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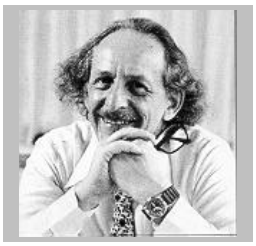

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EUGENE GARFIELD
INSTITUTE FOR SCIENTIFIC INFORMATION®
3501 MARKET ST., PHILADELPHIA, PA 19104

Psychology Research, 1986-1990: A Citationist Perspective on the Highest Impact Papers, Institutions, and Authors

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Abstract

A citation analysis of the core psychology literature published and cited from 1986 through 1990 is presented. It is based on 229 psychology journals indexed by ISI® in *Current Contents®/Social & Behavioral Sciences* during the five-year period, representing 49,622 papers in all fields of psychology. The papers, institutions, and authors with the highest current impact on psychology scholarship are identified.

Introduction

Several reprinted papers and guest essays reporting citation analyses of the psychology literature have appeared in *Current Contents®* (*CC®*) in recent years. For example, Herbert Walberg of the University of Illinois, Chicago, discussed the core journals, research fronts, and highly cited papers in educational psychology.[1] Also, Ray Over of La Trobe University, Bundoora, Australia, studied the relation between age and scientific achievement among psychologists using citation frequency of their papers as an indicator.[2]

However, our last comprehensive analysis involving the psychology literature appeared in *CC* about 15 years ago. That study reported on the most-cited papers, books, and authors in the social sciences.[3-5] So we were glad for the opportunity to provide an updated citationist perspective on psychology research when we heard from Pierre Philippot, Catholic University of Louvain, Belgium.

He was planning a daily newspaper for the 25th International Congress of Psychology held last July in Belgium, the *Brussels Congress News*. As a result of his discussion with my scientific assistant, Al Welljams-Dorof, we prepared a study of the highest impact papers, institutions, and authors of the psychology literature published and cited from 1986 through 1990.

Readers Respond

The study originally ran as a three-part series in the congress newspaper and is presented here as a single essay.[6-8] We invited comments on the study prior to its publication in *CC* and the response was surprisingly quick. Even while the congress was in session, faxes requesting reprints started coming in. Many of these included comments which have been incorporated in this essay.

The Basis of the Study

This study is based on 229 psychology journals covered by the Institute for Scientific Information® (ISI®) in *CC/Social & Behavioral Sciences* (*CC/S&BS*) from 1986 through 1990. They represent virtually all fields of psychology research, including applied, behavioral, clinical, developmental, educational, experimental, mathematical, social, and so on. The study does not include psychology papers published in *multidisciplinary* journals. Indeed, even psychiatry or other medical journals were *not* included. (Since psychiatrists often publish in psychology journals, many will appear in the rankings of authors.) We have also excluded books.

The study included 49,622 papers published from 1986 through 1990. By "papers" we mean original research articles, reviews, and technical notes only—edito-

Table 1: ISI®-indexed psychology papers cited at least 75 times in the 1986-1990 *SCI®* and *SSCI®*.

