Final Letter Compared with Final Phoneme in Male and Female Names

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First names of male and female residents in the United States in 1950 and 1990 were divided into three categories: the 100 most frequent names in 1950 and also in 1990, in 1950 only, and in 1990 only. The final letter more often than the final phoneme was associated with the same sex. The final letter was associated with the same sex more often for male than female names and therefore was more often predominantly male. Names that were the 100 most frequent in 1990 only had a final phoneme that was associated with the same sex more often for female than male names and therefore were more often predominantly female.

Introduction

The ending appears to be the best single criterion for differentiating between male and female first names. Barry and Harper (1995) reported that among the 25 most frequent first names given in Pennsylvania in 1960 and 1990, the final phoneme was a consonant for most male names and a vowel for most female names. Barry and Harper (1998) found the same difference between male and female names in lists of the 50 most frequent first names compiled by Dunkling (1995).

The final spelled letter instead of the final spoken phoneme was analyzed by Barry and Harper (2000). An unusually large sample consisted of the 500 most frequent male and female first names given in Pennsylvania in 1990. The final letter was a, e, or i for 67% of female and 12% of male names. The final letter was h or y for 14% of male and 15% of female names. Other final letters were the endings for 74% of male and 18% of female names.

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Different final letters of first names have been associated with male and female names since ancient times. In Latin, the final letter was always a for female names and us for male names (Ingraham, 1997, pp. 478-480). In English, different final letters are less consistently associated with male and female names.

The present paper compares the final spelled letter with the final spoken phoneme in male and female names. The comparison was applied to the 100 most frequent first names of United States residents in 1950 and 1990. The names in 1950 constitute estimates of frequency by Smith (1950), obtained largely from Social Security records. The names in 1990 are from the decennial census in 1990 (United States Census, 1990). Additional information is from first name frequencies in separate decades, 1900-1999, listed by the Social Security Administration (1999).

Procedure

The final letter and final phoneme were identified for each of the 100 most frequent male and female first names of United States residents in 1950 and 1990. The birth dates of most of the 1950 residents were between 1870 and 1932 because in 1950 very few residents obtained a social security number prior to the age of 18 years. The birth dates of most of the 1990 residents were between 1910 and 1990. Some residents born between 1910 and 1932 were counted in both years. Most residents born before 1910 were counted only in 1950. Most residents born after 1932 were counted only in 1990.

The final letter of each name was identified by one of three codes: predominantly female, ambiguous, or predominantly male. Fifteen final letters, b, c, d, g, k, l, m, n, o, p, r, s, t, w, and x, are predominantly male. Two final letters, h and y, are ambiguous because of similar frequencies in male and female names. Three final letters, a, e, and i, are predominantly female. None of the names ended in one of the remaining six letters of the alphabet (f, j, q, u, v, and z). Final letters associated with the same sex are predominantly male for male names and predominantly female for female names. Final letters associated with the opposite sex are

predominantly female for male names and predominantly male for female names.

Each final phoneme also was identified by one of three codes: predominantly male, ambiguous, or predominantly female. Predominantly male final phonemes are most consonant phonemes and the vowel phoneme o as in boat. Ambiguous final phonemes are sonorant, either nasal (m, n, or ng) or resonant (r or l). Predominantly female final phonemes are vowels except o. The criteria were described by Barry and Harper (1995). A subsequent change is that the vowel phoneme o is a male instead of female final phoneme.

The information on each first name was recorded in an electronic data file using a computer program package (SPSS, 1994) and procedures described by Barry (1995). Statistical significance of differences between two frequencies was tested by Chi Square with one degree of freedom. The two-tailed criterion and the correction for continuity were used to protect against invalid conclusions of statistical significance.

Results

The 100 most frequent first names of male and female residents in the United States in 1950 and 1990 are divided into three categories. (1) The 100 most frequent in 1950 and also in 1990. (2) The 100 most frequent in 1950 but not in 1990. (3) The 100 most frequent in 1990 but not in 1950.

