INSTRUMENTATION & TECHNIQUES

Ratings of frequency, familiarity, orthographic distinctiveness and pronunciability for 192 surnames

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Ratings of frequency, familiarity, orthographic distinctiveness, and pronunciability were obtained for a sample of 192 surnames selected randomly from a large metropolitan area phone book. Measures of reliability and the intercorrelations among the various measures indicate that the present information may be useful for investigations of learning and remembering names. Also, while certain unique aspects of name stimuli may have important advantages for researchers of verbal processes, the present ratings should also prove useful to personality and social psychologists when names are of interest.

There is a paucity of research regarding the learning of names, and there is a difficulty in testing any hypothesis related to learning names because of the absence of a systematic calibration of name stimuli along those dimensions traditionally controlled when verbal learning is investigated. Names obviously represent a unique class of verbal stimuli. Certain features of names distinguish this class of stimuli (e.g., ethnic association), and there is some difficulty in applying traditional definitions of verbal characteristics to names (i.e., is a name concrete or abstract?). However, the unique aspect of name stimuli may have certain advantages for researchers of verbal processes. For example, if the kind of implicit responses made to names differs from that made to common words, these stimuli may be of practical and theoretical importance when specific implicit responses are to be controlled.

The scaling of surname stimuli may complement a significant body of research in social and personality psychology. There has been some interest in these disciplines in the importance of names, especially given names, as social stimuli (e.g., see Hartman, Nicolay, & Hurley, 1968). A calibration of surname stimuli may provide a useful tool in these investigations.

The present study provides measures of frequency, familiarity, pronunciability, and orthographic distinctiveness for a large sample of surnames taken from a large metropolitan area phone book. An examination of these measures and their interrelationships will begin to identify the nature of name stimuli, as well as to serve research related to problems of learning and remembering names.

METHOD

Stimuli and Procedure

Two hundred surnames were selected from the 1972 Chicago, Illinois telephone book by using a table of random num-

bers to generate the page number, column number, and position in the column for each of the 200 selections. Names of businesses and multiple listings of the same name were not considered in determining position in a column.

From the sample of 200 names, eight lists of 50 names were derived using a random procedure except for the restrictions that each name appear twice in the set of eight lists and each appearance be in a different list of 50 names. For the rating task, each set of 50 names was randomly ordered in two columns of 25 names on a single sheet of paper. Names were appropriately capitalized but otherwise appeared in lower case and a space after each name was provided for the subject to record his rating. The eight stimulus forms were used equally often with each of the four scaling procedures to be described. Instructions for each of the rating tasks were given on a separate page and were generally similar to each other in that all were introduced by a lengthy paragraph which discussed everyday experiences with learning names and the fact that little is known about salient features of names.

Instructions for the frequency rating task required that subjects make "judgments as to how frequently a particular last name occurs relative to all other names." Subjects were further instructed to think of the task as one of trying to predict the number of times a particular name occurred in a large metropolitan phone book such as Chicago. A 9-point scale was provided on which the labels "rarely," "average," and "very frequently" were typed above Scale Points 1-2, 4-6, and 8-9, respectively. Instructions for rating pronunciability followed those described in Underwood and Schulz (1960, pp. 23-24) and also involved a 9-point scale. Subjects were asked to "rate each name as to the relative ease or difficulty of pronouncing it." The words "easy," "average," and "hard" were typed above the Scale Points 1-2, 4-6, and 8-9, respectively. Instructions for rating orthographic distinctiveness were similar to those used by Zechmeister (1969) and again used a 9-point scale. Subjects were "to visualize the physical aspects of a name in terms of what makes one name 'stand out,' 'catch your eye,' or appear more interesting than another." Above Scale Points 1-2, 4-6, and 8-9 were the words "not distinctive," "average," and "very distinctive," respectively. The fourth rating task required judgments of familiarity and closely followed the instructions used by Noble (1953). Subjects were told that this was a test "to find how often you have come in contact with certain names." Five possible ratings were permitted and these were described by the labels "never," "rarely," "sometimes," "often," and "very often," corresponding to Numbers 1-5, respectively.

