

Current Comments

Journal Citation Studies. 38. Arts and Humanities Journals Differ from Natural and Social Sciences Journals— But Their Similarities Are Surprising

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Considering the number of essays we have published about *scientific* literature since *Science Citation Index*® (*SCI*®) began, you might be surprised to learn that the first article I wrote on citation indexing actually dealt with the *humanities* literature. That 1955 paper was presented at the American Documentation Institute, Philadelphia, the predecessor of the American Society for Information Science. It discussed the use of citation indexing in relating biblical studies to the history of science.¹ This thread of connectivity between the humanities and science continues at *ISI*® and explains, in part, why we publish *Current Contents*®/*Arts & Humanities* (*CC*®/*A&H*)² as well as *Arts & Humanities Citation Index*™ (*A&HCI*™).³

Not surprisingly, the arts and humanities literature poses unique problems. Many of them became obvious when we prepared for the initial publication of *A&HCI*. In comparison to the relatively uniform citation practices of scientific researchers, those of arts and humanities scholars are seemingly unconventional and idiosyncratic. This is due to the wide variety of citation practices followed by humanities journals.

For example, literary critics may quote whole passages of a play or novel without including the work in their references. These "implicit" citations are recorded by our indexers and added to the formal citations listed in the article's references. Even when the work is explicitly cited, one author might refer to Samuel Clemens's *Huckleberry Finn* while another cites his pseudonym,

Mark Twain, and uses the title *The Adventures of Huckleberry Finn*.

More important, however, is the fact that arts and humanities authors typically cite books rather than journal articles. This presents problems when several editions in various languages are in print. In addition, authors refer to many types of artistic works other than books and articles—e.g., paintings, performances, poems, recordings, exhibits, films, etc. It was difficult, but not impossible, to overcome these unique problems and impose uniform citation standards where none existed before. One hopes that journal editors in the humanities will one day adopt international standards on citation practices not unlike the Vancouver style for biomedical journals.⁴

I've discussed *ISI*'s solutions to the problems of indexing arts and humanities literature elsewhere,^{3,5,6} so I won't go into detail here. But when you consider the volume of literature covered in *A&HCI*, you'll appreciate that these problems are far from trivial. The 1981 *A&HCI* comprehensively covered 1,185 journals in archaeology, architecture, art, classics, dance, film, radio, television, folklore, history, language and linguistics, literary review, literature, music, poetry, philosophy, religion, and theater. In addition, more than 5,000 journals covered in *SCI* and *Social Sciences Citation Index*® (*SSCI*®) were selectively screened for relevant articles in these and other fields such as history and philosophy of science, anthropology, law, economics, sociology, etc.

Also, about 120 multiauthored serials, monographs, or "books" are covered in *A&HCI*.

Table 1 presents a "profile" of the 1981 *A&HCI* data base, showing the types and numbers of items indexed that year. Also shown are the total and average numbers of references included in each. Most *A&HCI* journals publish items not typically found in natural and social sciences journals—e.g., poems, creative prose, and critical reviews of books, films, performances, exhibits, etc. These are in addition to original research articles, reviews of the literature, and other items typically found in scientific journals. However, the importance of book reviews is demonstrated in Table 1.

Nearly 107,000 items were indexed in the 1981 *A&HCI*, and 43.5 percent were book reviews. *A&HCI* "source" items produced or contained nearly 701,500 cited references. Of these, nine percent or 63,000 references were pseudo-citations—that is, when a book is reviewed its title does not appear as a formal citation, as do other articles or books that may be cited by the reviewer.

If we add together reviews of books, exhibits, theater productions, films, musical performances, scores, records, radio and television programs, and dance performances, these critical reviews represent 53 percent of the source items—but provide only 12 percent of the cited references. The average critical review cited only 1.5 references in 1981. This includes the pseudo-citation to the book itself.

Original scholarly articles represent the second largest group, accounting for 26 percent of all source publications indexed. Significantly, these articles account for 74 percent of the references processed. The average *A&HCI* article cited 19 references in 1981. If we add together data on articles and reviews of research (not of artworks or performances), they would account for 28 percent of the source items and 82 percent of the references processed. The overall average number of references cited in

Table 1: Breakdown of items indexed in the 1981 *A&HCI*¹⁰, in order of total number of items. A = type of item. B = number of items. C = number of references. D = average number of references per item.