Cites	Bibliographic Reference
174	**Schacter D L.** Implicit memory—history and current status. *J. Exp. Psychol. Lett.* 13:501-18, 1987. Univ. Toronto, Ontario, Canada
138	**Clark D M.** A cognitive approach to panic. *Behav. Res. Ther.* 24:461-70, 1986. Univ. Oxford, Warneford Hospital, Dept. Psychiat., England
128	**Browne A & Finkelhor D.** Impact of child sexual abuse—a review of the research. *Psychol. Bull.* 99:66-77, 1986. Univ. New Hampshire, Durham
125	**Taylor S E & Brown J D.** Illusion and well-being: a social-psychological perspective on mental health. *Psychol. Bull.* 103:193-210, 1988. Univ. California-Los Angeles, Dept. Psychol., Southern Methodist Univ., Dallas, TX
120	**Baron R M & Kenny D A.** The moderator-mediator variable distinction in social-psychological research: conceptual, strategic, and statistical considerations. *J. Personal. Soc. Psychol.* 51:1173-82, 1986. Univ. Connecticut, Dept. Psychol., Storrs
119	**Blaney P H.** Affect and memory—a review. *Psychol. Bull.* 99:229-46, 1986. Univ. Miami, Dept. Psychol., Coral Gables, FL
110	**Achenbach T M, McConaughy S H & Howell C T.** Child adolescent behavioral and emotional problems—implications of cross-informant correlations for situational specificity. *Psychol. Bull.* 101:213-32, 1987. Univ. Vermont, Dept. Psychiat., Burlington
110	**Folkman S, Lazarus R S, Dunkelschetter C, DeLongis A & Gruen R J.** Dynamics of a stressful encounter—cognitive appraisal, coping, and encounter outcomes. *J. Personal. Soc. Psychol.* 50:992-1003, 1986. Univ. California-Berkeley, Dept. Psychol.
107	**Booth-Kewley S & Friedman H S.** Psychological predictors of heart disease—a quantitative review. *Psychol. Bull.* 101:343-62, 1987. Univ. California-Riverside, Dept. Psychol.
101	**Brownell K D, Marlatt G A, Lichtenstein E & Wilson G T.** Understanding and preventing relapse. *Amer. Psychol.* 41:765-82, 1986. Univ. Pennsylvania Sch. Med., Philadelphia, Univ. Washington, Seattle, Univ. Oregon and Oregon Res. Inst., Eugene, Rutgers State Univ., New Brunswick, NJ
98	**Parker J G & Asher S R.** Peer relations and later personal adjustment—are low-accepted children at risk? *Psychol. Bull.* 102:357-89, 1987. Univ. Illinois, Dept. Psychol. & Bur. Educ. Res., Champaign
90	**Plomin R & Daniels D.** Why are children in the same family so different from one another? *Behav. Brain Sci.* 10:1-16, 1987. Pennsylvania State Univ., Dept. Individ. & Family Stud., University Park, Stanford Univ., Dept. Psychiat., CA
90	**Soubrie P.** Reconciling the role of central serotonin neurons in human and animal behavior. *Behav. Brain Sci.* 9:319-35, 1986. Univ. Paris, Fac. Med., Dept. Pharmacol., France
89	**Wyer R S & Srull T K.** Human cognition in its social context. *Psychol. Rev.* 93:322-59, 1986. Univ. Illinois, Dept. Psychol., Champaign
88	**Beck A T, Steer R A & Garbin M G.** Psychometric properties of the Beck Depression Inventory—25 years of evaluation. *Clin. Psychol.* 8:77-100, 1988. Univ. Pennsylvania Sch. Med., Dept. Psychiat., Univ. Med. & Dent. New Jersey, Dept. Psychiat., Camden, Natl. League Nursing, New York, NY
87	**Hobson J A, Lydic R & Baghdoyan H A.** Evolving concepts of sleep cycle generation—from brain centers to neuronal populations. *Behav. Brain Sci.* 9:371-400, 1986. Harvard Univ. Sch. Med., Neurophysiol. Lab., Boston, MA
85	**Higgins E T & Bargh J A.** Social cognition and social perception. *Annu. Rev. Psychol.* 38:369-425, 1987. New York Univ., Dept. Psychol., NY
85	**Holender D.** Semantic activation without conscious identification in dichotic listening, parafoveal vision, and visual masking—a survey and appraisal. *Behav. Brain Sci.* 9:1-23, 1986. Univ. Libre Bruxelles, Psychol. Exptl. Lab., Belgium
82	**Hastie R & Park B.** The relationship between memory and judgment depends on whether the judgment task is memory-based or online. *Psychol. Rev.* 93:258-68, 1986. Northwestern Univ., Dept. Psychol., Evanston, IL, Univ. Colorado, Dept. Psychol., Boulder
81	**Naatanen R & Picton T.** The N1 wave of the human electric and magnetic response to sound—a review and an analysis of the component structure. *Psychophysiology* 24:375-425, 1987. Univ. Helsinki, Dept. Psychol., Finland, Univ. Ottawa, Dept. Med., Ontario, Canada
81	**Striegel-Moore R H, Silberstein L R & Rodin J.** Toward an understanding of risk factors for bulimia. *Amer. Psychol.* 41:246-63, 1986. Yale Univ., Dept. Psychol., New Haven, CT
81	**Sweeney P D, Anderson K & Bailey S.** Attributional style in depression—a meta-analytic review. *J. Personal. Soc. Psychol.* 50:974-91, 1986. Indiana Univ., Program Social Psychol., Bloomington, Univ. Pittsburgh, PA

