

Publish or Perish: A Limited Author Analysis of ICA and NCA Journals

By Ulla Bunz

The study reported in this article investigated some of the communication discipline's publication conventions to provide information that can shape hiring, promotion, and/or tenure practices, particularly at highly research-oriented universities. The study investigates 349 research articles by 125 authors published in eight International Communication Association (ICA) and National Communication Association (NCA) journals between January 1999 and June 2004. The analyses focus on authors, their gender, academic rank, and university affiliations. Results show that full professors have significantly higher rates of productivity than either associate or assistant professors, even though assistant professors as a group are associated with the most manuscripts. The study reveals a short list ($n = 12$) of universities whose faculty and/or alumni have published more than their peers and those scholars' preferred publication outlets; recognizes especially productive scholars by academic rank ($n = 11$); and presents data that indicate a potential trend towards dissolving gender differences.

The communication discipline has undergone numerous cycles of evaluation and evolution. Reflection of such disciplinary self-assessment is evident in a number of articles appearing in the special issue of the *Journal of Communication* in 1993 (Vol. 53, No. 3). Contributions to the special issue looked at the state of theory in communication research and the state of the discipline itself. Since then, more than 10 years has elapsed and our discipline has continued to evolve. Many new subareas have developed. The *Journal of Communication's* special issues in 2004 and 2005—Vol. 54, No. 4, and Vol. 55, No. 3—addressed the disciplinary evolution by providing overviews of the prominent subfields of communication. In recent years, our discipline has also grown in the number of people who are trying to leave their mark through rigorous research and meaningful theoretical contributions.

Based on eight International Communication Association (ICA) and National Communication Association (NCA) journals published between January 1999 and June 2004, this article investigates some of the discipline's publication conven-

Ulla Bunz (PhD, University of Kansas) is an assistant professor in the Department of Communication at Florida State University. The author acknowledges the help of Ying-Sang Liu in retrieving a portion of the "university affiliation" and "academic rank" information.

Copyright © 2005 International Communication Association

tions to provide information that can shape hiring and promotion and/or tenure practices, particularly at highly research-oriented universities. The analyses purposefully exclude content or topic of the research articles. Instead they focus on authors, their academic ranks, university affiliations, and publication outlets.

Related Literature

In the 1980s and early 1990s, analyses similar to the one presented here abounded. Hickson, Stacks, and various colleagues focused on long-term analyses of prolific authors in communication (Hickson, Stacks, & Amsbary, 1989, 1993; Hickson, Stacks, & Bodon, 1999) and regional communication associations (e.g., Stacks, Rosenfeld, & Hickson, 1989). Other teams of researchers have focused on articles produced by institution (e.g., Barker, Hall, Roach, & Underberg, 1988), doctoral programs (e.g., Edwards & Baker, 1983), the questionable value of "prolific" scholarship (e.g., Erickson, Fleuriet, & Hosman, 1996), the advantages of citation analyses (e.g., Funkhouser, 1996), scholarship along gender lines (Cooper, Stewart, & Friedley, 1989; Hickson, Stacks, & Amsbary, 1992; Stephen, 2000), the publication practices of specific journals (Stephen, 1999), or the analysis of article/research productivity in specific subfields such as advertising (Soley & Reid, 1983) or broadcasting (Vincent, 1984). Not surprisingly, these researchers did not always agree with each other's methods, results, or interpretations.

When interpreting any author analysis such as the one presented here, it is important to remember that the results are limited to the data evaluated. Though Hickson, Stacks, and Amsbary (1993) concluded that scholars who tend to publish the most in the journals included in Hickson and colleagues' analyses would be likely to publish prolifically in other journals as well, this argument should not be flipped. An author who has published little or not at all in any particular selection of journals might have been prolific in journals not included in the analysis. Thus, there is no personal judgment of the authors included in or excluded from this limited author analysis.

The analyses presented in this article are limited by four main criteria. The first limitation resides with type of publications included in the analyses. Some researchers (e.g., Erickson, Fleuriet, & Hosman, 1996) point out that simple number counting cannot be equated with scholarship. Those authors' example is the inclusion of non-peer-reviewed articles in simple counting. To accommodate Erickson et al.'s call for a clearer distinction of quality versus pure quantity of publications while avoiding a personal judgment call on manuscripts, the study at hand was limited to research articles, excluding, for example, editorials, review and opinion essays, or book reviews.

Second, the analyses were limited by publication date. The 5 1/2-year time period chosen (from January 1999 to June 2004) is roughly equivalent to the average timeframe during which a new tenure-track assistant professor has to establish his or her academic record in order to be considered for promotion and tenure (also sometimes referred to as "up or out"). One could thus expect assistant professors to be most visible in any time-limited author analysis. On the other

Table 1. Overview of Journals and Their Issues Used for Analysis

ICA Journals	
<i>Communication Theory</i> (CT)	February 1999, 9(1)–May 2004, 14(2)
<i>Human Communication Research</i> (HCR)	January 1999, 25(3)–April 2004, 30(2)
<i>Journal of Communication</i> (JoC)	March 1999, 49(1)–June 2004, 54(2)
NCA Journals	
<i>Communication Education</i> (CE)	January 1999, 48(1)–April 2004, 53(2)
<i>Communication Monographs</i> (CM)	March 1999, 66(1)–June 2004, 71(2)
<i>Critical Studies in Media Communication</i> (CSMC)	March 1999, 16(1)–June 2004, 21(2)
<i>Journal of Applied Communication Research</i> (JACR)	February 1999, 27(1)–May 2004, 32(2)
<i>Quarterly Journal of Speech</i> (QJS)	February 1999, 85(1)–May 2004, 90(2)

Note. CSMC changed its name from “Mass” to “Media” in 2000.

hand, Hickson, Stacks, and Bodon (1999) showed that scholars who have begun publishing early in their careers and continued to do so for a number of years tended to increase their publication rates during their tenure as full professors. Based on these considerations, H1 was developed.

