning disabled adults has recently been shown to be valid and reliable (Decker et al., 1989; Finucci et al., 1984; Gilger, 1992; Lefly, 1997; Lefly & Pennington, in review). Gilger found that both accuracy and reliability of self-reported reading difficulties are higher for middle-aged, normal, or high-achieving adults (Gilger, 1992). Therefore, highly successful adults with RD with a mean age of 45 were selected for the present study (range = 26 - 75 years).

## Procedures and instruments

### Clinical interviews

Gilligan's clinical interview methodology was used to conduct in-depth retrospective interviews (3-9 hours each) in person with each adult (Attanucci, 1988). I developed an interview protocol of 20 questions to guide the interviews in a semi-structured, open-ended format (See Fink, 1995/1996 for interview protocol). Care was taken to avoid asking questions in a manner likely to influence participants' responses. When possible, I conducted interviews in homes or workplaces, where individuals recollected their literacy and learning history in a developmental framework, school grade by school grade, content area by content area. Each interview was audiotaped and transcribed in its entirety by a trained transcriber in order to preserve rich descriptive detail and ensure accuracy. I coded interview transcripts according to multiple dimensions of cognitive and affective development, including experiences of humiliation and frustration with learning, experiences of jubilation and joy in learning, topic(s) and type(s) of first books read, ages and circumstances of early memories regarding reading, relationships with important people, compliance with and/or resistance to normative gender roles and expectations, etc. To check for reliability, data were also coded and analyzed by an independent psychologist trained in developmental research methods.

### Self-in-relationship interviews

Recent research by developmentalists suggests that behavior, attitudes, and concepts of self vary, depending on the particular task, sociocultural and relational context, and level of environmental support (Fischer & Bidell, 1997). One underlying assumption of developmentalists is that an individual's self concept may vary in relationship to different people with whom he or she interacts. Despite these variations, however, each individual to some extent develops a relatively stable, enduring self-concept. To gather self-concept data, I administered Monsour's (1985) self-in-relationship interview protocol. This instrument has been widely used to analyze core self-concept and complexity of self development in differing relational and cultural contexts (e. g., Calverley et al., 1994; Fischer & Kennedy, 1997). Using Monsour's protocol, the individual first constructs a brief self portrait by naming five adjectives describing key personality, behavior, and character traits. Next, the individual produces five terms describing the self in relation to important people (such as the mother, father, romantic partner, friend or colleague, etc.). Finally, the individual selects from the entire list of previously produced adjectives, those adjectives that reflect the enduring self, thus constructing "the real self, the core self, the lasting self".

### Additional background information

I collected additional biographical data to verify interview information. Data sources included each adult's curriculum vitae, diagnostic school and clinical reports, when available, information from parents and spouses, when available, information from public sources such as Who's Who in America, and journal articles, book chapters, full-length books, and works of art created and published by each adult.

### Tests, assessments, and questionnaires

I individually administered formal and informal literacy tests to each participant. Assessment instruments included: (1) The Diagnostic Assessments of Reading with Trial Teaching Strategies, or DARTTS (Roswell & Chall, 1992), (2) The Nelson-Denny Reading Test of Vocabulary, Reading Comprehension, and Reading Rate, Form H, or ND (Brown et al., 1993), (3) The Pig Latin Test (adapted by Fink from Lefly, 1997), (4) The Florida Nonsense Passages (adapted from Finucci, 1974 by Gross-Glenn et al., 1990), and (5) The Graded Nonword Reading and Spelling Test (Snowling et al., 1996). (See Fink, 1998a for a description of each instrument).

I administered The Adult Reading History Questionnaire (ARHQ) to assess the existence of RD and collect data regarding literacy development over time (Lefly & Pennington, in review). The ARHQ has been highly correlated with adult diagnostic criteria in Pennington's familial dyslexic sample ($r = .61 - .73$; $p < .001$). These correlations are apparently higher than those of other adult self-report validity studies (Lefly & Pennington, in review, pp. 9-10). Lefly and Pennington used a cutoff point of .30 to determine the existence of RD. All 60 adults with RD in the present study had ARHQ scores well above .30 (Mean for total adults with RD =.60, SD=.09, range =.38 -.82). By this criterion, all were adults with RD.