Cites	Bibliographic Reference
81	**Wagner R K & Torgesen J K.** The nature of phonological processing and its causal role in the acquisition of reading skills. *Psychol. Bull.* 101:192-212, 1987. Florida State Univ., Dept. Psychol., Tallahassee
79	**Folkman S, Lazarus R S, Gruen R J & DeLongis A.** Appraisal, coping, health status, and psychological symptoms. *J. Personal. Soc. Psychol.* 50:571-9, 1986. Univ. California-Berkeley, Dept. Psychol.
79	**McCrae R R & Costa P T.** Validation of the 5-factor model of personality across instruments and observers. *J. Personal. Soc. Psychol.* 52:81-90, 1987. Natl. Inst. Aging, Gerontol. Res. Ctr., Bethesda, MD
75	**Pearl J.** Fusion, propagation, and structuring in belief networks. *Artif. Intell.* 29:241-88, 1986. Univ. California-Los Angeles, Dept. Comp. Sci., Cognit. Syst. Lab.

rials, letters to the editor, meeting abstracts, and other research communications were excluded.

These papers received 94,023 citations during 1986-1990 in the combined *Social Sciences Citation Index®* (*SSCI®*) and *Science Citation Index®* (*SCI®*). Obviously, papers published in 1986 would generally have received more citations than those in 1990. Dividing citations by papers, the average psychology paper was cited 1.89 times. This is the five-year citation impact "baseline" for this study.

A Focus on Recent Psychology Research

From this database, it is fairly straightforward to generate ranked lists of the highest impact papers, institutions, and authors. Before the rankings are presented, several readers' comments should be noted.

The five-year time period selected, 1986-1990, may not be the "optimum" time span for a bibliometric analysis of psychology research. David Klahr, Carnegie Mellon University, Pittsburgh, wondered how "a lagged analysis, in which a citation period lagged the publication period by a couple of years, would change the results."[9] Urs Schoepflin, Max Planck Institute for Human Development and Education, Berlin, pointed out that "the variable observation period of one to five years...might be too short.... [P]apers in the social sciences tend to have a longer maturing period in citation aging, the peak being around four years after publication."[10]

ISI's annual *Journal Citation Reports®* (*JCR®*) gives some indication of the cited "half-life" of psychology papers. That is, it provides data, counting back from the current year, on the point at which a journal received half of its citations. Of the 229 ISI-indexed psychology journals in the 1990 *JCR*, 35 (15.3%) showed half-lives of five years or less.[11] In other words, papers published from 1984 through 1990 accounted for 50 percent of all 1990 citations to these journals. And 140 journals (61.1%) had half-lives of eight years or less.

These data suggest that a more representative study of the psychology journal literature should perhaps be based on papers published over the past 8- to-10 years. But the purpose of our study was to identify papers, institutions, and authors with the highest *current* impact on psychology scholarship. In effect, the study focuses on "hot" research that has attracted high levels of current interest in the field. A comparable study of neuroscience or molecular biology might best be limited to two or three years.

Most-Cited Papers

Table 1 lists 26 papers published between 1986 and 1990 that were cited at least 75 times during this period. Complete bibliographic information is provided—all authors, article title, journal title as well as volume, pages, and year, and author institutional affiliation.

The 26 papers were published in 11 journals. *Psychological Bulletin* accounted for seven papers, followed by *Journal of Personality and Social Psychology* (five), *Behavioral and Brain Sciences* (four), and *American Psychologist* and *Psychological Review* (two each). Not surprisingly, they

Table 2: Fifty highest impact institutions in psychology, 1986-1990 *SCI* ® and *SSCI* ®, which produced at least 100 ISI®-indexed papers. A = Impact. B = Papers. C = Citations.