H1: Both assistant and full professors are more productive than associate professors, but there is no significant difference between assistant and full professors' productivity.

The third limitation of the analyses presented here is one of publication outlet, as only ICA and NCA journals are included. The journals and the issues included in the analyses are listed in Table 1.

Though there are several prestigious journals that are either published by regional communication associations (e.g., *Communication Quarterly*, published by the Eastern Communication Association) or by publishing houses unaffiliated with academic associations (e.g., *Communication Research*, published by Sage), the “top” and often perceived as most desirable publication outlets are the journals published by the International and the National Communication associations. A publication in one of these journals supposedly provides the highest exposure to and impact on the discipline, two important tenure and/or promotion evaluation criteria. The higher value of publications in national journals is reflected in Rosenfeld and Long's (1992) suggested “evaluation system for measuring faculty performance” (p. 36). According to this particular evaluation system (see p. 40), an article in a national journal is worth 8–12 points. The same article published in a regional journal is worth only 6–9 points. In practice, publishing in a non-ICA/NCA topical journal such as *Health Communication* or *New Media & Society* can be quite high impact within specific communication subfields. Thus, departments need to establish clear criteria for both tenure/promotion and hiring processes that define the “appropriateness” of publication outlets depending on research orientation of the institution and the specific subfield of the scholar in question.

Nonetheless, at many highly research-oriented universities, there is pressure to publish in the “top” journals—often defined as the ICA and NCA journals—at least

once or twice early in one's career. In fact, institutional or departmental reputations are often formed based on their graduates' or employees' success and visibility in the discipline (Edwards & Barker, 1983), and this success and visibility are often measured by the number of publications in a limited set of journals, as is the case in NCA's evaluation of doctoral programs' reputations. Throughout all academic ranks, but especially as scholars are tenured and become more established in the field, other motivations besides institutional pressure contribute to prolific scholars' publication efforts. One such motivational factor is the desire to share one's research with others. As areas of expertise deepen, certain journals may emerge as particularly suited for publication of one's research. Hickson, Stacks, and Bodon (1999) show that most authors—and, thus, the institutions with which these authors are associated—do indeed have tendencies towards publishing in specific journals. In connection with these issues, Research Questions 1 and 2 were developed.

RQ1: Are there any particular universities whose (a) alumni or (b) employees are particularly successful at publishing in the eight journals included in this study?

RQ2: Are people affiliated with a specific university more likely to publish in a particular journal than in other journals in the comparison set?

The fourth main factor of limitation for the analyses presented in this manuscript resides with the definition of "prolific." Hickson, Stacks, and Amsbury (1989) stated that in reference to the 15 journals they investigated, "Universities, even hardline 'publish or perish' universities, need to consider that six or more articles published in these journals places a new assistant professor in the top nine percent for the past 70 years" (p. 235). However, the authors also acknowledged that "the mean rate of publication among *active* scholars was 2.48 articles" for the period of 1915–1990 (Hickson, Stacks, & Amsbury, 1993, p. 230). These numbers and the other three limitations of the data were taken into consideration when determining the cutoff for the study presented here, allowing the definition of "prolific" to emerge from the data. In connection to the issue of productivity, Research Question 3 asked:

RQ3: Who are the most productive authors, and how many articles did one have to publish in the eight journals between January 1999 and June 2004 to be part of that group?

Finally, the issue of gender arises. Stereotypically, communication often is perceived as a female-dominated discipline. Factually, though, this has not been the case at the doctoral degree level. It was not until 1999–2000 that more women than men graduated with a communication PhD (women:men, 1.125:1). The trend was almost exactly reversed during 1990–1991 (women:men, 1:1.23), and even more drastically 15 and 20 years before that (women:men in 1975 was 1:3.08; in 1963, it was 1:16.63; U.S. Department of Education, n.d.). It is possible that this reversal of gender dominance in degrees conferred will be visible in publication records since 1999.

Data on faculty gender distributions in communication departments across the nation were not available. As a point of comparison, faculty gender was counted for a number of selected programs.¹ Results cannot be generalized across the discipline but are representative of the sample data analyzed in this article. The following percentages are based on the faculty of the included departments as of November 2004. Of that faculty, 60.2% were male; 10.8% were male assistant professors and 19.9% were female assistant professors; 14.4% were male associate professors and 6% were female associate professors; and 34.9% were male full professors and 13.8% were female full professors. These frequencies support the doctoral degree granting numbers in indicating that recently, more women than men have been granted communication doctoral degrees and have been hired in productive departments. At tenured ranks, however, the number of male communication faculty still dominated that of female faculty. Among sampled departments, the ratio of male:female was 1:0.40 for full professors, 1:0.42 at the associate level, and 1:1.83 at the assistant level. Such gender imbalance should lead to an apparent male dominance in publication records at tenured ranks if men and women are assumed to be equally productive. Results then have to be interpreted along the ratios reported above. To investigate gender and productivity, Hypothesis 2 was formed.

H2: There will be significantly more publications authored or coauthored by men than by women at tenured ranks.