Each set of rating instructions carried with it the same request for the subject before beginning the task to look over the list of names seeking names that represented all levels of the scale. The scaling procedure was self-paced and the experimenter only introduced the general nature of the research and was present to answer questions. Any one subject provided ratings for only one set of 50 names and according to only one of the four scaling procedures.

Subjects

During three academic semesters, in 1973-74, a total of 703 Loyola University students participated in the present research. Students participated in order to earn partial credit for a research requirement of their introductory psychology course. Rating tasks were administered in groups of all sizes during the course of the research.

RESULTS AND DISCUSSION

Errors made in preparing the stimulus forms required that data for eight names not be included. Table 1 shows the means and standard deviations for each of the remaining 192 surnames obtained on the basis of instructions to rate frequency, familiarity, distinctiveness, and pronunciability. Also provided in Table 1 is the actual frequency of each name as it was found in the 1972 Chicago directory. Each mean is based on a minimum of 40 responses based on summing the ratings of each name for the two different stimulus forms on which a name appeared.

A check on the reliability of each of the four scaling tasks was made by calculating the correlation between mean ratings of each name for the two different stimulus forms. These correlations were quite satisfactory for ratings of frequency (+.94), familiarity (+.96, and pronunciability (+.95). However, ratings of orthographic distinctiveness were not nearly as reliable (+.46). That subjects were not as consistent in applying the distinctiveness scale in this particular situation may be due to the fact that the sample of names varied greatly in physical length and also represented a wide range of familiarity and frequency. When these aspects of the stimuli are controlled, for example when low frequency items of the same length are scaled, subjects are quite reliable in using this scale (cf. Zechmeister, 1969). It is also possible that, despite instructions to ignore other features than physical ones, names are "unusual" or "catchy" on other dimensions that affected subjects' ratings.

Table 2 reports the intercorrelations among the measures in the present study. Correlations between rated frequency and either familiarity or difficulty of pronunciability, were all high and similar to those correlations reported when common words are scaled (see, for example, Hall, 1971). In addition, the correlation between orthographic distinctiveness and pronunciability (+.59) is similar to that found between these measures when subjects rated low frequency words (+.61, Zechmeister, 1969). However, correlations between dis-

Table 1
Actual Frequency Count and Ratings of Frequency, Familiarity, Orthographic Distinctiveness, and Pronunciability

