

HISTORY OF PSYCHOLOGY TEXTS AS MEASURING INSTRUMENTS OF EMINENCE IN PSYCHOLOGY

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In a 1968 paper, Edith ANNIN, Edwin G. BORING, and Robert WATSON presented the results of a rating of 1040 individuals in the History of Psychology who had lived between 1600 and 1967 (ANNIN, BORING & WATSON, 1968). A panel of nine judges (which included both BORING and WATSON) rated these individuals on a four-point scale. A rating of zero was to be given if the judge was unfamiliar with a name, one point if the name was familiar, two if the judge knew what the individual had contributed to Psychology, and three if he thought the individual's name should be included among those of the 500 most eminent psychologists. The ratings of the nine judges were added. An individual's rating could therefore vary from zero to twenty-seven. The paper by ANNIN et al. (which in the following will be referred to as ANNIN) gives the ratings of the 538 individuals who rated eleven or more. The object was to arrive at approximately 500 most eminent names.

Instances of published use of the ratings have been few. R.I. WATSON (1974-1976) used them as a basis for selecting names for inclusion in his two

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volumes of *Eminent Contributors to Psychology*, and ZUSNE (ZUSNE, 1975a) has shown the ratings in a collection of short biographies, which included most of the 538 individuals in the ANNIN list. Undoubtedly there have been additional informal and unpublished uses of them.

Not all is well with the ratings. The selection of the original pool of 1040 names on the basis of citation frequencies was sound, although it sometimes misfired, as in the case of Hans BERGER, the discoverer of the brain waves, who did not get included in the original pool of names. The main problem is the abnormal frequency distribution of the ratings (ZUSNE, 1975b). It is practically rectangular, that is, the number of individuals with the same ratings does not change very much from one rating category to another. The only exceptions are the categories of eleven and twenty-seven, each of which contains about twice the number of individuals in the remaining categories. The expected shape of the distribution of excellence ratings is one in which most of the individuals are at the low end of the distribution, with fewer being given medium ratings, and the high end of the distribution having the smallest number of individuals. A rectangular distribution can mean one of two things: either the attribute rated is uniformly distributed among the individuals rated, or some bias or biases are at work. The first possibility is not very plausible. On the other hand, several biasing factors, all contributing to the rectangularity of the frequency distribution, were clearly at work. Some of them are acknowledged by ANNIN. Most of the biasing factors may be subsumed under the heading of undue familiarity and its interaction with the dimensions of the four-point scale used. Too high a degree of familiarity of at least some of the judges with the life and work of the individuals rated produced preferences, likes, dislikes, and unusual perspectives on these individuals. The judges' familiarity arose from personal acquaintanceships with some of the individuals rated, the judges' nationalities, their fields of specialization, knowledge of other, more famous individuals who were namesakes of the ratees, and some judges' exposure to the entire pool of names prior to rating (WATSON and BORING supplied almost eighty percent of the names). The scale itself measured individuals on two different continua, familiarity and eminence. Three of the four scale points were to be given for familiarity and only one for eminence, however. Because the judges were already very familiar with a large number of the names on the list, this led to a decrease in number at the low end of the distribution and an increase in the middle and upper ranges. The judges' tendency to rate too many individuals as prominent because of their familiarity with them was further abetted by the fact that the scale had no degrees of freedom for rating differences in eminence. The result - a similarity in the number of individuals

who received the same rating.

A study by ZUSNE (1975b) replicated in part ANNIN's methodology with a different panel of raters and with the rater biases reduced or eliminated. The resulting rating structure assumed the expected theoretical shape. Still, one may wonder if this result was due to the reduction of the biases or whether perhaps it was a consequence of the fact that the characteristics of the nine raters of the ZUSNE panel differed so markedly from those of the ANNIN raters. In addition, one may question the use of category scaling with an intensive attribute, such as eminence, regardless of the qualities of the raters (see S.S. STEVENS, 1966, on the subject). If judged eminence increases on a geometric, rather than an arithmetic, scale, as do such continua as the perceived intensity of an electric shock or of sound, the subjective value of money, or the goodness of Swiss watches, then forcing judgments into a restricted and prescribed range should obliterate a large amount of important information. Both Sigmund FREUD and Henri PIERON were rated twenty-seven by the ANNIN panel, but is PIERON really as important or eminent as FREUD? The intuitive answer is no, and, as well shall see, the direct scaling of magnitude production not only confirms this intuition but shows that PIERON is an individual of vastly lesser stature than FREUD. What follows is a description of a novel scaling procedure that was used to reevaluate the ANNIN ratings, arriving at a ranking (rather than rating) of the 538 contributors to Psychology, and to eliminate the problems associated with category scaling.

METHOD

Obtaining judges to rate hundreds of individuals and the judging itself are the most onerous aspects of a rating effort, such as that undertaken by ANNIN. The judges and the judging process also introduce most, if not all, of the biases. It would be most desirable, for instance, if the judges did not know that they have been selected as judges or that they are engaged in a formal rating task. While this may sound like a contradiction in terms, such judging has in fact already been done. To make it usable in assessing historical contributions requires only the assumption that the amount of space that one devotes to the discussion of the contributions of an individual to a field of enquiry is directly proportional to the judges eminence of the individual among many others who are similarly discussed. Specifically, we have assumed that the number of pages in a History of Psychology devoted to the discussion of a contributor to the field of Psychology is directly proportional to that con-

tributor's eminence.

As one thinks of the variables that might affect the length of one's writing on a given person in a History that discusses the work of many contributors it becomes clear that the correlation between eminence and number of pages cannot be perfect by any means. On the other hand, it must be substantial and robust: if an author thought that Galileo Galilei was more important to the development of Psychology than, say, Kenneth SPENCE, then he would be inclined to tell the reader more about the former than the latter and do so consistently with most of the individuals he discussed. The truth of this proposition becomes even more salient if an attempt is made to falsify it - the suggestion that a minor contributor should be given more space than a major one is immediately rejected as a perverse one (although it is not unthinkable in the case of a particular author writing about particular individuals). The process of writing about the historical contributions of many individuals is comparable to the direct scaling method of magnitude production in psychophysics. Here a person judges how many times more or less intense, strong, attractive, or important one stimulus is compared with another by producing some physical magnitude, such as by pressing a dynamometer or drawing lines of different lengths. The pressure, line length, etc. reflect the magnitude of the attribute being judged.

If the assumption just made holds, then a set of qualified judges becomes immediately available in the form of existing History of Psychology texts or, rather, the authors of these texts. The cooperation of the judges is not required, the judging has already been done, and it has been done without the judges' conscious awareness that they were engaged in a judging task. The composition and strength of the panel of judges may be changed as needed without much additional effort, the limit on the number of judges being only the number of history texts in existence. Finally, eminence is an intensive continuum (STEVENS, 1966), and the direct scaling methods, such as magnitude estimation and magnitude production, rather than the category scaling method, are the appropriate ones. If, therefore, one is free to write, for instance, twice as much about a given person than another because that person is thought to be twice as eminent, then the main condition for magnitude production has been met. This method should provide the basis for establishing a much more realistic scale of eminence than ratings on a point scale that force everybody into the same, very narrow and inflexible categories.