	A	B	C	D
Book Reviews		46,528	63,995	1.4
Articles		28,210	521,648	18.5
Poems		8157	138	—
Notes		5208	23,228	4.5
Art Exhibit Reviews		2457	5761	2.3
Editorials and				
Interviews		2217	7307	3.3
Theater Reviews		1581	4185	2.6
Letters		1529	2645	1.7
Film Reviews		1519	2047	1.3
Bibliographies/ Reviews		1481	54,050	36.5
Musical Performance Reviews		1459	3745	2.6
Creative Prose		1429	194	—
Record Reviews		1379	1634	1.2
Biographical Items		1082	4560	4.2
Music Score Reviews		755	812	1.1
Dance Performance Reviews		579	1894	3.3
Meeting Abstracts		418	300	.7
Discussions		306	2237	7.3
Excerpts		158	146	.9
Scripts		124	31	—
TV/Radio Reviews		106	399	3.8
Corrections		76	129	1.7
Music Scores		55	11	—
Chronologies		29	384	13.2
Total		106,842	701,480	

articles or literature reviews is 19. In comparison, in 1981 the average for *SCI*⁷ was 20. For the 1981 *SSCI*,⁸ the average was 19.

Clearly, while books predominate, journals are an increasingly important medium through which arts and humanities scholarship is communicated. Thus, it is useful to examine which *A&HCI* journals are the most important. This was done in a preliminary way in the preface to the 1981 *A&HCI*, which was reprinted in *CC* last week.⁶ Now I'd like to present a more detailed and comprehensive report on what the *A&HCI* group cites, and vice versa.

In order to do this, we'll treat the journals covered in the 1981 *A&HCI* as if they were a single "General Journal of the Arts & Humanities." Since we do not have the space to provide data on all

1,185 journals, readers should refer to the *A&HCI Guide & Journal Lists*⁹ for further details.

The *A&HCI* journals published 101,593 source items in 1981, and they cited or gave out about 484,000 references. Only about five percent of these—24,000—were references to the same group of *A&HCI* journals. This reflects the well-known fact that arts and humanities journals cite a wide spectrum of non-journal literature—books, poems, diaries, biographies, and the like. For example, when we identified the most-cited works of the 100 most-cited *A&HCI* authors for 1977-1978, all were books.¹⁰ In a future study, we'll identify the most-cited works in *A&HCI*—books, poems, plays, paintings, articles, etc. This will give us a better understanding of the "literature" of the arts and humanities.

Articles published in *A&HCI* journals received about 41,000 citations from all journals covered in the combined ISI data bases for 1981. These include *A&HCI*, *SSCI*, and *SCI*. Only 63 percent of these were citations from *A&HCI* journals. The remaining one-third came from a variety of hard and soft science journals.

The ten most-cited *A&HCI* journals account for 12 percent of the 41,000 citations from all journals. They are shown in Table 2. In comparison, the ten most-cited *SCI* journals in 1981 accounted for 14 percent of total citations. The top ten *SSCI* journals accounted for 15 percent.

In Table 3, the 50 journals that were most cited by *A&HCI* journals in 1981 are listed. They are ranked by the number of citations received from the *A&HCI* group. These 50 journals received about 11,000 citations, or just two percent of the 484,000 references cited by *A&HCI* journals in 1981, because most of the *A&HCI* references are to books and other non-journal items. It is interesting to note, for example, that the *A&HCI* group gave more citations (12,400) to newspapers, collected works, performances, and letters

Table 2: The ten *A&HCI*TM journals most cited in the 1981 *A&HCI*, *SCIP*[®], and *SSCI*[®], and the number of citations they received.

