

IS THERE MORE TO COUNTING THAN WHAT MEETS THE EYE? COMMENT ON SNYDER AND RICE

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Snyder and Rice (1994) comment that Shortz, Worthington, McCullough, DeVries, and Morrow (1994) failed to use sophisticated methods in their identification of prolific authors, institutions, and journals within the field of marital therapy. This article is a response to Snyder and Rice. We argue that Snyder and Rice's suggested methods emphasize a different research question than our original question. We investigated productivity of authors and institutions, not impact of scholars on the field of marital therapy. Furthermore, we demonstrate that the results obtained from Snyder and Rice's suggested methodologies are not appreciably different from our original results.

Snyder and Rice (1994) argue that the method used by Shortz, Worthington, McCullough, DeVries, and Morrow (1994) to identify prolific authors, institutions, and publication outlets in the field of marital therapy "suggests serious limitations to their conclusions" (p. 191). Snyder and Rice (1994) offer other "sophisticated methodologies . . . for identifying those sources bearing the greatest influence on a discipline" (p. 195). They offer helpful suggestions to identify influential sources within a field, and we commend them for their suggestions. The present article addresses the question, do these alternative sophisticated methodologies really change our conclusions?

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Competing views exist concerning the best methods for measuring individuals', institutions', and journals' contributions to the development of a field. The most commonly preferred methods include the number of journal articles attributed to an author or institution (Horan, Hanish, Keen, Saberi, & Hird, 1993; Howard, 1983; Thomas & McKenzie, 1986), the number of citations for an author or institution (Heyduk & Fenigstein, 1984; Matson, Gauvier, & Manakam, 1989), or a combination of both articles published and number of author citations (Howard & Curtin, 1993). These methods differ in their focus. Number of articles published is a measure of productivity; number of citations is a measure of impact. The focus on productivity rather than impact yields differences in interpretation.

We argue that (a) we focused on productivity and used adequate methods to measure it and (b) even if we had followed Snyder and Rice's suggestions (which were more concerned with impact), our conclusions would be virtually unchanged from the original article. These sophisticated methodologies do not yield dramatically different conclusions about *recent* developments of a field.

EVALUATING JOURNALS' INFLUENCE

Snyder and Rice (1994) criticize Shortz et al. (1994) for (a) selecting 10 journals (based on the authors' collective experience) that were likely to publish scholarship on marital therapy between 1985 and 1991 and (b) treating publications in each journal equally. Snyder and Rice propose two criteria for ranking the differential influence of a journal: (a) the visibility of the journal (based on the journal's circulation) and (b) the immediacy and impact (calculated from citation data presented in the *Social Sciences Citation Index [SCCI]*). These approaches are problematic in that the estimates are based on *all* journals being read by *all* social scientists (especially psychologists). The focus of our original investigation (Shortz et al., 1994) was limited to scholars of marital therapy — not all social scientists. The journals we selected were intended to be the primary outlets for marital therapy scholarship, not outlets for all types of psychological scholarship. The visibility, immediacy, and impact ratings provided by Snyder and Rice (1994) are more appropriate for evaluating the influence of psychological journals in general, not journals with a focus on marital therapy.

Snyder and Rice (1994) also suggested that we should have surveyed experts in the field of marital therapy to obtain the most prominent journals in the discipline, an approach recommended by Howard (1983). We followed through on Snyder and Rice's (1994) suggestion. We randomly selected 112 experts from the editorial boards of 16 journals often publishing articles in marital and family therapy. We mailed 112 questionnaires asking experts (a) to nominate the most prominent journals in the field of marital therapy, (b) to indicate the journals to which they most often submit their work, and (c) to rank these journals based on the journal's prominence *within the field of marital therapy*. (The questionnaire is available upon request). One follow-up mailing was made. Our return rate was 49% ($N=55$), with 31% ($n=17$) of the experts who responded disqualifying themselves as experts on marital therapy. (Several journals did not specialize in marital and family scholarship. A total of 38 experts provided nominations and ranking).

Results from the three questions indicated that the 5 journals that were considered to be the most prominent in marital therapy, and the journals to which researchers most often submitted their work in marital therapy were *Journal of Marital and Family Therapy*, *Family Process*, *Journal of Family Psychology*, *Journal of Counseling and Clinical Psychology*,

and *American Journal of Family Therapy* (see Table 1). Of the top 10 journals, 3 were not in circulation throughout the time period of our original investigation and were therefore excluded from our analysis (*Journal of Family Psychology*, *Journal of Family Psychotherapy*, and *Journal of Couples Therapy*). Excluding these 3 journals, only 1 of the top 10 was not among our original list of 10 journals (*Family Relations*). This suggested that little difference was made by going through the time-consuming surveys with experts nominating and rank-ordering journals.