Procedures

Journals

Together, ICA and NCA produce 13 publications. Two NCA journals, *Communication Teacher* and *Review of Communication* were excluded from analysis because the first publishes only short instructional exercises and the second publishes book reviews. The NCA journals *Communication and Critical/Cultural Studies* and *Text and Performance Quarterly* and the ICA publication *Communication Yearbook* were also excluded from the analysis. *CCCS* is a new journal that was first published in March 2004 and hardly provides data spanning the 5-year time span investigated here. As its name implies, *Communication Yearbook* is an annual publication (though two volumes were published in 2001) in book format. Thus, although *CY* is an ICA publication that publishes scholarly review articles, it was not counted as a journal publication containing research articles. Finally, as its name implies, *Text and Performance Quarterly* focuses specifically on performance-related work, including stage performance. With this focus, the journal is

¹ Later analyses reveal the universities listed in Table 3 as employing the most prolific authors of the sample population analyzed here, so those programs' faculty members were counted. For Michigan State University, faculty for both the communication and the telecommunications departments were counted; at Pennsylvania State University and the University of Texas-Austin, only the departments of communication were assessed; and at the University of Illinois-Urbana Champaign, only the department of speech communication was included.

targeted at theatre and performance art. The focus of those areas and the journal *TPQ* are considered distinctly different from the other publications mentioned above. Thus, journal articles appearing in *TPQ* since 1999 were not included in the analyses presented below.

Data Retrieval and Verification

On May 15, 2004, a search using journal names was conducted on the Web of Science. The search was limited to research articles in the English language. All resulting hits were marked and subsequently exported directly into an EndNote™ database. EndNote™ is a referencing database software and is compatible with the Web of Science. Missing issues were retrieved from the database Ingenta (*Communication Education*, 49[4]–53[1]; *Critical Studies in Media Communication*, 17[3]–17[4], 19[1]–19[4]); and exported into Word. From Word, the output is compatible with EndNote™ and can be imported in a few simple steps. This electronic process limits data entry problems, especially with author names where one letter can make an important difference. Nonetheless, data from the most current issues of all journals except *HCR* had to be inputted manually because they were not yet available in electronic form in either of the two main databases used.

Every effort was made to correct or clarify questionable author names after importing and inputting all data. For example, in two cases, the author names imported from the online databases were “Burgeon” when they should have been “Burgoon.” These and similar typographical errors were corrected after verifying authorship, mostly through publication information provided on authors’ websites. In addition, if erroneous assumptions could possibly be made based on author initials and full first names were not provided automatically through the online databases, full names were sought for verification, mostly using the full-text database EBSCOhost, by seeking out the print version of an article or by verifying via online vitae that a particular author had indeed written a specific article. Examples of such cases include “Allen, M.” and “Allen, M. W.,” who are not the same person. However, “Park, H.” and “Park, H. S.” are the same person. For one particular article, it was determined that “Smith, S.” was the same person as “Smith, S. L.,” not “Smith, S. W.,” and so on. In cases of common last names (e.g., Johnson, Lee, Miller), full first names were always sought. Nonetheless there is still a slight possibility that faulty information from the Web of Science and/or Ingenta was not caught and corrected, so this erroneous data would have been maintained throughout the following analyses. Academic rank, doctoral degree-granting institution and place of current employment² for selected authors were added manually after the information was retrieved from the author notes of the eight journals and/or personal websites.

Data Management

Data were managed in three main steps. The first step consisted of importing the

² Unless identified differently, “current university” always refers to place of employment at the time of article publication. So, if an author published one article each in 2001 and 2002, but changed place of employment in-between as reflected in the author notes, two separate “current” universities were recorded.

data from the online databases and inputting data from the newest issues manually. This yielded 962 research articles by 1,250 different authors. Step 2 consisted of “splitting” authorship for articles with multiple authors. For example, if an article had three authors, it was entered three times into the database, once under each of the authors’ names. Rank of authorship (single, 1st, 2nd, 3rd, etc.) was indicated in a specially designated database field. All authors listed for an article were maintained and credited equally, although the American Psychological Association (APA) style guide indicates that only the first five authors are credited when an article is cited in text (APA, 2001, pp. 208–209). After this splitting of authorship, there were 1,806 entries by the same 1,250 authors as in Step 1. For Step 3, authors who had published only one or two research articles (no matter what rank of authorship) in the 5 1/2-year time span were separated from those who had published three or more. This decision was based in part on the averages reported in the literature in combination with the limited time period investigated and in part on the data itself, which showed a clear break between authors with one or two listings and authors with three or more listings. After the separation process, 487 entries for 349 articles by 125 authors remained as Dataset 3.³ The numbers indicate that in the past 5 years there have been 920 authors who have placed one and 205 authors who have placed two articles in an ICA or NCA journal, many of them not as single or first author. In fact, the average number of publications for the 1,250 authors in the eight journals since 1999 was 0.77. The lower mean as compared to Hickson and colleagues’ results derives probably from the lower number of journals included in this analysis. The following sections provide the results of the data analyses, several tables, and responses to the research questions and hypotheses.

Results

H1: Productivity by Academic Rank

In order to investigate productivity by rank, frequency analyses were conducted. Table 2—especially the columns for “totals” and “mean”—represents the number of author listings on publications by academic rank, gender, and journal. The “graduate student” and “other” categories were omitted from the table due to small group size. When interpreting Table 2 and looking at other data in relation to academic rank, it is important to remember that a number of people were promoted since 1999, so they may be counted in more than one academic rank. The lower part of Table 2 provides information on ranks and promotions.

As Table 2 shows, by a mere numbers count, assistant professors as a group have authored or coauthored more articles ($n_{ai} = 205$, with n_{ai} being the number of

³ Rank of authorship was assessed, but rankings were not weighed differently. Each listed author received full credit no matter whether they were the first or last author. Frequency analysis shows that 97% ($n = 471$, $N = 487$) of author rankings associated with listings in Dataset 3 are either single, 1st, 2nd, or 3rd authored. These numbers indicate that authors were not retained in the group of prolific authors because of “tagging on” their name to a long list of coauthors.

