Champagne, beer, or coffee? A corpus of gender-related and neutral words

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A list of gender-related and gender-neutral words for use in testing gender stereotyping and memory was created and evaluated. Words were rated by samples of undergraduates at universities located in the northeast, southeast, and south-central United States. A substantial list of masculine, feminine, and gender-neutral words was identified. These lists allow researchers to construct large lists of gender-associated words while being able to control for extraneous variables, such as word frequency and word length. In addition, the high reliability across the samples suggests that gender ratings are a fairly stable phenomenon. Applications for this list are discussed. The word lists presented in Tables 1-3 and the raw data analyzed in this article may be downloaded from www.psychonomic.org/archive/.

The study of the nature of stereotypes has a long history in the social sciences (Allport, 1954; Katz & Braly, 1933). The social cognitive perspective (Schneider, 1996), which focuses on the cognitive processes that underlie the categorization of individuals with regard to race, gender, sexual orientation, political affiliation, attractiveness, and other determining factors (cf. Bessenoff & Sherman, 2000; Greenwald & Banaji, 1995; Macrae, Mitchell, & Pendry, 2002; Mather, Johnson, & De Leonardis, 1999) has provided the dominant paradigm for studying stereotypes. In the studies listed above and in others, the relationship between category-specific characteristics and/or behaviors (i.e., stereotypes) and aspects of human memory has been investigated. Many researchers have explored memory and gender stereotypes in particular. Banaji and Greenwald (1995) examined the misattribution of fame to familiar and nonfamiliar forenames. Participants were exposed to an equal number of male and female forenames attached to common last names (e.g., Peter Walker or Susan Walker). When tested at a later time, the participants were more likely to attribute fame to masculine names. These results show evidence of a bias to associate male gender, rather than female gender, to achievement or fame. Similarly,

Macrae, Alnwick, Milne, and Schloerscheidt (2002) have presented evidence that women use more male stereotype information in semantic memory during particular phases of the menstrual cycle.

Despite these intriguing results, one of the challenges facing researchers in gender stereotypes and memory is developing an extensive list of gender-stereotypical items that can be used for additional investigations. Although some investigators have compiled lists of gender-specific items and behaviors (Bem, 1974; Blair & Banaji, 1996; Carreiras, Garnham, Oakhill, & Cain, 1996; Edelbrock & Sugawara, 1978), these lists lack the scope necessary for the research methodology of memory testing. Between these studies, fewer than 50 words have been identified as stereotypically male, female, or gender neutral. Although Rosenkrantz, Vogel, Bee, Broverman, and Broverman (1968) compiled a 122-item list of differentiated male and female words and traits, these items are not necessarily representative, because the criterion for selection of male and female items was agreement between just 2 participants. In addition, their list included phrases (e.g., *kind to animals*), which would be difficult to adapt to many memory investigations in a way that would control for extraneous variables that are known to affect remembering, such as word frequency (e.g., Deese, 1961), word length (e.g., Baddeley, Thomson, & Buchanan, 1975), or concreteness (e.g., Paivio, 1969). One of the more promising endeavors in the investigation of cognition has been the relatively recent appli-

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cation of brain-imaging technology. All of the current brain-imaging methods (e.g., fMRI, PET, ERP) require many trials to extract memory-related brain activity from ongoing brain activity (see Gazzaniga, Ivry, & Mangun, 2002). Therefore, the goal of the present investigation was to compile an extensive database of gender-related and gender-neutral words that would allow researchers to select stimuli for almost any memory research application.

METHOD

Participants

The survey was completed by an initial sample of 177 undergraduates (56 males, 121 females) from the College of New Jersey. The results of this initial sample were compared with two additional samples of students from different geographic regions in the United States, to assess the generalizability of the results. Thus, a sample of 98 undergraduates (50 males, 48 females) attending North Carolina State University and 81 undergraduates (24 males, 57 females) attending the University of North Texas also completed the survey.

Procedure

Due to the lack of a preexisting database, a list of gender-related and gender-neutral words was developed on the basis of face validity and previous lists from the literature. Words in these lists were carefully selected to include various parts of speech (e.g., nouns, verbs, and adjectives). These items were pilot tested to confirm the researchers' initial assessment of the gender association of each word and to create word lists that were very similar in word frequency (Kučera & Francis, 1967) and length. A list of 124 masculine (frequency, $M = 38.00$ occurrences/million, range = 1–464; length, $M = 6.79$ letters, range = 3–12 letters), 124 feminine (frequency, $M = 25.07$, range = 1–232; length, $M = 7.00$, range = 3–13), and 352 neutral (frequency, $M = 47.85$, range = 1–442; length, $M = 6.14$, range = 3–12) words was refined through several pilot-testing sessions. The formal survey used in this study was created by randomly ordering these items. The participants were informed that the purpose of this survey was to determine the gender association of a list of words. To complete the survey, the participants rated each item on a Likert Scale from 1 to 5 (1 = *definitely feminine*, 2 = *somewhat feminine*, 3 = *neutral*, 4 = *somewhat masculine*, and 5 = *definitely masculine*).

Although the participants were not instructed to determine the gender stereotypicality of each of the stimuli, gender relatedness can be inferred to coincide with gender stereotypicality. For example, by determining that a particular word (e.g., *ballerina*) is associated with a gender (female), the participant has positioned that particular stimulus under the mentally represented category of females. As many social cognitive psychologists have indicated, stereotypes can be understood as similar to other categorical generalizations (Insko & Schopler, 1972). On the basis of this assumption, the authors agree with McCauley, Stitt, and Segal (1980) in defining a stereotype as "a name given to a generalization about a class of people." Adjectives correspond to personality traits (e.g., *caring*) shared by a particular gender, whereas behaviors (e.g., *boxing*) are reflected in verbs. Although nouns (e.g., *daughter*) may be by definition female, they can be thought of as gender stereotypical because the social roles to which individuals subscribe to are known to be generally associated with a particular gender (Diekmann, Eagly, & Kulesa, 2002). Because these behaviors, personality traits, and nouns can be associated with one gender more so than with another, they may be generally construed as gender stereotypical.

RESULTS

The mean and standard deviation word ratings were calculated for all 600 words. The values are presented in ascending order on the basis of the data obtained from the original sample collected at the College of New Jersey. The corresponding ratings from the other two samples are displayed in the adjacent columns in the tables. For ease of reference, we divided the entire list into three tables, which may be found in the Appendix. Table A1 presents words that have a feminine association (as defined by a mean rating of 1–2.49). Table A2 presents words that tend to be gender neutral (mean ratings of 2.5–3.49), and Table A3 presents words that have a masculine association (mean ratings of 3.5–5). For some of the words, the mean ratings varied considerably depending on the sample. These words are indicated in bold typeface in the tables. In addition to the mean ratings, the number of letters and word frequency (Kučera & Francis, 1967) are presented for each item, to create a database that can be easily searched and reordered according to any attribute.

In addition to the general descriptive statistics, we analyzed the data in order to look for differences in item ratings as a function of the sex of the rater. Tables A4, A5, and A6 present the items that show an overall difference in classification by males and females. To determine these differences, word ratings by male and female participants were compared for significant differences, using t tests for samples with uneven variances. Although this procedure revealed many statistical differences, we present only the items for which the mean overall group rating (presented in Tables A1–A3) might be misrepresentative, because there was inconsistency in the ratings across the different sexes. Thus, items were selected for Tables A4–A6 on the basis of a significant difference in the mean rating across the sexes and the working definition of gender categories used in this article. For example, an item was included in Tables A4–A6 if the overall group rating was *neutral* (i.e., rated 2.50–3.49) and men tended to rate the word as *neutral*, whereas women tended to rate the word as *masculine* (i.e., >3.49).

Table A4 presents this subset of significant differences observed in the New Jersey sample, Table A5 presents the data observed in the North Carolina sample, and Table A6 presents the significant differences observed in the Texas data. When the word ratings from the New Jersey sample were subjected to the t test analyses of mean ratings by the sex of the participant, significant differences were observed for 138 of the 600 items (or 23%). However, these ratings were category consistent for all but 19 of the 138 items. Analyses of the North Carolina sample revealed significant differences for 36 of the 600 items (6%), and the ratings were category consistent for all but 7 of the 36 items. Finally, analyses of the Texas sample revealed significant differences for 34

of the 600 items (6%), and the ratings were category consistent for all but 9 of the 36 items. This more detailed inspection of the analyses reveals that the vast majority of word ratings presented in our database have similar gender ratings for male and female participants.

