

Speaking Only To Ourselves? Citation Analysis of *Journal of Leisure Research* and *Leisure Sciences*

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Journal Citation Reports and *Social Science Citation Index* were used to determine the extent to which articles in *Journal of Leisure Research* and *Leisure Sciences* cite or are cited by articles published in outside sources. Though there is a large and growing body of research on leisure and recreation, little contemporary outside literature is cited in these leisure research journals. In addition, sources outside of leisure studies seldom cite articles from these journals. Analysis of citation patterns documents the ways that journals borrow from and build upon one another. The citation patterns uncovered in this analysis suggest that these leisure research journals are intellectually isolated from important and relevant bodies of literature.

KEYWORDS: *Leisure research, citation analysis*

Introduction

There have been several attempts to analyze the content of articles published in the leisure studies journals. These include examination of the substantive content of articles (Burdge, 1989; Crandall & Lewko, 1976) and review of the methodological perspectives used in data analysis (Bedini & Wu, 1994; Havitz & Sell, 1991; Riddick, DeSchraver, & Weissinger, 1984). Recent electronic databases make possible another form of analysis—citation analysis—which examines patterns of who cites whom among academic journals. Analysis of citation patterns highlights the ways that journals borrow from and build upon one another. In fact, citations have been called “a formal acknowledgment of ‘intellectual debt’ ” (*Journal Citation Reports*, 1994, p. 5). Citation analysis has been used in many disciplines to map patterns of influence between journals (cf. Courtney, Kawchuk, & Spafford, 1987; Everett & Pecotich, 1993; Funkhouser, 1996; Hanson, 1990; Howard & Howard, 1992; Meyer & Spencer, 1996; Tanner, 1984).

This paper presents a citation analysis of two key journals in leisure studies, *Journal of Leisure Research* (*JLR*) and *Leisure Sciences* (*LS*). The stated goal of *JLR* is to publish papers that contribute to our understanding of leisure or recreation; *LS* specifically invites papers with a social science or disciplinary perspective. These two journals are the central forum for theoretical research in leisure studies. An examination of the articles in these journals suggests that they would be likely to cite literature from journals outside our field. In addition, *JLR* and *LS* are indexed in reference databases such as Current Contents while many other leisure journals are not, increas-

ing the visibility of these journals for researchers outside our field. Of all the leisure research journals, *JLR* and *LS* seem best suited to illustrate the extent to which leisure research is integrated into the broader disciplinary literature.

Methods

Two electronic databases were used for this analysis, *Journal Citation Reports* and *Social Science Citation Index*. Both are published by the Institute for Scientific Information and there is considerable overlap in the journals they index. The *Journal Citation Reports* summarizes annual citation patterns for 7000 scholarly journals worldwide, including a frequency distribution of the sources cited in each journal ("who did we cite") and a distribution of the journals that cited this journal ("who cited us"). The most recent version of *Journal Citation Reports* summarizes the citation patterns of journals published in 1997.

The *Social Science Citation Index* (*SSCI*) used to exist only as a printed index. Today it exists electronically on CD-ROM and as part of an on-line database called *Web of Science*. *SSCI* encompasses 1700 social science journals in 50 disciplines including anthropology, psychology, sociology, social work, and marketing; at the time of this analysis it contained over 2.8 million articles. The electronic form of *SSCI* includes the bibliographic information, abstract, keywords, and references cited by each article, and provides links to other articles in *SSCI* that cited that article. Whereas *Journal Citation Reports* provided summary data on citation patterns for each journal, *SSCI* allowed a more detailed examination of citation patterns for separate articles.

JLR and *LS* are included in *Journal Citation Reports* and *SSCI*. *Society and Leisure* is also included in *Journal Citation Reports* but is not in *SSCI*. No other journals from our field are included in either database. Because of that, the analyses reported here do not include the times *JLR* or *LS* were cited by *Therapeutic Recreation Journal*, *Journal of Park and Recreation Administration*, or other applied leisure research journals. However, since our purpose was to examine the degree to which leisure research is integrated into research from related disciplines, it is appropriate to use these databases and focus only on *JLR* and *LS*.