Table 2. Number of Articles by Academic Rank, Gender, and Journal

Rank in 2004	CE	CM	CSMC	CT	HCR	JACR	JoC	QJS	Article total	Author total	Mean articles
Assistant professor	25	45	18	9	40	15	44	9	205	65	3.15
Female	7	21	12	3	19	8	27	2	89	31	2.87
Male	18	24	6	6	21	7	27	7	118	34	3.47
Associate professor	14	25	4	9	17	10	9	0	88	35	2.51
Female	4	10	1	3	6	7	1	0	32	12	2.67
Male	10	15	3	6	11	3	8	0	56	23	2.43
Full professor	27	44	6	6	28	24	30	4	169	43	3.93
Female	8	11	1	1	7	13	9	1	51	13	3.92
Male	19	33	5	5	21	11	21	3	118	30	3.93
Article totals	70	124	28	24	93	51	84	13	487		
Female	20	49	14	7	37	29	28	3	187		
Male	50	75	14	17	56	22	56	10	300		

Absolute totals:

Number of separate authors: 125

Gender: 52 female, 73 male

Rank and promotion:

13 graduate students (of whom 10—7 women, 3 men—became assistant professors, 1 became "other")

65 assistant professors (of whom 14—4 women, 10 men—became associate professors)

33 associate professors (of which 8—2 women, 6 men—became full professors)

43 full professors (including one male colleague who went from assistant to associate to full since 1999)

2 other (including 1 former graduate student)

Number of separate journal articles by these authors: 349

Number of dataset listings after each author was credited for each article that he/she single and coauthored: 487

author listings) than either full ($n_{al} = 169$) or associate ($n_{al} = 88$) professors. However, post hoc tests to a significant ANOVA analysis, $F(2, 459) = 17.68, p < .001, \eta = .07$, show that full professors ($n_p = 43$ with n_p being the number of people, $M = 5.56, SD = 3.12$) were significantly more productive than either assistant ($n_p = 65, M = 4.03, SD = 1.32; p < .000$) or associate ($n_p = 35, M = 4.44, SD = 3.00; p = .002$) professors. There was no significant difference between associate ($n_p = 35, M = 4.44, SD = 3.00$) and assistant ($n_p = 65, M = 4.03, SD = 1.32$) professors, $p = .40$ (with $\alpha = .05$, the power to detect small, medium, and large effects was .35, .97, and .99, respectively). Hypothesis 1 stated that full professors would show higher productivity than associate professors (supported); that assistant professors would show higher productivity than associate professors (rejected); and that there would be no differences in productivity between assistant and full professors (rejected).

RQ1: Productivity by Institution

Research Question 1 inquired whether any particular universities could be identified whose alumni or current employees seem to be particularly productive. Overall, the 125 authors of Dataset 3 are or were employed by 67 different universities and one research institute and had graduated from 40 universities. Because of overlap, a total of 84 universities and one research institute are represented in the data. All 13 graduate students were matriculated at U.S. universities. Graduate student publications were assessed under the “currently employed by” category, but not under the “degree-granting university” category because the students had not factually completed their degrees when their articles were published.

Ranking the universities once by total current employees’ publications and once by alumni’s publications, seven universities ranked highest among their peers in both listings. These universities were, in alphabetical order, Michigan State University, Pennsylvania State University, University of Arizona, University of California-Santa Barbara, University of Texas-Austin, University of Wisconsin-Madison, and West Virginia University. Table 3 lists the top 10 universities based on current employees’ number of publications, and the top 9 universities based on doctoral alumni’s publications. The “totals” column especially allows a quick overview and comparison among these 12 universities. Note that the table data represent only the publications of authors who have published three or more manuscripts within the study’s parameters and are/were associated with any of the 12 listed universities.

Current employees and alumni of the seven universities identified above, when combined, were responsible for 87% ($n = 422$) of the listings in Dataset 3. In fact, the frequency information shows that current employees and alumni combined of only three universities (48 people, or 38% of those represented in Dataset 3) are responsible for 54% of listings in Dataset 3. The three universities are Michigan State University ($n = 137$, or 28%), the University of California-Santa Barbara ($n = 55$, or 11%), and the University of Wisconsin-Madison ($n = 73$, or 15%).

RQ2: Productivity by Journal

In addition to totals discussed above, Table 3 also provides more specific data on publication outlet and university affiliation. The more specific data were used to