Although the textbook method eliminates the problems associated

with category scaling, the familiarity problem associated with the judges (or authors) themselves can only be reduced, not completely eliminated. As long as judges, raters, or authors are used, the problem of personal biases and predictions that color judgment will remain. The biases may be reduced by increasing the number of judges with different backgrounds, and this is much more conveniently accomplished when the judges are textbook authors.

Sixteen History of Psychology texts were used as data sources: BORING, 1950; ESPER, 1964; HEHLMANN, 1963; KANTOR, 1963-1969; KLEIN, 1970; LEAHEY, 1980; LUNDIN, 1979; MISIAK and SEXTON, 1966; MURPHY and KOVACH, 1972; PETERS, 1953; ROBINSON, 1976; SAHAKIAN, 1975; SCHULTZ, 1981; THOMSON, 1968; WATSON, 1978; and YAROSHEVSKII 1971. Twelve of these were by American authors, one (M.G. YAROSHEVSKII) by a Russian, one (Wilhelm HEHLMANN) by a German, and two (R.S. PETERS and Robert THOMSON) by British authors. In order to minimize differences in coverage of twentieth-century psychologists, only texts published in 1950 or later were used. The selection of texts was further restricted by the requirement that they do not vary excessively in the total number of pages and that they be complete, general histories of Psychology. The length of treatment given a contributor to Psychology by the author of a text was measured by counting the number of pages and fractions of a page. The smallest fraction measured was .05 of a page. Mere mention of a person's name was recorded as .01 of a page. The length of the material was measured wherever it occurred in the book, except lists of references, and was added for a person within a book.

The names that were targeted for measurement were these: (1) the 538 names in the ANNIN list that had received a rating of eleven or above; (2) thirty-two names from the ANNIN list that had been rated ten and below (see footnote 4 in ANNIN) and who were also mentioned in any of the sixteen texts; (3) 121 names of contributors who had died before 1600 or after 1967 and therefore had not been included among the 1040 names in the initial ANNIN list but who in all likelihood would have been rated at least eleven had they been included; and (4) six individuals who had died before 1967 but had not been included in the ANNIN list for one reason or another, such as Hans BERGER, mentioned earlier. Since comparisons between the ANNIN ratings and any other measure of eminence could be done only on the 570 individuals in the first two categories, these were combined in one group and considered separately from the 127 names in categories (3) and (4).

RESULT AND DISCUSSION

Percentages are the basic data used in the present analysis. The number of pages and fractions of a page devoted to an individual in a text were expressed as a percentage of the total number of pages in that text. For each name, the percentages were averaged across the sixteen texts. In all cases, the means were computed by dividing the sum of percentages by sixteen. To compensate for the varying number of texts that fail to mention a given name, one could use for the divisor either the number of texts that actually do mention the name or else the number of texts that fail to do so. The three methods were compared and found to yield no significant differences in terms of the resulting rank ordering of individuals.

TABLE I presents the 570 names with ANNIN ratings, arranged in order of the mean percentage of pages given each in the sixteen texts. The resulting ranks as well as the ANNIN ratings are also given.

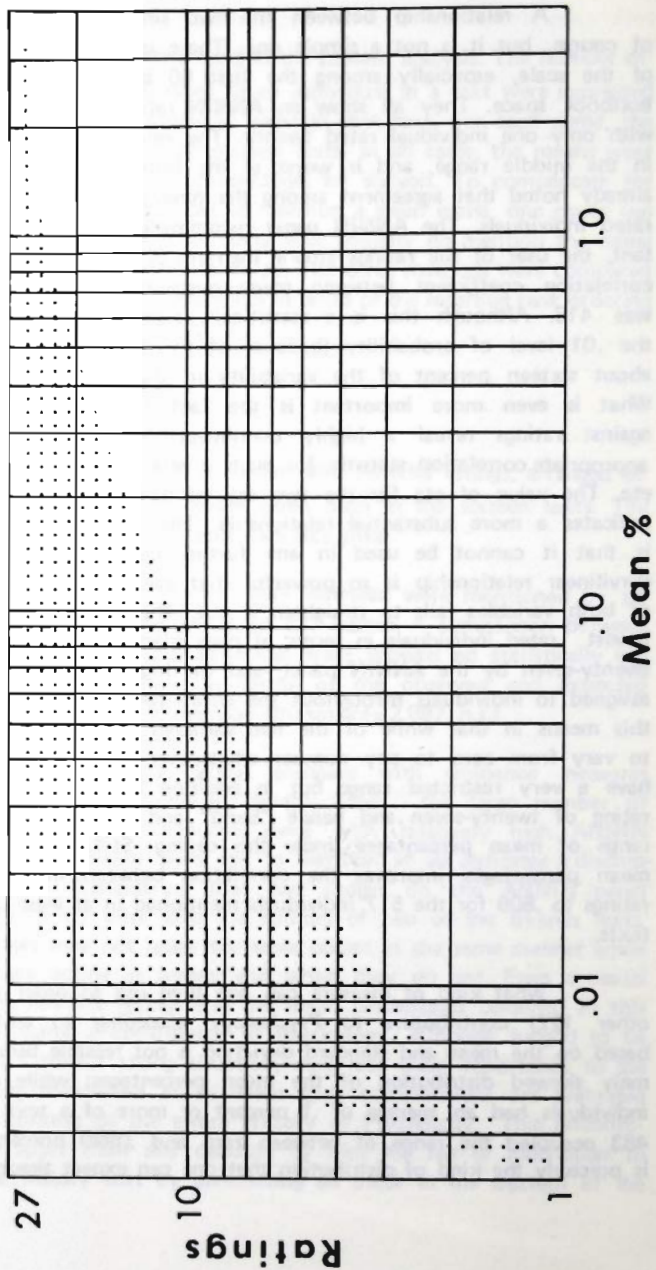
From the group of 570 names, only nineteen were mentioned by all sixteen texts and none from the group of 127 names. A comparison between the twelve American and four non-American texts showed no statistically significant difference between them in terms of the observed and expected number of mentions and failures to mention ($\chi^2 = 2.887$, n.s.).

How do the ANNIN ratings compare with eminence measures obtained using History of Psychology texts? First, the large number of individuals, fifty-three, which includes some with relatively high ANNIN ratings, but whom the history texts fail to mention at all indicates a discrepancy between them. Considering that two judges on the ANNIN panel (BORING and WATSON) were also the authors of two of the sixteen texts, it is clear that judges may not judge the same object in the same manner when they know they are acting as judges and when they do not. Even a casual comparison of the ANNIN ratings and the mean percentages obtained in this study shows that many a contributor to Psychology, although judged to be very important in a formal rating situation, may lose their importance to the point of not being mentioned at all when their contributions are evaluated within the larger context of the entire History of Psychology. This phenomenon occurs quite apart from any decision to trim the list of individuals to be discussed in a history text by eliminating all those at the bottom of the list.