	Cnt	Freq	SD	Fam	SD	Orth	SD	Prn	SD
1. Abraham	98	6.12	2.23	3.07	1.22	5.14	2.51	2.28	1.65
2. Abramowicz	17	3.26	2.20	1.59	1.04	5.26	2.40	6.93	1.90
3. Aeridia	1	2.45	2.00	1.14	0.52	5.07	3.03	7.66	1.20
4. Akridge	4	3.09	2.13	1.43	0.59	4.91	2.21	4.30	2.01
5. Akabowski	2	1.00	2.09	1.26	0.70	6.31	2.94	7.26	1.90
6. Alvarado	1	3.13	2.11	1.31	0.64	5.22	2.67	6.70	1.61
7. Alvarez	53	4.38	2.20	2.17	1.34	5.65	2.32	4.73	2.14
8. Alvarez	158	5.59	2.46	2.79	1.14	5.31	1.99	4.66	2.31
9. Asbury	8	4.98	2.03	1.98	1.00	5.55	1.94	3.62	2.04
10. Austwick	1	3.24	1.76	1.33	0.57	6.07	1.95	5.42	1.69
11. Bagley	13	4.55	1.74	1.93	1.07	6.79	1.90	3.21	1.70
12. Bambulis	17	4.26	1.95	2.33	1.12	6.16	1.95	4.40	1.86
13. Bapiste	14	4.93	2.86	1.05	0.53	5.33	2.15	2.32	1.37
14. Barnett	263	6.29	1.93	2.86	1.05	5.53	1.80	4.29	2.22
15. Barnhardt	1	5.09	1.75	2.36	1.12	5.33	1.80	4.29	2.22
16. Barrie	7	5.52	1.85	2.43	1.29	4.44	2.21	1.43	1.45
17. Bell	920	7.40	2.25	3.64	0.93	4.20	1.17	1.08	0.66
18. Bennett	405	7.52	1.95	3.26	1.08	4.27	2.46	2.04	1.56
19. Bernacovics	1	1.09	1.53	1.26	0.80	5.86	2.88	7.96	1.58
20. Bonke	8	3.52	1.99	1.45	0.80	4.74	2.15	4.47	1.85
21. Brantley	43	4.98	1.72	1.81	0.99	4.79	1.99	3.39	1.74
22. Brantley	12	3.76	1.84	1.79	0.92	5.89	1.83	4.96	1.88
23. Caldwell	231	6.76	1.75	3.19	1.19	5.61	2.22	2.30	1.36
24. Campbell	777	7.81	1.67	3.93	0.92	4.81	2.42	2.04	1.49
25. Canturua	1	1.17	1.46	1.26	0.54	5.26	2.21	4.91	1.84
26. Carlson	622	6.95	1.75	3.59	1.11	5.00	2.56	2.02	1.25
27. Carreras	4	4.12	2.00	1.67	1.00	5.95	2.15	6.51	1.83
28. Carson	146	7.86	1.69	4.07	1.09	4.49	2.98	1.77	1.03
29. Chalms	1	4.38	1.83	1.29	0.55	5.68	1.77	1.97	1.97
30. Channey	1	5.64	2.14	2.59	1.21	5.11	1.93	3.69	1.78
31. Chapman	316	6.09	2.01	2.88	1.17	4.91	2.39	2.00	1.38
32. Chodora	1	2.19	1.40	1.24	0.66	5.07	2.80	6.53	2.07
33. Choldin	2	3.62	1.50	1.21	0.47	5.26	1.89	5.12	1.61
34. Cicorchia	2	1.83	1.25	1.09	0.30	6.40	2.98	8.27	1.09
35. Cimaglia	5	1.95	1.62	1.07	0.28	4.78	2.90	6.93	1.84
36. Cionei	2	1.88	0.99	1.00	0.00	5.94	2.36	7.44	1.58