The following questions guided the study:

1. What qualities characterize the core self-concept of successful adults with RD?
2. How do highly successful males and females with RD develop literacy?
3. What literacy levels do successful adults with RD develop?
4. What is the relationship between cultural meanings of gender and the academic and professional aspirations of males and females with RD?
5. How do academic experiences and literacy development of successful males and females with RD differ at home and school?
6. How do childhood differences in imagination of males and females with RD enhance or curtail their educational and professional perspectives?
7. What are the instructional implications of the results of this study?

## RESULTS

### Core self-concept: The enduring self

Individuals in the present study demonstrated strong, enduring concepts of self. There were no significant differences by gender, with approximately 67% of both men and women overall citing two relatively stable attributes: Empathy and persistence. On average, these men and women related personal characteristics of empathy and persistence directly to their own struggles with reading disabilities. They believed that their own struggles with learning had played a strong role in their development of the ability to empathize with others insofar as they had "been there" and had personal knowledge of what it felt like to struggle as learners. In addition, men and women both related their quality of persistence to their learning struggles and their need not to give up but, on the contrary, to work extra hard when facing a difficult task. These results fit with earlier findings by Gerber and his colleagues (Gerber et. al, 1992).

### Gender and high interest texts

Both men and women with RD developed literacy through avid reading of high interest texts. A salient difference between the men's and women's literacy development was in their favorite topics and genres, which followed traditional gender patterns. Of the 30 women with RD, 23 preferred fiction, whereas 7 preferred non-fiction. Of the 30 men with RD, 14 preferred fiction, while 16 preferred non-fiction. Gender differences in topics of personal interest reading were statistically significant (chi square = 5.71, $p = .017$). Table 2 summarizes findings related to gender and topics of high interest reading (see next page.)

Women, more often than men, noted the "pull" of reading materials related to developmental self-identity and relational issues provided in novels. They were particularly drawn to love stories, even where history was ostensibly the subject.

Ann Brown (educational researcher):

## Table 2
## Gender and Types of High Interest Reading*

| Women | | Men | |
|---|---|---|---|
| n = 30 | | n = 30 | |
| Novels | 23 | Novels | 14 |
| Biographies | 2 | Biographies | 2 |
| Science | 2 | Science | 5 |
| Social Studies | 1 | Social Studies | 6 |
| Cooking | 1 | Automechanics | 1 |
| No Data | 1 | Sailing | 1 |
| | | Poetry | 1 |

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> Jane Buchbinder (fiction writer):
> I loved novels....I read Judy Blume books, like Are You There God? It's Me, Margaret and Wifey, which were really captivating.

Men, more often than women, were drawn into factual information-loaded materials provided by nonfiction texts.

> Ronald Davis (biochemist):
> I became fascinated with nitrogen chemistry. So the way to understand that was to start reading chemistry books. So I got organic chemistry books; I got as many of these as I could find.

Six males with RD, but only 1 female, read avidly during childhood about social studies. As children, 5 males with RD, compared to only 2 females, were avid science readers. These numbers, while small, mirror the reading interests of "normally developing" readers (Whitehead & Maddren, 1974, pp. 24-25).

### High literacy levels

The 60 adults with RD developed most of the salient characteristics of Chall's (1983) Stage 5, the highest level of reading development. They comprehended sophisticated text, achieving high scores on silent reading comprehension and vocabulary subtests of the DARTTS and ND. On the ND, for example, they averaged 16.9 GE (a grade equivalent slightly above the fourth year of college). There were no differences by gender in their literacy strengths and weaknesses. Both men and women with RD developed high literacy levels. (See Fink, 1998a for details and extended discussion of literacy levels and profiles).

How did these 60 adults develop high level literacy? The key was that they read avidly about a topic of passionate personal interest.

> James Bensinger (physicist):
> I knew certainly as early as fifth grade that physics was what I wanted to do. So I did a lot of reading. Ya know, I read magazines and books and just spent a lot of time, just reading about physics.

By "just reading about physics," James Bensinger developed the specialized vocabulary and conceptual knowledge of this discipline. His immersion in physics enabled him to develop the specific scientific schema for reading and thinking about physics. By acquiring detailed background knowledge in one field (physics), he enhanced his ability to use the context to read, conceptualize, and engage in creative problem solving.