A relationship between the two sets of measures is not absent, of course, but it is not a simple one. There is a good agreement at the top of the scale, especially among the first 60 individuals ranked according to textbook space. They all show an ANNIN rating of twenty-three and above, with only one individual rated twenty. The relationship begins to break down in the middle range, and is worst at the bottom of the scale. ANNIN had already noted that agreement among the nine judges was best for the highest rated individuals. The ANNIN paper recommends that, if agreement is important, the user of the ratings stop at the rank of fourteen. The product-moment correlation coefficient between mean percentages and the ANNIN ratings was .416. Although this is a statistically significant correlation, far beyond the .01 level of probability (because of the large N), it accounts for only about sixteen percent of the variability in the two sets of data correlated. What is even more important is the fact that mean percentages plotted against ratings reveal a highly curvilinear relationship (FIGURE I). The appropriate correlation statistic for such a relationship is the correlation ratio, η . The value of η for the two sets of data in question was .648, which indicates a more substantial relationship. The problem with the η statistic is that it cannot be used in any further computations. Furthermore, the curvilinear relationship is so powerful that even a logarithmic transformation of both variables fails to straighten it out. This is because even some of the lowest rated individuals in terms of page space devoted to them were rated twenty-seven by the ANNIN panel, and the highest three or four ratings were assigned to individuals throughout the entire range of mean percentages. What this means is that while of the two variables the mean percentages are free to vary from zero to any number whatsoever, the ANNIN ratings not only have a very restricted range but in addition have a ceiling of a maximum rating of twenty-seven and hence "bend" and keep the extremely extended range of mean percentages under this ceiling. Still, using logarithms of the mean percentages improves the correlation between them and the ANNIN ratings to .609 for the 517 individuals mentioned in at least one of the sixteen texts.

What kind of measure can one then use to order the 570 (and the other 127) contributors to Psychology according to eminence? Ranking based on the mean and standard deviation is not feasible because of the extremely skewed distribution of the mean percentages: while only eighty-seven individuals had an average of .1 percent or more of a text devoted to them 483 occupied the range of between zero and .0999 percent. This, however, is precisely the kind of distribution that one can expect theoretically, as stated

FIGURE 1: SCATTERPLOT OF MEAN PERCENTAGES OF PAGE SPACE DEVOTED TO 517 CONTRIBUTORS TO PSYCHOLOGY IN 16 HISTORY OF PSYCHOLOGY TEXTS AND OF RATINGS GIVEN THE SAME INDIVIDUALS BY A 9-JUDGE PANEL, IN LOG-LOG COORDINATES



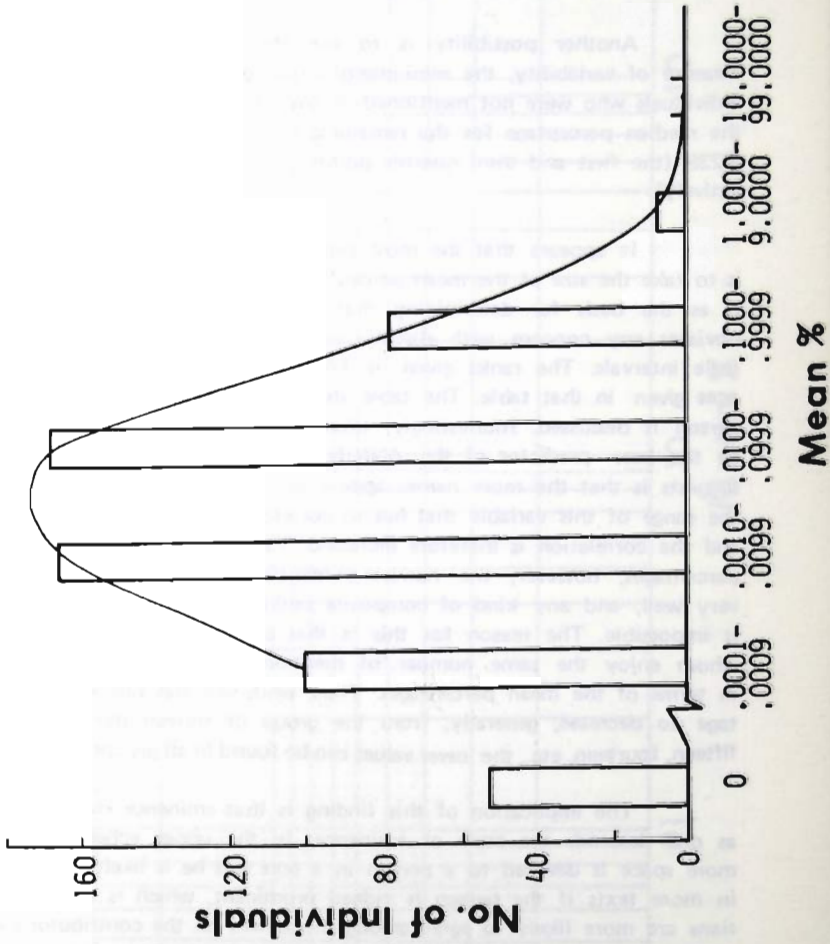
above. On a logarithmic scale, the distribution of mean percentages looks as in FIGURE II. Using the mean and standard deviation of log mean percentages to calculate standard scores is one possibility. The appropriate values for the 697 names, exclusive of those not mentioned in any of the sixteen texts (a total of fifty-seven) are -2.0099 and 1.0242 .

Another possibility is to use the median and the corresponding measure of variability, the semi-interquartile deviation, Q . When the fifty-seven individuals who were not mentioned in any of the sixteen texts are disregarded, the median percentage for the remaining 640 individuals is $.0109$ and the Q is $.0239$ (the first and third quartile points, Q_1 and Q_3 , are $.0041$ and $.0520$ respectively).

It appears that the most practical solution to the ordering problem is to take the size of the mean percentage for each individual measured and use it as the basis for determining that individual's rank. The ranking method obviates any concern with distribution constraints and the equality of the scale intervals. The ranks given in TABLE I are based on the mean percentages given in that table. The table also gives the number of texts in which a person is discussed. Interestingly, taken by itself, this measure turns out to be the best predictor of the ANNIN ratings: they correlate $.723$. What this suggests is that the more names appear in a history text, the less restricted is the range of this variable that has to correlate with the variable of 570 names and the correlation is therefore increased. Taken in conjunction with the mean percentages, however, the number-of-mentions measure does not work out very well, and any kind of composite ranking based on both these measures is impossible. The reason for this is that among groups of individuals all of whom enjoy the same number of mentions there is a considerable overlap in terms of the mean percentages. Thus, while the top values of mean percentage do decrease, generally, from the group of sixteen mentions to that of fifteen, fourteen, etc., the lower values can be found in all groups.