37. Clay	246	6.67	2.39	3.11	1.11	4.70	2.99	1.06	0.25
38. Compis	1	2.62	1.27	1.19	0.45	4.98	2.18	5.13	2.09
39. Cowash	1	3.21	2.23	1.38	0.62	5.77	2.45	6.72	1.57
40. Crone	2	4.71	1.86	1.64	0.76	4.55	1.89	2.12	1.25
41. Daniels	426	7.07	1.94	3.81	0.89	5.35	2.38	2.45	1.61
42. Darby	28	5.57	2.06	2.38	1.08	4.43	2.90	1.21	0.59
43. Davis	2470	8.55	1.55	3.95	1.08	4.18	2.90	1.21	0.59
44. Deason	14	3.29	2.04	1.43	0.77	5.47	2.17	5.98	2.04
45. DeMatale	2	1.55	1.71	1.57	0.97	6.53	1.87	6.39	1.82
46. DeZurko	2	2.93	1.47	1.21	0.56	6.14	2.13	5.22	2.07
47. Domagala	13	2.55	1.45	1.21	0.64	5.45	2.45	6.68	2.06
48. Drout	4	2.74	1.67	1.24	0.53	5.22	2.15	4.79	1.96
49. Edstrom	9	1.93	1.84	1.59	0.81	5.00	2.08	4.30	1.91
50. Edwards	883	7.64	1.56	3.74	0.96	5.51	2.79	1.45	0.85
51. Elbert	7	2.50	1.53	1.33	0.79	5.78	2.26	6.40	1.45
52. Eppte	5	3.62	1.92	1.27	0.44	5.09	2.10	3.88	2.05
53. Epps	44	3.21	1.67	1.33	0.69	5.33	2.35	2.02	1.31
54. Eppstein	209	6.02	2.11	3.02	1.20	5.67	1.92	4.06	2.02
55. Eether	7	5.12	2.15	2.57	1.35	5.57	2.05	3.43	2.11
56. Fleck	43	4.31	1.93	1.81	1.04	4.64	1.93	1.11	2.01
57. Flourcup	1	2.55	2.25	1.02	0.15	5.00	3.00	1.11	2.01
58. Fourcade	1	2.55	1.25	1.09	0.30	5.60	2.09	5.39	1.91
59. Fox	463	7.86	1.41	3.79	1.18	4.36	3.11	1.19	1.16
60. Frank	362	6.59	2.27	3.69	1.35	3.85	2.76	1.19	0.68
61. Gatewood	32	5.50	2.00	2.00	1.04	4.67	1.74	1.92	1.23
62. Gelsanlitt	1	2.50	1.73	1.12	0.39	7.09	2.60	7.29	1.79
63. Gennett	5	4.59	1.79	1.64	0.79	5.74	1.95	9.88	1.48
64. Glover	173	5.62	1.55	2.33	1.20	4.29	2.07	2.79	1.59
65. Glow	14	4.02	2.05	1.76	1.21	5.65	2.57	1.49	1.04
66. Golke	2	3.02	1.79	1.14	0.35	4.72	2.17	5.98	1.71
67. Gugler	1	4.50	1.88	1.76	0.91	4.66	1.61	4.45	1.88
68. Hamilton	482	7.64	1.72	4.07	0.97	5.70	2.76	1.96	1.30
69. Harclay	4	4.31	1.99	1.52	0.80	5.28	2.11	4.00	1.43
70. Harton	8	4.71	2.20	1.55	0.80	4.53	1.83	2.67	1.61
71. Henrich	11	4.95	1.74	2.26	0.86	4.73	2.04	4.63	1.44
72. Henry	388	7.45	1.95	3.79	1.02	4.58	2.97	1.32	0.78
73. Hernandez	441	6.43	1.75	3.67	1.03	4.81	2.02	3.30	1.83
74. Hicks	234	6.38	1.78	3.05	1.03	5.00	2.79	1.34	0.73