The specificity of interest-driven reading was a key factor for the 60 successful adults with RD in this study. Through avid, highly focused reading in specialized disciplines and genres, they developed deep background knowledge, becoming conversant with domain-specific vocabulary, concepts, themes, questions, and typical text structures. Extensive reading about a favorite subject enhanced their background knowledge and enabled them to gain practice, which fostered fluency and increasingly sophisticated skills. The redundant text material itself may have provided the requisite drill and practice that facilitated their reading development at optimal levels.

### Captivating materials and "flow"

Captivating — this word appeared repeatedly as individuals described their reading. Surprisingly, the adults in this study were avid readers who seem to have been transported by the reading experience. In common parlance we call this "getting lost in a good book;" the reader is completely involved, even transformed, by the characters and plot of a novel, losing awareness of all else around. Such total immersion stemming from involvement and enjoyment is what Csikszentmihalyi (1991) calls " a flow experience" — the feeling of being carried away by a current. When concentration based on enjoyment and interest is this intense, the result is a loss of self-consciousness, which can be very liberating, both emotionally and cognitively. For an individual with RD, who ordinarily struggles with reading and, consequently, becomes anxious in most reading situations, such a flow-like experience is memorable and significant.

> Priscilla Singer (arts educator):
>
> ...I was amazed that I could be so locked in a book. It was like the discovery of how a book could take me somewhere different and take me into a world and characters that I could identify with.

The individuals in this study were transformed by their interactions with interesting, personally intriguing reading materials — materials that they frequently chose themselves.

### Great expectations?: Different perceptions

Men and women were asked the following question: "Would you have experienced differences at home and/or school if you had had the same talents and abilities as well as the same learning difficulties, but been

> I remember reading many historical novels; I read those avidly, particularly about the Tudor and Stuart Periods. Because mainly they were lovely love stories.

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## Great expectations?: Different perceptions

Men and women were asked the following question: "Would you have experienced differences at home and/or school if you had had the same talents and abilities as well as the same learning difficulties, but been of a different gender?" Results showed that women more often than men thought that being of a different gender would have made a difference in their home and school experiences. Ninety-three percent of women with RD, compared to 67% of men with RD, felt that they would have been treated differently if they had been of a different gender. These differences were statistically significant (Fisher's exact test, p = .021).

Furthermore, their responses indicated that, overall, women believed that it would have been advantageous to have been male rather than female with RD. Of the 30 women with RD, 28 believed that their home and/or school experiences would have been more positive had they been male. In contrast, only 20 men with RD out of 30 felt that being female would have made a difference. And, in most cases, males believed that being female would have been a disadvantage. Table 3 summarizes these results. (See next page)

I hypothesized that an adult's age and era of school attendance could have been factors in developing perceptions regarding gender roles and experiences. Therefore, I analyzed responses by age. Table 4 shows results of this analysis. There were no significant differences by age. (See next page)

Women with RD who grew up alongside brothers with RD reported disparities in parental attention, with boys overall seeming to receive more attention than girls.

> Kelly Remington (hotel manager):
> It was kind of like the whole world revolved around my brother Bob, who was dyslexic. My mother spent so much time with him! She ignored my sister and me, even though we were both dyslexic, too.

> Florence Haseltine (gynecologist):
> My brother has almost all the same learning problems that I have, but he got lots of attention. I didn't. My mother didn't realize that I couldn't read until I was almost 11.

Overall, men believed that, despite their reading disability, others held high academic and career expectations for them throughout their lives, both at home and school. S. Charles Bean's remarks about his mother's expectations were typical.

> S. Charles Bean (neurologist):
> My mother had me picked for being great. My sister was pressured to become a wife and mother, but I was the one that was going to succeed.

Overall, women with RD perceived lower academic and career expectations for themselves — lower expectations at home and school that they attributed to being female.

> Tania Baker (biologist):
> My high school guidance counselor transferred me out of a more difficult college track English curriculum to an easier one because I was a girl. He said that since my spelling was so bad, I could never be a secretary; but he said I could be a receptionist.

Women explicitly stated that they would have been pushed further to achieve more had they been male.

> Hannah Adams (teacher):
> My teachers would have pushed me further if I were a boy.

> Marlene Hirschberg (arts administrator):
> My brother and I both had learning problems, but my mother pushed him to go to law school. She didn't push me.