For this analysis, journals and other material were categorized as either "leisure sources" or "outside sources" (see Table 1). Leisure sources included the core theoretical and applied journals in leisure studies plus books that are central to the curricula in many leisure studies programs. Sources such as U.S. Forest Service recreation reports were also classified as leisure sources because they directly address recreation management. All other material was grouped as outside sources including journals like *Society and Natural Resources* and *Tourism Management*. Leisure researchers sometimes publish in these outside journals but those journals were counted as outside sources anyway. More will be said about this later.

TABLE 1
Examples of Leisure Sources and Outside Sources

Leisure Sources	Outside Sources
Journal of Leisure Research	Journal of Personality and Social Psychology
Leisure Sciences	Psychological Bulletin
Society and Leisure	Journal of Applied Psychology
Leisure Studies	American Sociological Review
Therapeutic Recreation Journal	Public Opinion Quarterly
Journal of Applied Recreation Research	Environment and Behavior
Journal of Park and Recreation Administration	Land Economics
SPRE Annual	Environment Management
	Forest Science
Books and Reports	Journal of Forestry
Driver, <i>Benefits of Leisure</i>	Annals of Tourism Research
Neulinger, <i>Psychology of Leisure</i>	Journal of Sport and Exercise Psychology
Pieper, <i>Leisure as the Basis of Culture</i>	Perception Motor Skills
DeGrazia, <i>Of Time, Work and Leisure</i>	Society and Natural Resources
Kelly, <i>Sociology of Leisure</i>	Tourism Management
USDA Forest Service Reports	Wildlife Society Bulletin

Magnitude of Research on Leisure

Table 2 reports the number of articles on leisure and recreation indexed in *SSCI* each year for the past decade (using a subject search for "leisure*" or "recreation*" truncated to capture related words like *leisure-time* or *recreational* in the title, keywords, or abstract of English language full-length articles). As shown, there has been phenomenal growth in research in this area. In 1989 there were 55 articles that addressed leisure or recreation, increasing to 415 articles in 1998. In total, *SSCI*¹ includes 2630 articles about leisure or recreation for this ten-year period. During that same time, *JLR* and *LS* typically published fewer than 40 articles per year. In 1989 the articles in *JLR* and *LS* represented 45 percent of the published research on leisure and recreation; by 1998 these journals represented less than ten percent. It is clear from these simple statistics that *JLR* and *LS* no longer are a unique repository for research on leisure and recreation. In fact, our journals represent an increasingly smaller proportion of the total research in this area.

Who Did We Cite?

The *Journal Citation Reports* indicated that articles in *JLR* made 824 references to 420 separate sources in 1997, and articles in *LS* made 472 refer-

¹The full of *Web of Science*, including the Science Citation Index Expanded, the Arts and Humanities Index, and the Social Science Citation Index, contained 5152 full length English language articles published 1989-1998 that addressed recreation or leisure.

TABLE 2
Number of Articles Addressing Leisure and Recreation in the Social Science Citation Index, 1989-1998

	<i>JLR and LS</i>	All Other Journals	Total
1989	25 (45%)	30 (55%)	55
1990	35 (48%)	38 (52%)	73
1991	41 (23%)	138 (77%)	179
1992	38 (14%)	240 (86%)	278
1993	51 (19%)	221 (81%)	272
1994	30 (11%)	243 (89%)	273
1995	39 (11%)	308 (89%)	347
1996	39 (11%)	318 (89%)	357
1997	39 (10%)	342 (90%)	381
1998	36 (9%)	379 (91%)	415
Total	373	2257	2630

Note: Dates reflect the year the journal was entered into *SSCI* which may differ slightly from the year of publication

TABLE 3
Age and Source of References Cited by JLR and LS in 1996 and 1997

Cited Reference:	Citations in <i>JLR</i> (35 articles)		Citations in <i>LS</i> (33 articles)	
	Leisure Source	Outside Source	Leisure Source	Outside Source
1 to 5 years old ¹	151 (36%)	197 (21%)	93 (20%)	162 (18%)
6 to 10 years old	156 (37%)	268 (29%)	193 (42%)	215 (24%)
Over 10 years old	111 (27%)	458 (50%)	176 (38%)	519 (58%)
Sub-total	418	923	462	896
Total	1341		1358	