Rank	Institution	A	B	C
1	Carnegie Mellon Univ. Pittsburgh, PA	6.10	199	1,213
2	Univ. Vermont Burlington, VT	5.16	108	557
3	Princeton Univ. Princeton, NJ	4.92	130	639
	Univ. Oxford Oxford, England	4.92	212	1,043
5	Univ. Toronto Ontario, Canada	4.78	437	2,088
6	Univ. Pennsylvania Philadelphia, PA	4.70	311	1,461
7	Medical Research Council London, England	4.68	196	917
8	Stanford Univ. Stanford, CA	4.62	399	1,844
9	Univ. Illinois Champaign-Urbana, IL	4.51	726	3,275
10	Univ. Pittsburgh Pittsburgh, PA	4.47	447	1,997
11	Univ. Oregon Eugene, OR	4.43	209	926
12	Univ. Chicago Chicago, IL	4.40	146	642
13	Temple Univ. Philadelphia, PA	4.29	180	773
14	New York Univ. New York, NY	4.28	297	1,271
15	Northwestern Univ. Evanston, IL	4.27	270	1,153
16	Univ. California Berkeley, CA	4.22	316	1,335
17	Vanderbilt Univ. Nashville, TN	4.10	184	754
18	Univ. Michigan Ann Arbor, MI	4.09	517	2,113
19	Mass. Inst. Technol. Cambridge, MA	3.98	125	498
20	Univ. California San Diego, CA	3.95	293	1,157
21	Univ. Rochester Rochester, NY	3.88	174	675
22	Harvard Univ. Cambridge, MA	3.86	432	1,668
23	Univ. California Los Angeles, CA	3.84	728	2,794
24	Indiana Univ. Bloomington, IN	3.83	352	1,348
25	Univ. Washington Seattle, WA	3.70	399	1,475
26	Max Planck Inst. Psychol. Res. Berlin/Munich/Nijmwegen Germany	3.67	105	385
27	Cornell Univ. Ithaca/New York, NY	3.66	222	812
28	Inst. Psychiatry Univ. London London, England	3.65	174	635
	Yale Univ. New Haven, CT	3.65	360	1,314
30	State Univ. New York Stony Brook, NY	3.58	176	630
31	Univ. California San Francisco, CA	3.48	192	668
32	Univ. Connecticut Storrs, CT	3.44	246	846
33	Univ. Western Ontario London, Ontario, Canada	3.43	377	1,292
34	Univ. California Santa Barbara, CA	3.41	217	741
35	Univ. Kentucky Lexington, KY	3.38	170	575
36	Univ. British Columbia Vancouver, Canada	3.24	349	1,131
37	Brown Univ. Providence, RI	3.23	181	584
38	Univ. Virginia Charlottesville, VA	3.23	188	608
39	Duke Univ. Durham, NC	3.19	185	591
40	Columbia Univ. New York, NY	3.16	170	538
	Univ. Minnesota Minneapolis, MN	3.16	483	1,527
42	Johns Hopkins Univ. Baltimore, MD	3.14	214	672
43	Univ. Massachusetts Amherst/Boston, MA	3.13	292	913

Rank	Institution	A	B	C
44	Michigan State Univ. East Lansing, MI	3.10	297	921
45	Univ. Utah Salt Lake City, UT	3.09	171	529
46	Univ. Colorado Boulder/Colorado Springs, CO	3.07	370	1,136
47	Univ. Miami Coral Gables, FL	3.06	173	530
48	Rutgers State Univ. New Brunswick, NJ	3.02	284	857
	State Univ. New York Buffalo, NY	3.02	166	502
50	Texas A&M Univ. College Station, TX	3.00	132	336

rank high among psychology journals in terms of impact, as reported in the 1990 *SSCI JCR*.

Thirty-six institutions were involved in producing the most-cited psychology papers, of which 30 are in the US. Four of these each published two papers (Univ. California-Berkeley, Univ. California-Los Angeles, Univ. Illinois at Champaign-Urbana, and Univ. Pennsylvania). Canada was represented by two institutions (Univ. Ottawa and Univ. Toronto), and one each is based in Belgium (Univ. Libre Bruxelles), Finland (Univ. Helsinki), France (Univ. Paris), and the UK (Univ. Oxford).

Highest Impact Institutions

The highest impact institutions for the *entire* database, not just the list of most-cited papers, are shown in Table 2. Their citation impact was 1.6 to 3.2 times as great as the baseline for the field. It should be noted that only those institutions that produced at least 100 papers over the five-year period are included.

Of the 50 institutions listed, 43 are based in the US. The UK and Canada are represented by three institutions each, followed by Germany with one.

Anita DeLongis, one of the authors identified below, raised an interesting point about the rankings in Table 2. Originally her current affiliation was given in the *Brussels Congress News* series as the University of Illinois. She noted that she is now at the University of British Columbia, and this correction was made in this essay. She suggested that the respective institutional rankings might change if her citations were credited to British Columbia and deducted from Illinois.[12]

Actually, the rankings are unaffected. The reason is simple—citations were credited to institutions listed on the paper's address line. That is only fair, since the institution where the work was done deserves to be credited. While the career moves of individual authors do not alter *past* institutional citation or impact rankings, they may influence *future* trends.

This was illustrated in a *Science Watch®* report comparing citation impact trends in university physics research from 1973 to 1988.[13] David Pendlebury, the editor, noted a decline in Harvard University's impact. He suggested that the trend may in part have been due to the departure from Harvard of Edward Witten to Princeton University and Steven Weinberg to the University of Texas at Austin, both of whom are among the most-cited physics authors.