## Romance and attractiveness

For many women, the challenge of "doing school" was subordinated to the notion of "doing girl". Women spontaneously reported that they were "educated in romance" (Holland & Eisenhart, 1990); that is, they were raised with the belief that prettiness and popularity mattered more for them than being smart.

For women with brothers, this stood in sharp contrast to what was emphasized in their brothers' upbringing.

> Tracy Bloomberg (special educator):
> I always got the sense at home that my academic career wasn't that important, wasn't as important as my brother's. I was social, and my parents expected me to

## Table 3
## Responses by Gender

Question: Would being of a different gender with RD have made a difference?

**Response**

| | **Women** | **Men** |
|---|---|---|
| **YES** | 28 | 20 |
| **NO** | 2 | 10 |

Fischer's exact text, p = .021

## Table 4
## Responses by Age

Women

| Response | **Women age 26-40** | **Women age 41+** |
|---|---|---|
| **YES** | 16 | 12 |
| **NO** | 1 | 1 |

Men

| Response | **Men age 26-40** | **Men age 41+** |
|---|---|---|
| **YES** | 5 | 15 |
| **NO** | 4 | 6 |

> marry well, marry a doctor (which I did). My parents focused on helping my brother become a doctor (which he did) — even though he wasn't a very good student earlier — and he was less motivated than I was.

Tracy Bloomberg apparently did not resist the normative cultural expectations for a girl; she lived up to her parents' (and the mainstream culture's) expectations, gaining prestige mainly through her social skills. The highlight of her social success was that she married well — she married a doctor.

Research suggests that, throughout her lifetime, a girl/woman's social worth and prestige are measured primarily by her sexual attractiveness and potential for romantic success (Gray, 1999; Holland & Eisenhart, 1990; Lees, 1986). In our society, this phenomenon is experienced most poignantly by females between middle school and early adult years, when major educational and career decisions are made and a girl/woman is creating her self identity. This cultural model, like others, is shared but rarely discussed; however, if asked, individuals can describe it in intricate detail (D'Andrade, 1992; Gray, 1999; LeVine, 1984). Thus, the model involves tacit assumptions that are powerful but not necessarily discussed explicitly. Although there are differences based on race, class, and ethnicity (Lorber, 1994), a paradigm of gender based on a cultural model of romance and attractiveness impacts individuals' beliefs, values, and actions. Holland and Eisenhart (1990) reported a pattern among college women who began their academic careers with strong scholastic interests but ended up focusing their efforts on romantic rather than academic pursuits (Gray, 1999).

In the present study, beauty, sociability, and the cultivation of femininity were promoted as powerful positive attributes for girls and women with RD by parents and others. Apparently, academic achievement was considered less important.

> Ann Brown (educational researcher):
> Academics was not expected of me. I was pretty as a child; I was constantly told I was pretty. And I was very, very successful, um, I won medals for dancing. So this was all that was expected of me. Not academics.

Believing that "doing girl" was what was most highly valued, some women with RD, consciously or not, accepted the social norms of femininity. And, apparently one way to get through life was to excel at being exquisitely feminine:

> Priscilla Singer (arts educator):
> I had the sort of body and beauty that took me through a great deal. I mean, as a girl I was, you know, homecoming queen.

> Kelly Remington (hotel manager):
> I had other things going for me. I love to dance, so I took modern dance and ballet. And I was into fixing my hair and having boyfriends and being sociable.

Some women with RD consciously used their femininity and social skills to avoid doing school work.

> Lezli Whitehouse (language clinician):
> A lot of what I call faking it, my manipulative ways of getting out of things like school assignments, were based on the fact that I was a girl. I could flirt my way through.

> Maureen Jacobson (social worker):
> I was very social, and, um, I used that to get out of a lot of work requirements.

Families espousing gender equity apparently were not immune to the effects of traditional gender views.

> Maureen Jacobson (social worker):
> My family prides itself on being liberal. But in reality, we all have it; we're all part of the society. When a woman isn't able to accomplish something academically, it's usually considered okay, because she'll go get married. Someone will support her. So she's not supported or encouraged to fight the battle that a man would be kicked to do.

Women with RD frequently were not supported to "fight the academic battle" to the same extent as the men. Rather, the women were encouraged to develop their femininity — to enhance their attractiveness and social relationship skills.