Of course, there are many more differences between ratings of the sexes that may be of interest to others. For example, a subset of the items for which there is a half point or greater difference between male raters and female raters could be derived. As a result, we invite other scientists to explore these (and other) effects in the data themselves.¹

DISCUSSION

The purpose of this survey was to develop a comprehensive list of masculine, feminine, and neutral words. The results of the survey identified approximately 60 words that have a strong masculine and feminine association, as well as a number of words that have a moderate association with one of the sexes. We also identified a substantial number of gender-neutral words, which can be used to select control words to match almost any research application. Because we collected data from three different regions of the United States, this list provides some assurances that the gender associations are not specific to one sample.

We believe that this list will serve as a valuable resource for researchers investigating gender stereotypes in memory. Because the words are listed according to their mean rating on the survey, a subset of words can be easily generated for almost any application. For example, if one wants to test masculine and feminine adjectives, these words can be quickly selected. Then the list of neutral words can be searched for gender-neutral adjectives. The extensive list of neutral words allows researchers to control for many extraneous variables, such as word frequency or length (which are also presented in the tables). In addition, one can examine memory for words that have a strong gender association (those at the extreme ends of the database) or can test memory for words that have a weaker gender association. In addition, if researchers wish to use stimuli that found much agreement among raters, items with small standard deviations can be selected. By providing a long list of words with and without gender associations, these stimulus materials can be applied to technologies that require a large number of observations (i.e., brain-imaging technology).²

We believe that this list will serve as a valuable resource not only for social cognitive psychologists investigating memory, but also for researchers in various psychological disciplines. For example, these words could be used by social psychologists in studies of gendered attitude assessment. The Bem Sex-Role Inventory (Bem, 1974) was developed to assess levels of individuals' an-

drogyny. The list generated by our research could add breadth to the Bem Sex-Role Inventory and could be further refined for other clinical assessments related to gender identity and personality. Edelbrock and Sugawara (1978) and Kail and Levine (1976) created very limited pools of gender-specific traits as assessed by young children. In a more expansive fashion, by administering the list presented in this article to different age groups, developmental psychologists could broaden their understanding of the development of gender stereotyping.

Although the present investigation makes an important advance in identifying gender stereotypic and gender-neutral words, future research could improve upon the areas in which this present study was limited. For instance, ratings were carefully collected from three distinctive regions of the United States; however, they cannot represent the gender-stereotypical beliefs of people from different cultures or even subcultures in the United States. In addition, gender roles and norms have changed dramatically in the United States over the past century. Further erosion of the differences between men and women in the workplace and at home may alter the gender ratings of the stimuli over time. The data are also limited in that they represent the beliefs of college-aged individuals, and we suspect that gender-relatedness ratings will vary considerably by age. Despite these limitations, this research will most certainly provide a tool that researchers in various fields might utilize to further our knowledge of the influence of gender on cognition.

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NOTES

1. Readers interested in obtaining an electronic version of the raw SPSS datafile can access this file via the Psychonomic Society Web archive. See the "Archived Materials" instructions at the end of this article.
2. Readers interested in obtaining an electronic version of the Microsoft Excel file containing mean ratings, standard deviations, number of letters, and word frequency for each stimulus can access this file via the Psychonomic Society Web archive. See the "Archived Materials" instructions at the end of this article.

ARCHIVED MATERIALS

The following materials and links may be accessed through the Psychonomic Society's Norms, Stimuli, and Data archive, <http://www.psychonomic.org/archive/>.

To access these files or links, search the archive for this article using the journal (*Behavior Research Methods, Instruments, & Computers*), the first author's name (Crawford), and the publication year (2004).

FILE: Crawford-BRMIC-2004.zip.

DESCRIPTION: The compressed archive file contains two files:

crawford2004tables1_3.xls, containing the word lists presented in Tables 1-3 of this article in a file generated by Excel 2002, which can be sorted according to any variable. Each row in the file represents one of the 600 stimulus words; each column, one of the dependent measures (mean and *SD* for each sample, number of letters, frequency).

crawford2004raw_data.sav, containing the raw data analyzed in this article in a file generated by SPSS 11.0.1. Each row in the file represents a case (participant's ratings) for each of the 600 stimulus words; columns contain variables for sample location (New Jersey, North Carolina, or Texas), sample identification number, subject identification number, sex of the participant (1 = male, 2 = female), and rating assigned to each stimulus word (described in the article).

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APPENDIX

Table A1
Feminine Words (1–2.49)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Wife	1.022	0.237	1.020	0.142	1.037	0.190	4	228
Princess	1.028	0.166	1.082	0.469	1.062	0.242	8	10
Bridesmaid	1.034	0.236	1.031	0.225	1.049	0.312	10	1
Pregnant	1.039	0.326	1.061	0.280	1.111	0.353	8	8
Bride	1.045	0.278	1.020	0.142	1.086	0.360	5	33
Grandmother	1.050	0.220	1.061	0.241	1.160	0.460	11	9
Aunt	1.051	0.287	1.020	0.142	1.099	0.436	4	22
Mother	1.073	0.464	1.010	0.101	1.099	0.339	6	216
Bikini	1.073	0.302	1.041	0.199	1.197	0.621	6	1
Daughter	1.079	0.344	1.051	0.221	1.136	0.440	8	72
Dress	1.079	0.271	1.112	0.317	1.185	0.503	5	67
Queen	1.079	0.376	1.112	0.348	1.235	0.729	5	41
Sister	1.101	0.440	1.122	0.413	1.136	0.379	6	38
Sorority	1.118	0.416	1.163	0.550	1.309	0.701	8	1
Pantyhose	1.124	0.448	1.153	0.415	1.210	0.607	9	1
Nun	1.124	0.421	1.194	0.511	1.333	0.671	3	2
Lingerie	1.130	0.452	1.194	0.446	1.222	0.548	8	2
Ovulate	1.135	0.481	1.175	0.457	1.235	0.554	7	1
Maiden	1.146	0.370	1.204	0.405	1.197	0.459	6	2
Menstruation	1.146	0.544	1.296	0.692	1.309	0.752	12	1
Lipstick	1.169	0.445	1.224	0.528	1.210	0.410	8	3
Mascara	1.182	0.502	1.306	0.616	1.235	0.531	7	1
Niece	1.192	0.448	1.143	0.352	1.284	0.617	5	8
Heiress	1.194	0.499	1.234	0.639	1.284	0.617	7	1
Barbie	1.197	0.500	1.133	0.370	1.296	0.621	6	1
Maternal	1.198	0.544	1.378	0.711	1.444	0.837	8	5
Garter	1.215	0.563	1.316	0.636	1.876	1.239	6	2
Estrogen	1.220	0.667	1.347	0.875	1.284	0.675	8	1
Mistress	1.231	0.561	1.204	0.453	1.333	0.707	8	5
Ballerina	1.233	0.498	1.316	0.489	1.358	0.712	9	1
Cosmetic	1.237	0.500	1.255	0.504	1.346	0.616	8	1
Damsel	1.243	0.546	1.290	0.558	1.432	0.741	6	1
Doll	1.260	0.500	1.204	0.405	1.333	0.775	4	11
Makeup	1.260	0.586	1.247	0.457	1.309	0.539	6	1
Gown	1.266	0.651	1.398	0.700	1.370	0.697	4	16
Duchess	1.293	0.606	1.347	0.594	1.358	0.747	7	1
Dollhouse	1.299	0.528	1.357	0.523	1.444	0.689	9	1
Skirt	1.305	0.655	1.306	0.506	1.383	0.699	5	21
Stewardess	1.339	0.629	1.571	0.746	1.469	0.792	10	2
Bitch	1.355	0.668	1.398	0.700	1.605	0.944	5	6
Prostitute	1.361	0.607	1.388	0.603	1.617	0.768	10	6
Ponytail	1.372	0.636	1.408	0.686	1.395	0.719	8	1
Pink	1.379	0.552	1.316	0.585	1.395	0.736	4	48
Nanny	1.379	0.542	1.306	0.545	1.469	0.776	5	1
Manicure	1.384	0.532	1.459	0.691	1.593	0.667	8	1
Blouse	1.389	0.565	1.398	0.570	1.432	0.723	6	1
Perfume	1.401	0.586	1.454	0.677	1.383	0.699	7	10
Ballet	1.401	0.577	1.520	0.630	1.506	0.744	4	45
Pretty	1.412	0.516	1.571	0.556	1.457	0.571	6	109
Beautiful	1.418	0.589	1.449	0.628	1.469	0.691	9	127
Bouquet	1.418	0.617	1.429	0.556	1.568	0.706	7	4
Necklace	1.441	0.647	1.480	0.630	1.531	0.691	8	3
Petite	1.452	0.573	1.582	0.591	1.494	0.709	6	1
Earrings	1.452	0.682	1.388	0.683	1.383	0.624	8	3
Witches	1.457	0.639	1.490	0.579	1.469	0.672	7	8
Fairy	1.457	0.612	1.653	0.690	1.654	0.839	5	4
Corset	1.466	0.820	1.694	0.913	1.370	0.601	6	1
Voluptuous	1.475	0.683	1.615	0.800	1.506	0.744	10	3
Bonnet	1.502	0.640	1.602	0.669	1.531	0.709	6	3
Pedicure	1.519	0.707	1.735	0.767	1.617	0.699	8	1
Flowers	1.531	0.682	1.633	0.738	1.568	0.741	7	57
Purse	1.531	0.769	1.469	0.677	1.518	0.792	5	14
Blossom	1.548	0.673	1.520	0.677	1.518	0.709	7	7
Anorexia	1.553	0.664	1.735	0.682	1.790	0.754	8	1
Barrette	1.581	1.025	1.816	0.976	1.605	0.970	8	1
Secretary	1.593	0.624	1.633	0.648	1.580	0.788	9	191