Journal	Number of Citations
Language	724
Journal of Philosophy	640
American Antiquity	603
PMLA—Publications of the Modern Language Association	495
Linguistic Inquiry	465
Past & Present	435
Philosophical Review	435
American Historical Review	420
Economic History Review	398
Journal of Economic History	348

than to the 50 journals listed in Table 3. However, if we consider only those *A&HCI* citations to other *A&HCI* journals, the 50 journals listed here account for 43 percent. In comparison, in 1981, the 50 most-cited *SCI* journals accounted for 32 percent of *SCI* citations. For *SSCI*, the top 50 journals accounted for 40 percent of 1981 *SSCI* citations.

History is the most heavily represented field in Table 3, with ten journals on the list. There are eight philosophy journals and five language and linguistics journals. Art and classics each have four journals, while archaeology, interdisciplinary sciences, literature, and religion each have three. Two sociology journals appear in Table 3. Chemistry, anthropology, general arts and humanities, interdisciplinary social sciences, and literary review each account for one journal.

Forty-two of the 50 most-cited journals are members of the *A&HCI* group. The eight non-*A&HCI* journals in Table 3 are: *American Anthropologist*, *American Journal of Sociology*, *American Sociological Review*, *Annales—Economies Sociétés Civilisations*, *Liebig's Annalen der Chemie*, *Nature*, *Science*, and *Scientific American*.

The last four of these journals are from the natural sciences. It is significant that *Science* ranked twelfth among the journals most cited by the *A&HCI* group. Of the 260 citations it received from *A&HCI* journals, 76 were given by

Table 3: The 50 journals most cited by *A&HCI*™ journals in 1981. An asterisk indicates an *A&HCI* journal. A = total citations received from *A&HCI* group. B = total citations received. C = self-citations. D = percent of total citations which are *A&HCI* citations (A/B). E = percent of total citations which are self-citations (self-cited rate, C/B). F = percent of *A&HCI* citations which are self-citations (C/A). G = impact factor. H = immediacy index. I = total 1981 source items.

Journal	A	B	C	D	E	F	G	H	I
*PMLA—Publ. Mod. Lang. Assoc.	490	495	23	99.0	4.6	4.7	.61	.55	23
*J. Philos.	440	640	29	68.8	4.5	6.6	.72	.24	41
*Linguist. Inq.	422	465	175	90.8	37.6	41.5	1.51	.29	45
*Language	420	724	94	58.0	13.0	22.4	1.34	.22	23
*World Lit. Today	336	337	329	99.7	97.6	97.9	.16	.02	48
*Past Present	323	435	41	74.3	9.4	12.7	.61	.10	30
*Amer. Hist. Rev.	319	420	16	75.9	3.8	5.0	1.02	.22	18
*Phil. Rev.	316	435	20	72.6	4.6	6.3	.97	0	14
*Burlington Mag.	295	299	77	98.7	25.8	26.1	.18	.10	93
*Art Bull.	282	287	46	98.3	16.0	16.3	.46	.05	39
*Amer. Antiq. Science	261	603	188	43.3	31.2	72.0	.80	.07	76
*Econ. Hist. Rev.	260	64,355	—	.4	—	—	6.24	1.33	1077
*Vop. Istor. SSSR	256	398	79	64.3	19.8	30.9	.37	.10	30
*Vop. Filos. SSSR	243	262	132	92.7	50.3	54.3	.15	.07	148
*Speculum—J. Medieval Stud.	238	323	175	73.7	54.1	73.5	.27	.10	163
*William Mary Quart.	223	250	10	89.2	4.0	4.4	.39	.05	22
*Amer. Anthropol.	223	268	83	83.2	30.9	37.2	.54	.21	24
*Esprit	222	1194	—	18.6	—	—	.92	.13	46
*Hesperia	219	245	160	89.4	65.3	73.1	.15	.25	222
*J. Bibl. Lit.	217	222	122	97.7	55.0	56.2	.81	0	14
*Mind	210	213	11	98.6	5.2	5.2	.22	0	16
*Poetique	198	323	23	61.3	7.1	11.6	.33	0	41
*J. Econ. Hist.	194	194	21	100.0	10.8	10.8	.29	0	36
*Amer. J. Archaeol.	192	348	60	55.2	17.2	31.3	.39	.14	44
*Class. Quart.	190	199	89	95.5	44.7	46.8	.29	.13	48
*J. Hist. Idea.	187	200	31	93.5	15.5	16.6	.09	.08	53
*Leonardo	179	229	15	78.2	6.6	8.4	.23	.08	40
*J. Roman Stud.	179	189	171	94.7	90.4	95.5	.53	.40	78
*MLN—Mod. Lang. Notes	175	179	47	97.8	26.3	26.9	.74	0	11
*New Lit. Hist.	175	175	13	100.0	7.4	7.4	.05	.02	57
*Deut. Z. Phil.	174	186	5	93.5	2.7	2.9	.34	0	25
*J. Hellenic Stud.	171	180	154	95.0	85.6	90.1	.43	.12	81
*Istoriya SSSR	168	175	10	96.0	5.7	6.0	.30	0	19
*Historia	164	167	127	98.2	76.0	77.4	.23	.07	105
*ELH—Engl. Lit. Hist.	162	167	9	97.0	5.4	5.6	.03	.01	150
*J. Warburg Courtauld Inst. Nature	159	159	12	100.0	7.5	7.5	.22	.02	45
Ann.—Econ. Soc. Civil.	159	160	0	99.4	0	0	.13	—	—
*Hermes—Z. Klass. Philol.	153	242	—	63.2	—	—	.33	.08	40
*New Test. Stud. Sci. Amer.	152	160	18	95.0	11.3	11.8	.08	0	44
*Amer. Phil. Quart.	150	150	39	100.0	26.0	26.0	.17	.02	45
Liebigs Ann. Chem.	150	2915	—	5.1	—	—	2.74	.41	111
*Crit. Inq.	149	200	20	74.5	10.0	13.4	.35	.22	41
*Historia—Z. Alte Geschichte	149	5469	—	2.7	—	—	.91	.41	234
*Vetus Testamentum	148	157	35	94.3	22.3	23.6	.38	.06	47
Amer. J. Sociol.	147	154	17	95.5	11.0	11.6	.42	0	14
Amer. Sociol. Rev.	145	146	46	99.3	31.5	31.7	.14	0	49
*Phil. Stud.	144	2707	—	5.3	—	—	1.67	.39	61
	139	4222	—	3.3	—	—	3.19	.33	51
	139	168	23	82.7	13.7	16.5	.22	.05	60