Table 1
The Top Ten Prominent Journals in Marital Therapy, As Identified by 38
Marital Therapy Experts Based on a List of 16 Journals

Journal	Total Weight ^a Points	# of Experts Ranking Journal 1 ^b	# of Experts Ranking Journal in Top 5 ^c
<i>Journal of Marital and Family Therapy</i>	319	18	34
<i>Family Process</i>	292	9	31
<i>Journal of Family Psychology</i>	255	8	28
<i>Journal of Consulting and Clinical Psychology</i>	198	6	19
<i>American Journal of Family Therapy</i>	183	1	19
<i>Psychotherapy</i>	112	0	10
<i>Behavior Therapy</i>	90	0	10
<i>Family Relations</i>	87	0	9
<i>Journal of Family Psychotherapy</i>	86	0	4
<i>Journal of Couples Therapy</i>	67	1	5

^a Experts rank ordered the top 10 journals according to the prominence of a journal. We assigned 10 weight points to the top rank, 9 to the second rank, and so forth.

^b The number of experts that ranked the journal as the most prominent journal.

^c The number of experts that ranked the journal as one of the top 5 journals.

EVALUATING AUTHORS' INFLUENCE: PRODUCTIVITY VERSUS IMPACT

Snyder and Rice (1994) suggest that an author's influence is better measured by impact, in terms of number of citations received by the author, than by productivity, measured by the number of the author's publications. However, as Snyder and Rice (1994) point out, citation data are biased against "rising stars" and tend to favor established scholars. Snyder and Rice did not mention that citations tend to overrepresent articles reporting scale development, trendy issues, and epidemiological information (Horan et al., 1993; Howard & Curtin, 1993). In addition, citations include many self-citations (which cannot be easily purged) as well as citations by advisees and colleagues. These practices obscure an author's true impact on the field.

The intent of our original paper was to direct individuals interested in the field of marital therapy toward scholars who are currently producing scholarship in the field. We did not intend to identify prominent scholars who have had a great impact on the field in the past, but who are no longer actively producing scholarship. Our focus was productivity, not impact. Therefore, citation data do not provide the best way to measure our research question.

Snyder and Rice (1994) also criticized our Full Publication Equivalents as a way of assigning authorship credit. They calculated a Spearman rank-order correlation of .18 between Shortz et al.'s (1994) Full Publication Equivalents and number of citations from SSCI through August 1992 for articles used by Shortz et al. to identify prolific authors. They chose only the top 7 authors of the over 100 authors in our complete list, which presents a restricted range problem. In general, when we examined the full distribution, we found that the overall sample of authors was highly skewed. The vast majority (76%) of the authors in the list received one Full Publication Equivalent or less. Furthermore, 97% received less than two Full Publication Equivalents. The 7 authors used by Snyder and Rice were at the high end of the sample and do not represent the sample.

SELECTION AND WEIGHTING: WHAT AND HOW TO COUNT

Snyder and Rice (1994) criticize Shortz et al. (1994) for omitting book chapters from their analysis. We omitted chapters for three reasons. First, chapters report empirical research much more infrequently than do journals. Chapters clearly provide a large share of influential scholarly works within the field of marital therapy, but they systematically exclude most empirical research. Second, chapters depend more on personal contacts than do journal articles and are less often refereed. Chapters thus tend to measure *impact* more than productivity because they generally require authors to be well-known *before* they are invited to write a chapter. Finally, and most importantly, including chapters would *not* have achieved our purpose. We wanted to identify scholars and publication outlets to help students and pro-fessionals identify prolific authors and institutions and the most likely outlets for their own scholarship on marital therapy. Including book chapters (or books, for that matter) would not have contributed to that purpose, given that most chapters are invited.

Snyder and Rice (1994) adduce the importance of books and chapters by citing Nederhof's (1989) analysis of productivity of psychologists from the Netherlands. This citation has limited relevance to the argument since it examines psychologists, not marriage and family specialists, and defines "research productivity" by a different criterion than is commonly used in the United States. For example, 30% of the reported productivity for the Netherlands' psychologists was in "research reports and contributions to proceedings," which often

(perhaps usually) are not counted as published works in the United States.