Tables 1-6 contain a total number of 147 male and 150 female names, divided into three categories. The first category, persistently popular, contains 53 male names listed in Table 1 and 50 female names listed in Table 2. Each name is followed by its rank frequency between 1 (most frequent) and 100 (least frequent), separately in 1950 and 1990. The second category, previously popular, contains 47 male names listed in Table 3 and 50 female names listed in Table 4. The rank frequency in 1950 is shown. They are the remaining names among the 100 most frequent in 1950 after removing the 53 male and 50 female names that were among the 100 most frequent in 1990 also. The third category, subsequently popular, contains 47 male names listed in Table 5 and 50 female names listed in Table 6. The rank frequency in 1990 is shown. They replaced in 1990 the same numbers of names that were among the 100 most frequent in 1950 but not in 1990.

Table 1. The 53 male first names that were among the 100 most frequent in 1950 and also in 1990. Rank order frequency is shown for residents in 1950 and 1990. The final letter (FL) and final phoneme (FP) are associated with same sex (S), ambiguous (A), or associated with opposite sex (O).

Name	1950	1990	FL	FP	Name	1950	1990	FL	FP
John	1	2	S	A	Philip	33	95	S	S
William	2	5	S	A	Stephen	35	34	S	A
Charles	3	8	S	S	Carl	37	47	S	A
James	4	1	S	S	Clarence	39	93	O	S
George	5	16	O	S	Ernest	40	86	S	S
Robert	6	3	S	S	Michael	41	4	S	A
Thomas	7	10	S	S	Eugene	43	80	O	A
Henry	8	46	A	O	Howard	45	79	S	S
Joseph	9	9	A	S	Roy	48	65	A	O
Edward	10	19	S	S	Raymond	49	36	S	S
Samuel	11	60	S	A	Donald	51	15	S	S
Frank	12	31	S	S	Lawrence	52	63	O	S
Richard	13	7	S	S	Earl	53	98	S	A
Harry	14	70	A	O	Martin	55	85	S	A
Walter	17	41	S	A	Jesse	56	89	O	O
David	18	6	S	S	Anthony	61	22	A	O
Arthur	19	48	S	A	Patrick	62	42	S	S
Albert	20	54	S	S	Jonathan	63	55	S	A
Benjamin	21	66	S	A	Russell	72	82	S	A
Daniel	23	12	S	A	Nicholas	75	64	S	S
Louis	24	75	S	S	Kenneth	80	17	A	S
Harold	25	44	S	S	Christopher	85	11	S	A
Paul	26	13	S	A	Timothy	89	27	A	O
Fred	27	71	S	S	Maurice	90	25	O	S
Andrew	29	35	S	O	Joshua	96	38	O	O
Peter	31	43	S	A	Roger	100	50	S	A
Ralph	32	62	A	S					

Table 2. The 50 most female first names that were among the 100 most frequent in 1950 and also in 1990. Rank order frequency is shown for residents in 1950 and 1990. The final letter (FL) and final phoneme (FP) are associated with same sex (S), ambiguous (A), or associated with opposite sex (O).

Name	1950	1990	FL	FP	Name	1950	1990	FL	FP
Mary	1	1	A	S	Mildred	33	60	O	O
Elizabeth	2	5	A	O	Janet	34	45	O	O
Barbara	3	4	S	S	Evelyn	35	57	O	A
Dorothy	4	10	A	S	Katherine	37	61	S	A
Helen	5	15	O	A	Doris	38	55	O	O
Margaret	6	9	O	O	Lois	41	91	O	O
Ruth	7	19	A	O	Marilyn	42	80	O	A
Virginia	8	35	S	S	Martha	43	38	S	S
Jean	9	58	O	A	Phyllis	49	93	O	O
Frances	10	47	O	O	Carol	53	18	O	A
Nancy	11	12	A	S	Sarah	56	23	A	S
Patricia	12	2	S	S	Gloria	59	56	S	S
Jane	13	77	S	A	Julia	64	89	S	S
Alice	14	51	S	O	Joyce	65	49	S	O
Joan	15	62	O	A	Susan	66	8	O	A
Betty	16	14	A	S	Jacqueline	67	86	S	A
Anne	19	85	S	A	Theresa	70	72	S	S
Ann	21	48	O	A	Kathryn	71	82	O	A
Rose	22	65	S	O	Judith	74	64	A	O
Lillian	23	98	O	A	Beverly	80	73	A	S
Marie	24	44	S	S	Norma	81	94	S	S
Shirley	25	27	A	S	Carolyn	86	42	O	A
Irene	27	76	S	A	Catherine	88	46	S	A
Anna	30	33	S	S	Laura	90	22	S	S
Louise	32	83	S	O	Emily	95	99	A	S

Table 3. The 47 male first names that were among the 100 most frequent in 1950 but not in 1990. Rank order frequency is shown for residents in 1950. The final letter (FL) and final phoneme (FP) are associated with same sex (S), ambiguous (A), or associated with opposite sex (O).