75. Hollis	59	5.45	1.81	2.29	0.97	4.72	2.05	2.69	1.57
76. Honeywood	4	3.88	1.95	1.21	0.47	5.57	2.46	2.49	1.49
77. Honquest	2	2.21	1.26	1.12	0.39	5.71	2.09	6.26	1.89
78. Hourihane	6	2.26	1.19	1.21	0.47	6.02	2.84	7.21	1.86
79. Howell	189	6.45	2.15	3.29	1.07	4.45	2.04	2.32	1.25
80. Hudson	412	7.30	1.53	3.43	1.13	4.56	2.82	2.15	1.40
81. Hughes	664	7.67	1.71	3.95	0.82	4.27	2.59	1.94	1.48
82. Illgen	1	2.62	2.00	1.02	0.15	5.12	2.54	5.85	1.91
83. Imeson	1	4.48	2.12	2.02	1.14	5.39	1.68	3.83	1.77
84. Impariala	1	2.62	1.48	1.50	1.04	6.57	2.49	6.02	1.76
85. Indicavitch	2	1.98	1.77	1.17	0.54	6.40	2.05	7.33	1.89
86. Iwanick	2	2.21	1.91	1.07	0.26	5.57	3.30	7.91	1.89
87. Jackson	2522	8.00	1.99	4.19	0.89	3.58	2.72	1.86	1.61
88. James	546	8.26	1.15	4.09	1.01	3.64	3.13	1.17	1.15
89. Jansen	50	7.31	1.63	3.21	1.18	4.81	2.39	2.08	1.30
90. Jeechke	15	2.38	1.38	1.55	0.97	5.24	2.30	7.44	1.68
91. Johnson	6709	8.40	1.77	4.76	0.48	3.86	3.08	1.23	0.47
92. Joiner	35	3.81	1.82	1.64	0.91	5.66	2.04	2.74	1.55
93. Jones	51	6.00	2.47	2.76	1.08	4.52	2.26	2.91	1.68
94. Kaplan	533	4.90	1.27	2.81	1.06	4.95	1.64	2.55	1.72
95. Kelly	1013	8.48	0.98	4.31	0.97	4.54	3.11	1.43	0.93
96. Kiedykowski	1	2.50	1.94	1.09	0.30	4.91	1.03	7.87	1.69
97. King	1183	7.74	1.73	4.09	0.93	4.12	2.98	1.22	1.16
98. Kleiman	17	4.21	1.85	1.83	0.91	4.65	1.54	4.47	1.92
99. Klein	532	6.57	2.30	3.43	1.11	4.20	2.09	2.30	1.53
100. Kohn	97	4.88	1.97	2.17	1.06	4.65	1.93	3.33	2.05
101. Kolb	63	4.33	2.14	1.12	0.06	4.29	2.19	2.19	1.91
102. Koval	21	3.26	1.70	1.43	0.94	5.16	2.01	4.35	1.97
103. Kozinski	14	5.09	1.90	2.14	1.28	5.09	2.25	4.52	2.27
104. Krulac	2	2.64	1.48	1.38	0.70	5.07	2.29	4.53	1.96
105. Krull	103	3.93	1.93	1.57	0.86	4.67	2.30	3.16	1.63
106. Kueton	1	3.12	1.43	1.19	0.50	5.48	1.66	5.85	2.09
107. Kurowski	5	3.88	2.10	1.43	0.74	5.47	2.08	5.85	2.05
108. Kyliakos	1	2.19	1.78	1.02	0.15	6.02	3.41	8.56	0.99
109. Kyriazas	6	2.07	1.45	1.05	0.22	4.78	3.00	8.13	1.28
110. Larson	509	6.93	2.44	3.33	1.14	4.29	2.48	2.19	1.61
111. Layton	20	5.12	1.70	1.98	0.92	4.56	1.76	2.74	1.61