archaeology journals and 70 by history journals. *Nature* received 159 citations from *A&HCI* journals—53 of which were from history journals and 49 from philosophy journals. *Scientific American* followed the same pattern—39 of its 150 *A&HCI* citations came from philosophy journals and 34 from history journals. *Liebigs Annalen der Chemie* received 149 *A&HCI* citations, of which 85 were from history journals.

Anthropology might be thought to be a category in *A&HCI* that needs full coverage because *American Anthropologist* ranked eighteenth in Table 3. However, only 19 percent of its citations were from the *A&HCI* group. Also, the appearance of two leading sociology journals on the list—*American Journal of Sociology* and *American Sociological Review*—is interesting. But only between three and five percent of their citations came from *A&HCI* journals (column D). This is one of the criteria that determine whether or not a journal or field is fully covered in our data bases.

Three Soviet journals are in Table 3: *Voprosy Filosofii*, *Voprosy Istorii*, and *Istoriya*. Compared with other philosophy journals in Table 3, *Voprosy Filosofii* has a higher self-cited rate (column E). That is, of the 323 citations it received in 1981, 175 or 54 percent were from articles published in *Voprosy Filosofii*. In contrast, the most-cited philosophy journal, *Journal of Philosophy*, had a self-cited rate of five percent. But *Deutsche Zeitschrift für Philosophie* had the highest self-cited rate, 86 percent, of all philosophy journals listed. The two Soviet history journals also had high self-cited rates: *Voprosy Istorii* at 50 percent and *Istoriya* at 76 percent. The two most-cited history journals in Table 3, *Past & Present* and *American Historical Review*, had self-cited rates of nine and four percent, respectively.