The implication of this finding is that eminence changes its meaning as one descends the scale of eminence. In the upper echelons of eminence, more space is devoted to a person in a text and he is likely to be mentioned in more texts if the person is indeed prominent, which is to say that historians are more likely to agree among themselves on the contributor's eminence and on the reasons for it. In the lower echelons, however, one may receive a brief mention in a history for a variety of reasons that are not necessarily related to eminence, and historians are not as likely to agree as to which of

FIGURE II: FREQUENCY DISTRIBUTION OF 570 CONTRIBUTORS TO PSYCHOLOGY WHO WERE RATED BY A 9-JUDGE PANEL, ACCORDING TO THE AMOUNT OF SPACE (MEAN PERCENTAGE OF PAGES) GIVEN THEM IN 16 HISTORY OF PSYCHOLOGY TEXTS. THE MEAN PERCENTAGES ARE ON A LOGARITHMIC SCALE



these reasons are sufficient to warrant a person's inclusion in a history. These reasons have to do with such things as how close a judge or writer feels a contributor to the History of Psychology is to him in terms of ideas, personal acquaintance or association, his familiarity with the contributor's work, the degree of compulsion felt to list everybody in any way connected with a given topic, decisions to slight a better known name in favor of an "underdog", and a number of other similar reasons. Most of them come under the heading of familiarity or even undue familiarity. Although there is a connection with eminence, it is certainly not quite the same thing.

What emerges from both the category scaling effort of ANNIN et al. and the magnitude production method reported here is that a historian's response to the historical visibility of a contributor to a field of science occurs along a bipolar continuum that is not all in the same plane, however: eminence and familiarity are neither synonyms nor antonyms but concepts related by way of two individuals: eminence refers to the individual evaluated while familiarity refers to a characteristic of the evaluator. Both ideas, eminence and familiarity, were explicitly included in the instructions given the ANNIN judges: after assessing their familiarity with a person and his contribution, the judges were to shift to an evaluation of that person's eminence. It appears that the same kind of shift between familiarity and eminence occurs when no explicit instructions are involved, for the historian's decision on whether to include a name in his history and how much to write about it depends on the interaction between judged eminence and the historian's familiarity and involvement with the object of his judgment. Although the measure of eminence reported here is not a pure measure of either eminence or the familiarity/involvement factor, it is superior to the category scaling method for psychometric reasons.

SUMMARY

A comparison is made between the ratings given 570 individuals, important to the History of Psychology, by a panel of judges in 1968 and a new measure of eminence based on the amount of space devoted to the discussion of such individuals in 16 History of Psychology texts. The 570 contributors are ranked according to this measure, as are 127 additional, previously unrated contributors. The psychometric advantages of the text space method as an instance of

direct scaling over the category scaling method are stressed, and the problem of judgment that is simultaneously based on eminence and familiarity or involvement with the person judged is stressed.

RESUMEN

En este trabajo se comparan, por una parte, las posiciones en una escala de estimación categórica, de 570 hombres importantes para la Historia de la Psicología, que les fueron asignadas por un grupo de nueve peritos en 1968, y, por la otra, una nueva medida de eminencia que se basa en la cantidad de páginas en que los autores de 16 historias de la Psicología tratan de estos hombres. Los 570 eminentes, más otras 127 personas importantes para la Historia de la Psicología, han sido asignadas nuevas posiciones de acuerdo con un procedimiento de ranking que se basa en la nueva medida de eminencia. Se subrayan las ventajas ofrecidas por el nuevo método, representante del método de psicometría directa, en contraste con el método indirecto, representado por las escalas de estimación categóricas. En conclusión, se trata del problema que presenta un criterio de evaluación que se funda a la vez en la eminencia de la persona evaluada por el perito y el conocimiento e interés que él tenga en esta persona.

YRAMMUS

TABLE I: 570 DECEASED CONTRIBUTORS TO PSYCHOLOGY IN ORDER OF EMINENCE

NAME OF CONTRIBUTOR	MEAN PERCENT OF SPACE GIVEN IN 16 TEXTS	Nº OF MENTIONS IN 16 TEXTS	RANK	ANNIN RATING
FREUD, Sigmund	3.2343	15	1	27
WUNDT, Wilhelm	2.4565	16	2	27
JAMES, William	1.7644	16	3	27
WATSON, John	1.4630	16	4	27
DESCARTES, René	1.3476	15	5	27
FECHNER, Gustav	1.1247	16	6	27
HUME, David	1.0425	15	7	27
LOCKE, John	1.0322	15	8	27
TITCHENER, Edward B.	.9143	16	9	27
KANT, Immanuel	.8923	16	10	25
HELMHOLTZ, Hermann von	.8692	16	11	27
LEWIN, Kurt	.8497	15	12	26
McDOUGALL, William	.8418	15	13	27
PAVLOV, Ivan	.7934	16	14	27
BERKELEY, George	.7889	14	15	25
GALTON, Francis	.7736	16	16	27
JUNG, Carl G.	.7638	14	17	27
DARWIN, Charles	.6912	16	18	27

TABLE 1 (Continuation)

HERBERT, Johann F.	.6649	15	19	27
LEIBNIZ, Gottfried W.	.6139	14	20	26
HULL, Clark	.5946	15	21	27
TOLMAN, Edward	.5922	15	22	27
REID, Thomas	.5695	12	23	25
ADLER, Alfred	.5689	13	24	27
MILL, John Stuart	.5645	16	25	27
HARTLEY, David	.5617	16	26	24
HALL, G.S.	.5542	14	27	27
EBBINGHAUS, Hermann	.5501	15	28	27
SPINOZA, Baruch	.5459	12	29	24
THORNDIKE, Edward L.	.5345	16	30	27
BAIN, Alexander	.5000	14	31	26
HOBBS, Thomas	.4846	13	32	24
CATTELL, James McK.	.4624	14	33	26
WERTHEIMER, Max	.4258	13	34	27
MILL, James	.4246	15	35	27
BRENTANO, Franz	.4030	16	36	27
KULPE, Oswald	.4002	15	37	27
LOTZE, Rudolf H.	.3890	12	38	25
SECHENOV, I.M.	.3755	12	39	26
MULLER, Johannes	.3656	16	40	25
SPENCER, Herbert	.3645	15	41	27
BROWN, Thomas	.3456	13	42	22
WEISS, Paul	.3392	12	43	22
WEBER, Ernst H.	.3243	16	44	27
KOHLER, Wolfgang	.3074	16	45	27
WOODWORTH, R.S.	.2838	12	46	27

TABLE I (Continuation)

VYGOTSKII, L.S.	.2812	5	47	20
BACON, Francis	.2659	11	48	23
GUTHRIE, Edwin R.	.2468	10	49	26
BINET, Alfred	.2453	14	50	27
HORNEY, Karen	.2374	9	51	23
STUMPF, Carl	.2362	15	52	27
HUSSERL, Edmund	.2345	13	53	26
WOLFF, Christian	.2241	10	54	25
LASHLEY, Karl	.2182	16	55	27
ALLPORT, Gordon	.2097	11	56	27
ANGELL, James R.	.2048	12	57	27
GALL, Franz Joseph	.1910	15	58	24
MULLER, Georg	.1894	13	59	26
DEWEY, John	.1881	15	60	27
BENEKE, Friedrich	.1716	8	61	17
JANET, Pierre	.1715	9	62	27
WARD, James	.1699	10	63	24
CARR, Harvey	.1598	9	64	23
MACH, Ernst	.1570	15	65	25
MARX, Karl	.1487	10	66	16
DILTHEY, Wilhelm	.1486	8	67	22
SULLIVAN, Harry, S.	.1417	7	68	23
CONDILLAC, Etienne	.1345	9	69	25
MORGAN, C.L.	.1336	13	70	27
HERING, Ewald	.1335	11	71	27
LA METTRIE, Julien	.1334	15	72	26
BEKHTEREV, V.M.	.1304	14	73	27
SPEARMAN, Charles E.	.1302	10	74	27