Name	1950	FL	FP	Name	1950	FL	FP
Francis	15	S	S	Nathan	70	S	A
Frederick	16	S	S	Norman	71	S	A
Alexander	22	S	A	Matthew	73	S	O
Edwin	28	S	A	Julius	74	S	S
Alfred	30	S	S	Allen	76	S	A
Herbert	34	S	S	Chester	77	S	A
Jacob	36	S	S	Leo	78	S	S
Theodore	38	O	A	Guy	79	A	O
Lewis	42	S	S	Otto	81	S	S
Hugh	44	A	O	Josiah	82	A	O
Isaac	46	S	S	Bernard	83	S	S
Nathaniel	47	S	A	Claude	84	O	S
Edmond	50	S	S	Sidney	86	A	O
Horace	54	O	S	Harvey	87	A	O
Oliver	57	S	A	Moses	88	S	S
Oscar	58	S	A	Gilbert	91	S	S
Augustus	59	S	S	Archibald	92	S	S
Edgar	60	S	A	Jeremiah	93	A	O
Elmer	64	S	A	Rufus	94	S	S
Stanley	65	A	O	Leon	95	S	A
Herman	66	S	A	Max	97	S	S
Franklin	67	S	A	Lloyd	98	S	S
Abraham	68	S	A	Warren	99	S	A
Leonard	69	S	S				

Table 4. The 50 female first names that were among the 100 most frequent in 1950 but not in 1990. Rank order frequency is shown for residents in 1950. The final letter (FL) and final phoneme (FP) are associated with same sex (S), ambiguous (A), or associated with opposite sex (O).

Name	1950	FL	FP	Name	1950	FL	FP
Dolores	17	O	O	Pauline	63	S	A
Eleanor	18	O	A	Esther	68	O	A
Florence	20	S	O	Marian	69	O	A
Lorraine	26	S	A	Caroline	72	S	A
Grace	28	S	O	Rita	73	S	S
Marjorie	29	S	S	Priscilla	75	S	S
Josephine	31	S	A	Violet	76	O	O
Marion	36	O	A	Beatrice	77	S	O
Lucille	39	S	A	Geraldine	78	S	A
Ellen	40	O	A	Hazel	79	O	A
Harriet	44	O	O	Emma	82	S	S
June	45	S	A	Gladys	83	O	O
Bernice	46	S	O	Adeline	84	S	A
Jeanne	47	S	A	Stella	85	S	S
Charlotte	48	S	O	Agnes	87	O	O
Loretta	50	S	S	Elsie	89	S	S
Katharine	51	S	A	Constance	91	S	O
Elaine	52	S	A	Eileen	92	O	A
Clara	54	S	S	Genevieve	93	S	O
Edith	55	A	O	Rosalie	94	S	S
Gertrude	57	S	O	Cecilia	96	S	S
Sylvia	58	S	S	Joanne	97	S	A
Rosemary	60	A	S	Carmella	98	S	S
Sally	61	A	S	Vivian	99	O	A
Edna	62	S	S	Lucy	100	A	S

Table 5. The 47 male first names that were among the 100 most frequent in 1990 but not in 1950. Rank order frequency is shown for residents in 1990. The final letter (FL) and final phoneme (FP) are associated with same sex (S), ambiguous (A), or associated with opposite sex (O).