Schoepflin also questioned the listing of the Max Planck Institute for Human Development and Education.[10] The ranking that appeared in the *Brussels Congress News* gave Munich as the institute's location. In fact, Schoepflin pointed out, there are two other institutes located in Berlin and Nijmwegen. As he suspected, the data in Table 2 were *aggregated* for all three entities. Schoepflin notes this "might be the proper procedure...[since] all three Max Planck Institutes that engage in psychological research...are, although geographically distributed, part of one institution, i.e., the Max Planck Society."[10]

Most Productive Institutions

In terms of productivity, those that published at least 400 papers were: Univ. California-Los Angeles (728); Univ. Illinois (726); Univ. Michigan (517); Univ. Minnesota (483); Univ. Maryland (463); Univ. Pittsburgh (447), Univ. Toronto (437), Harvard (432), Pennsylvania State Univ.

Table 3: Fifty highest impact authors in psychology, 1986-1990 *SCI*® and *SSCI*®, who published at least 10 ISI®-indexed papers. A = Impact. B = Papers. C = Citations.

Rank	Author	A	B	C
1	Markus H Univ. Michigan Ann Arbor, MI	19.90	10	199
2	Schacter D L Univ. Arizona Tucson, AZ	19.87	23	457
3	Kenny D A Univ. Connecticut Storrs, CT	17.69	13	230
4	Lichtenstein E Oregon Research Inst. Eugene, OR	17.00	13	221
5	Costa P T Natl. Inst. Aging Bethesda, MD	15.94	17	271
6	Park B Univ. Colorado Boulder, CO	15.90	10	159
7	Wyer R S Univ. Illinois Champaign-Urbana, IL	15.64	11	172
8	Tulving E Univ. Toronto Ontario, Canada	14.75	12	177
9	Shimamura A P Univ. California Berkeley, CA	14.67	12	176
10	McCrae R R Natl. Inst. Aging Bethesda, MD	14.38	16	230
11	Wilson G T Rutgers State Univ. New Brunswick, NJ	14.21	14	199
12	Graf P Univ. British Columbia Vancouver, Canada	14.09	11	155
13	Grossberg S Boston Univ. Boston, MA	14.08	13	183
14	Higgins E T Columbia Univ. New York, NY	13.81	16	221
15	Brown J D Univ. Washington Seattle, WA	13.50	14	189
16	Watson D Southern Methodist Univ. Dallas, TX	13.36	11	147
17	Taylor S E Univ. California Los Angeles, CA	12.94	17	220
18	Marlatt G A Univ. Washington Seattle, WA	12.57	14	176
19	Moscovitch M Univ. Toronto Ontario, Canada	12.31	13	160
20	Pennebaker J W Southern Methodist Univ. Dallas, TX	12.30	10	123
21	Coyne J C Univ. Michigan Sch. Med. Ann Arbor, MI	10.90	10	109
22	Compas B E Univ. Vermont Burlington, VT	10.83	12	130
23	Baltes P B Max Planck Inst. Human Develop. & Educ. Berlin, Germany	10.70	10	107
24	Ingram R E San Diego State Univ. San Diego, CA	10.58	12	127
25	Diener E Univ. Illinois Champaign-Urbana, IL	10.46	13	136
26	Beck A T Univ. Pennsylvania Sch. Med. Philadelphia, PA	10.40	20	208
27	Naatanen R Univ. Helsinki Helsinki, Finland	10.33	15	155
28	McKoon G Northwestern Univ. Evanston, IL	10.23	13	133
29	Stoney C M Univ. Pittsburgh Sch. Med. Pittsburgh, PA	10.20	10	102
30	Hayes S C Univ. Nevada Reno, NV	10.00	16	160
31	Reznick J S Yale Univ. New Haven, CT	9.90	10	99
32	Matthews K A Univ. Pittsburgh Sch. Med. Pittsburgh, PA	9.85	20	197
33	Hendrick C Texas Tech. Univ. Lubbock, TX	9.80	10	98