Table 3. Article Authors Affiliated as Alumni or Current Employees by Journal

Institution		N	CE	CM	CSMC	CT	HCR	JACR	JoC	QJS	χ^2
Michigan State	Current	52	0	27	0	0	13	5	7	0	97.54
	Alumni	85	2	42	1	6	23	5	6	0	140.41
Pennsylvania State U	Current	16	1	3	0	2	3	3	3	1	5.00
	Alumni	19	15	3	0	0	0	1	0	0	79.94
U of Arizona	Current	20	1	5	0	0	7	1	6	0	24.8
	Alumni	21	1	7	0	0	7	2	4	0	24.33
U of California Santa Barbara	Current	30	0	11	2	0	6	1	10	0	39.88
	Alumni	25	2	6	0	0	6	3	8	0	22.67
U of Illinois-Urbana/Champaign	Current	21	0	5	0	1	8	1	6	0	27.37
	Alumni	14	0	5	0	1	7	0	1	0	29.42
U of Minnesota	Current	0	0	0	0	0	0	0	0	0	-
	Alumni	15	2	0	1	0	1	4	6	1	16.47
U of Missouri-Columbia	Current	25	0	12	1	0	5	2	4	1	36.10
	Alumni	3	0	2	0	0	1	0	0	0	10.33
U Missouri-St. Louis	Current	21	2	12	2	0	1	1	2	1	39.57
	Alumni	0	0	0	0	0	0	0	0	0	-
U of Southern California	Current	0	0	0	0	0	0	0	0	0	-
	Alumni	22	1	6	2	0	4	7	2	0	17.99
U of Texas-Austin	Current	16	2	5	1	2	3	1	2	0	8.00
	Alumni	22	1	10	0	0	4	7	0	0	38.36
U of Wisconsin-Madison	Current	29	1	7	0	3	13	0	5	0	40.78
	Alumni	44	0	8	2	2	9	2	20	1	59.70
West Virginia U	Current	16	9	5	0	0	0	2	0	0	39.00
	Alumni	27	11	8	0	0	4	3	1	0	35.52
Total of above universities	Current	246	16	92	6	8	59	17	45	3	
	Alumni	297	35	97	6	9	66	34	48	2	
Total of the 56 other universities	Current	241	54	32	22	16	34	34	39	10	
	Alumni	190	37	27	22	15	27	17	36	11	

Note. Table data represent only the publications of authors who have published three or more manuscripts within the study's parameters and are/were associated with any of the 12 listed universities. Chi-square values ≥ 14.07 are significant at the $p < .05$ level, and values ≥ 18.48 are significant at the $p < .01$ level with $df = 7$.

investigate Research Question 2, which inquired whether people affiliated with a specific university are more likely to publish in a particular journal than they were in other journals in the comparison set.

Overall, *t* tests showed that people currently employed at one of the 12 universities listed were more likely to publish in the eight ICA and NCA journals ($n_{al} = 246$ with n_{al} being the number of author listings, $M = 4.36$, $SD = 2.14$) than are people employed by any of the dataset's other institutions ($n_{al} = 241$, $M = 3.69$, $SD = 2.27$), $t(485) = 3.34$, $p < .001$, $r^2 = .02$. However, there was no significant difference among alumni of the 12 universities listed in Table 3 ($n_{al} = 297$, $M = 4.14$, $SD = 2.19$) and alumni of the other universities ($n_{al} = 190$, $M = 3.85$, $SD = 2.28$) with regard to the eight journals, $t(485) = 1.91$, $p = .16$ (with $\alpha = .05$, power to detect small, medium, and large effect sizes was .57, .99, and .99, respectively).

For each of the 12 universities, Table 3 provides the number of author listings on research articles published in one of the eight journals under investigation

once for current employees and once for alumni. A separate 1 x 8 chi-square analysis ($df = 7$) was conducted for 21 out of the 24 rows (three rows are empty, thus analyses were not conducted). Out of the 21, 18 tests were significant at the $p < .05$ level, and out of these 18, 16 were also significant at the $p < .01$ level, as displayed in Table 3. Thus, in these 18 cases, current employees or alumni were more likely to publish in one or more journals than in others. The raw count of numbers provided in the table indicates dominating outlets per group of scholars, though interpretation of these results needs to occur within the limitations of the study as outlined in the Literature section and in footnotes 3 and 4. Follow-up tests were not conducted, in part because of the low cell sizes and in part because of the nature of the data itself (not randomly selected, not a comparison between a sample and a population).

For the other universities, no primary publication outlets could be detected. In the interest of space, these nonsignificant results are not reported here. However, the low frequencies reported in Table 3 indicate that most likely the samples were too small to detect differences. Overall, these results show that for selected groups, relationships between university affiliation and dominant publication outlet can be identified.

RQ3: Prolific Authors

Research Question 3 inquired who would be the most productive authors according to this study, and how many articles one would have had to publish to fall into this category. As this study was limited to the time span of 5 1/2 years and did not take into account the date of doctoral degree conferred (i.e., a person graduating in 1999 would have had over 5 years to publish, whereas another person might not even have begun their doctoral program until 2003, in effect limiting the possible time frame for publication), Table 4 presents the most productive authors per academic rank rather than across all ranks.

Based on the limited sample analyzed, as a graduate student, one would have had to publish three or more; as an assistant professor, six or more; as an associate professor, five or more; and as a full professor, nine or more articles in the eight journals to be the most prolific among prolific scholars. Two people will be pointed out here specifically, namely Levine, who is listed both under the “associate” and the “full” category for a total of 15 ICA/NCA journal articles in just over 5 years, and Park, who is listed only once under the “graduate student” category, but who is a runner-up in the “assistant” category with five additional publications.

H2: Productivity by Gender

Hypothesis 2 predicted that there would be significantly more publications authored or coauthored by men than by women at tenured ranks. Table 2 already presented some frequency information on gender, showing that by simple count, there were more male ($n = 73$) than female authors ($n = 52$) total and at each academic rank. However, the ratio of prolific men to prolific women seems to be changing. At the full professor level, the men:women ratio was 1:0.43 (n ratio 30:13); at the associate level the ratio was 1:0.52 (n ratio 23:12); at the assistant level the ratio was 1:0.91 (n ratio 34:31); and at the graduate student level (data