But what happened in cases when a girl with RD resisted conforming to the cultural norms of femininity? Did she bear the brunt of increased stigmatization, discrimination, and ostracism? Were any positive outcomes associated with resistance?

**Resistance and Resilience**

Research suggests that both males and females with learning disabilities are frequently stigmatized (Skolnikoff, 1999), often bearing the brunt of damaging discrimination, reduced life chances (Goffman, 1963, p.5), and poor quality of life (Reder & Vogel, 1997). Moreover, girls and women (with and without learning disabilities) often suffer gender stigmatization and reduced life chances. However, stigmatization sometimes has an unforseen liberating effect.

In several cases in the present study, resistance to gender norms was associated with resilience. Professor Sylvia Law, an attorney, and Dr. Florence Haseltine, a gynecologist, exemplify two such cases. These women openly refused to accept the social place accorded them (Goffman, 1963, p. 143), especially with regard to stereotyped gender roles. And, apparently as a result of their noncomformity, these women resisters felt "less disabled".

> Sylvia Law (attorney):
> And so I was less disabled by those characteristic assumptions about the way women think and work than many people. — Because I'm so big! I just knew I didn't fit the stereotype; I couldn't fit the stereotype. There was NO WAY I could be what a girl was supposed to be like. So I said, 'Well, that's not me'. You know, it's liberating not to fit the stereotype, to be so far from fitting it that there's no sense in trying (laughing).

Resistance to gender norms apparently enhanced and improved Sylvia Law's life chances. She was freed from the stultifying notions of proper female behavior, attributes, and goals because she believed that she could not compete successfully in the arena of prototypical femininity. Convinced that she was too big and therefore did not "look feminine," she felt free to pursue her intellectual and civic interests, which were considerable. Today, she is a mover and shaker in civil rights and health law. She is the author of numerous scholarly articles and major legal books , (e.g., The Rights of the Poor and Law and the American Health Care System). Her work has influenced public policy at the national level and is at the center of current controversies in American law. Perceiving herself liberated from traditional norms of femininity, Sylvia Law felt free to pursue her intellectual ambitions to the fullest extent. Currently a Chair Professor o Law, Medicine, and Psychiatry at New York University School of Law, Sylvia Law is at the top of her profession

Dr. Florence Haseltine, MD., Ph.D., is another noteworthy woman resister with outstanding accomplishments. She founded the Society for the Advancement of Women's Health Research and made women's health a national research priority in the 1990s and into the new millenium. Dr. Haseltine is Director of the Center for Population Research at the National Institutes of Health and the recipient of coveted medical awards. She has authored several books (including Woman Doctor) and many articles on women's health. From the get-go, Dr. Haseltine resisted norms of traditional femininity, beginning in elementary school. A thread woven throughout her life is the theme of being an outsider. She was an oddball who struggled and fought vehemently against established norms of propriety and femininity.

> Florence Haseltine (gynecologist):
> I was never proper or girlish. Never. I was sort of an odd duck in a lot of ways. My parents even gave me a boy's name — Paddy. I was always kind of odd. ... They used to put me in the back of the class so I could play with the animals while the other kids were working quietly. And I'd play with the snakes. In fifth grade, sixth grade — even in seventh grade, I'd play with snakes in the back of the room. People thought I was an oddball.

Dr. Florence Haseltine's oddball status is not surprising; according to research, individuals with learning disabilities often develop an oddball or outsider identity (Skolnikoff, 1999). Due to the hidden, invisible nature of the learning disability, they often operate somewhere "betwixt and between" the world of the non-learning disabled and the disabled (Skolnikoff, 1999; Turner, 1967). This "liminal" space (Turner, 1967, 1969/1995), located between and at the edges of the social world, creates a sense of marginalization, frequently with unfortunate negative consequences. However, some individuals gain strength from this identity, developing a strong sense of self agency which enables them to be independent, assertive, and creative thinkers and doers. This seems to have been the case for Sylvia Law and Florence Haseltine. These women resisters were among the highest achievers among the group of highly successful women in this study. Along with their outsider status, they developed a strong sense of themselves as agents — individuals whose actions are able to influence, not only their own life circumstances, but also those of the world around them.