Rank	Author	A	B	C
34	Donchin E Univ. Illinois Champaign-Urbana, IL	9.36	11	103
35	Swann W B Univ. Texas Austin, TX	9.27	11	102
36	Perner J Univ. Sussex Brighton, England	9.10	10	91
37	Craik F I M Univ. Toronto Ontario, Canada	9.00	12	108
	Rodin J Yale Univ. New Haven, CT	9.00	19	171
39	Triandis H C Univ. Illinois Champaign-Urbana, IL	8.91	11	98
40	Spector P E Univ. South Florida Tampa, FL	8.83	12	106
41	Dobson K S Univ. Calgary Alberta, Canada	8.82	11	97
42	Sergent J Montreal Neurol. Hosp. & Inst. Quebec, Canada	8.75	12	105
43	Cooper P J Univ. Cambridge Cambridge, England	8.70	10	87
	Tetlock P E Univ. California Berkeley, CA	8.70	10	87
45	Steer R A Univ. Med. & Dent. New Jersey Camden, NJ	8.67	15	130
46	Stiles W B Miami Univ. Oxford, OH	8.64	11	95
47	Steinberg L Temple Univ. Philadelphia, PA	8.62	13	112
48	Velicer W F Univ. Rhode Island Kingston, RI	8.50	12	102
49	Hellige J B Univ. Southern California Los Angeles, CA	8.47	17	144
50	Shaw B F Toronto Hosp. Ontario, Canada	8.44	16	135

(411); and Univ. Missouri (410). Stanford Univ. and Ohio State Univ., Columbus, should also be mentioned since each produced 399 papers.

Most-Cited Institutions

As you would expect, the same institutions lead in terms of absolute citations (as distinct from impact). The most cited were: Univ. Illinois (3,275); Univ. California-Los Angeles (2,794); Univ. Michigan (2,113); Univ. Toronto (2,088); Univ. Pittsburgh (1,997); Stanford (1,844); Harvard (1,668); Univ. Minnesota (1,527); Univ. Washington (1,475); Univ. Pennsylvania (1,461); Indiana Univ. (1,348); Univ. California-Berkeley (1,335); and Yale Univ. (1,314).

Highest Impact Authors

From the 1986-1990 database of about 50,000 papers, publication, citation, and impact data were aggregated and ranked for *all* authors in the byline. More than 102,450 names were identified, which include homographs—that is, two or more authors with the same surname and initials.

We have considered only those authors who published at least 10 papers in the five-year period of this study. Some authors may achieve high impact rankings on the basis of having published just one or two highly cited papers. For example, A. Browne of the University of New Hampshire, Durham, had an impact of 128.00, based on a single ISI-indexed 1986 paper on child sexual abuse, which is listed in Table 1.

Table 3 shows the 50 highest impact authors in psychology for 1986-1990. Every reasonable effort was made to ensure that homographs were purged from the list by checking current author addresses. Potential homographs were identified when two or more institutional affiliations were consistently listed for an author's name over several years.

The impact of these authors was between 4.5 and 10.5 times as great as the baseline for the field. And they rank among the 99.95th percentile of all au-

Table 4: Most-cited authors in psychology, 1986-1990 *SCI*® and *SSCI*®, who published at least 10 ISI®-indexed papers. Asterisks indicate authors who also appear on Table 3. A = Citations. B = Papers. C = Impact.

Rank	Author	A	B	C
1	*Schacter D L Univ. Arizona Tucson, AZ	457	23	19.87
2	*Costa P T Natl. Inst. Aging Bethesda, MD	271	17	15.94
3	Newcomb M D Univ. Southern California Los Angeles, CA	254	34	7.47
4	*Kenny D A Univ. Connecticut Storrs, CT	230	13	17.69
	*McCrae R R Natl. Inst. Aging Bethesda, MD	230	16	14.38
6	Kazdin A E Yale Univ. New Haven, CT	222	28	7.93
7	*Higgins E T Columbia Univ. New York, NY	221	16	13.81
	*Lichtenstein E Oregon Research Inst. Eugene, OR	221	13	17.00
9	Plomin R Pennsylvania State Univ. University Park, PA	220	36	6.11
	*Taylor S E Univ. California Los Angeles, CA	220	17	12.94
11	Rushton J P Univ. Western Ontario London, Ontario, Canada	214	27	7.93
12	*Beck A T Univ. Pennsylvania Sch. Med. Philadelphia, PA	208	20	10.40
13	Blanchard E B State Univ. New York Albany, NY	206	58	3.55
14	*Markus H Univ. Michigan Ann Arbor, MI	199	10	19.90
	*Wilson G T Rutgers State Univ. New Brunswick, NJ	199	14	14.21
16	*Matthews K A Univ. Pittsburgh Sch. Med. Pittsburgh, PA	197	20	9.85
17	Bentler P M Univ. California Los Angeles, CA	193	30	6.43
18	Marsh H W Univ. Western Sydney Campbelltown, NSW, Australia	192	26	7.38
19	*Brown J D Univ. Washington Seattle, WA	189	14	13.50
20	*Grossberg S Boston Univ. Boston, MA	183	13	14.08
21	*Tulving E Univ. Toronto Ontario, Canada	177	12	14.75
22	*Marlatt G A Univ. Washington Seattle, WA	176	14	12.57
	*Shimamura A P Univ. California Berkeley, CA	176	12	14.67
24	Forehand R Univ. Georgia Athens, GA	175	30	5.83
25	*Wyer R S Univ. Illinois Champaign-Urbana, IL	172	11	15.64
26	*Rodin J Yale Univ. New Haven, CT	171	19	9.00
27	Ratcliff R Northwestern Univ. Evanston, IL	166	20	8.30
28	Kendall P C Temple Univ. Philadelphia, PA	164	21	7.81
29	Young A W Univ. Durham Durham, England	163	28	5.82
30	*Hayes S C Univ. Nevada Reno, NV	160	16	10.00
	*Moscovitch M Univ. Toronto Ontario, Canada	160	13	12.31
32	*Park B Univ. Colorado Boulder, CO	159	10	15.90
33	Eysenck H J Inst. Psychiatry Univ. London London, England	155	39	3.97
	*Graf P Univ. British Columbia Vancouver, Canada	155	11	14.09