Journal Citation Reports, 1996 and 1997

¹The period 1-5 years represents 1992-1996 for citations indexed in the 1996 *Journal Citation Reports* and 1993-1997 for articles indexed in the 1997 *Journal Citation Reports*.

ences to 253 separate sources. A source refers to a book, report, or journal; references to a journal do not necessarily cite the same article. Only 22% of the sources cited in *JLR* and 15% of the sources cited in *LS* were cited more than once in that journal during that year. Of the sources cited two or more times, more than half were books, reports, and smaller journals not indexed in *Journal Citation Reports*. In other words, only a small percentage of sources were cited more than once and fewer than half of those were academic journals indexed in *Journal Citation Reports*. This low incidence of repeat cit-

ing suggests that articles do not share a common reference base with other articles in these journals, particularly a common base in academic or disciplinary journals outside our field.

Table 3 shows the age and source of material that was cited by articles published in *JLR* and *LS* during 1996 and 1997, using data from the *Journal Citation Reports*. These two years were summed together to reduce the influence of any cluster of related articles. During these two years *JLR* published 36 articles containing 1341 citations and *LS* published 33 articles containing 1358 citations. In each journal, approximately one third of all references were to leisure sources (with most of those being to *JLR* and *LS*) and two thirds of all references were to outside sources. This gives an initial impression that these journals are fairly well integrated into the outside literature. However, Table 3 reveals that half of the outside literature cited in *JLR* and *LS* was over ten years old. In *LS*, many of the leisure sources were quite dated as well.

This finding is not easy to interpret. Because authors are expected to cite previously published work and often review the historical development of relevant literature, it is common to cite older publications. Reference to older outside literature may represent a review of social or psychological theory that extends back several years. Nevertheless, these findings are disturbing. With over 2200 articles published on leisure and recreation in outside journals during the past ten years, and with disciplinary theory continuing to evolve, we should expect our journals to draw more heavily on contemporary outside literature.

Who Cited Us?

The *Journal Citation Reports* indicated that *JLR* was cited 821 times and *LS* was cited 431 times during 1996 and 1997. Again, these two years are summed together to reduce the influence of any cluster of related articles. As shown in Table 4, leisure sources made 401 references to *JLR* and 228 references to *LS* during these two years, citing both old and new articles in each journal. Outside sources made 420 references to *JLR* and 203 references to *LS* during these two years, most often citing articles that were more than ten years old from *JLR* and articles that were more than five years old from *LS*. Articles one to five years old in *LS* were cited only 21 times by outside sources in 1996 and 1997. Overall, these findings suggest that older articles are more relevant to outside scholars than recently published articles in each of these journals.

Though Table 4 indicates that *JLR* and *LS* were cited fairly regularly by outside sources, this is the cumulative effect of many journals making only a few references to these leisure research journals. In 1997 only two journals (excluding *JLR* and *LS*) cited *JLR* ten or more times. These were *Annals of Tourism Research* (cited *JLR* 14 times including 7 references to articles over ten years old) and *Tourism Management* (cited *JLR* 14 times including 8 references to articles over ten years old). The only journal citing *LS* ten or

TABLE 4
Age of JLR and LS articles that were cited in 1996 and 1997

Age of article cited	<i>JLR</i> cited in:		<i>LS</i> cited in:	
	Leisure Source	Outside Source	Leisure Source	Outside Source
1 to 5 years old ¹	102 (25%)	105 (25%)	64 (28%)	21 (10%)
6 to 10 years old	163 (41%)	120 (29%)	97 (43%)	99 (49%)
Over 10 years old	136 (34%)	195 (46%)	67 (29%)	83 (41%)
Sub-total	401	420	228	203
Total	821		431	

Journal Citation Reports, 1996 and 1997

¹The period 1-5 years represents 1992-1996 for citations indexed in the 1996 *Journal Citation Reports* and 1993-1997 for articles indexed in the 1997 *Journal Citation Reports*.