**Science and math interests**

The present study was not designed with a focus on mathematics and science. However, a pattern emerged showing that individuals with RD were told explicitly by teachers and guidance counselors not to take advanced courses in science and math due to their difficulties with reading. Participants vividly recalled being given this advice, even when they expressed interest and demonstrated ability in these subjects.

> Dorothy Brown (special education advocate):
> I wanted to be a scientist but wasn't encouraged; I was told to avoid science courses because of my learning disability.

Women perceived lower expectations for themselves than for men with regard to science and math, even when they came from science-oriented families.

> Maureen Jacobson (social worker):
> Science is a favorite direction in my family; my father is a medical doctor. But, being a girl, it wasn't anything taken seriously, even though I've always wanted to be a veterinarian. I was never pushed towards the sciences or given any support.

Seven women with RD, compared to 1 man with RD, were explicitly advised not to enroll in science and/or math classes due to their reading difficulties.

Professor Ronald Davis, a Stanford University biochemist, was forbidden to take math and science courses due to his reading difficulties and poor performance on intelligence and achievement tests given under standard administration conditions (before accommodations were required).

> Guidance counselor:
> 'With an IQ of 90, you'll never pass elementary algebra. I forbid you to take it. Take shop instead; major in shop'.

Davis, driven by intense curiosity and a burning interest in math and science, refused to be dissuaded.

> Ronald Davis (biochemist):
> 'I'm going to go and take the class...and I don't care if you don't want me to take it'.

Driven by his own intrinsic interest in learning algebra, Davis borrowed an elementary algebra textbook, which he read slowly and methodically during the summer, gradually mastering the algebra text and receiving a 95, the highest grade in his class. Davis demonstrated the same pattern of persistence that Gerber and Reiff (1992) found in their study of 71 successful adults with learning disabilities. Repeatedly, Davis encountered serious obstacles, yet he persisted in surmounting them. Although he earned straight A's in science courses in college, he failed freshman English. Undaunted again, he repeated the course, graduated, and went on to earn a Ph.D. in chemistry, eventually becoming an internationally acclaimed scientist. What carried him through were his persistence and his passionate interest in a single content area.

## SUMMARY OF FINDINGS

This study, which focused on development in highly successful adults with RD, led to several key findings.

About two-thirds of the 60 successful men and women with RD developed core self-concepts with enduring qualities of empathy and persistence. This result fits with findings from studies of adults with learning disabilities by Gerber and his colleagues (Gerber et al., 1992).

These successful adults with RD developed high level literacy skills through avid reading about a subject of passionate personal interest. They were "turned on" to their topic, whether it was biology, biography, or love stories. They found materials that thoroughly engaged them — so much so that many reported a flow experience, an emotional state described by Cszikszentmihalyi as the feeling of being carried away on a current (Cszikszentmihalyi, 1991). Apparently their imagination took flight as they discovered their own interests and sought relevant books that excited them.

There were gender differences in the types of books that excited males and females with RD. On average, women preferred fiction, whereas men preferred nonfiction.

Females with RD were more likely than males to be discouraged from pursuing academic interests. Apparently this was the case both at home and at school.

Individuals with RD of both genders were discouraged from pursuing mathematics and science, with females experiencing this more often than males. Females with RD who were interested in science were channeled into more traditional female courses, roles, and occupations under the apparent assumption that, cloaked in these cultural costumes, their learning differences would be invisible and inconsequential.

Finally, women with RD had the perception that, had they been male, they would have been encouraged (as some of their brothers were) to pursue scientific and mathematical interests. This finding, based on small numbers, must be interpreted cautiously; however, it should be noted that this result parallels results obtained in studies of individuals without learning disabilities (e. g., Wigfield et al., 1998).

## INSTRUCTIONAL IMPLICATIONS OF THE FINDINGS

The findings from this study have several important implications for instruction and research. These involve issues related to passion, analysis of reading, twin text reading, creative writing, development of empathy and persistence, and educational expectations.

### Passion

Many struggling readers fail to find books that excite them; indeed, they are often noticeably disengaged while reading (Wolf, 1998). The results of this study suggest that, in order to entice seemingly "turned off" students into reading, we need to provide reading materials based on each person's interests and passions. How can teachers ascertain students' individual interests? One way is by interviewing each individual and administering an interest inventory. This involves inquiring about each person's family, hobbies or work, favorite books, movies, television programs, videos, and computer activities — then locating interest-based materials accordingly. Highly interesting, personally captivating reading materials can provide the drill and practice necessary to create good readers. And, interest-based materials may be more effective than standard texts for developing fluency and optimal literacy levels.