APPENDIX (Continued)

Table A1 (Continued)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Knitting	1.598	0.701	1.683	0.683	1.716	0.855	8	1
Babysitter	1.604	0.613	1.653	0.611	1.728	0.707	10	1
Corsage	1.610	0.983	1.786	1.096	1.753	1.124	7	1
Nurse	1.644	0.605	1.571	0.642	1.716	0.693	5	17
Bracelet	1.649	0.666	1.704	0.661	1.667	0.689	8	1
Virginal	1.666	0.758	1.633	0.709	1.728	0.922	8	1
Librarian	1.700	0.703	1.878	0.790	1.827	0.905	9	5
Needlepoint	1.717	0.790	1.888	0.811	1.765	0.912	11	1
Rose	1.723	0.736	1.826	0.704	1.876	0.764	4	86
Housekeeper	1.723	0.663	1.837	0.714	1.704	0.813	11	2
Sewing	1.779	0.740	1.755	0.643	1.753	0.767	6	10
Gossip	1.819	0.731	1.826	0.718	1.802	0.781	6	13
Quilting	1.870	0.730	1.959	0.772	1.802	0.872	8	1
Flirtatious	1.904	0.781	1.980	0.746	2.074	0.932	11	1
Sensitive	1.932	0.856	1.939	0.823	1.839	0.766	9	59
Rainbow	1.988	0.775	2.153	0.791	1.988	0.901	7	4
Diet	1.994	0.734	2.194	0.769	2.000	0.806	4	21
Silk	2.005	0.764	2.031	0.710	1.876	0.797	4	12
Romantic	2.022	0.790	2.122	0.763	1.988	0.829	8	32
Bunny	2.028	0.751	2.041	0.731	1.938	0.827	5	1
Kitten	2.039	0.668	1.929	0.790	2.074	0.803	6	5
Hopscotch	2.045	0.774	2.347	0.719	2.296	0.715	9	1
Teacher	2.067	0.794	2.092	0.719	2.062	0.856	7	80
Sweet	2.073	0.715	2.102	0.634	1.963	0.797	5	70
Thin	2.073	0.818	2.102	0.739	2.037	0.914	4	92
Housework	2.084	0.721	1.888	0.744	2.086	0.869	9	2
Sentimental	2.101	0.791	2.337	0.673	2.111	0.742	11	15
Love	2.101	0.826	2.214	0.828	2.086	0.925	4	232
Jumprope	2.124	0.773	2.439	0.733	2.494	0.727	8	1
Emotional	2.141	0.736	2.214	0.596	2.000	0.742	9	68
Dance	2.146	0.723	2.316	0.619	2.222	0.742	5	90
Innocent	2.146	0.754	2.194	0.668	2.074	0.771	8	37
Hemming	2.153	0.810	2.122	0.744	2.086	0.883	7	1
Caring	2.163	0.631	2.306	0.633	2.000	0.790	6	10
Cooking	2.169	0.772	2.153	0.664	2.025	0.894	7	32
Cry	2.192	0.751	2.347	0.627	2.173	0.721	3	48
Gentle	2.197	0.776	2.275	0.670	2.173	0.787	6	27
Nagging	2.226	0.702	2.316	0.754	2.185	0.853	7	9
Sympathetic	2.248	0.695	2.408	0.623	2.136	0.703	11	35
Laundry	2.265	0.709	2.408	0.655	2.383	0.874	7	5
Garden	2.271	0.718	2.337	0.717	2.111	0.742	6	60
Skinny	2.293	0.800	2.388	0.698	2.259	0.803	6	9
Supportive	2.301	0.759	2.418	0.759	2.099	0.831	10	7
Springtime	2.395	0.658	2.541	0.595	2.309	0.785	10	4
Tango	2.418	0.635	2.582	0.591	2.593	0.803	5	2
Desire	2.435	0.728	2.531	0.735	2.407	0.946	6	79
Heaven	2.440	0.721	2.622	0.618	2.407	0.803	6	43
Champagne	2.446	0.745	2.582	0.759	2.346	0.809	9	13
Oven	2.480	0.731	2.622	0.650	2.506	0.760	4	7
Grocery	2.452	0.681	2.510	0.678	2.506	0.744	7	9
Patient	2.457	0.730	2.571	0.673	2.346	0.824	7	86
Star	2.457	0.722	2.510	0.707	2.346	0.824	4	25
Understanding	2.463	0.612	2.633	0.632	2.481	0.808	13	121

Table A2
Neutral Words (2.5 – 3.49)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Pleasing	2.502	0.716	2.490	0.646	2.432	0.757	8	10
Trend	2.502	0.700	2.704	0.578	2.593	0.648	5	46
Faithful	2.508	0.666	2.663	0.517	2.309	0.831	8	12
Insecure	2.525	0.657	2.551	0.705	2.321	0.803	8	3
Hope	2.542	0.621	2.714	0.556	2.407	0.738	4	178
Fruit	2.548	0.638	2.551	0.594	2.420	0.788	5	35

APPENDIX (Continued)