TABLE 5
Who Cited Articles Published Between 1992-1996 in JLR and LS

Cited by:	<i>JLR</i>	<i>LS</i>
	(109 articles)	(119 articles)
Self	69 (14%)	51 (19%)
<i>JLR, LS, or Society and Leisure</i>	245 (50%)	135 (50%)
Outside Source	173 (36%)	83 (31%)
Total	487	269

Social Science Citation Index, September 1998

more times was *Landscape and Urban Planning* (cited *LS* 11 times with all 11 references to articles over ten years old). This low incidence of repeated citing indicates that our journals do not have significant visibility in the outside journals that cite them.

SSCI was used to more rigorously track patterns of who cited articles from these leisure journals. Each article published in *JLR* or *LS* between 1992 and 1996 was pulled up and links were followed to other articles in the *SSCI* database that had cited them. Many *JLR* and *LS* articles had not been cited by any other source in *SSCI*, though the newer articles had had little chance to be cited yet (by October 1998 when this analysis was performed). Articles published in 1992 and 1993 (the two oldest years) had been cited a median of 3 times in *JLR* (with 2 out of 48 articles never cited) and a median of 2 times in *LS* (with 5 out of 41 articles never cited). The most frequently cited article (Ajzen & Driver, 1992) was in *JLR* and had been cited 37 times.

Looking more broadly at articles published in the five year period between 1992-1996, articles from *JLR* had been cited 487 times and articles from *LS* had been cited 269 times by other articles indexed in *SSCI* (see Table 5). Fourteen percent of the references to *JLR* and 19% of the references to *LS* were authors citing their own work. Another 50% of the references to each journal came from other authors publishing in *JLR*, *LS*, or *Society and Leisure* (the only leisure journals included in *SSCI*). Outside sources accounted for about one third of the references to both *JLR* and *LS*. The article by Ajzen and Driver (1992) was cited 37 times, accounting for 21% of all references to *JLR* by outside sources.

Table 5 indicated a large number of self-citations. In fact, about one in six references to these journals were authors citing their own work. This is to be expected when authors publish a body of interrelated research, and self-citations would appear as a smaller percentage if other people cited these articles more frequently. However, this large percentage of self-citations suggests that authors may be more enamoured by their own work than are other researchers.

The citations by outside sources shown in Table 5 stem from 170 separate articles appearing in 102 journals. Thirty-five of these articles cited two or more articles from the leisure research journals; the rest cited only one. To put this in perspective, approximately 1500 articles on leisure or recreation were published outside our field between 1993 and October 1998 (the date of this analysis). Of those, only 170 (approximately 11%) cited any article that had been published in *JLR* or *LS* between 1992-1996 and only 35 (approximately 2%) cited two or more articles from these journals.

At this point its important to remember that we defined leisure sources and outside sources in a very conservative fashion. Outside sources included many journals that are closely aligned with our field such as *Society and Natural Resources* and *Tourism Management*. When leisure studies faculty publish in those journals they often cite *JLR* or *LS*. Because it would be unwieldy to categorize articles by the departmental affiliation of the authors, all citations in these journals were considered to be outside citations. Thus, the prevalence of true outsiders citing our work is even less than the low numbers depicted in Table 5.

Comparison with Other Journals

Most of us would like to believe that our publications have an impact on research in a given area. With that in mind, the above analysis may be particularly discouraging. However, without a basis of comparison it is difficult to interpret the significance of this citation analysis. *Journal Citation Reports* computes two numbers to assist in this type of comparison. The *impact factor* for a journal is the ratio of the number of times articles from the previous two years were cited in a given year, in relation to the number of articles published in those two years. A high impact factor indicates that articles are cited quite often in the two years following publication. The *cited*

half-life refers to the median age of articles cited from a journal. A long cited half-life indicates that older articles are still influential in scholarly work in that area.

Table 6 reports the impact factor and cited half-life for 1997 for a variety of journals including *JLR* and *LS*. As expected, key disciplinary journals in psychology and sociology have a greater impact factor than journals in specialized fields like *JLR* and *LS*. The cited half-life of the key disciplinary journals is also greater, reflecting the continued citing of significant articles. The impact factor of *JLR* was 0.718, about twice that of *LS* at 0.341. Both journals had a cited half-life of 8.4 years. These numbers are comparable to many journals in other specialized fields. However, the high incidence of self-citations, the low incidence of being cited by outside sources, and the fact that outside sources cite our older work, still imply an insular position for the leisure research journals.