Rank	Author	A	B	C
	*Naatanen R Univ. Helsinki Helsinki, Finland	155	15	10.33
36	Gotlib I H Univ. Western Ontario London, Ontario, Canada	153	19	8.05
37	Smith T W Univ. Utah Salt Lake City, UT	148	19	7.79
38	*Watson D Southern Methodist Univ. Dallas, TX	147	11	13.36
39	*Hellige J B Univ. Southern California Los Angeles, CA	144	17	8.47
40	Fulker D W Univ. Colorado Boulder, CO	143	25	5.72
41	Nezu A M Fairleigh Dickinson Univ. Teaneck, NJ	141	21	6.71
42	*Diener E Univ. Illinois Champaign-Urbana, IL	136	13	10.46
43	Moos R H Stanford Univ. Med. Center Stanford, CA	135	20	6.75
	*Shaw B F Toronto Hosp. Ontario, Canada	135	16	8.44
45	Spanos N P Carleton Univ. Ottawa, Ontario, Canada	134	39	3.44
	Watkins C E Univ. North Texas Denton, TX	134	39	3.44
47	*McKoon G Northwestern Univ. Evanston, IL	133	13	10.23
48	Bornstein M H Natl. Inst. Child Health & Human Dev. Bethesda, MD	132	17	7.76
49	Barlow D H State Univ. New York Albany, NY	131	34	3.85
50	*Compas B E Univ. Vermont Burlington, VT	130	12	10.83
	*Steer R A Univ. Med. & Dent. New Jersey Camden, NJ	130	15	8.67

thor names in the 1986-1990 psychology database on impact.

Their Institutional Affiliation

Table 3 also shows the 1990 institutional affiliation for each author. Thirty-nine authors were based in the US. The Univ. Illinois accounted for four. The following institutions accounted for two each: National Institute of Aging; Southern Methodist Univ.; Univ. California-Berkeley; Univ. Michigan; Univ. Pittsburgh; Univ. Washington; and Yale Univ.

Canada is represented by seven authors, three of whom were based at the Univ. Toronto. The UK follows with two high impact authors, and one author each was based in Finland and Germany.

Most-Cited Authors

Table 4 ranks authors in terms of absolute citations rather than impact. Only those authors who published at least 10 papers in ISI-indexed psychology journals from 1986 to 1990 are included. Not surprisingly, there is considerable overlap between the lists of most-cited and highest impact authors. Thirty of the 51 authors in Table 4 also appeared in Table 3, and they are indicated by asterisks.

This list did not appear originally in the congress news series but was added at the suggestion of J. Philippe Rushton, University of Western Ontario, London, Ontario, Canada. He stated, "The research I have carried out using peer ratings to validate various rankings seems to give clearer support for 'total' citations when it comes to people and departments but 'relative' citations [i.e., impact] when it comes to journals.[14-16] The source of the bias is as follows: A highly cited person who wrote many editorials or book reviews in addition to important articles would be penalized. A graduate student who co-authored five pieces with a prolific mentor but then did very little else would be lionized."[17]

As stated earlier, the study was limited to original research papers, review articles, and technical notes—editorials, book reviews, and other less substantive items were excluded. Thus, the possible bias Rushton

Table 5: Most-productive authors who produced at least 25 papers, 1986-1990 *CC®/Social & Behavioral Sciences*. Asterisks indicate authors who also appear in Table 4. A = Papers. B = Citations. C = Impact.