Linguistic Inquiry had an impact factor of 1.5, the highest of the *A&HCI* journals on the list (column G). Impact tells you how many times the average article in a journal has been cited during a

particular year. It is calculated in this study by dividing the number of source articles a journal published in 1979 and 1980 into the number of citations they received in 1981. *Language*, another linguistics journal, ranked second with an impact of 1.3. *American Historical Review* and *Philosophical Review* follow, each with an impact of 1.0. Except for *Philosophical Review*, these journals also ranked high on the immediacy index—the average number of citations received by articles published in 1981 (column H). The immediacy index for *Linguistic Inquiry* was .3. Only two journals in Table 3 ranked higher: *PMLA* at .6 and *Leonardo* at .4. *American Historical Review* and *Language* each have an immediacy of .2.

Of course, the way we calculate impact for the natural and social sciences may not correspond to the actual peak citation period for *A&HCI* journals. Higher impact factors might be obtained by dividing the number of source articles published in, say, 1976 and 1977 into the number of citations they received in 1981. But we have not yet determined the peak citation periods for *A&HCI* journals. Although our data go back to 1976, we may need a longer "track record" to decide which two-year period would yield the highest impacts. The problem is complicated because peak citation periods are likely to be different for various fields—linguistics versus literary criticism, for example. I'll discuss how impact factors are affected by using different time periods as a base in a future essay.

Table 4 lists the 50 journals which most frequently cited the *A&HCI* journals in 1981, in order of the number of references to the *A&HCI* group. These journals cited *A&HCI* journals 8,500 times, accounting for 21 percent of all citations received by the *A&HCI* group that year. History is again the most heavily represented field on the list, with 14 journals. Art, language and linguistics, and philosophy follow with seven jour-

Table 4: The 50 journals which most frequently cited *A&HCI*™ journals in 1981. An asterisk indicates an *A&HCI* journal. A=total citations to *A&HCI* group. B=total citations given out. C=self-citations. D=percent of total citations which are *A&HCI* citations (A/B). E=percent of total citations which are self-citations (self-citing rate, C/B). F=percent of *A&HCI* citations which are self-citations (C/A). G=impact factor. H=immediacy index. I=total 1981 source items.