Table 1 (Continued)

112.	Leu	7	2.55	1.60	1.50	0.74	4.98	2.10	4.48	2.29
113.	Lombardi	37	6.12	1.86	3.40	1.21	6.53	2.00	3.31	1.88
114.	Longfield	4	5.79	1.70	2.17	0.99	4.91	2.15	2.57	1.63
115.	Louis	46	6.57	2.20	3.62	1.13	3.57	2.44	2.39	1.68
116.	Loukas	9	4.33	2.11	2.38	0.99	5.14	1.73	4.51	2.22
117.	Majka	54	2.62	1.71	1.26	0.73	5.16	2.32	6.43	1.76
118.	Majstorovic	2	1.83	1.34	1.05	0.22	5.23	3.24	8.30	0.91
119.	McCullin	2	6.43	2.00	2.71	1.02	4.87	1.80	3.21	1.82
120.	McDonnell	90	7.88	1.35	3.67	1.12	4.28	2.13	2.75	1.81
121.	McDougal	15	5.83	2.07	2.48	0.94	6.13	2.24	4.40	2.14
122.	Menne	7	6.55	2.29	2.24	1.14	4.49	1.77	4.13	2.10
123.	Michale	144	7.48	1.99	3.71	0.99	4.56	2.48	1.90	1.43
124.	Mika	53	3.74	2.01	1.55	0.80	5.09	2.18	4.45	2.10
125.	Mikaleki	3	3.69	1.75	1.48	0.83	5.36	1.98	6.31	1.94
126.	Miller	2988	8.43	1.64	4.36	0.79	3.44	2.68	1.50	1.11
127.	Milton	106	6.81	2.09	3.38	1.19	4.35	2.33	1.98	1.28
128.	Miskowski	2	3.76	2.29	1.48	0.83	5.62	2.34	6.82	2.36
129.	Mitcham	8	5.29	2.05	2.45	1.15	5.90	1.91	3.20	1.42
130.	Mitchell	686	7.86	1.77	4.00	1.04	3.98	2.43	2.61	1.81
131.	Mite	3	3.62	1.94	1.29	0.64	4.15	2.10	2.00	1.65
132.	Molina	55	3.33	1.46	1.69	1.16	5.27	2.03	3.53	2.01
133.	Moore	1886	7.81	1.85	4.12	0.86	4.52	2.68	1.51	0.78
134.	Motherhead	1	2.17	1.53	1.02	0.15	6.89	2.42	3.26	1.97
135.	Wachbar	4	3.50	2.00	1.21	0.56	5.64	2.43	5.81	2.17
136.	Morse	3	2.62	1.74	1.14	0.65	5.60	2.62	6.38	1.68
137.	Nathan	118	6.09	1.63	2.81	1.13	5.25	2.52	2.33	1.63
138.	Near	3	4.05	2.02	1.64	0.98	4.00	2.70	1.46	1.32
139.	Neuosa	2	1.93	1.07	1.05	0.22	5.66	2.86	7.38	1.48
140.	Norris	166	6.79	1.89	3.12	1.15	4.20	1.96	2.51	1.99
141.	Notka	8	3.19	1.89	1.12	0.33	4.91	2.13	5.79	2.32
142.	Obolowicz	2	2.48	2.03	1.21	0.41	5.45	2.96	7.77	1.94
143.	Ostar	25	4.02	2.01	1.81	0.94	5.08	2.07	1.15	1.84
144.	Ostermeier	6	3.67	2.02	1.74	0.73	6.27	2.59	5.77	2.16
145.	Papadopoulos	8	2.14	1.96	2.05	1.17	6.51	2.90	6.57	2.53
146.	Parker	781	7.69	1.54	3.88	0.97	4.48	2.90	1.52	0.94
147.	Parley	4	4.07	1.87	2.00	1.10	6.02	2.22	2.42	1.44
148.	Petar	40	6.38	2.22	3.36	1.43	3.57	2.37	1.28	0.74
149.	Pichal	1	2.86	1.37	1.33	0.79	4.83	1.98	5.87	1.75
150.	Pictor	1	3.29	1.73	1.21	0.52	5.49	1.87	3.58	1.82
151.	Potrykus	3	2.52	1.66	1.14	0.35	5.93	2.39	7.23	1.56
152.	Porter	93	6.59	1.89	1.19	1.13	3.88	2.42	1.81	1.08
153.	Quinlan	77	5.05	2.36	2.36	1.36	5.51	1.95	1.81	2.19
154.	Renee	166	6.86	2.21	3.45	1.15	4.84	2.38	1.71	1.15
155.	Richie	17	5.31	2.28	2.83	1.21	4.76	2.11	2.04	1.25
156.	Richmond	129	7.33	1.39	3.12	1.09	5.17	2.42	2.02	1.36
157.	Reion	6	4.07	1.97	1.95	1.27	5.29	1.78	7.92	1.69
158.	Reuell	11	6.24	1.53	2.33	0.98	5.05	2.06	1.57	1.80
159.	Roundtree	25	4.14	2.26	2.48	1.21	6.52	2.51	2.13	1.65
160.	Rykal	1	2.79	1.77	1.36	0.73	5.40	2.38	5.96	1.98
161.	Sahlberg	5	4.50	1.99	1.53	0.80	4.36	2.22	5.15	1.69
162.	Salestone	5	4.07	1.79	1.71	0.52	5.79	2.06	4.90	1.80