### Critical analysis of reading

How can we help both ourselves and our students move away from static, binary views of gender toward more expansive, dynamic views? The men and women in this study tended to prefer different types of texts for reading, which raises new questions: How can we engage students with RD in reading through their preferred interests and genres without promoting gender stereotypes? How can we avoid inadvertently sending the message that females should get "educated in romance" while males should get educated in so-called "real" subjects? What values and skills can the reading of different types of texts - fiction and nonfiction- promote?

An individual's gender conceptualization and knowledge of the world can be expanded through guided critical analyses and thoughtful dialogue about the reading material. The example of a girl (or woman) who reads only romantic novels is illustrative. The results of this study suggest that, to support her optimal development, she should not only be allowed, but also be encouraged, to pursue her fascination with love stories. One approach could be to find love stories in which the female protagonist is involved in a romance and, at the same time, is also involved in a profession less typical for women. One example is the biography written by the daughter of Madame Curie, the first person to receive the Nobel prize twice, once in physics and once in chemistry (Curie, 1937).

A second approach could be to reframe the way that the individual reads love stories. What we say as we interpret with students the positionings and behaviors of heroines or heroes can help to expand the notions of gender held by both boys and girls, men and women. We might ask students of both genders to consider what is meant by the conclusion, "She married a doctor and lived happily ever after". What was the quality of the couple's life twenty years later? Under what conditions did the woman live? The man? According to what assumptions? How fulfilling were their lives, and why? The discussions we engage in, the views of gender that we express, can affect a girl/woman's developing view of herself and her own life possibilities. Such guided questioning can also prevent gender stereotyping in boys and men and affect their developing views of themselves. Materials and activities that deal specifically with gender development are admirably presented in a paper by Nancy Prosenjak (1999) and in a brochure entitled Guidelines for a Gender-balanced Curriculum in English by the Women in Literature and Life Assembly of the National Council of Teachers of English (1998).

In this study of adults with RD, women overall preferred reading fiction – primarily romantic novels. Is there value in reading such novels? Can attitudes and lessons learned from the reading of romance novels be assets for coping in the "real" world? Research suggests that the act of reading contemporary romantic fiction is associated with several positive outcomes (Radway, 1984/1991). First, the romantic novel is easily accessible and understandable because of its relatively simple vocabulary, standard syntax, and familiar language style. Thus, romantic fiction is reader friendly and can break down important barriers to literacy — barriers that otherwise deter reluctant readers. Second, romantic fiction promotes the development of interpersonal relationships and attitudes of caring and empathy. Readers of romantic fiction can actively extrapolate information about successful intimate relationships and apply that information to their own lives (Radway, 1991, p. 193). Readers can develop what Carol Gilligan calls the perspective of care and relationship, a perspective in which the relational world is valued and highly regarded (Gilligan, 1982/1993). This viewpoint is important for both women and men as they negotiate intimate and work relationships in their own lives.

Evidence from recent studies suggests that boys as well as girls yearn to develop sensitivity (Hall, 1999; Kindlon & Thompson, 1999; Pollack, 1998) and can benefit from education in an empathic perspective of care and relationship —— a perspective developed in part from reading and analyzing romantic texts. Yet, the results of the present study show that, on average, males prefer to read nonfiction. What are the values inherent in reading nonfiction texts? Nonfiction provides essentially unlimited, detailed information and exposure to the wider world — with virtually no boundaries of geography, history, time, space, or topic. Thus, nonfiction helps prepare readers for the world of work and citizenship by presenting vast amounts of information in numerous content areas (i.e., mathematics, science, social studies, art, etc.). Nonfiction texts also educate from a variety of philosophical, religious, and moral perspectives. Through nonfiction readers can learn about the perspective of justice (Gilligan 1982, 1993), or judging right from wrong. Thus, guiding students' critical reading of texts is important, not only for helping them develop literacy skills, but also for (simultaneously) expanding their notions of gender, increasing their content area knowledge, and developing their moral and ethical views of the world.