Table A2 (Continued)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Passive	2.553	0.681	2.714	0.658	2.543	0.807	7	11
Beach	2.565	0.619	2.582	0.687	2.642	0.695	5	61
Wine	2.576	0.653	2.612	0.713	2.543	0.822	4	72
Stove	2.581	0.750	2.571	0.673	2.518	0.743	5	15
Color	2.598	0.623	2.673	0.654	2.494	0.727	5	141
Eggs	2.604	0.716	2.592	0.655	2.506	0.853	4	35
Share	2.604	0.585	2.714	0.537	2.370	0.660	5	98
Spirit	2.610	0.584	2.735	0.509	2.518	0.743	6	182
Island	2.625	0.681	2.724	0.570	2.667	0.725	6	127
Warm	2.627	0.580	2.796	0.591	2.654	0.809	4	67
Masquerade	2.632	0.758	2.643	0.763	2.469	0.792	10	2
Broom	2.632	0.765	2.653	0.761	2.457	0.867	5	2
Earth	2.632	0.758	2.633	0.724	2.370	0.813	5	150
Grapefruit	2.632	0.589	2.714	0.642	2.679	0.834	10	3
Gold	2.644	0.785	2.857	0.760	3.000	0.962	4	52
Apple	2.649	0.613	2.694	0.633	2.617	0.815	5	9
Shoes	2.649	0.658	2.622	0.650	2.531	0.838	5	44
Bird	2.683	0.575	2.724	0.639	2.617	0.644	4	31
Fine	2.687	0.716	2.796	0.746	2.679	0.920	4	161
Acetone	2.694	0.713	2.804	0.671	2.716	0.884	7	4
Happy	2.706	0.526	2.684	0.585	2.469	0.760	5	98
Thanks	2.711	0.585	2.816	0.462	2.580	0.589	6	37
Season	2.711	0.585	2.734	0.651	2.543	0.791	6	105
Ethical	2.717	0.639	2.806	0.568	2.765	0.694	7	29
Child	2.723	0.561	2.775	0.487	2.642	0.638	5	213
Gallery	2.723	0.561	2.765	0.514	2.593	0.755	7	31
Dependent	2.727	0.704	2.663	0.608	2.691	0.785	9	40
Bumblebee	2.728	0.635	2.878	0.723	2.625	0.603	9	2
Ripening	2.733	0.547	2.755	0.575	2.667	0.725	8	3
Cotton	2.734	0.641	2.735	0.548	2.790	0.754	6	38
Ramble	2.740	0.648	2.857	0.609	2.654	0.761	6	3
Cordial	2.744	0.791	2.875	0.653	2.556	0.724	7	6
Refine	2.745	0.646	2.765	0.670	2.753	0.859	6	3
Butter	2.751	0.635	2.694	0.526	2.617	0.699	6	27
Balloon	2.757	0.586	2.663	0.555	2.630	0.797	7	10
Goose	2.757	0.668	2.786	0.630	2.469	0.823	5	4
Moon	2.768	0.600	2.786	0.646	2.506	0.709	4	60
Letter	2.768	0.519	2.878	0.359	2.852	0.635	6	145
Fickle	2.774	0.634	2.734	0.602	2.617	0.663	6	1
Parent	2.785	0.563	2.816	0.484	2.802	0.660	6	15
Bag	2.802	0.612	2.826	0.643	2.790	0.753	3	42
Piano	2.807	0.619	2.694	0.633	2.630	0.766	5	38
Ocean	2.807	0.530	2.775	0.682	2.691	0.831	5	34
Moderation	2.813	0.481	2.878	0.413	2.667	0.612	10	3
Call	2.819	0.512	2.929	0.437	2.679	0.629	4	188
Esteem	2.819	0.640	2.796	0.555	2.679	0.704	6	5
Alone	2.824	0.561	2.816	0.648	2.728	0.806	5	195
Decelerate	2.829	0.580	2.867	0.510	2.864	0.787	10	1
Rain	2.830	0.505	2.837	0.447	2.815	0.709	4	70
Water	2.830	0.457	2.796	0.500	2.654	0.636	5	442
Market	2.830	0.652	2.898	0.565	2.802	0.641	6	155
Articulate	2.830	0.643	2.969	0.464	2.864	0.818	10	8
Modern	2.836	0.523	2.816	0.563	2.753	0.750	6	198
Ideal	2.840	0.593	2.878	0.387	2.876	0.578	5	61
Music	2.841	0.591	2.929	0.437	2.914	0.674	5	216
Lake	2.841	0.551	2.898	0.487	2.938	0.730	4	54
Maple	2.841	0.497	2.888	0.474	2.765	0.746	5	7
Flip	2.847	0.537	2.980	0.497	2.864	0.607	4	4
Impeccable	2.847	0.634	2.949	0.598	2.839	0.782	10	6
Mouse	2.853	0.674	2.918	0.511	2.802	0.697	5	10
Fabled	2.853	0.533	2.827	0.477	2.753	0.643	6	4
Camera	2.858	0.582	2.888	0.590	2.716	0.693	6	36
Sand	2.858	0.461	2.949	0.462	2.815	0.527	4	28
Oxygen	2.858	0.473	2.867	0.422	2.815	0.477	6	43
Mind	2.858	0.519	2.888	0.377	2.839	0.661	4	325

APPENDIX (Continued)

Table A2 (Continued)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Unison	2.863	0.505	2.918	0.371	2.778	0.671	6	3
Aspirin	2.864	0.567	2.857	0.537	2.839	0.715	7	3
Triangle	2.864	0.547	2.888	0.535	2.802	0.714	8	4
Village	2.864	0.615	2.939	0.534	2.963	0.679	7	72
Alphabet	2.870	0.464	2.867	0.397	2.790	0.586	8	2
Grade	2.870	0.426	2.878	0.413	2.914	0.552	5	35
Choice	2.870	0.439	2.929	0.329	2.704	0.697	6	113
Glass	2.870	0.522	2.888	0.515	2.827	0.667	5	99
Lukewarm	2.870	0.583	3.031	0.464	2.963	0.621	8	5
Learn	2.870	0.412	2.867	0.490	2.827	0.587	5	84
Health	2.875	0.421	2.969	0.417	2.728	0.633	6	105
Feed	2.875	0.580	2.918	0.447	2.852	0.726	4	123
Alive	2.875	0.447	2.969	0.303	2.839	0.601	5	57
Conniving	2.875	0.816	2.694	0.724	2.802	1.005	9	1
Adjective	2.875	0.378	3.010	0.268	2.889	0.474	9	2
Maybe	2.875	0.435	2.908	0.408	2.889	0.524	5	134
Complete	2.881	0.491	2.949	0.462	2.889	0.592	8	181
Near	2.881	0.357	2.898	0.366	2.827	0.543	4	198
Narrow	2.887	0.498	2.878	0.482	2.889	0.758	6	63
Lettuce	2.887	0.411	2.837	0.531	2.728	0.652	7	1
Leaf	2.887	0.424	2.918	0.469	2.765	0.694	4	12
Octave	2.887	0.592	2.867	0.490	2.988	0.680	6	2
Frame	2.887	0.601	2.929	0.523	2.839	0.661	5	74
Vision	2.887	0.531	2.959	0.404	2.839	0.661	6	56
Float	2.887	0.475	2.908	0.324	2.827	0.667	5	3
Livelihood	2.892	0.578	2.898	0.507	2.815	0.635	10	5
Sound	2.892	0.361	2.969	0.335	2.901	0.374	5	204
Liquid	2.892	0.458	2.980	0.320	2.839	0.697	6	48
Visit	2.898	0.427	2.939	0.375	2.778	0.570	5	109
Notice	2.898	0.427	2.990	0.393	2.827	0.703	6	59
Trickle	2.898	0.574	2.847	0.544	2.654	0.655	7	2
Book	2.904	0.570	2.980	0.574	2.988	0.716	4	193
Chair	2.904	0.422	2.949	0.505	2.926	0.628	5	66
Noodle	2.909	0.525	2.908	0.408	2.926	0.685	6	1
Reply	2.909	0.480	2.939	0.346	2.750	0.585	5	42
Fastidious	2.909	0.514	3.051	0.392	2.926	0.628	10	3
Observable	2.909	0.503	3.000	0.454	2.790	0.564	10	3
Party	2.909	0.659	3.061	0.553	3.062	0.658	5	216
Wind	2.915	0.498	2.929	0.542	2.839	0.766	4	63
Surname	2.915	0.970	3.010	1.010	3.296	1.123	7	3
Whichever	2.920	0.483	2.969	0.441	3.012	0.559	9	6
Acorn	2.920	0.482	2.908	0.539	2.802	0.679	6	1
Answer	2.920	0.418	2.949	0.333	2.852	0.550	6	152
Price	2.926	0.426	3.020	0.517	2.876	0.678	5	108
Tongue	2.926	0.574	2.847	0.439	2.889	0.806	6	35
Daily	2.932	0.393	2.908	0.324	2.963	0.697	5	122
Hill	2.932	0.471	2.969	0.507	3.000	0.612	4	72
Ill	2.932	0.434	2.959	0.284	2.914	0.479	3	39
Carpet	2.932	0.644	2.888	0.590	3.037	0.766	6	13
Echo	2.949	0.514	3.010	0.487	2.778	0.612	4	10
Handbook	2.949	0.556	2.878	0.359	2.790	0.684	8	2
Admit	2.954	0.541	2.939	0.589	2.790	0.665	5	37
Myth	2.954	0.531	3.071	0.523	3.012	0.766	4	35
Doorbell	2.954	0.509	2.929	0.460	2.914	0.656	8	2
Crumb	2.954	0.462	3.000	0.287	3.037	0.641	5	3
Apart	2.960	0.389	3.020	0.379	2.889	0.474	5	57
Coffee	2.960	0.567	2.888	0.515	2.963	0.660	6	78
Town	2.960	0.389	2.878	0.482	3.062	0.556	4	212
Half	2.960	0.268	2.898	0.465	2.889	0.447	4	275
East	2.960	0.431	2.878	0.482	2.938	0.533	4	183
Independent	2.960	0.785	2.980	0.688	2.914	0.964	11	70
Reach	2.965	0.352	2.990	0.176	2.988	0.487	5	106
Dozen	2.966	0.450	2.990	0.366	2.876	0.659	5	52
Drugstore	2.966	0.487	3.041	0.536	3.086	0.552	9	5