TABLE I (Continuation)

BELL, Charles	.1221	14	75	24
CABANIS, Pierre	.1190	10	76	22
NEWTON, Isaac	.1189	15	77	26
FLOURENS, Pierre	.1183	15	78	24
HAMILTON, William	.1175	7	79	21
HEGEL, Georg Wilhelm	.1155	13	80	18
KOFFKA, Kurt	.1131	14	81	27
MUNSTERBERG, Hugo	.1123	9	82	24
TETENS, Johann	.1121	6	83	11
BREUER, Josef	.1067	13	84	23
KORNILOV, K.N.	.1050	6	85	13
ROMANES, George J.	.1007	11	86	25
COMTE, Auguste	.0995	12	87	25
GALILEI, Galileo	.0919	12	88	22
MESMER, Franz Anton	.0904	9	89	25
EHRENFELS, Christian	.0901	12	90	26
MEAD, George H.	.0881	7	91	19
BUHLER, Karl	.0874	12	92	26
MAINE DE BIRAN, Marie	.0868	8	93	24
MALEBRANCHE, Nicolas	.0851	8	94	21
MICHOTTE, Albert	.0832	6	95	27
KATZ, David	.0824	9	96	25
ROUSSEAU, Jean Jacques	.0823	10	97	24
PINEL, Philippe	.0818	9	98	25
CHARCOT, Jean-Martin	.0808	16	99	27
BRIDGMAN, Percy W.	.0776	12	100	24
SHERRINGTON, Charles S.	.0766	12	101	27
LIPPS, Theodor	.0759	7	102	23

TABLE I (Continuation)

RUBINSHTEIN, S.L.	.0739	5	103	12
STERN, William	.0692	9	104	26
BRAID, James	.0679	8	105.5	21
LADD, George T.	.0679	9	105.5	24
STOUT, George F.	.0672	7	107	26
KRAEPELIN, Emil	.0654	9	108	27
SCHOPENHAUER, Arthur	.0641	11	109	22
NIETZSCHE, Friedrich	.0640	8	110	20
LOEB, Jacques	.0634	11	111	26
BALDWIN, James M.	.0627	11	112	25
RIBOT, Theodule	.0596	11	113	26
KRUGER, Felix	.0577	5	114	20
BESSEL, Friedrich	.0572	8	115	23
HOLT, Edwin B.	.0568	7	116.5	22
MYERS, Charles S.	.0568	6	116.5	21
YERKES, Robert M.	.0534	11	118	27
BENTHAM, Jeremy	.0525	8	119.5	22
RUBIN, Edgar	.0525	7	119.5	27
HOVLAND, Carl I.	.0522	5	121	23
STEWART, Dugald	.0520	11	122	23
DONDERS, Franciscus	.0518	13	123.5	19
KEPLER, Johannes	.0518	10	123.5	19
VOLTAIRE	.0496	8	125	19
KRETSCHMER, Ernst	.0491	9	126.5	26
SCRIPTURE, Edward W.	.0491	10	126.5	23
MAGENDIE, François	.0479	12	128	25
KLAGES, Ludwig	.0472	4	129	15
BROCA, Paul	.0471	13	130	24

TABLE I (Continuation)

WATT, Henry J.	.0459	12	131	19
BONNET, Charles	.0455	6	132	20
LAMARCK, Jean Baptiste	.0445	12	133	23
BERGSON, Henri	.0444	7	134	22
SPURZHEIM, Johann	.0440	10	135	21
HAECKEL, Ernst	.0424	6	136	15
MEINONG, Alexius	.0421	8	137	24
HOBHOUSE, Leonard T.	.0419	8	138	19
RIVERS, William H.	.0414	9	139	19
CANNON, Walter B.	.0402	8	140	27
ACH, Narziss	.0401	10	141	26
GASSENDI, Pierre	.0398	5	142	11
RORSCHACH, Hermann	.0396	6	143	26
HALLER, Albrecht	.0393	8	144	17
FRANZ, Shepher I.	.0390	7	145	20
BERNHEIM, Hyppolite	.0373	9	146	23
HELVETIUS, Claude	.0369	6	147	15
THURSTONE, Louis L.	.0363	9	148	27
SULLY, James	.0355	8	149	22
PEARSON, Karl	.0353	11	150.5	27
SPRANGER, Eduard	.0353	5	150.5	25
MARBE, Karl	.0352	10	152	24
HALL, Marshall	.0345	9	153	21
HUNTER, Walter S.	.0344	7	154	25
TERMAN, Lewis M.	.0342	10	155	27
HERDER, Johann	.0341	4	156	11
WHYTT, Robert	.0332	7	157	15
STAHL, G.E.	.0331	4	158.5	8

TABLE 1 (Continuation)

ZIEHEN, Theodor	.0331	6	158.5	18
HARVEY, William	.0329	11	160	20
UEXKULL, Jakob von	.0323	6	161	19
MALTHUS, Thomas R.	.0320	7	162	17
WITMER, Lightner	.0307	8	163	19
FISHER, R.A.	.0298	6	164	20
MESSER, August	.0294	7	165	18
CLAPAREDE, Edouard	.0290	8	166	26
CHELPAKOV, G.I.	.0289	5	167	2
QUETELET, Adolphe	.0276	7	168	24
MERLEAU-PONTY, Maurice	.0274	4	169	16
ELLIS, Havelock	.0270	3	170	23
ELLIOTSON, John	.0260	6	171	22
HARTMANN, Eduard von	.0258	9	172	15
LIEBEAULT, Ambroise	.0257	8	173.5	21
WILLIS, Thomas	.0257	3	173.5	8
GOLDSTEIN, Kurt	.0254	10	175	26
AVENARIUS, Richard	.0250	4	176.5	23
JAENSCH, Erich	.0250	7	176.5	25
PURKINJE, Jan Evangelista	.0248	9	178	24
JASTROW, Joseph	.0244	7	179	22
JACKSON, John H.	.0241	10	180	21
ALEXANDER, Franz G.	.0228	4	181.5	18
DUNCKER, Karl	.0228	3	181.5	18
LEWES, George H.	.0226	4	183	11
GALVANI, Luigi	.0222	8	184	20
HEAD, Henry	.0219	8	185	25
SMITH, Adam	.0218	6	186	17

TABLE 1 (Continuation)