Name	1990	FL	FP	Name	1990	FL	FP
Mark	14	S	S	Willie	61	O	O
Steven	18	S	A	Bruce	67	O	S
Brian	20	S	A	Brandon	68	S	A
Ronald	21	S	S	Adam	69	S	A
Kevin	23	S	A	Wayne	72	O	A
Jason	24	S	A	Billy	73	A	O
Gary	26	A	O	Steve	74	O	S
Jose	28	O	O	Jeremy	76	A	O
Larry	29	A	O	Aaron	77	S	A
Jeffrey	30	A	O	Randy	78	A	O
Scott	32	S	S	Carlos	81	S	S
Eric	33	S	S	Bobby	83	A	O
Gregory	37	A	O	Victor	84	S	A
Jerry	39	A	O	Phillip	87	S	S
Dennis	40	S	S	Todd	88	S	S
Douglas	45	S	S	Craig	90	S	S
Ryan	49	S	A	Alan	91	S	A
Joe	51	O	S	Shawn	92	S	A
Juan	52	S	A	Sean	94	S	A
Jack	53	S	S	Chris	96	S	S
Justin	56	S	A	Johnny	97	A	O
Terry	57	A	O	Jimmy	99	A	O
Gerald	58	S	S	Antonio	100	S	S
Keith	59	A	S				

Table 6. The 50 female first names that were among the 100 most frequent in 1990 but not in 1950. Rank order frequency is shown for residents in 1990. The final letter (FL) and final phoneme (FP) are associated with same sex (S), ambiguous (A), or associated with opposite sex (O).

Name	1990	FL	FP	Name	1990	FL	FP
Linda	3	S	S	Julie	52	S	S
Jennifer	6	O	A	Heather	53	O	A
Maria	7	S	S	Teresa	54	S	S
Lisa	11	S	S	Cheryl	59	O	A
Karen	13	O	A	Ashley	63	A	S
Sandra	16	S	S	Janice	66	S	O
Donna	17	S	S	Kelly	67	A	S
Sharon	20	O	A	Nicole	68	S	A
Michelle	21	S	A	Judy	69	A	S
Kimberly	24	A	S	Christina	70	S	S
Deborah	25	A	S	Kathy	71	A	S
Jessica	26	S	S	Denise	74	S	O
Cynthia	28	S	S	Tammy	75	A	S
Angela	29	S	S	Lori	78	S	S
Melissa	30	S	S	Rachel	79	O	A
Brenda	31	S	S	Andrea	81	S	S
Amy	32	A	S	Sara	84	S	S
Rebecca	34	S	S	Wanda	87	S	S
Kathleen	36	O	A	Bonnie	88	S	S
Pamela	37	S	S	Ruby	90	A	S
Debra	39	S	S	Tina	92	S	S
Amanda	40	S	S	Paula	95	S	S
Stephanie	41	S	S	Diana	96	S	S
Christine	43	S	A	Annie	97	S	S
Diane	50	S	A	Robin	100	O	A

The first category of names is defined as the 100 most frequent in 1950 and also in 1990. An additional characteristic of these names is that in both years they contained a high proportion of the most popular names, such as rank frequencies between 1 and 25. In comparison with a rank frequency between 26 and 100, names with a rank frequency between 1 and 25 in one year are more likely to have a rank frequency between 1 and 100 in the other year. Popularity of names usually changes gradually instead of suddenly.

Among the 25 most frequent names in 1950, three male and three female names were the 100 most frequent in 1950 only instead of 1950 and also 1990. Among the 25 most frequent names in 1990, six male and 11 female names were the 100 most frequent in 19990 only instead of 1990 and also 1950. Increase is usually more rapid than decrease in popularity of a name. Combining male and female names, 17 names were the 25 most frequent in 1990 but not the 100 most frequent in the prior year, 1950, compared with six names that were the 25 most frequent in 1950 but not the 100 most frequent in the subsequent year, 1990. More rapid change in popularity of female than male names is indicated by the larger number of 14 female names than nine male names that were the 25 most frequent in 1950 only or 1990 only but not the 100 most frequent in 1950 and also 1990.

For each name in Tables 1-6, the final letter (FL) and final phoneme (FP) are coded by one of three letters that designate the association of the ending with sex of the name. The letter S indicates association with the same sex, which is a predominantly male ending of a male name or a predominantly female ending of a female name. The letter A indicates ambiguous because the frequency of the ending is similar in male and female names. The letter O indicates association with the opposite sex, which is a predominantly female ending of a male name or a predominantly male ending of a female name.