APPENDIX (Continued)

Table A2 (Continued)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Coat	2.966	0.542	3.112	0.554	3.160	0.679	4	43
Convection	2.966	0.542	3.010	0.366	2.963	0.679	10	2
River	2.966	0.487	2.990	0.583	2.926	0.721	5	165
Underside	2.966	0.411	2.949	0.440	2.938	0.457	9	3
Heat	2.971	0.643	3.061	0.606	3.173	0.877	4	97
Mute	2.971	0.360	2.990	0.337	2.889	0.570	4	3
Lunch	2.971	0.404	2.950	0.462	2.889	0.418	5	33
Magic	2.971	0.718	3.031	0.633	3.111	0.822	5	37
Deaf	2.971	0.457	3.041	0.349	3.123	0.600	4	12
Guess	2.977	0.521	2.918	0.398	3.111	0.632	5	56
Lens	2.977	0.438	2.898	0.393	2.901	0.583	4	12
Toothbrush	2.977	0.451	3.000	0.352	3.012	0.462	10	6
Precede	2.983	0.482	3.051	0.362	2.963	0.641	7	3
Media	2.983	0.558	2.959	0.429	3.074	0.738	5	13
Cadence	2.983	0.527	3.206	0.676	2.988	0.798	7	2
Aggies	2.988	0.512	3.206	0.628	3.617	0.943	6	2
Astound	2.988	0.426	3.041	0.349	2.975	0.591	7	1
Oncoming	2.988	0.439	3.031	0.303	3.037	0.459	8	2
Agile	2.994	0.794	3.184	0.723	2.864	0.862	5	2
Biopsy	2.994	0.598	3.093	0.597	2.975	0.774	6	2
Grass	2.994	0.482	2.969	0.527	2.988	0.698	5	53
Banner	3.000	0.478	2.990	0.442	3.123	0.556	6	8
Hamster	3.000	0.715	2.929	0.561	3.074	0.685	7	1
Refill	3.000	0.398	3.020	0.430	2.951	0.669	6	3
Sediment	3.000	0.583	3.010	0.487	3.000	0.758	8	3
Weekday	3.000	0.319	3.071	0.437	3.160	0.580	7	2
Tarnish	3.000	0.614	2.980	0.497	2.988	0.642	7	1
Schema	3.000	0.488	2.980	0.406	2.864	0.518	6	3
Malaria	3.000	0.543	3.093	0.458	3.037	0.732	7	3
Calamity	3.005	0.635	3.031	0.467	2.716	0.762	8	4
Undercurrent	3.005	0.376	2.990	0.418	3.062	0.509	12	3
Usual	3.005	0.407	2.969	0.418	3.012	0.512	5	96
Airline	3.005	0.458	2.959	0.474	3.136	0.720	7	2
Offer	3.005	0.447	3.051	0.300	3.000	0.592	5	80
Token	3.011	0.522	2.980	0.406	3.037	0.580	5	10
Tree	3.011	0.488	3.010	0.487	2.938	0.639	4	59
Nightfall	3.011	0.553	2.949	0.505	2.864	0.802	9	4
Award	3.011	0.522	3.061	0.401	2.938	0.619	5	46
Noun	3.011	0.301	2.990	0.418	2.852	0.635	4	1
Deep	3.016	0.578	2.980	0.465	3.148	0.776	4	109
Shake	3.016	0.538	2.939	0.494	2.988	0.642	5	17
Oat	3.016	0.432	3.082	0.447	3.185	0.572	3	1
Nose	3.016	0.405	2.888	0.572	2.926	0.587	4	60
Student	3.016	0.271	3.031	0.225	3.037	0.459	7	130
Impact	3.022	0.510	3.082	0.447	3.074	0.608	6	67
Hideaway	3.022	0.521	3.031	0.486	3.000	0.707	8	1
Film	3.022	0.553	3.000	0.454	3.000	0.652	4	96
Kiosk	3.022	0.487	2.887	0.557	2.975	0.707	5	1
Freedom	3.022	0.510	3.143	0.592	3.086	0.728	7	128
Poor	3.022	0.425	3.010	0.337	3.025	0.569	4	113
Arthritis	3.028	0.652	3.153	0.563	3.160	0.889	9	3
Obvious	3.028	0.515	3.041	0.516	3.099	0.700	7	92
Unexplained	3.033	0.542	3.061	0.450	3.210	0.684	11	4
Knee	3.033	0.351	3.061	0.426	3.123	0.458	4	35
Diagram	3.033	0.450	2.929	0.387	2.975	0.707	7	10
Pandemic	3.034	0.511	2.980	0.320	3.012	0.512	8	2
Plaintive	3.039	0.644	2.888	0.535	3.025	0.632	9	2
Bank	3.039	0.444	3.041	0.516	3.099	0.718	4	83
Logical	3.039	0.660	3.153	0.598	3.062	0.764	7	34
Trauma	3.045	0.646	3.133	0.530	3.000	0.725	6	1
Lobe	3.045	0.462	2.980	0.476	3.012	0.602	4	3
Porch	3.045	0.591	2.959	0.536	3.025	0.707	5	43
Cold	3.045	0.497	3.000	0.556	3.012	0.716	4	171
Zealous	3.045	0.619	3.010	0.442	2.951	0.705	7	4
Hotel	3.045	0.509	3.000	0.574	3.197	0.679	5	126

APPENDIX (Continued)

Table A2 (Continued)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Tube	3.045	0.486	2.980	0.379	3.086	0.636	4	31
Key	3.050	0.467	3.031	0.365	3.037	0.486	3	88
Algae	3.050	0.491	3.020	0.497	2.938	0.677	5	7
Estimation	3.050	0.479	3.000	0.382	3.173	0.648	10	4
Ferment	3.050	0.503	2.980	0.556	2.975	0.724	7	2
Undefined	3.051	0.359	2.960	0.452	3.037	0.486	9	4
Disease	3.056	0.408	3.082	0.447	3.160	0.697	7	53
Ability	3.056	0.422	3.092	0.354	3.284	0.637	7	74
Obtain	3.062	0.402	3.010	0.176	2.963	0.601	6	42
Volume	3.062	0.478	3.092	0.433	3.000	0.612	6	135
Guilt	3.062	0.700	3.112	0.495	2.938	0.812	5	33
Concur	3.062	0.523	3.020	0.406	3.025	0.632	6	4
Lexicon	3.062	0.512	2.979	0.250	3.012	0.559	7	2
Confident	3.067	0.703	3.184	0.581	3.111	0.880	9	16
Windshield	3.067	0.447	3.041	0.452	3.197	0.660	10	6
Reverted	3.067	0.393	2.990	0.304	3.222	0.707	8	2
Catsup	3.067	0.483	2.938	0.496	2.963	0.558	7	3
Uneven	3.073	0.439	3.020	0.202	3.025	0.524	6	6
Affix	3.073	0.464	2.990	0.337	3.012	0.559	5	1
Escape	3.073	0.554	3.092	0.408	3.074	0.771	6	65
North	3.079	0.377	3.020	0.430	3.197	0.660	5	206
Match	3.079	0.445	3.010	0.442	2.951	0.522	5	41
Couch	3.079	0.505	3.082	0.604	3.247	0.767	5	12
Commercial	3.079	0.482	3.051	0.462	3.123	0.659	10	61
Regulating	3.079	0.625	3.133	0.468	3.197	0.697	10	4
Eat	3.079	0.527	3.000	0.518	3.123	0.620	3	61
Spasm	3.079	0.537	3.082	0.491	3.049	0.669	5	3
Elbow	3.084	0.486	3.010	0.442	3.136	0.720	5	10
Crazy	3.084	0.620	3.206	0.576	3.197	0.732	5	34
Rode	3.084	0.509	3.082	0.447	3.259	0.608	4	40
Dormant	3.084	0.552	3.020	0.556	3.025	0.632	7	5
Lease	3.084	0.396	3.061	0.472	3.062	0.533	5	10
Invalid	3.084	0.396	3.041	0.378	3.136	0.565	7	7
Addition	3.084	0.509	3.051	0.462	2.988	0.750	8	142
Funny	3.090	0.576	3.102	0.527	3.099	0.700	5	41
Tasteless	3.090	0.468	3.000	0.431	3.012	0.559	9	1
Magnet	3.090	0.469	3.021	0.540	3.000	0.671	6	3
Bottle	3.090	0.596	3.051	0.544	3.062	0.695	6	76
Aversion	3.090	0.597	2.959	0.404	3.111	0.632	8	2
Floor	3.090	0.373	3.010	0.306	3.160	0.432	5	158
Rebuttal	3.096	0.529	3.031	0.564	3.185	0.691	8	2
Green	3.096	0.580	3.112	0.590	3.086	0.825	5	116
Union	3.096	0.654	3.031	0.766	3.074	0.755	5	182
Scan	3.096	0.364	2.990	0.366	3.012	0.512	4	5
Table	3.101	0.440	3.020	0.286	2.988	0.642	5	198
Fork	3.101	0.594	2.980	0.430	3.099	0.700	4	14
Deliberate	3.101	0.544	3.041	0.429	3.197	0.781	10	15
Enigmatic	3.107	0.568	3.031	0.464	3.160	0.679	9	2
Absent	3.107	0.391	3.092	0.354	3.185	0.615	6	28
Energy	3.113	0.574	3.194	0.550	3.086	0.728	6	100
Hexagon	3.113	0.437	3.133	0.490	3.210	0.586	7	1
Expertise	3.113	0.542	3.214	0.460	3.259	0.587	9	3
Paper	3.113	0.411	3.010	0.418	3.136	0.565	5	157
Deteriorated	3.118	0.479	3.143	0.574	3.247	0.783	12	1
Ahead	3.118	0.524	3.153	0.544	3.049	0.669	5	109
Title	3.118	0.442	3.061	0.450	3.197	0.534	5	77
Orthographic	3.118	0.491	3.186	0.527	3.358	0.658	12	3
Furlough	3.118	0.514	3.102	0.393	3.333	0.707	8	2
Decisive	3.124	0.727	3.184	0.632	3.099	0.889	8	19
Exit	3.124	0.529	3.061	0.426	3.247	0.560	4	7
Kinetic	3.125	0.485	3.071	0.412	3.037	0.621	7	8
Vote	3.129	0.476	3.133	0.397	3.210	0.541	4	75
False	3.129	0.488	3.051	0.333	3.086	0.552	5	29
Achieving	3.129	0.639	3.184	0.525	3.086	0.711	9	15
Bottleneck	3.129	0.682	3.092	0.594	3.321	0.788	10	2