LADD-FRANKLIN, Christine	.0211	2	187	22
CUVIER, Georges	.0210	4	188	12
BETHE, Albrecht	.0203	5	190	16
CARUS, Carl Gustav	.0203	2	190	6
YOUNG, Thomas	.0203	11	190	23
ESDAILE, James	.0202	5	192.5	20
MYERS, F.W.H.	.0202	4	192.5	10
BLEULER, Eugen	.0197	9	194	25
WIENER, Norbert	.0195	4	195	18
GESELL, Arnold	.0193	7	196	25
BERNARD, Claude	.0191	9	197.5	25
WERNER, Heinz	.0191	2	197.5	24
COOLEY, Charles H.	.0189	3	199	13
ESQUIROL, Jean Etienne	.0186	6	200.5	18
VAN HELMONT, Jean Baptiste	.0186	5	200.5	9
GOETHE, Wolfgang	.0182	11	203	25
GRIESINGER, Wilhelm	.0182	3	203	5
SPENCE, Kenneth W.	.0182	8	203	25
GEULINCX, Arnold	.0180	5	205	11
GEMELLI, Agostino	.0175	2	206	22
PASCAL, Blaise	.0174	7	207	14
DESTUTT DE TRACY, Antoine	.0172	4	208.5	11
FREY, Maximilian von	.0172	2	208.5	23
LE BON, Gustave	.0171	9	210	24
MATSUMOTO, Matataro	.0169	3	211	11
DIDEROT, Denis	.0167	9	213	15
PIERON, Henri	.0167	4	213	27

TABLE I (Continuation)

WALLACE, Alfred R.	.0167	8	213	15
LAVATER, Johann Caspar	.0166	3	215	10
HITZIG, Eduard	.0165	14	216	18
FICHTE, Johann Gottlieb	.0162	9	217	16
SMALL, Willard S.	.0160	6	218	18
MEYER, Adolf	.0159	6	219	21
KRIES, Johannes von	.0158	4	220	25
STEINTHAL, Heymann	.0156	8	221	12
FRITSCH, Gustav	.0152	14	222	18
FERRIER, David	.0151	6	223.5	10
TAINÉ, Hippolyte	.0151	5	223.5	21
LAZARUS, Moritz	.0148	8	225	13
GOLTZ, Friedrich	.0147	5	226	12
DU BOIS-REYMOND, Emil	.0146	13	227	23
MALINOWSKI, Bronislaw	.0144	4	228	22
PEIRCE, Charles S.	.0139	8	229	19
THOMSON, Godfrey	.0135	6	230	23
GODDARD, Henry H.	.0133	4	231	19
BICHAT, M.F.X.	.0132	5	232.5	17
HUXLEY, Thomas	.0132	9	232.5	18
BRUNSWIK, Egon	.0129	9	234.5	26
SCHELLING, Friedrich	.0129	8	234.5	15
LANGÉ, Carl	.0128	8	236	14
BERNSTEIN, Julius	.0126	5	237	12
BINSWANGER, Ludwig	.0123	4	238	19
WITASEK, Stephan	.0120	5	239	19
MOTORA, Yūjirō	.0119	2	240	6
CORNÉLIUS, Hans	.0118	4	241	9

TABLE I (Continuation)

LINNAEUS, Carolus	.0117	6	19	242
ROLANDO, Luigi	.0116	3	15	243
SPALDING, Douglas A.	.0114	3	12	244
MAXWELL, James Clerk	.0112	4	19	245
WASHBURN, Margaret	.0111	6	23	246
ORTH, Johannes	.0108	6	13	247
COGHILL, George E.	.0107	3	20	248
HELLPACH, Willy	.0105	3	12	249.5
ITARD, Jean	.0105	3	23	249.5
ROSS, Edward A.	.0103	3	11	251
HEALY, William	.0100	3	17	252.5
MENDEL, Gregor	.0100	9	21	252.5
LINDWORSKY, Johannes	.0099	2	15	254.5
RANK, Otto	.0099	7	23	254.5
JENNINGS, Herbert S.	.0097	4	25	257
MUNK, Herrmann	.0097	4	10	257
ROTHAKER, Erich	.0097	1	8	257
SANFORD, Edmund C.	.0095	5	20	259
FLOURNOY, Theodore	.0092	5	11	260
SEGUIIN, Edouard	.0091	2	18	261
DELBOEUF, Joseph	.0090	2	24	262.5
MAYO, Elton	.0090	1	11	262.5
HOLLINGWORTH, Harry L.	.0088	5	20	264
BOOK, William F.	.0087	1	12	265.5
SCOTT, Walter D.	.0087	3	11	265.5
MEUMANN, Ernst	.0086	7	23	268
SCHUMANN, Friedrich	.0086	8	19	268
STRONG, Edward E.	.0086	4	20	268

TABLE 1 (Continuation)

DARWIN, Erasmus	.0083	6	270	16
PROCHASKA, Georg	.0082	3	271	11
SWEDENBORG, Emmanuel	.0080	4	272	11
MAUDSLEY, Henry	.0079	9	273	16
MONTESSORI, Maria	.0078	3	274	21
DIX, Dorothea	.0077	2	275	11
BEERS, Clifford W.	.0076	2	276.5	17
MEYNERT, Theodor H.	.0076	6	276.5	12
KROH, Oswald	.0075	1	279.5	12
PONZO, Mario	.0075	1	279.5	15
PREYER, Wilhelm	.0075	8	279.5	22
TARDE, Gabriel	.0075	7	279.5	24
COUE, Emile	.0074	2	282.5	18
FLECHSIG, Paul	.0074	6	282.5	13
PRIESTLEY, Joseph	.0072	8	284	13
ALEMBERT, Jean L. de	.0069	3	285	15
DURKHEIM, Emile	.0067	3	286	23
DREVER, James	.0066	5	288	23
EDWARDS, Jonathan	.0066	3	288	11
TYLOR, Edward B.	.0066	2	288	13
LAPLACE, Pierre	.0065	6	290	17
BENUSSI, Vittorio	.0064	5	291.5	20
GOLGI, Camillo	.0064	6	291.5	14
CALKINS, Mary W.	.0063	8	293	20
JUDD, Charles H.	.0062	9	294.5	22
RUSH, James	.0062	2	294.5	5
BAHNSEN, Julius	.0060	1	296.5	4
RAMON Y CAJAL, Santiago	.0060	6	296.5	25

TABLE I (Continuation)

LUCAS, Keith	.0059	4	298	7
VALENTINE, Charles W.	.0058	2	299	13
DUMAS, Georges	.0057	5	300	21
JOHNSON, Samuel	.0056	2	301.5	12
KONIG, Arthur	.0056	7	301.5	16
BYKOV, K.M.	.0055	4	303.5	8
LEEUWENHOEK, Anton von	.0055	3	303.5	16
MOEDE, Walter	.0054	4	305.5	12
PRINCE, Morton	.0054	6	305.5	23
KELLY, George A.	.0053	1	307.5	17
RUCKMICK, Christian A.	.0053	2	307.5	17
DALTON, John	.0052	7	309	23
McGEOCH, John A.	.0051	4	310.5	20
VOLKMANN, Alfred W.	.0051	7	310.5	12
BOYLE, Robert	.0050	4	312.5	9
SHAND, Alexander F.	.0050	4	312.5	15
BRYAN, William L.	.0049	5	314	16
DE SANCTIS, Sante	.0048	1	315.5	13
SEASHORE, Carl E.	.0048	4	315.5	24
GAUSS, Karl	.0047	7	317.5	22
KIESOW, Federico	.0047	5	317.5	19
BRUCKE, Ernst	.0045	12	319	20
FRANKLIN, Benjamin	.0044	6	321	13
JONES, Ernest	.0044	8	321	22
WOLFF, Werner	.0044	1	321	9
OGDEN, Robert M.	.0043	5	323.5	20
WALLAS, Graham	.0043	1	323.5	11
BOUILLAUD, Jean Baptiste	.0042	1	325.5	5