Summary and Discussion

To summarize the above analyses, there is a large and growing body of research on leisure and recreation in the broader social sciences, of which our journals represent a small proportion. *Journal of Leisure Research* and *Leisure Sciences* cite very little of that contemporary work, with more than half of their outside citations referring to literature that is more than ten years old. In addition, sources outside the leisure journals seldom cite articles published in *JLR* or *LS*, particularly the more recently published articles. This pattern of isolation is more extreme for *LS* than for *JLR*, though neither journal is well integrated into contemporary outside literature. If citations are indeed a symbol of "intellectual debt," these leisure research journals and the outside journals that publish about leisure apparently owe very little debt to one another.

Kuhn (1970) suggested that research journals solidify a field and secure its unique position in academic scholarship. Indeed, when the leisure journals were established thirty years ago they increased the visibility of our work and solidified a sense of camaraderie among leisure scholars. However, the benefits of consolidating our research into specialized journals may be tenuated by the possibility of becoming too inbred in our scholarship.

Because the applied leisure research journals are not included in these databases, this analysis undoubtedly underestimates the total number of times that articles in *JLR* or *LS* were cited. In fact, one might argue that the applied leisure research journals are a more significant audience for our research than the disciplinary journals outside our field. This argument might be convincing except for the growing body of research on leisure and recreation that exists in other disciplines. With a mission to promote the scholarly study of leisure, there is no excuse for *JLR* and *LS* to ignore that outside research.

It is also probable that many of the 2200 articles published in outside sources are not relevant to leisure studies as it is framed within our journals.

TABLE 6
Impact Factor and Cited Half-Life for Selected Journals, 1997

	1997 Articles	1997 Total Cites	Impact Factor	Cited Half-Life
Psychological Bulletin	34	11572	6.038	10+
Journal of Personality and Social Psychology	216	17864	2.986	10+
American Sociological Review	55	5070	2.941	10+
Journal of Abnormal Psychology	69	5882	2.678	10+
American Journal of Sociology	40	3605	2.087	10+
Journal of Applied Psychology	79	5371	1.815	10+
Journal of Sport and Exercise Psychology	25	917	1.714	8.6
Journal of Marriage and Family	71	3331	1.438	9.5
Journal of Applied Sport Psychology	20	104	1.000	4.3
Rural Sociology	20	433	.786	7.5
Journal of Leisure Research	18	378	.718	8.4
Land Economics	40	575	.683	7.7
Public Opinion Quarterly	20	1032	.490	10+
Environment and Behavior	29	532	.424	9.3
Annals of Tourism Research	74	377	.351	7.1
Leisure Sciences	12	225	.341	8.4
Landscape and Urban Planning	71	164	.313	4.1
Society and Natural Resources	37	115	.282	4.4
Tourism Management	59	149	.182	5.8

Journal Citation Reports, 1997

Those outside articles address leisure and recreation within the context of family, health, urban planning, culture, and the economy, among other perspectives, and few have direct relevance to leisure practitioners. However, the limited scope of our field has been criticized in the past (cf. Burdge, 1985). Before rejecting that literature as immaterial, we might examine and question the boundaries that we have established for our own study of leisure.

Though this analysis examined the citation patterns for two leisure research journals, the real implications are for the *people* who publish in those journals. These results suggest that leisure researchers need to make a concerted effort to become more familiar with the broader set of literature relevant to leisure studies. Electronic databases and university librarians can help leisure researchers identify on-going research in other fields. These resources are not new; therefore, the insular scope of the leisure journals suggests that leisure researchers have not seriously attempted to expand beyond their own journals. It is possible that this growing interest in leisure and recreation caught off-guard a generation of leisure researchers who are firmly established in older disciplinary theory and comfortable using the

leisure journals as their primary frame of reference. However, we must expect more from our students who will be the next generation of leisure scholars.

The insular position described in this analysis challenges the claim that *Journal of Leisure Research* and *Leisure Sciences* are the key journals for leisure research. To the extent that they do not cite (and are not cited by) outside sources, these journals are intellectually isolated from important and relevant bodies of literature. And with no clear set of references shared by articles in these journals, the articles themselves appear to be isolated from each other as well. We are indeed speaking only to ourselves, perhaps more literally than we had imagined.

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