Snyder and Rice (1994) also argue that Shortz et al.'s (1994) method for weighting authorship that ignores ordinal position is less accurate than Howard, Cole, and Maxwell's (1987) method for weighting multiply authored works. Technically, this is true. All authors were weighted equally. We did not consider ordinal position in our weighting system because ordinal position of authorship is not determined in a universal manner on all multiply authored works. The first author might be the one who provided the seminal idea for the work, the one who wrote the manuscript, the scholar with the most established career regardless of amount of contribution, or a student doing a thesis as part of an established scholar's research program. Who is considered to have made the greatest contribution?

Table 2
Comparison of Shortz et al.'s (1994) Method of Weighting Authorship
and Howard et al.'s (1987) Method

Author	Shortz et al. "Full Publication Equivalents" ^a	Howard et al. weighting system ^b
Wilcoxon, S. A.	4.8	5.1
Johnson, S. M.	4.0	5.2
Jacobson, N. S.	3.5	4.1
Greenberg, L. S.	3.0	2.8
Ingram, T. L.	2.5	2.4
Snyder, D. S.	2.2	2.1
Waring, E. M.	2.3	1.6

^a Full Publication Equivalents (FPE) were calculated by giving each author on the paper an equal division of credit. (i.e., each author on a co-authored paper received 1/2 FPE; each author on a three authored paper received 1/3 FPE)

^b Authorship credit was calculated with Howard et al.'s (1987) formula that takes ordinal position into account.

$$\text{Individual credit} = (1.5^{n-1}) / (\sum_{i=1}^n 1.5^{i-1}), \text{ where } n = \text{total number of authors and } i \text{ is the author's ordinal position.}$$

We decided to recalculate authorship weight using Howard et al.'s (1987) method (which takes ordinal position into account) to see the extent of the difference between the two methods. As shown in Table 2, there were slight differences in overall credit, but the overall ranking of the authors did not appreciably change. Wilcoxon moved from first to second and Johnson moved from second to first on our list of most prolific authors. It seems, then, that both methods are accurate for determining authorship.

CONCLUSIONS

Future scholarship within the field of marital therapy can be facilitated by knowledge of

prominent individuals, institutions, and journals within the field. As illustrated by Snyder and Rice, various methods exist for identifying these influential sources. Some methods are more appropriate for measuring productivity, whereas others are more appropriate for measuring impact. Our aim was to identify productive scholars, institutions, and journals within the field. Snyder and Rice (1994) focused more on scholarly impact and provided valuable methods for evaluating impact.

The additional analyses conducted on our original data suggest that our methods were successful at accomplishing our goal and that (even ignoring the differences between productivity and impact) some of Snyder and Rice's (1994) suggestions made only minor differences in results while requiring substantially more effort. Scholars attempting to study questions such as those addressed in our original paper, Snyder and Rice's response, and our reply need to select, from the variety available, those methods most appropriate for achieving their purposes.

REFERENCES

- Heyduk, R. G., & Fenigstein, A. (1984). Influential works and authors in psychology: A survey of eminent psychologists. *American Psychologist, 39*, 556-559.
- Horan, J. J., Hanish, C., Keen, B., Saberi, D., & Hird, J. S. (1993). When examining the cerebral functioning of division 17, which organ should we dissect? *The Counseling Psychologist, 21*, 307-315.
- Howard, G. S. (1983). Research productivity in counseling psychology: An update and generalization study. *Journal of Counseling Psychology, 30*, 600-602.
- Howard, G. S., Cole, D. A., & Maxwell, S. E. (1987). Research productivity in psychology based on publication in the journals of the American Psychological Association. *American Psychologist, 42*, 975-986.
- Howard, G. S., & Curtin, T. D. (1993). Individual productivity and impact in counseling psychology. *The Counseling Psychologist, 21*, 288-302.
- Matson, J. L., Gouvier, W. D., & Manikam, R. (1989). Publication counts and scholastic productivity: Comment on Howard, Cole, and Maxwell. *American Psychologist, 44*, 734-735.
- Nederhof, A. J. (1989). Books and chapters are not to be neglected in measuring research productivity. *American Psychologist, 44*, 734-735.
- Shortz, J. L., Worthington, E. L., McCullough, M. E., DeVries, H., & Morrow, D. (1994). Published scholarship on marital therapy. *Journal of Marital and Family Therapy, 20*, 185-189.
- Snyder, D. K., & Rice, J. L. (1994). There's more to counting than meets the eye: Comment on Shortz et al. *Journal of Marital and Family Therapy, 20*, 191-196.
- Thomas, F. N., & McKenzie, P. N. (1986). Prolific writers in marital and family therapy: A research note. *Journal of Marital and Family Therapy, 12*, 175-180.