TABLE 1 (Continuation)

STRATTON, George M.	.0042	5	325.5	22
BENEDICT, Ruth	.0041	5	327.5	16
BOWDITCH, Henry P.	.0041	5	327.5	12
BROWN, William	.0040	4	329	11
FROBES, Joseph	.0038	3	330	16
AUBERT, Hermann	.0037	3	331.5	20
BRILL, Abraham A.	.0037	3	331.5	18
DUNLAP, Knight	.0035	5	333	22
KLEIN, Melanie	.0034	6	334.5	17
WALLON, Henri	.0034	4	334.5	12
GOECKEL, Rudolf	.0033	4	339.5	1
HUMBOLDT, Wilhelm von	.0033	4	339.5	17
MERCIER, Désiré	.0033	3	339.5	13
MEYER, Max	.0033	5	339.5	20
MOLYNEUX, William	.0033	3	339.5	13
PFLUGER, Eduard	.0033	3	339.5	18
SELZ, Otto	.0033	4	339.5	17
ZWAARDEMAKER, Hendrick	.0033	2	239.5	23
ABRAHAM, Karl	.0031	5	347	20
BERNOULLI, Daniel	.0031	5	347	11
FLUGEL, John C.	.0031	4	347	16
GELB, Adhémar	.0031	3	347	15
JOST, Adolph	.0031	4	347	16
PILZECKER, Alfons	.0031	3	347	15
TIEDEMANN, Dietrich	.0031	2	347	11
AMES, Adalbert	.0030	2	351.5	16
EXNER, Sigmund	.0030	3	351.5	18
LAVOISIER, Antoine	.0029	5	354	16

TABLE I (Continuation)

MCCOSH, James	.0029	5	354	13
STEKEL, Wilhelm	.0029	5	354	16
BUFFON, Georges	.0028	4	358	13
FERE, Charles	.0028	5	358	18
HOFFDING, Harald	.0028	5	358	24
UNZER, Johann	.0028	3	358	7
VAHINGER, Hans	.0028	3	358	11
LUDWIG, Carl	.0027	10	362	14
NAGEL, Wilibald	.0027	2	362	12
PINTNER, Rudolf	.0027	1	362	18
LANGE, Ludwig	.0026	6	365	12
MARIOTTE, Edmé	.0026	2	365	22
YULE, George U.	.0026	3	365	20
CARPENTER, William B.	.0024	3	368	14
CONDORCET, Marie	.0024	3	368	20
LUBBOCK, John	.0024	3	368	16
LEVY-BRUHL, Lucien	.0023	2	372	23
LOMBROSO, Cesare	.0023	3	372	20
MURCHISON, Carl	.0023	5	372	20
WALLER, Augustus D.	.0023	3	372	5
WHIPPLE, Guy M.	.0023	3	372	20
BOAS, Franz	.0022	7	375.5	19
MONTESQUIEU, Charles de S.	.0022	4	375.5	17
GUILLAUME, Paul	.0021	1	378	16
HORNBOSTEL, Erich von	.0021	1	378	16
MACCURDY, John T.	.0021	1	378	12
PORTER, Noah	.0019	4	380.5	11
RICHEL, Charles	.0019	4	380.5	17

TABLE I (Continuation)

GRUHLE, Hans	.0018	5	382	12
ASTRUC, Jean	.0017	1	384	10
HUYGENS, Christian	.0017	4	384	26
RAPAPORT, David	.0017	4	384	21
EWALD, Julius	.0016	4	388.5	17
FROBEL, Friedrich	.0016	3	388.5	13
REVESZ, Géza	.0016	2	388.5	23
ROBINSON, Edward S.	.0016	2	388.5	16
SIMON, Théodore	.0016	8	388.5	21
VIERORDT, Karl von	.0016	3	388.5	17
BEAUNIS, Henri	.0015	6	395.5	18
BOURDON, Benjamin	.0015	2	395.5	13
CASON, Hulsey	.0015	1	395.5	11
FITTS, Paul	.0015	1	395.5	16
KRIS, Ernst	.0015	4	395.5	11
RAUCH, Frederick A.	.0015	2	395.5	5
RUSH, Benjamin	.0015	2	395.5	15
WHEATSTONE, Charles	.0015	4	395.5	14
FABRE, Jean	.0014	4	400.5	20
FERRARI, Giulio	.0014	1	400.5	5
MERSENNE, Marin	.0013	1	403	11
PESTALOZZI, Johann	.0013	6	403	22
TSCHERMAK, Johann	.0013	1	403	8
VERWORN, Max	.0012	1	405	14
BINGHAM, Walter V.	.0011	4	408	23
DELABARRE, Edmund B.	.0011	3	408	12
LANGFELD, Herbert S.	.0011	4	408	20
STORRING, Gustav	.0011	3	408	15

TABLE I (Continuation)

WHITE, William A.	.0011	6	408	14
BURNHAM, William H.	.0010	4	414.5	13
COLERIDGE, Samuel T.	.0010	2	414.5	11
FARRAND, Livingston	.0010	2	414.5	11
FOREL, August	.0010	5	414.5	12
GODENOUGH, Florence	.0010	3	414.5	20
LEHMANN, Alfred	.0010	5	414.5	16
PACE, Edward A.	.0010	4	414.5	5
WIRTH, Wilhelm	.0010	4	414.5	14
AGASSIZ, Louis	.009	5	421	13
DONALDSON, Henry H.	.0009	6	421	15
GROOS, Karl	.0009	1	421	16
HICKOCK, Laurens P.	.0009	1	421	5
WARREN, Howard C.	.0009	7	421	23
BENTLEY, Madison	.0008	2	426	21
BROWN-SEQUARD, Charles E.	.0008	4	426	14
HECHT, Selig	.0008	2	426	22
URBAN, Francis M.	.0008	2	426	14
WELLS, Frederick L.	.0008	2	426	11
ANGELL, Frank	.0007	6	434	16
BRETT, George S.	.0007	1	434	18
FOURIER, Charles	.0007	1	434	14
KELLEY, Truman L.	.0007	3	434	21
NISSEN, Henry W.	.0007	1	434	14
SCHLOSBERG, Harold	.0007	4	434	20
STOUFFER, Samuel A.	.0007	1	434	13
UPHAM, Thomas C.	.0007	1	434	6

TABLE I (Continuation)