APPENDIX (Continued)

Table A2 (Continued)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Quarter	3.129	0.476	2.959	0.406	3.111	0.548	7	34
Tattered	3.129	0.583	3.173	0.557	3.025	0.689	8	5
Tails	3.130	0.565	3.041	0.608	3.099	0.752	5	7
Litigant	3.135	0.547	3.072	0.439	3.099	0.625	8	2
Oblivion	3.135	0.557	3.020	0.476	3.049	0.669	8	2
Deficient	3.135	0.597	3.020	0.379	3.136	0.720	9	3
Pepper	3.135	0.615	3.214	0.542	3.235	0.576	6	13
Ground	3.135	0.417	3.082	0.469	3.235	0.638	6	186
Discredit	3.135	0.504	3.031	0.486	3.160	0.641	9	2
Quick	3.146	0.554	3.143	0.556	3.100	0.648	5	68
Odd	3.146	0.465	3.153	0.439	3.222	0.632	3	44
Horse	3.146	0.723	3.041	0.672	3.173	0.703	5	117
Target	3.152	0.537	3.184	0.462	3.049	0.757	6	45
Document	3.158	0.436	3.041	0.404	3.086	0.596	8	13
Jacket	3.158	0.486	3.122	0.542	3.111	0.689	6	33
Trilogy	3.163	0.466	3.125	0.363	3.296	0.601	7	4
Shin	3.163	0.534	3.000	0.556	3.210	0.646	4	3
Contributor	3.163	0.575	3.143	0.431	3.210	0.754	11	2
Worse	3.169	0.445	3.092	0.408	3.148	0.572	5	50
Watch	3.169	0.588	3.235	0.514	3.160	0.679	5	81
Radio	3.169	0.470	3.051	0.264	3.247	0.603	5	120
Addiction	3.175	0.628	3.092	0.519	3.272	0.880	9	3
Airplane	3.180	0.440	3.102	0.465	3.296	0.766	8	11
Export	3.180	0.414	3.122	0.359	3.444	0.707	6	10
Carbon	3.186	0.444	3.163	0.423	3.185	0.527	6	30
Bite	3.186	0.558	3.173	0.557	3.272	0.689	4	10
Compost	3.186	0.537	3.165	0.472	3.259	0.648	7	8
Pocket	3.186	0.493	3.153	0.439	3.222	0.707	6	46
Dislodge	3.192	0.530	3.153	0.434	3.173	0.628	8	2
Quake	3.192	0.496	3.082	0.531	3.272	0.707	5	2
Capacitor	3.192	0.540	3.194	0.490	3.309	0.584	9	2
Molecule	3.197	0.554	3.051	0.484	3.185	0.594	8	6
Racket	3.197	0.511	3.224	0.584	3.358	0.811	6	5
Unit	3.197	0.522	3.020	0.351	3.160	0.641	4	103
Theory	3.197	0.488	2.990	0.366	3.111	0.500	6	129
Death	3.197	0.648	3.326	0.670	3.309	0.736	5	277
Biography	3.197	0.522	3.092	0.499	3.136	0.754	9	13
News	3.203	0.536	3.173	0.538	3.321	0.629	4	102
Provoke	3.203	0.624	3.133	0.490	3.370	0.732	7	3
Error	3.204	0.505	3.071	0.437	3.287	0.750	5	36
Paint	3.205	0.645	3.163	0.569	3.197	0.765	5	37
Irrigate	3.209	0.550	3.265	0.602	3.333	0.652	8	1
Canyons	3.210	0.646	3.061	0.623	3.136	0.771	7	2
Rectangle	3.226	0.482	3.122	0.413	3.197	0.600	9	4
Wage	3.231	0.508	3.224	0.487	3.259	0.587	4	56
Assertive	3.233	0.690	3.216	0.767	3.136	0.833	9	2
Kennel	3.237	0.543	3.194	0.586	3.346	0.616	6	3
Rapid	3.237	0.500	3.133	0.510	3.185	0.673	5	43
Coffin	3.237	0.564	3.265	0.509	3.457	0.742	6	7
Humor	3.242	0.535	3.142	0.476	3.247	0.603	5	47
Wreck	3.242	0.586	3.326	0.533	3.370	0.887	5	8
Gripping	3.248	0.617	3.275	0.493	3.346	0.744	8	6
Cigarette	3.254	0.689	3.296	0.629	3.481	0.853	9	25
Score	3.259	0.543	3.214	0.523	3.235	0.746	5	66
Job	3.259	0.533	3.224	0.508	3.333	0.548	3	238
Fence	3.261	0.650	3.439	0.690	3.605	0.817	5	30
Bicycle	3.265	0.566	3.255	0.543	3.160	0.601	7	5
Stick	3.265	0.632	3.204	0.536	3.469	0.654	5	39
Decayed	3.271	0.548	3.173	0.557	3.296	0.697	7	4
Stapler	3.276	0.508	3.316	0.619	3.494	0.673	7	1
Messy	3.276	0.637	3.388	0.636	3.321	0.878	5	3
Rude	3.282	0.682	3.316	0.585	3.358	0.763	4	6
Frog	3.282	0.656	3.275	0.639	3.222	0.775	4	1
Horn	3.282	0.602	3.214	0.613	3.346	0.727	4	31
Monotone	3.288	0.622	3.122	0.614	3.358	0.795	8	3

APPENDIX (Continued)