Journal	A	B	C	D	E	F	G	H	I
*World Lit. Today	347	2173	329	16.0	15.1	94.8	.16	.02	48
*Amer. J. Archaeol.	261	1845	89	14.1	4.8	34.1	.29	.13	48
*Amer. Antiq. Synthese	247	2264	188	10.9	8.3	76.1	.80	.07	76
Synthese	247	1338	—	18.5	—	—	.38	.13	85
*Art. Mag.	238	4677	82	5.1	17.5	34.5	.11	.06	184
*Linguist. Inq.	234	799	175	29.3	21.9	74.8	1.51	.29	45
*Language	230	1888	94	12.2	5.0	40.9	1.34	.22	23
*Burlington Mag.	228	2700	77	8.4	2.9	33.8	.18	.10	93
*Amer. Hist. Rev.	213	2877	16	7.4	.5	7.5	1.02	.22	18
*Istoriya SSSR	211	3970	127	5.3	3.2	60.2	.23	.07	105
*Vop. Filos. SSSR	203	2760	175	7.4	6.3	86.2	.27	.10	163
*Vop. Istor. SSSR	202	5694	132	3.5	2.3	65.3	.15	.07	148
Adv. Archaeol. Meth. Th.	196	1433	—	13.7	—	—	1.44	.25	8
*Linguist. Anal.	196	602	65	32.6	10.8	33.2	.84	.17	30
*Lingua	192	1402	43	13.7	3.1	22.4	.40	.06	32
*Leonardo	189	918	171	20.6	18.6	90.5	.53	.40	78
*Class. Quart.	185	1527	31	12.1	2.0	16.8	.09	.08	53
*Deut. Z. Phil.	181	2246	154	8.1	6.9	85.1	.43	.12	81
*Apollo—Mag. Arts	177	2245	53	7.9	2.4	29.9	.07	.07	102
*Esprit	176	1311	160	13.4	12.2	90.9	.15	.25	222
*Rev. Art	175	1119	20	15.6	1.8	11.4	.10	0	16
*Hist. J.	168	1941	27	8.7	1.4	16.1	.40	.04	50
*William Mary Quart.	168	1389	83	12.1	6.0	49.4	.54	.21	24
*Art Bull.	157	1805	46	8.7	2.5	29.3	.46	.05	39
*Econ. Hist. Rev.	155	1555	79	10.0	5.1	51.0	.37	.10	30
*Phil. Stud.	153	585	23	26.2	3.9	15.0	.22	.05	60
*Hesperia	152	489	122	31.1	24.9	80.3	.81	0	14
*J. Amer. Hist.	152	1959	7	7.8	.4	4.6	.78	.05	22
*Romance Philol.	152	1669	10	9.1	.6	6.6	.02	0	28
Curr. Anthropol.	150	3802	—	3.9	—	—	.84	.25	8
*Gesta—Int. Cen. Med. Art	148	1083	10	13.7	.9	6.8	.03	0	31
Past Present	148	1822	41	8.1	2.3	27.7	.61	.10	30
*Speculum—J. Medieval Stud.	146	1486	10	9.8	.7	6.8	.39	.05	22
*ELH—Engl. Lit. Hist.	145	1254	12	11.6	1.0	8.3	.22	.02	45
*Crit. Inq.	144	1055	35	13.6	3.3	24.3	.38	.06	47
*PMLA—Publ. Mod. Lang. Assoc.	138	906	23	15.2	2.5	16.7	.61	.55	23
*J. Interdiscipl. Hist.	135	1537	6	8.8	.4	4.4	.04	0	30
*Amer. Phil. Quart.	130	644	20	20.2	3.1	15.4	.35	.22	41
*J. Mod. Hist.	129	1618	11	8.0	.7	8.5	.60	.06	18
*Stud. Philol.	128	1012	1	12.6	.1	.8	.02	0	32
*Amer. Arch.	127	436	101	29.1	23.2	79.5	.58	.05	21
*Comp. Stud. Soc. Hist.	123	1911	12	6.4	.6	9.8	.54	.12	26
*J. Philos.	120	544	29	22.1	5.3	24.2	.72	.24	41
*New Test. Stud.	117	1115	39	10.5	3.4	33.3	.17	.02	45
*J. Econ. Hist.	116	1309	60	8.9	4.6	51.7	.39	.14	44
*Nous	115	398	24	28.9	6.0	20.9	.79	.18	22
*Vetus Testamentum	114	1002	46	11.4	4.2	40.4	.14	0	49
Annu. Rev. Anthropol.	113	2198	—	5.1	—	—	1.14	.07	15
*Gesch. Ges.	113	1699	0	6.7	0	0	—	0	20
*Pap. Lang. Lit.	113	659	0	17.1	0	0	.01	0	30

nals each. Five archaeology journals and three literature journals are included in Table 4. Anthropology and religion each have two journals, and classics, literary review, and general arts and humanities each have one journal.

Four journals in Table 4 are not *A&HCI* journals: *Advances in Archaeological Method and Theory*; *Annual Review of Anthropology*; *Current Anthropology*; and *Synthese*, a philosophy journal. These journals are fully covered in *SSCI*. They illustrate the difficulty of arbitrarily separating the humanities from the social sciences. But this is partly resolved by our selective coverage of these journals. However, the data would seem to indicate we should have covered *Synthese*, since philosophy is supposed to be fully covered. This will be rectified.

For the 46 *A&HCI* journals in Table 4, an average of only ten percent of their references cited *A&HCI* journals. But nearly 40 percent of these references to the *A&HCI* group are self-citations. That is, the average *A&HCI* journal

cites other arts and humanities journals relatively infrequently—but when it does, it tends to cite itself.

When Tables 3 and 4 are compared, we see that 29 journals appear on the top tables. Five journals are listed in the top ten on both tables: *American Historical Review*; *Burlington Magazine*, an art journal; *Language*; *Linguistic Inquiry*; and *World Literature Today*. These five journals rank highest of all 1,185 *A&HCI* journals in terms of the number of citations they received from *A&HCI* journals and the number of their references to the *A&HCI* group. Three of these journals also rank among the top ten in impact and immediacy: *American Historical Review*, *Language*, and *Linguistic Inquiry*.

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