Table 7 shows, separately for the final letter and final phoneme, the percentages of endings that are associated with same sex (S), are ambiguous (A), and are associated with opposite sex (O). The totals of the three percentages are 100% except 101% for the final letter of male names in 1990 only. The deviation from 100% is due to the effect of rounding the percentages to two digits.

Table 7. Summary of information in Tables 1-6. Percentages of names are shown with a final letter (FL) and final phoneme (FP) associated with same sex, ambiguous, and associated with opposite sex.

	Number Of Names	Same Sex FL	Same Sex FP	Ambiguous FL	Ambiguous FP	Opposite Sex FL	Opposite Sex FP
All Names							
Male	147	70%*	45%	19%	35%	11%	20%
Female	150	58%	47%	16%	33%	26%**	20%
1950, 1990							
Male	53	72%*	49%	15%	36%	13%	15%
Female	50	42%	38%	22%	34%	36%*	28%
1950 Only							
Male	47	79%	47%	15%	36%	6%	17%
Female	50	66%	32%	8%	40%	26%*	28%
1990 Only							
Male	47	60%	38%	28%	32%	13%	30%**
Female	50	66%	72%**	18%	24%	16%	4%

* $p < .05$ ** $p < .01$ for difference from the opposite sex.

In Table 7, the percentages for all 147 male and 150 female names are followed by the percentages for the three categories of names. The first category contains 53 male and 50 female names that were the 100 most frequent in 1950 and also 1990. These names are listed in Tables 1 and 2. The second category contains 47 male and 50 female names that were the 100 most frequent in 1950 only. These names are listed in Tables 3 and 4. The third category contains 47 male and 50 female names that were the 100 most frequent in 1990 only. These names are listed in Tables 5 and 6.

Combining the total of 147 male and 150 female names, the association with the same sex averages 64% of the final letters and 46% of the final phonemes. The sex difference was tested for statistical reliability by comparing the two types of endings in each name. The ending was associated with the same sex for 86 final letters but not final phonemes and for 30 final phonemes but not final letters. The larger number of names with a final letter than final phoneme associated with the same sex is statistically significant (Chi Square = 14.34, $\underline{df}$ = 1, $p < .001$).

The same comparison between the two types of endings showed that the final phoneme was ambiguous in 100 names and the final letter was ambiguous in 51 names. An ambiguous final letter and ambiguous final phoneme never occurred in the same name. The larger number of names with an ambiguous final phoneme than final letter is statistically significant (Chi Square = 15.26, $\underline{df} = 1$, $p < .001$).

An ending associated with the opposite sex (O) was the final phoneme but not final letter in 46 names and the final letter but not final phoneme in 42 names. This difference is small and not statistically significant. The larger number of names with a final letter than final phoneme associated with the same sex therefore is accompanied by a reverse difference in the frequency of names with an ending that is ambiguous instead of associated with the opposite sex. In comparison

with the final letter, the final phoneme is more often ambiguous rather than associated with the opposite sex.

The final letter of many male names is a sonorant consonant, l, m, n, or r. Examples are John, William, Samuel, and Walter in Table 1. Male names with these ending are the most frequent reasons for the larger number of male names with a final letter than a final phoneme that was associated with the same sex. All consonant final letters are predominantly male, but sonorant consonant final phonemes are ambiguous.

The silent e final letter of many female names is preceded by a consonant letter. Examples are Jane, Alice, Anne, and Rose, listed in Table 2. Female names with a silent e final letter are the most frequent reasons for the larger number of female names with a final letter than a final phoneme that was associated with the same sex. The final letter is predominantly female. The final phoneme, a consonant, is ambiguous or predominantly male.

The percentages in Table 7 show differences between male and female names. An asterisk following the 70% correct prediction of the same sex by the final letter for the total of 147 male names indicates that the percentage for male names is reliably higher ($p < .05$) than the 58% prediction of the same sex by the final letter for the total of 150 female names (Chi Square = 4.18, df = 1). Conversely the 26% incorrect prediction of the opposite sex by the final letter for the 150 female names is reliably higher ($p < .01$) than the 11% prediction for the 147 male names (Chi Square = 10.26, df = 1, $p < .01$).