### Twin texts: Fact and fiction

Another way to facilitate broader text experiences — regardless of gender — on a topic of personal interest is to teach with twin texts. This entails the simultaneous teaching and discussing of both fiction and nonfiction texts that deal with a similar theme or topic. Recently, Camp (2000) described in detail how twin texts can be used so that they work together to deepen the classroom literacy program. Camp presented compelling examples of twin texts and explanations of their paired usage (Camp, 2000). She explained how, through a teacher's skillful guidance with twin texts, students can learn to appreciate new genres that enrich their interest and deepen their understanding about a topic of personal curiosity.

### Creative writing

Providing plentiful opportunities for students to engage in creative writing is another way for educators to help expand students' world views, self-concepts, and gender notions. Macgillivray and Martinez (1998) found that writing allows young students to create new worlds, explore multiple positions, and play with various conceptualizations of gender and power. This finding is applicable to middle school, secondary and post-secondary, and adult education. Literacy instructors at all levels can use creative writing to encourage the disruption of gender norms, acknowledging and encouraging creation of original tales that transform stultifying, static notions of gender. By facilitating a critical analysis of individuals' own stories, we can enhance the ability to read and write stories differently, opening new possibiities for reading and seeing the world differently. Creative writing activities that are easy to implement are amply described in Totally Private and Personal: Journaling Ideas for Girls and Young Women (Wilber, 1996). This book contains concrete ideas that can be modifed to fit the developmental stage and needs of children and adults, both male and female.

### Development of empathy and persistence

Many of the men and women with RD in this study developed personal qualities of empathy and persistence. What are the implications of this finding? Should students with RD be guided into careers in the helping professions that value the ability to empathize with others and the ability to persist when the going gets tough? If so, which professions? This raises another important issue: How can we prevent perpetuating gender stereotyping in career paths and choices for students with RD? — This question, which is beyond the scope of this study, merits future investigation.

### Challenging educational expectations in all domains

An unexpected finding from this study was that individuals with RD who were interested in science and math were explicitly discouraged from taking higher level math and science courses because their difficulties with reading led others to the misperception that they would have difficulties with quantitative and scientific reasoning. Females with RD experienced this response more frequently than males, a result consistent with research on individuals without learning disabilities (Wigfield et al., 1998). Studies have revealed that women and men with and without RD have succeeded in science at the highest possible levels (see Fink, 1993; 1995/1996; 1998a; Keller, 1983). The lofty goal of preventing a reading disability from inadvertently stunting an individual's cognitive growth in science or math requires ongoing personalized analysis of each developing student's learning profile. As educators, we need to recognize that a problem with reading may obscure ability — even talent — in another area. The results of this study underscore the need to ensure that both males and females with RD are encouraged to pursue courses of study that tap into all of their talents and interests.

Clearly, what students read is of key importance to their future development. And, capitalizing on students' personal interests can promote optimal literacy. Literacy can be transformative, affecting not only the immediate encounter with a text, but also the individual's developing world view and concept of self. To maximize transformation through reading we need to focus, not only on what is read, but also on how a piece of writing is analyzed and discussed. What varieties of interpretive frameworks does the teacher use to guide an individual's meaning-making? To guide development of personal understanding? What actions do educators take to expand gender conceptualization for males and females and expand their ability to imagine their own and others' life possibilities? These issues are of pivotal importance as we expand our notions of how best to help both boys and girls, both men and women, in their lifelong struggles with reading disabilities.*

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A different version of this paper will appear as:

Fink, Rosalie P. (in press). Gender and imagination : Gender conceptualization and literacy develop ment in successful adults with reading disabili ties. Learning Disabilities: A Multidisciplinary Journal .

[1] Among the men and women with dyslexia are Dr. Baruj Benaccerraf, 1980 Nobel Laureate in Immunology and Pathology; Lora Brody, TV/radio personality and author of Cooking With Memories; Dr. Donald Francis, AIDS researcher/activist and protagonist of the movie "And the Band Played On;" Dr. Florence Haseltine, author of Woman Doctor and Women's Health Research; Dr. Robert Knapp, Harvard oncologist and author of Gynecological Oncology; Professor Ronald W. Davis, genomics researcher and biochemistry textbook author; George Deem, New York City artist, Susan Brown, New York City filmmaker, and Professor Sylvia Law, N.Y.U. legal scholar and author of books on poverty, health care, welfare, and the law.

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