163.	Sando	6	3.86	1.75	1.18	0.73	5.16	2.32	2.79	1.79
164.	Sanes	1	3.45	1.71	1.38	0.91	4.24	2.14	4.98	1.98
165.	Schape	6	4.40	1.78	1.69	0.92	5.27	2.03	4.81	2.08
166.	Smith	5922	9.00	0.00	4.69	0.75	3.34	3.25	1.25	1.19
167.	Smithson	13	6.05	2.09	2.21	1.17	4.00	2.16	2.71	1.74
168.	Solarz	14	3.24	1.71	1.33	0.69	5.78	1.92	5.45	1.92
169.	Springer	105	6.45	1.67	2.69	1.09	4.84	2.22	2.48	1.56
170.	Stevens	388	8.24	1.74	4.21	0.81	5.03	2.82	1.55	0.83
171.	Strickland	92	4.95	2.16	2.57	1.11	5.93	1.66	1.95	1.69
172.	Tallant	2	3.83	1.81	1.36	0.79	5.63	1.74	3.88	1.95
173.	Taylor	1908	7.79	2.24	4.31	0.84	4.60	2.66	1.70	1.20
174.	Towner	18	3.26	1.99	1.62	0.79	4.26	1.50	2.19	1.38
175.	Tubby	28	4.05	2.23	2.17	1.36	5.53	2.36	5.82	2.21
176.	Tyler	188	7.57	1.71	3.64	0.92	4.44	2.39	2.04	1.63
177.	Tynes	8	3.48	1.81	1.45	0.83	4.30	1.79	4.38	2.03
178.	Typilin	3	3.36	1.72	1.17	0.44	5.35	2.15	5.09	1.99
179.	Varner	16	4.55	1.77	1.45	0.63	4.67	1.80	3.65	1.92
180.	Verechoore	3	2.31	2.07	1.09	0.30	5.70	3.04	7.25	1.57
181.	Walker	1452	7.83	1.53	4.26	0.76	4.27	2.86	1.72	1.17
182.	Walton	279	7.21	1.28	3.46	0.94	5.16	2.19	1.73	1.22
183.	Wellner	8	5.12	1.83	1.52	0.77	4.53	2.01	2.64	1.58
184.	Wells	400	7.83	1.67	3.36	1.34	4.49	3.02	1.24	0.64
185.	Wight	4	4.81	2.05	2.00	1.01	4.54	2.30	4.08	2.25
186.	Wikianski	3	3.79	1.70	1.26	0.59	5.30	2.33	5.83	2.23
187.	Williams	5302	7.81	2.21	4.57	0.59	4.15	2.93	1.60	1.12
188.	Worth	23	6.62	2.22	2.93	1.00	3.29	2.08	1.71	1.43
189.	Zabab	2	2.29	1.64	1.19	0.59	6.72	2.61	5.75	1.95
190.	Zellinski	9	4.98	2.28	2.14	1.09	5.98	2.09	3.88	2.20
191.	Zmuda	31	1.76	1.49	1.19	0.71	5.30	2.87	6.46	2.08
192.	Zorek	4	3.07	2.11	1.57	0.94	6.05	2.33	6.28	2.15

Column Mean	263.62	4.77	2.21	5.08	3.96
Column SD	843.07	1.92	1.04	.73	2.02
Column Range	1-6708	1.76-9.00	1.00-4.76	3.29-7.09	1.06-8.56

Table 2
Correlations Between Scale Measures, Actual Frequency (Cnt), and Log-Actual Frequency (Log-Cnt)

	Freq	Fam	Orth	Pro
Cnt	.50	.57	-.38	-.36
Log-Cnt	.84	.88	-.53	-.73
Freq		.95	-.60	-.84
Fam			-.54	-.77
Orth				.59

tinctiveness and other measures, while consistently negative, are not generally high, and, of course, are problematic due to the lower reliability of the distinctiveness scale. As can be seen from Table 2, ratings were also correlated with log-actual frequency. Correlations based on this comparison are increased substantially. The semilog correlation reported in Table 2 for the present category scaling of frequency was, in fact, slightly higher than the log-log correlation for this same data (+.79). Using magnitude estimation procedures, Shapiro (1969) has reported correlations of +.92 to +.96 between log-actual word frequency and log estimates, and Rubin (1974) obtained correlations of +.77 and +.73 between log frequency and log estimates of syllable frequency.

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