Table A2 (Continued)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Wagon	3.288	0.604	3.398	0.587	3.272	0.707	5	55
Erupt	3.288	0.649	3.265	0.529	3.469	0.654	5	2
Fish	3.288	0.649	3.276	0.605	3.235	0.712	4	35
Roof	3.293	0.606	3.235	0.571	3.383	0.663	4	59
Demand	3.318	0.756	3.265	0.635	3.296	0.887	6	102
Earthquake	3.322	0.651	3.378	0.711	3.444	0.707	10	9
Armadillo	3.322	0.642	3.367	0.599	3.383	0.663	9	2
Loud	3.310	0.730	3.275	0.513	3.407	0.848	4	20
Stagger	3.310	0.593	3.245	0.478	3.370	0.749	7	2
Sock	3.327	0.626	3.357	0.596	3.420	0.756	4	4
Lightning	3.333	0.712	3.429	0.658	3.481	0.691	9	14
Hump	3.355	0.770	3.224	0.601	3.346	0.793	4	2
Income	3.355	0.576	3.275	0.729	3.518	0.673	6	109
Wheel	3.361	0.578	3.418	0.641	3.407	0.587	5	56
Navigate	3.367	0.549	3.408	0.623	3.506	0.744	8	1
Animal	3.372	0.671	3.337	0.786	3.531	0.808	6	68
Forest	3.378	0.681	3.316	0.754	3.444	0.894	6	66
Coal	3.378	0.672	3.418	0.573	3.444	0.758	4	32
Electric	3.384	0.656	3.429	0.609	3.531	0.776	8	68
Pension	3.397	0.595	3.194	0.531	3.432	0.611	7	13
Mutiny	3.401	0.684	3.429	0.609	3.457	0.725	6	3
Stone	3.406	0.677	3.338	0.586	3.494	0.691	5	58
Cards	3.412	0.669	3.388	0.741	3.432	0.688	5	36
Overbearing	3.429	0.902	3.571	0.837	3.679	0.985	11	2
Bold	3.435	0.751	3.459	0.676	3.444	0.866	4	21
Trash	3.457	0.698	3.357	0.579	3.333	0.758	5	2
Toilet	3.480	0.784	3.469	0.763	3.407	0.919	6	13
Eagle	3.485	0.658	3.316	0.652	3.284	0.810	5	5
Boat	3.491	0.604	3.449	0.720	3.580	0.788	4	72

Table A3
Masculine Words (3.5 – 5)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Bark	3.502	0.700	3.402	0.672	3.654	0.854	4	14
Rebellious	3.508	0.708	3.724	0.670	3.704	0.828	10	2
Hell	3.531	0.707	3.500	0.692	3.617	0.902	4	95
Chess	3.548	0.714	3.510	0.646	3.605	0.753	5	3
Dark	3.553	0.767	3.408	0.716	3.642	0.899	4	185
Angry	3.559	0.721	3.500	0.677	3.778	0.806	5	45
Professor	3.559	0.655	3.673	0.685	3.716	0.762	9	57
Helicopter	3.570	0.645	3.546	0.750	3.728	0.775	10	1
Rocket	3.576	0.750	3.571	0.673	3.753	0.859	6	7
Courageous	3.593	0.821	3.541	0.676	3.543	0.807	10	4
Athletic	3.598	0.785	3.622	0.650	3.716	0.794	8	18
Blue	3.598	0.847	3.500	0.777	3.729	0.962	4	143
Lawyer	3.604	0.683	3.724	0.700	3.852	0.808	6	43
Lasso	3.604	0.777	3.639	0.780	3.691	0.846	5	2
Reckless	3.610	0.594	3.490	0.646	3.605	0.736	8	9
Crude	3.610	0.754	3.480	0.707	3.679	0.906	5	15
Locomotive	3.615	0.690	3.602	0.728	3.605	0.847	10	2
Arrogant	3.621	0.774	3.490	0.646	3.691	0.752	8	2
Gym	3.621	0.774	3.612	0.636	3.593	0.787	3	2
Darts	3.632	0.711	3.490	0.579	3.605	0.769	5	1
Tall	3.632	0.735	3.827	0.689	3.778	0.806	4	55
Domineering	3.632	0.856	3.546	0.736	3.778	0.922	11	2
Hostile	3.632	0.772	3.694	0.709	3.876	0.797	7	19
Tattoo	3.638	0.710	3.704	0.706	3.741	0.803	6	1
Forceful	3.655	0.715	3.663	0.591	3.839	0.715	8	8
Snake	3.655	0.797	3.449	0.690	3.580	0.934	5	44
Judge	3.661	0.681	3.684	0.667	3.827	0.755	5	77
Billiards	3.687	0.732	3.704	0.629	3.753	0.767	9	1
Tornado	3.689	0.730	3.612	0.808	3.617	0.767	7	1
Violent	3.700	0.678	3.612	0.683	3.728	0.837	7	33

APPENDIX (Continued)

Table A3 (Continued)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Powerful	3.706	0.807	3.806	0.727	3.753	0.902	8	63
Jeep	3.711	0.732	3.806	0.698	3.753	0.859	4	16
Competitive	3.723	0.773	3.775	0.696	3.852	0.853	11	31
Garage	3.728	0.749	3.633	0.664	3.839	0.843	6	21
Strapping	3.733	0.836	3.531	0.789	3.642	0.826	9	3
Vulgar	3.734	0.864	3.796	0.641	3.790	0.720	6	7
Destructive	3.734	0.732	3.701	0.615	3.876	0.871	11	25
Briefcase	3.740	0.639	3.684	0.619	3.938	0.747	9	1
Bridegroom	3.744	1.268	3.622	1.206	3.568	1.369	10	3
Rough	3.745	0.713	3.765	0.700	3.852	0.776	5	41
Surgeon	3.745	0.721	3.775	0.696	3.741	0.771	7	11
Doctor	3.768	0.688	3.837	0.713	3.790	0.847	6	100
Wrench	3.779	0.840	3.663	0.884	3.914	0.869	6	1
Pliers	3.796	0.785	3.633	0.709	3.716	0.778	6	1
Tough	3.807	0.696	3.775	0.725	3.889	0.851	5	36
Wallet	3.807	0.744	3.939	0.757	4.000	0.866	6	6
Sports	3.819	0.762	3.816	0.663	3.938	0.812	6	49
Strong	3.830	0.702	3.939	0.701	3.901	0.831	6	202
Drill	3.841	0.781	3.796	0.773	3.876	0.857	5	33
Screwdriver	3.847	0.710	3.796	0.673	4.000	0.742	11	1
Astronaut	3.892	0.686	3.786	0.662	3.827	0.738	9	2
Hero	3.898	0.826	3.755	0.897	3.753	0.942	4	52
Skateboard	3.904	0.654	3.888	0.607	4.000	0.775	10	1
Pistol	3.915	0.721	3.939	0.671	3.963	0.766	6	27
Pilot	3.915	0.681	3.908	0.761	4.037	0.858	5	44
Fight	3.932	0.815	3.969	0.818	3.963	0.858	5	98
God	3.932	0.920	3.969	0.913	3.975	1.012	3	318
Truck	3.932	0.719	3.867	0.683	3.975	0.724	5	57
Dentist	3.937	0.754	3.969	0.710	4.000	0.775	7	12
Police	3.937	0.604	3.949	0.598	3.975	0.689	6	155
Dominant	3.943	0.720	3.939	0.715	4.000	0.894	8	65
Exterminator	3.949	0.763	3.847	0.709	4.148	0.882	12	1
Tractor	3.966	0.797	4.051	0.751	4.148	0.776	7	24
Engineer	3.966	0.782	3.867	0.713	3.988	0.782	8	42
Bicep	4.005	0.726	3.990	0.634	4.000	0.689	5	1
Devil	4.016	0.828	3.898	0.806	4.123	0.871	5	25
Aggressive	4.022	0.573	4.051	0.632	4.185	0.654	10	17
Chiseled	4.022	0.706	3.786	0.721	3.864	0.833	8	2
Politician	4.028	0.741	3.949	0.694	3.963	0.766	10	13
Poker	4.028	0.686	4.051	0.709	4.160	0.697	5	6
Master	4.039	0.725	4.051	0.648	4.074	0.932	6	72
Fishing	4.050	0.676	4.133	0.636	4.049	0.757	7	32
Hammer	4.050	0.770	3.918	0.795	4.012	0.901	6	9
Burly	4.067	0.822	3.794	0.853	4.210	0.862	5	3
Prisoner	4.090	0.668	3.990	0.666	4.185	0.709	8	7
Brawny	4.096	0.751	3.796	0.837	4.099	0.982	6	1
Veteran	4.146	0.731	4.082	0.713	4.037	0.828	7	27
Beer	4.146	0.691	4.194	0.727	4.259	0.721	4	34
Hairy	4.152	0.771	4.000	0.718	4.049	0.723	5	5
War	4.169	0.734	4.071	0.749	4.272	0.806	3	464
Hunting	4.169	0.726	4.020	0.703	4.272	0.758	7	34
Trousers	4.186	0.686	4.031	0.766	4.086	0.745	8	7
Janitor	4.186	0.669	3.929	0.630	3.975	0.724	7	4
Carpenter	4.203	0.717	4.071	0.707	4.025	0.894	9	6
Umpire	4.237	0.746	4.102	0.739	4.173	0.818	6	1
Hockey	4.237	0.811	4.194	0.683	4.197	0.765	6	1
Army	4.248	0.765	4.163	0.621	4.160	0.813	4	132
Cigars	4.276	0.696	4.173	0.746	4.272	0.725	6	2
President	4.288	0.683	4.398	0.638	4.296	0.715	9	382
Sheriff	4.288	0.640	4.224	0.634	4.296	0.732	7	20
Mechanic	4.322	0.756	4.204	0.688	4.296	0.732	8	5
Muscular	4.333	0.704	4.286	0.673	4.272	0.791	8	16
Bald	4.350	0.649	4.153	0.778	4.321	0.755	4	5
Baseball	4.355	0.709	4.306	0.738	4.259	0.771	8	57
Plumber	4.361	0.677	4.286	0.689	4.296	0.828	7	4