The difference between male and female names in percentage of final letters associated with the same sex is largest and continues to be statistically significant for the first category of names, listed in Tables 1 and 2. These are the persistently popular names, indicated by their inclusion among the 100 most frequent in 1950 and also in 1990. The sex difference is smaller and not statistically significant for the

names that were the most frequent in 1950 only (Tables 3 and 4) and in 1990 only (Tables 5 and 6).

The largest change from 1950 to 1990 in frequency of names with a final phoneme associated with the same sex was from 32% of female names that were the 100 most frequent in 1950 only to 72% of female names that were the 100 most frequent in 1990 only. The higher percentage in 1990 than in 1950 is statistically significant (Chi Square = 9.02, df = 1, p < .01). The change is largely attributable to two differences between the two years. The number of female names with a silent final letter e preceded by a consonant decreased from 20 in 1950 only to five in 1990 only. Examples in 1950, listed in Table 4, are Florence, Lorraine, and Lucille. These female names have a final phoneme that is ambiguous or associated with the opposite sex and a final letter that is associated with the same sex. The number of female names with the final letter a increased from ten in 1950 only to 22 in 1990 only. Examples in 1990, listed in Table 6, are Linda, Maria, and Lisa. These female names are associated with the same sex for final sound and final letter.

Among the 100 most frequent names in 1990 only, listed in Tables 5 and 6, the final phoneme was associated with the same sex for 72% of the female names and 38% of the male names. The sex difference is statistically significant (Chi Square = 9.82, df = 1, p < .01). Conversely, the final phoneme was associated with the opposite sex more frequently for male than female names (Chi Square = 9.91, df = 1, p < .01). The lower percentage of male final phonemes associated with the same sex is partly attributable a high frequency of 12 for the final letter n among male names that were the 100 most frequent in 1990 only. The final letter is associated with the same sex but the final phoneme is ambiguous. Examples in 1990, listed in Table 5, are Steven, Brian, and Kevin.

The male names that were the 100 most frequent in 1990 only also included the unusually large number of 12 with the final letter y. The final letter is ambiguous and the final

phoneme is associated with the opposite sex. Stanley, Guy, Sidney, and Harvey, listed in Table 3, are the male names in 1950 only with the final letter y. In 1990 only, listed in Table 5, four different male names, Gary, Jeffrey, Gregory, Jeremy, have the final letter y. Eight additional male names with the final letter y, in 1990 only, are Larry, Jerry, Terry, Billy, Randy, Bobby, Johnny, and Jimmy. These eight names are more frequently nicknames or diminutives instead of official first names. Table 1 shows that a frequent nickname or diminutive with the final letter y occurred in only one male name, Harry, that was the most frequent in 1950 and also in 1990.

A smaller but similar change from 1950 to 1990 occurred for frequent female nicknames or diminutives with the final letter y. The occurrences were none in 1950 only, one (Betty) in 1950 and also in 1990 (Table 2), and three (Judy, Kathy, and Tammy) in 1990 only (Table 6).

Table 8. Numbers of the 100 most frequent male (M) and female (F) names that had the final letter y for births in ten successive decades, 1900-1999.

Years Born	Total Names		Conventional Names		Nicknames, Diminutives	
	M	F	M	F	M	F
1900-09	8	6	6	5	2	1
1910-19	9	6	7	5	2	1
1920-29	9	8	6	7	3	1
1930-39	14	11	6	7	8	4
1940-49	21	13	10	6	11	7
1950-59	23	15	11	6	12	9
1960-69	24	15	13	9	11	6
1970-79	21	17	12	14	9	3
1980-89	14	19	13	19	1	0
1990-99	9	19	9	18	0	1
Total	151	129	92	96	59	33

Table 8 shows the numbers of male and female names with the final letter y that were the 100 most frequent for people born in the United States who applied for a Social Security card. Years of birth are shown in each of ten successive decades, from 1900-09 to 1990-99. Conventional names are distinguished from names that are more often nicknames or diminutives that replace a frequent conventional name.

The similarity in total number of male and female names is consistent with the designation of the final letter y as ambiguous. The numbers of male and female names were highest for births in 1940-79 and lower both for earlier years, 1900-39, and later years, 1980-99. The higher numbers in 1940-79 are mostly attributable to an increase in numbers of frequent nicknames and diminutives rather than of conventional names. Most of the United States residents in 1950 were born prior to 1930 and thus prior to the increase in the numbers of nicknames and diminutives with the final letter y. Many of the United States residents in 1990 were born between 1940 and 1979, when nicknames and diminutives with the final letter y were most frequent.