Rank	Author	A	B	C
1	Lester D Stockton State College Pomona, NJ	238	79	0.33
2	Furnham A Univ. College London London, England	64	124	1.94
3	*Blanchard E B State Univ. New York Albany, NY	58	206	3.55
4	Mikulincer M Bar Ilan Univ. Ramat Gan, Israel	43	108	2.51
5	*Eysenck H J Inst. Psychiatry Univ. London London, England	39	155	3.97
	*Spanos N P Carleton Univ. Ottawa, Ontario, Canada	39	134	3.44
	*Watkins C E Univ. North Texas Denton, TX	39	134	3.44
8	*Plomin R Pennsylvania State Univ. University Park, PA	36	220	6.11
9	Ray J J Univ. New South Wales Kensington, Australia	35	38	1.09
10	*Barlow D H State Univ. New York Albany, NY	34	131	3.85
	Gustafson R Univ. Orebro Orebro, Sweden	34	103	3.03
	*Newcomb M D Univ. Southern California Los Angeles, CA	34	254	7.47
13	Boyle GJ Univ. Queensland St. Lucia, Australia	31	52	1.68
14	*Bentler P M Univ. California Los Angeles, CA	30	193	6.43
	*Forehand R Univ. Georgia Athens, GA	30	175	5.83
16	Strube M J Washington Univ. St. Louis, MO	29	82	2.83
17	Ackerman B P Univ. Delaware Newark, DE	28	55	1.96
	Beer J North Central Kansas Special Educ. Coop. Phillipsburg, KS	28	37	1.32
	Elliott D McMaster Univ. Hamilton, Ontario, Canada	28	75	2.68
	*Kazdin A E Yale Univ. New Haven, CT	28	222	7.93
	*Young A W Univ. Durham Durham, England	28	163	5.82
22	Heilbrun A B Emory Univ. Atlanta, GA	27	91	3.37
	*Rushton J P Univ. Western Ontario London, Ontario, Canada	27	214	7.93
	Sternberg R J Yale Univ. New Haven, CT	27	78	2.89
25	Leary M R Wake Forest Univ. Winston-Salem, NC	26	85	3.27
	*Marsh H W Univ. Western Sydney Campbelltown, NSW Australia	26	192	7.38
	Moses J A Stanford Univ. Sch. Med. Stanford, CA	26	33	1.27
28	Eisenberg N Arizona State Univ. Tempe, AZ	25	81	3.24
	Epstein L H Univ. Pittsburgh Sch. Med. Pittsburgh, PA	25	116	4.64
	*Fulker D W Univ. Colorado Boulder, CO	25	143	5.72
	McKelvie S J Bishops Univ. Lennoxville, Quebec Canada	25	18	0.72

noted above has been controlled for—that is, an author would not be "penalized" by counting *all* published items in the impact calculation. Also, a graduate student or lab technician might occasionally appear on author lists ranked by impact—but only if their "mentors" were not just prolific, as Rushton observed, but also highly cited.

Nevertheless, rankings by impact, total citations, or other quantitative indicators have their advantages and limitations. Thus, in the interest of balance, rankings by impact, total citations, and also productivity were prepared for this essay.

Most Productive Authors

Table 5 lists 31 authors who published at least 25 papers in the period 1986-1990. Nineteen were based in the US and four in Canada. Australia and the UK account for three each, followed by Israel and Sweden with one each.

Fourteen of the authors in Table 5 also appeared on the list of most-cited authors in Table 4 and are indicated by asterisks. However, none of the most-prolific authors were included in the list of highest impact authors in Table 3.

Conclusion

This concludes our citationist perspective on psychology research. We welcome requests from professional societies and other organizations for similar studies of the highest impact papers, institutions, and authors in their research specialties for upcoming annual meetings. These citation-based analyses provide an interesting, unique, and quantitative view of scholarly research that supplements the subjective and qualitative perceptions of specialists in the field.

Hopefully, a follow-up study would take into account psychology papers published in multidisciplinary journals, as has been the practice in prior studies. This would also include papers highly cited *by* psychologists that would not necessarily be classified as "psychology" in the traditional disciplinary context.

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