APPENDIX (Continued)

Table A3 (Continued)

Word	NJ		NC		TX		No. of Letters	Frequency
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Gigalo	4.384	0.818	4.073	0.861	4.444	0.806	6	1
Bowtie	4.389	0.738	4.337	0.673	4.321	0.849	6	1
Football	4.429	0.712	4.459	0.629	4.605	0.540	8	36
Fraternity	4.717	0.706	4.653	0.719	4.259	1.253	10	6
Soldier	4.429	0.645	4.337	0.657	4.321	0.772	7	39
Boxing	4.446	0.689	4.347	0.690	4.395	0.736	6	1
Necktie	4.463	0.699	4.347	0.761	4.247	0.902	7	2
Duke	4.497	0.700	4.082	0.991	4.284	0.965	4	11
Sideburns	4.502	0.640	4.449	0.660	4.432	0.670	9	1
Cologne	4.525	0.666	4.418	0.772	4.136	1.081	7	9
Cowboy	4.593	0.596	4.551	0.720	4.531	0.743	6	16
Pirate	4.593	0.615	4.398	0.714	4.395	0.817	6	4
Goatee	4.661	0.638	4.490	0.707	4.531	0.867	6	1
Wrestling	4.672	0.548	4.684	0.619	4.741	0.468	9	1
Priest	4.683	0.613	4.459	0.629	4.481	0.691	6	16
Beard	4.717	0.553	4.571	0.592	4.642	0.730	5	26
Handsome	4.717	0.521	4.643	0.579	4.593	0.587	8	40
Mustache	4.785	0.463	4.653	0.520	4.691	0.625	8	5
Prince	4.819	0.523	4.643	0.707	4.453	0.949	6	33
Bachelor	4.819	0.544	4.786	0.460	4.728	0.742	8	6
King	4.847	0.616	4.806	0.653	4.790	0.646	4	88
Testosterone	4.881	0.429	4.826	0.455	4.753	0.582	12	1
Husband	4.881	0.535	4.939	0.281	4.864	0.379	7	131
Father	4.904	0.435	4.888	0.451	4.889	0.353	6	183
Brother	4.904	0.422	4.765	0.729	4.790	0.627	7	73
Uncle	4.943	0.254	4.878	0.482	4.926	0.346	5	5

Table A4
Mean Ratings by Sex of Participant for Items That Differed Reliably in
Their Gender Categorization for the New Jersey Sample

Item	Group Rating		Male Participants' Rating			Female Participants' Rating			<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>				
Feminine Words											
Desire	2.435	0.728	2.607	0.802	N	2.355	0.681	F	2.034	93.146	.045
Patient	2.457	0.730	2.661	0.695	N	2.364	0.730	F	2.603	112.176	.011
Star	2.457	0.722	2.679	0.543	N	2.355	0.773	F	3.200	147.224	.002
Champagne	2.446	0.745	2.679	0.690	N	2.339	0.748	F	2.965	115.359	.004
Heaven	2.440	0.721	2.696	0.569	N	2.322	0.755	F	3.650	138.800	<.001
Neutral Words											
Beach	2.565	0.619	2.786	0.530	N	2.463	0.633	F	3.540	126.430	.001
Color	2.598	0.623	2.821	0.508	N	2.496	0.647	F	3.623	133.901	<.001
Boat	3.491	0.604	3.304	0.537	N	3.578	0.616	M	3.022	121.738	.003
Faithful	2.508	0.666	2.679	0.543	N	2.430	0.705	F	2.570	136.295	.011
Pleasing	2.502	0.716	2.679	0.606	N	2.421	0.750	F	2.428	130.504	.017
Masculine Words											
Darts	3.632	0.711	3.464	0.713	N	3.711	0.700	M	2.151	105.516	.034
Snake	3.655	0.797	3.464	0.785	N	3.744	0.791	M	2.197	107.845	.030
Dark	3.553	0.767	3.339	0.611	N	3.653	0.813	M	2.846	139.239	.005
Domineering	3.632	0.856	3.429	0.735	N	3.727	0.894	M	2.343	128.545	.021
Rocket	3.576	0.750	3.411	0.708	N	3.653	0.761	M	2.067	114.508	.041
Arrogant	3.621	0.774	3.357	0.672	N	3.744	0.791	M	3.360	124.593	.001
Crude	3.610	0.754	3.375	0.702	N	3.719	0.755	M	2.958	114.589	.004
Bridegroom	3.744	1.268	3.291	1.286	N	3.950	1.210	M	3.211	98.974	.002
Strapping	3.733	0.836	3.464	0.852	N	3.858	0.802	M	2.911	101.866	.004

Note—The category that corresponds to the mean rating is presented along with the mean rating. M, male category; F, female category; N, neutral category.

APPENDIX (Continued)

Table A5
Mean Ratings by Sex of Participant for Items That Differed Reliably in
Their Gender Categorization for the North Carolina Sample

Item	Group Rating		Male Participants' Rating			Female Participants' Rating			<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>				
Feminine Words											
Springtime	2.541	0.595	2.680	0.513	N	2.396	0.644	F	2.411	89.745	.018
Neutral Words											
Toilet	3.469	0.763	3.300	0.839	N	3.646	0.635	M	2.306	91.128	.023
Bold	3.459	0.676	3.600	0.782	M	3.312	0.512	N	2.161	84.842	.034
Stove	2.571	0.673	2.440	0.704	F	2.708	0.617	N	2.007	95.224	.048
Masculine Words											
Courageous	3.541	0.676	3.680	0.653	M	3.396	0.676	N	2.116	95.446	.037
Gym	3.612	0.636	3.740	0.664	M	3.479	0.583	N	2.068	95.251	.041
Bridegroom	3.622	1.206	3.380	1.338	N	3.875	1.003	M	2.077	90.714	.041

Note—The category that corresponds to the mean rating is presented along with the mean rating. M, male category; F, female category; N, neutral category.

Table A6
Mean Ratings by Sex of Participant for Items That Differed Reliably in
Their Gender Categorization for the Texas Sample

Item	Group Rating		Male Participants' Rating			Female Participants' Rating			<i>t</i>	<i>df</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		<i>M</i>	<i>SD</i>				
Feminine Words											
Patient	2.346	0.824	2.667	0.917	N	2.210	0.750	F	2.153	36.582	.038
Laundry	2.383	0.874	2.708	0.955	N	2.246	0.808	F	2.081	37.566	.044
Star	2.346	0.824	2.667	0.917	N	2.210	0.750	F	2.153	36.582	.038
Neutral Words											
Gallery	2.593	0.755	2.917	0.881	N	2.456	0.657	F	2.306	34.258	.027
Stone	3.494	0.691	3.792	0.884	M	3.368	.555	N	2.173	30.931	.038
Thanks	2.580	0.589	2.792	0.509	N	2.491	0.601	F	2.295	50.771	.026
Conniving	2.802	1.005	2.375	0.970	F	2.982	0.973	N	2.572	43.418	.014
Masculine Words											
Reckless	3.605	0.736	3.208	0.833	N	3.772	0.627	M	2.978	34.488	.005
Bridegroom	3.568	1.369	2.958	1.429	N	3.825	1.269	M	2.573	39.057	.014

Note—The category that corresponds to the mean rating is presented along with the mean rating. M, male category; F, female category; N, neutral category.

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