WHEELER, Raymond H.	.0007	3	434	19
WHEELER, William M.	.0007	1	434	11
WHITEHEAD, Alfred N.	.0007	1	434	14
HERRICK, Charles J.	.0006	5	441	16
LESSING, Gotthold	.0006	3	441	11
PLATEAU, Joseph	.0006	2	441	18
COMENIUS, Joann	.0005	4	444	15
DESSOIR, Max	.0005	2	444	18
FERENCZI, Sándor	.0005	4	444	19
HENRI, Victor	.0005	4	444	16
PILLSBURY, Walter B.	.0005	4	444	21
BLIX, Magnus	.0004	3	455	14
EULER, Leonhard	.0004	3	455	12
FULLERTON, George S.	.0004	3	455	14
FULTON, John T.	.0004	3	455	14
GOLDSCHIEDER, Alfred	.0004	3	455	18
HEYMANS, Gerardus	.0004	3	455	17
HUMPHREY, George	.0004	4	455	17
KLEMM, Otto	.0004	3	455	20
LINTON, Ralph	.0004	3	455	19
REYMERT, Martin L.	.0004	1	455	14
ROSANOFF, Aaron J.	.0004	3	455	15
ROYCE, Josiah	.0004	3	455	16
SACHS, Hanns	.0004	3	455	13
SCHEERER, Martin	.0004	1	455	14
SMUTS, Jan C.	.0004	1	455	13
SOUTHARD, Elmer E.	.0004	1	455	11

TABLE I (Continuation)

ZILBOORG, Gregory	.0004	4	455	17
DECROLY, Ovide	.0003	2	470	11
DRIESCH, Hans	.0003	2	470	18
FEARING, Franklin	.0003	2	470	12
HOLLINGWORTH, Leta S.	.0003	2	470	12
JAENSCH, Walter	.0003	2	470	11
KINSEY, Alfred C.	.0003	2	470	21
KLUCKHOHN, Clyde K.	.0003	2	470	18
MULLER-FREIENFELS, Richard	.0003	2	470	15
ROBACK, Abraham A.	.0003	2	470	17
SAPIR, Edward	.0003	2	470	19
SCHILLER, Friedrich	.0003	2	470	13
WARDEN, Carl J.	.0003	2	470	19
WARNER, Lucien H.	.0003	2	470	11
COUSIN, Victor	.0002	2	486.5	15
CROCE, Benedetto	.0002	1	486.5	15
DEARBORN, Walter F.	.0002	2	486.5	12
DE VRIES, Hugo	.0002	2	486.5	16
DOWNEY, June E.	.0002	2	486.5	14
ERDMANN, Benno	.0002	2	486.5	12
FARADAY, Michael	.0002	2	486.5	15
FARNSWORTH	.0002	1	486.5	12
FRENKEL-BRUNSWIK, Else	.0002	2	486.5	19
HENMON, Vivian A.	.0002	2	486.5	11
HENNING, Hans	.0002	2	486.5	20
LEUBA, James H.	.0002	2	486.5	15
MEISSNER, Georg	.0002	2	486.5	11

TABLE I (Continuation)

OGDEN, C.K.	.0002	1	486.5	12
POPPELREUTER, Walther	.0002	2	486.5	16
STARBUCK, Edwin D.	.0002	2	486.5	12
TROLAND, Leonard T.	.0002	2	486.5	21
TUKE, William	.0002	2	486.5	3
VALENTINE, Willard L.	.0002	1	486.5	13
WISSELER, Clark	.0002	2	486.5	14
ANGYAL, Andras	.0001	1	506.5	13
BAIRD, John W.	.0001	1	506.5	16
BEEBE-CENTER, John G.	.0001	1	506.5	19
BLONDEL, Charles	.0001	1	506.5	11
BOOLE, George	.0001	1	506.5	15
BROWN, Warner	.0001	1	506.5	11
CROZIER, William J.	.0001	1	506.5	18
DODGE, Raymond	.0001	1	506.5	20
FENICHEL, Otto	.0001	1	506.5	15
HERSKOVITZ, Melville J.	.0001	1	506.5	13
HOLZINGER, Karl J.	.0001	1	506.5	13
KIRKPATRICK, Edwin A.	.0001	1	506.5	11
PARSONS, John H.	.0001	1	506.5	13
PATERSON, Donald G.	.0001	1	506.5	15
PAULHAN, Frédéric	.0001	1	506.5	11
PFUNGST, Oskar	.0001	1	506.5	14
RIGNANO, Eugenio	.0001	1	506.5	15
THIERY, Armand	.0001	1	506.5	9
WEBER, Max	.0001	1	506.5	19
ZENER, Karl	.0001	1	506.5	15

TABLE I (Continuation)

The following 53 individuals that were also rated by the ANNIN panel, received no mention in the 16 history texts. The ANNIN ratings are in parentheses.

ANGIER, Roswell P.	(12)	AVELING, Francis	(11)
BABINSKI, Joseph	(20)	BALLARD, Philip B.	(11)
BANISTER, Harry	(11)	BIRD, Charles	(11)
BRUNSCHVIG, León	(11)	CARLSON, Anton J.	(12)
DAVENPORT, Charles B.	(11)	DELACROIX, Henri	(15)
DUSSER DE BARENNE, Johannes G.	(13)	EMMERT, Emil	(17)
ENGLISH, Horace B.	(14)	FERNBERGER, Samuel W.	(18)
FERREE, Clarence E.	(11)	FEUERBACH, Paul J. Anselm von	(14)
FREEMAN, Frank N.	(11)	FROMM-REICHMANN, Frieda	(12)
GOSSET, William S.	(13)	HEALY, William	(11)
JEVONS, William S.	(11)	JODL, Friedrich	(11)
KAFKA, Gustav	(14)	KARWOSKI, Theodore	(11)
KELLOG, Chester E.	(13)	KUHLMANN, Frederick	(11)
LANDIS, Carney	(14)	LAPICQUE, Louis	(18)
LORGE, Irving	(14)	LOUTITT, Chauncey McK.	(13)
McGREGOR, Douglas	(12)	MIRA Y LOPEZ, Emilio	(13)
MOLL, Albert	(13)	MONAKOW, Constantin von	(12)
MULLER-LYER, Franz	(19)	MUENZINGER, Karl F.	(16)
PECKHAM, George W.	(12)	POLYAK, Stephan	(12)
RANSCHBURG, Paul	(12)	RAYLEIGH, John W.S.	(18)
ROHEIM, Géza	(11)	SANFORD, Filmore H.	(16)
SAUDEK, Robert	(11)	SCHILLER, Paul H.	(13)

TABLE I (Continuation)

SEASHORE, Harold G.	(11)	SHEPARD, John F.	(11)
SIDIS, Boris	(17)	SNODDY, George S.	(11)
STOELTING, Christian	(12)	STONE, Calvin P.	(16)
SYMONDS, Percival M.	(11)	TWITMYER, Edwin B.	(14)
WIERSMA, Enno D.	(12)		

NOTES

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- (2) David P. DAILEY is Assistant Professor of Psychology at the University of Tulsa, Tulsa, Oklahoma 74104. He teaches Statistics in the Psychology Department and Artificial Intelligence in the Mathematics Department. His research concerns cognition and graph theory.

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