Table 4. Most Published Authors by Academic Rank in ICA/NCA Journals

Academic rank	Name	No. of articles	Current university	University granting doctoral degree
Graduate students	Duggan, A. P.	3	UC-Santa Barbara	(N/A at time of pub for latest article by each)
	Fediuk, T. A.	3	Michigan State U	
	Park, H. S.	3	UC-Santa Barbara	
Assistant professors	Caughlin, J. P.	6	U of Illinois-Urbana/Champaign	U of Texas-Austin
	Golish Afifi, T. D.	7	Pennsylvania State U	Nebraska-Lincoln
	Holbert, R. L.	6	U of Delaware	Wisconsin-Madison
Associate professors	Stephenson, M. T.	6	Texas A&M U	U of Kentucky
	Levine, T. R.	6	Michigan State U	Michigan State U
	Pavitt, C.	5	U of Delaware	Wisconsin-Madison
Full professors	Benoit, W. L.	9	U Missouri-Columbia	Wayne State U
	Levine, T. R.	9	Michigan State U	Michigan State U
	McCroskey, J. C.	10	West Virginia U	Pennsylvania State

Note. "Current" university refers to year of most recent ICA/NCA publication recorded.

not included in Table 2), the ratio of men:women was 1:1.60 (n ratio 5:8), showing that there are more female than male prolific authors among graduate students. Of course, the number of authors involved ($n = 13$) is very small at the graduate student level. With regard to productivity, male:female full professors showed a productivity ratio of 1:0.43; at the associate levels, 1:0.57, respectively; and at the assistant levels, 1:0.75, respectively.

Results of t tests show that male full professors as a group ($n_p = 30$, $n_{al} = 118$ with n_p being number of people and n_{al} being combined number of author listings on articles, $M = 5.91$, $SD = 3.59$) authored or coauthored significantly more publications than did female full professors as a group ($n_p = 13$, $n_{al} = 51$, $M = 4.72$, $SD = 1.60$), $t(267) = 2.98$, $p = .003$, $r^2 = .03$; and that male associate professors as a group ($n_p = 23$, $n_{al} = 56$, $M = 4.98$, $SD = 3.63$) authored or coauthored significantly more publications than did female associate professors as a group ($n_p = 12$, $n_{al} = 32$, $M = 3.50$, $SD = .72$), $t(62) = 2.95$, $p = .004$, $r^2 = .12$, as could be expected due to the larger numbers of male faculty at those ranks. All other gender comparisons—whether across rank, within rank at the group level, or within rank at the individual level—show nonsignificant results, as presented in Table 5. The power to detect medium or large effect sizes was generally moderate or large, indicating that most likely obtained results would hold true at the population level as well. The exception is the results with regard to graduate students, where power was low, indicating that the sample size was too small to really detect medium or large effects.

Thus, although these data show that men as a group publish significantly more manuscripts than women as a group at the associate and full professor rank, these data do not support the notion that productivity depends on gender. There are more prolific men at the more advanced academic ranks simply because there are more male faculty at the advanced ranks. At the assistant professor level, there are fewer men than women, but the men publish more than the women. The following section interprets the results presented above.

Table 5. Productivity by Gender and Rank, Nonsignificant Results

	Gender	<i>M</i>	<i>SD</i>	<i>n</i>	Test result	<i>p</i>	<i>d</i>	Power
Across all ranks	Female	12.35	10.72	52	$F(1, 156) = 1.26$	.26	.25	.88
	Male	15.57	21.30	73				
Group level	Female	4.00	1.42	97	$t(203) = .35$	.73	.50	.94
	Male	4.06	1.22	108				
Graduate students	Female	4.42	2.19	12	$t(18) = -1.47$	.10	.50	.18
	Male	3.25	.46	8				
Individual level	Female	18.54	15.36	13	$t(41) = .66$	.51	.50	.31
	Male	23.27	31.69	30				
Associate	Female	9.33	5.36	12	$t(33) = .69$	.49	.50	.27
	Male	12.13	17.85	23				
Assistant	Female	12.51	9.91	31	$t(63) = .17$	.87	.50	.51
	Male	12.91	8.91	34				
Graduate students	Female	6.62	7.30	8	$t(11) = -.49$	.64	.50	.13
	Male	5.20	3.03	5				

Note. $\alpha = .05$ for all calculations. *d* levels from Cohen (1992). Power values calculated with GPower, available at <http://www.psych.uni-duesseldorf.de/aap/projects/gpower/index.html>. *N* refers to the number of people, except for the group level, where it stands for the combined number of author listings on articles.

Discussion

Productivity by Rank and the Importance of Experience

Hypothesis 1 examined productivity by academic rank. Specifically, it predicted that assistant professors would be more productive than associate professors due to publication-related tenure pressures that exist particularly at research-oriented universities. This prediction was not supported for the dataset at hand. Results show that among active and frequently publishing scholars, productivity seems to increase throughout one's career, with full professors producing significantly more publications on average than either associate or assistant professors.

A comparison between the rank distribution of the sample dataset and the faculty of the universities of Table 3 (see footnote 1) supports this interpretation. For the sample data, the assistant to associate to full professor distribution is 45% to 25% to 30%, respectively. Counting the faculty of the investigated departments—whether they have published and are included in this dataset or not—the distribution is 31% to 20% to 81%. It thus seems that a larger proportion of assistant professors publish, but those (fewer) full professors that continue to publish throughout their career do so more prolifically than tenure-driven assistant professors. It seems that highly research-oriented departments can benefit more long term if they instill in their assistant professors the desire to do research and publish. It is questionable whether the often implied and sometimes voiced threat to “publish

or perish” that haunts assistant professors at highly research-oriented universities communicates the intended message effectively. Tenure and promotion committees are urged to consider these results and set their expectations as to number of articles published in ICA/NCA journals accordingly for each step of the promotion process.