Discussion

Analysis of the final letter instead of the final phoneme of first names has several advantages. The final letter is more often associated with the same sex and less often ambiguous. The final letter therefore is preferable for the purpose of identifying the sex of an unknown name. The sex is more likely to be unknown for a name that is printed or written instead of spoken. A practical advantage of the final letter for research on names is that lists of names are printed rather than spoken.

Two different comparisons, persistence of popularity and change in popularity, were obtained by assigning the names in the two years to three categories. The first category, which contains the 100 most frequent names in 1950 and also

1990, constitutes names with persistent popularity. In comparison with the other two categories, the persistently popular names indicate preference for names that have a final letter associated with male names. This preference may be one of the expressions of the prevalently superior status of males in the United States, described by Bem (1993).

A change in choices of names, during the span of 40 years, can be determined by differences of the third category, containing the 100 most frequent names in 1990 only, from the second category, containing the 100 most frequent names in 1950 only. The largest change was an increase in the percentage of female names that had a final phoneme associated with the same sex. The percentage of male names that had a final phoneme associated with the opposite sex also increased from 1950 only to 1990 only. Both changes indicate more frequent choices of names that have an ending associated with female names.

Previous reports also indicate more frequent choices of names with female attributes during the last few decades. Barry and Harper (1995) used several measures that differentiated between male and female names, including the final phoneme. Names with female attributes were more often chosen for boys and girls born in Pennsylvania in 1990 than in 1960. Barry and Harper (1998) analyzed lists compiled by Dunkling (1995) of the 50 most frequent male and female names in England and Wales, the United States, and Australia. Dunkling sampled multiple years from 1700 to 1995 in England and Wales, from 1875 to 1995 in the United States, and from 1950 to 1995 in Australia. The final phoneme and other characteristics that differentiate male from female names became increasingly male from the earliest date recorded until 1925 for male names and 1900 for female names. After 1925 for male names and 1950 for female names, these characteristics progressively became more often female.

Barry and Harper (1998) suggested that the final phonemes of most female names are vocally expanded and

soft. The final phonemes of most male names are vocally compressed and strong. Whissell (2001) similarly stated that phonemes are more soft, pleasant, passive, and sad in female names and more cheerful, active, nasty, and unpleasant in male names. The changes in choices of names from the 1950 to the 1990 residents may indicate increased preference for soft and pleasant rather than cheerful and active attributes. The same changes also may indicate increased acceptance of passive and sad rather than nasty and unpleasant attributes.

The United States residents in 1950 and 1990 include a wide range of years of birth. An advantage is that the names listed in Tables 1-6 were popular for a substantial number of years. The 100 most frequent names of the residents therefore exclude briefly fashionable names.

Differences between frequent names for births in two different years usually show more changes in female than male names (Barry & Harper, 1995; Lieberson, 2000, pp. 36-42). One of the reasons for this sex difference was reported by Rossi (1965). Boys are more often given the first name of their father or of another family member. Girls are more often given a first name that is currently fashionable and new to their family.

The more rapid change in choices of female than male names was minimized for the United States residents by the wide range in their years of birth. Most of the residents in 1950 were born between 1870 and 1932. Most of the residents in 1990 were born between 1910 and 1990. More rapid change in choices of female than male names is indicated by 50 female names compared with 47 male names that were the 100 most frequent in one year only. This difference is small and not statistically significant. A larger difference is between 14 female and nine male names that were the 25 most frequent in one year but not the 100 most frequent in the other year.

Prolonged fashions can be detected by differences in the 100 most frequent names between the residents in 1950 and 1990. An example is the temporary popularity of names

with the final letter y that are often nicknames or diminutives. Table 8 shows that names of this type were popular during four decades, 1940-79. The 100 most frequent names of residents in 1990 only include eight male names (Table 5) and three female names (Table 6) with these characteristics. The 100 most frequent names of residents in 1950 only and in 1950 and also 1990 (Tables 1-4) contain very few names with the same characteristics.

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