Productivity by Institution and Reputation

A productivity analysis by institution reveals potential trends within the discipline with regard to publication opportunities and identifies highly research-oriented universities.⁴ Indirectly, a publication by a well-known author in a prestigious journal reflects positively both on the doctoral degree-granting university of the author and the current place of employment. In order to accredit these institutions, authors often include such information in the author note. At times, especially for beginning scholars who still have to establish their own reputations, author credibility can be derived from one’s “pedigree,” the current or doctoral university. Through this reciprocal process and over time, certain departments may develop reputations, such as for being highly research-oriented or for using a specific methodological orientation. Criteria for the acceptance of graduate students or the hiring of new faculty, as well as tenure expectations may rise as a department perceives its reputation for high-quality research and publications to rise within the discipline.

Results presented show that seven universities rank highest both by number of publications authored by current employees and authored by doctoral alumni. Indeed, the result that out of the 125 people in Dataset 3, 48 people (38%) associated with only three universities—Michigan State University, University of California-Santa Barbara, and University of Wisconsin-Madison—are responsible for 54% of the sample data seems to indicate that these three universities have graduated and/or employed particularly prolific scholars in the past 5 years. The results also indicate that these universities encourage collaborative publishing. Advantages of such programs for those graduate students who see their future with a research-oriented university include extensive mentoring by experienced faculty on the research process. Such professional relationships may extend to coauthorship on publications during graduate school or the first years of assistant professorship.

Productivity by Journal and by Editorial and Departmental Inclinations

Results presented show 18 cases in which a particular group of scholars—current employees or alumni of a particular university—could be shown to publish predominantly in one particular journal. Although it would be easy to conclude favoritism, such linear thinking ignores the complex nature of the publication process and the limitations of this study. The kind of author analysis presented in this

⁴ No distinction was made in this analysis between universities that have only one communication-related program and those that have more than one. The lack of this distinction may make some universities appear more dominant than any particular department or program at that university would be on its own. In addition, universities that tend to encourage research teams and collaborative publishing, as is more common in quantitatively oriented research, will appear to be more dominant here due to the author coding as explained in the data management section.

article cannot identify causation. At the very minimum, information on submission numbers and submission affiliations would be required.

However, the present author analysis can identify departmental inclinations and link them to editorial statements. If an editor indicates a clear preference for quantitative studies, then scholars favoring quantitative methods are more likely to have their manuscripts accepted during the tenure of this editor than scholars favoring, for example, rhetorical or ethnographic methods. University affiliation plays into this only in that some programs, for example, the ones at the University of Wisconsin-Madison and at Michigan State University, are known for favoring quantitative methods, and manuscripts originating out of those programs might have a better chance of being accepted by an editor whose editorial statement openly encourages quantitative submissions. Experienced scholars and hiring committees can then assess a potential candidate's research and methodological orientation based on manuscripts placed not just within the "top" journals, but within specific journals during specific editorial emphases. Tenure and/or promotion committees equally should take into consideration editorial policies of journals deemed as appropriate outlets for the 5 or 6 years prior. The nature or methodology of a particular scholar's research may simply have made it more difficult for him or her to place the manuscript in a select group of journals if editorial emphases did not favor the scholar's particular approach, no matter how high the quality of the work. Thus, the definition of "appropriate journal" should not be standardized.

Prolific Authors and Tenure Expectations

Table 4 lists the most prolific authors by academic rank. Obviously, the table does not reflect the publication records of these or other scholars in journals other than the eight investigated here. The scholars listed in the table can thus claim their status as "most productive scholar by rank" only within the parameters set by these data.

Results of the study presented here show that the most prolific faculty published between 5 and 15 research articles in the ICA/NCA journals in just over 5 years. When interpreting these and the following numbers, it is important to remember that the way the present data were coded inflates publication numbers for authors who collaborate repeatedly, as rank of authorship was not weighted. Subdisciplines such as rhetoric, in which collaboration on manuscripts is less common than in social scientific, quantitatively oriented research, will tally up fewer author listings with such coding procedures, as is apparent in the low numbers for the *Quarterly Journal of Speech* in Tables 2 and 3. Thus, just as the definition of appropriate journal should not be standardized, it may be prudent to define "minimum or appropriate number" of publications depending on the scholar's subdiscipline and primary methodology.

At the same time, and keeping in mind the tendency of the analysis to favor collaborative, quantitative publications when tallying up, the data show a clear break between those who published one or two articles in the time frame investigated and those who published three or more. Thus, one can conclude that based on the limited analyses presented here, a prolific author publishes three or more research articles in 5 1/2 years in any of the eight journals. In 1999, Hickson,

Stacks, and Bodon pointed out that “a faculty member who publishes six or more articles in a lifetime finds one’s self in the top 9.65% of the discipline” (p. 192). These authors’ analyses covered 80 years of communication scholarship and 19 journals, including the 8 used here. So, the scholars identified in the present study and listed in Table 4 are more than prolific, falling into the 10% range despite the limitations on time and journals. Tenure committees need to take into consideration that, statistically, it is impossible for everyone to publish within the 10% range. Instead, even highly research-oriented universities—“hardline ‘publish or perish’ universities,” as Hickson, Stacks, and Amsbury (1989) called them—need to acknowledge that three publications in the eight ICA/NCA journals during a time frame of 6 years or less is an above average accomplishment and qualifies an assistant professor as a prolific author. After all, only 48 out of 1,250 authors (3.8%) originally retrieved for this study’s dataset were people with three or more publications in the eight ICA/NCA journals while they were at the rank of assistant professor. Such an accomplishment must be weighted accordingly during tenure evaluations, as otherwise tenure expectations are raised beyond what is statistically possible given the limitations on publication space.

Productivity by Gender and Social Change

Results presented earlier support the notion that productivity does not depend on gender. Results also showed that there are both significantly more male associate and significantly more male full professors who seem to publish significantly more than their female counterparts. However, these results are in line with reported gender ratios in a selected sample of communication departments. In fact, tenured women included in this dataset seem to do slightly better than tenured men based on presented ratios (e.g., men:women ratio at the associate level is 1:0.42, but productivity ratio is 1:0.57). Any perceived male publication dominance at tenured ranks is skewed by the lower number of tenured women. Power was generally too low to interpret results at the graduate student level with certainty. At the assistant professor level, more women than men are currently employed by the sampled departments. Men have higher productivity ratios, but significance testing did not support such observations with sufficient power to observe medium or large effects. Thus, even with a larger sample, results are not likely to show gender dominance at the assistant professor rank. In conjunction with the U.S. Department of Education data that shows that in 1999–2000 more women than men were granted PhD degrees in communication for the first time, results presented in this manuscript may be indications for large-scale social change. Future studies ought to investigate repeatedly whether this trend of gender equality continues and, over time, progresses throughout all academic ranks.

Concluding Remarks

The communication discipline continues to evolve and grow both in number of subfields and people. Different communication programs across the nation place different emphases on research and publication. In some departments, book pub-

lications, excellent teaching, or engaged service may “count” more than research articles when a job candidate’s record is evaluated and that employee is considered for tenure or promotion. Meanwhile, at highly research-oriented universities such as the ones making up most of the dataset assessed here, the institutional pressure on assistant professors to publish research articles in “top” journals continues to be high.

Results presented and discussed in this article should be taken into consideration when evaluating a scholar’s record. Publication records show clearly that only a very limited number of people can and do publish repeatedly in ICA and NCA journals in any given time frame. Whether a scholar is to be considered prolific or to be having an impact on the discipline ought to be a very person-specific evaluation. Developing promotion standards for publishing that implicitly threaten faculty with “perishing” may not be the most effective long-term strategy. Instead, promotion criteria should encourage faculty to engage in the research work that they enjoy, as people who are intrinsically motivated actively continue to publish even without institutional pressure. Such criteria should include a diverse definition of what is considered to be a top journal in a specific scholar’s subfield. As the discipline continues to evolve and new journals—and new forms of publishing, such as electronic publishing—are founded and devised, studies such as the one presented in this article should be conducted repeatedly. There cannot be a “one size fits all” measuring stick of performance that accommodates a discipline as diverse as communication is.

References

- American Psychological Association. (2001). *Publication manual of the American Psychological Association* (5th ed.). Washington, DC: American Psychological Association.
- Barker, L., Ray, V. O., Watson, K. W., & Hall, R. N. (1988). An investigation of the quantity of articles produced in the communication discipline: An institutional analysis on the basis of highest degree conferred, part III. *ACA Bulletin*, 65, 31–38.
- Blair, C., Brown, J. R., & Baxter, L. A. (1994). Disciplining the feminine. *Quarterly Journal of Speech*, 80, 383–409.
- Cohen, J. (1992). A power primer. *Psychological Bulletin*, 112, 155–159.
- Cooper, P. J., Stewart, L. P., & Friedley, S. A. (1989). Twenty years of research by and about women in major communication journals: 1967–1986. *ACA Bulletin*, 67, 46–61.
- Edwards, R., & Barker, L. (1983). Perceptions of highly regarded doctoral programs in selected areas of speech communication. *Communication Education*, 32, 63–68.
- Erickson, K. V., Fleuriet, C. A., & Hosman, L. A. (1996). Scholars and pub-junkies: Perspectives on academic publishing. *Southern Communication Journal*, 61, 271–276.
- Funkhouser, E. (1996). The evaluative use of citation analysis for communication journals. *Human Communication Research*, 22, 563–574.
- Hickson, M., III, Stacks, D. W., & Amsbary, J. H. (1989). An analysis of prolific scholarship in speech communication, 1915–1985: Toward a yardstick for measuring research productivity. *Communication Education*, 38, 230–236.
- Hickson, M., III, Stacks, D. W., & Amsbary, J. H. (1992). Active prolific female scholars in communication: An analysis of research productivity, II. *Communication Quarterly*, 4, 350–356.

- Hickson, M., III, Stacks, D. W., & Amsbary, J. H. (1993). Active prolific scholars in communication studies: Analysis of research productivity, II. *Communication Education*, 42, 224–233.
- Hickson, M., III, Stacks, D. W., & Bodon, J. (1999). The status of research productivity in communication: 1915–1995. *Communication Monographs*, 66, 178–197.
- National Center for Education Statistics. (2004). *Begin your college search by selecting criteria in the form below*. Retrieved June 7, 2004, from <http://nces.ed.gov/ipeds/cool/>
- Rosenfeld, L. B., & Long, B. W. (1992). An evaluation system for measuring faculty performance. *ACA Bulletin*, 79, 36–44.
- Soley, L. C., & Reid, L. N. (1983). Advertising article productivity of the U.S. academic community. *Journalism Quarterly*, 60, 464–469, 542.
- Stacks, D. W., Rosenfeld, L. B., & Hickson, M., III. (1989). Perceptions of regional communication associations. *Communication Education*, 38, 144–150.
- Stephen, T. (1999). Computer assisted concept analysis of HCR's first 25 years. *Human Communication Research*, 25, 498–513.
- Stephen, T. (2000). Concept analysis of gender, feminist, and women's studies research in the communication literature. *Communication Monographs*, 67, 193–214.
- U.S. Department of Education (n.d.). *General information survey and integrated postsecondary education data system*. Retrieved June 7, 2004, from <http://www.natcom.org/ComProg/Stats/earned.htm>
- Vincent, R. C. (1984). Broadcast research productivity of U.S. communication programs, 1976–1983. *Journalism Quarterly*, 61, 841–846.