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**Are You Talking to Me?
The Nature of Community in Entrepreneurship Scholarship**

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Abstract

Research in entrepreneurship has grown rapidly, encompassing multiple theoretical and methodological traditions. This special issue is devoted to understanding the scientific structure of entrepreneurship research. Articles included in this issue use bibliometric techniques to find linkages within published entrepreneurship scholars. These analyses compellingly show that: research in our field contains: multiple but disconnected research themes; dominant research themes reflecting the disciplinary training and lens of authors; very few papers get cited even in our disciplinary journals; and key research themes and foci are subject to considerable dynamism and change. The articles provide rich opportunities for insightful, influential and creative research in the field.

This special issue of *Entrepreneurship Theory and Practice* focuses on how entrepreneurship scholarship is organized by entrepreneurship scholars. Rather than offer frameworks that categorize types of entrepreneurship scholarship based on assumed themes that may characterize the field (i.e., Busenitz, et. al., 2003; Davidsson, 2004; Gartner, 1985; Low, 2001; Low & MacMillan, 1988; Shane & Venkataraman, 2000; Zahra & Dess, 2001; Zahra, 2005), the articles in this special issue explore how scholars make connections to other entrepreneurship research through their references. To do so, the articles identify and analyze what information (i.e., books, monographs, journal articles) entrepreneurship scholars pay attention to and implicitly link together when conducting their own research. Articles in this special issue seek to capture and identify, through analytical measures, the nature and kinds of intellectual communities that comprise the field of entrepreneurship scholarship.

The type of analyses in the articles that we have included in this special issue fall under the label of scientometrics, which is the study of science using the methods of science (Price, 1963; 1965). Authors rely on bibliometrics, which is the study of a given field or body of literature using quantitative analysis and statistics to describe patterns of publication (Hertzfel, 1987; Osareh, 1996a; 1996b). The primary technique used in the selected articles is document and author co-citation analysis, which involves analyzing the number of times two documents (e.g., a book, monograph or journal article) or authors of documents are cited together in another document (McCain, 1990; Small, 1973). When certain documents or authors are cited together, one may assume that they have a relationship to each other. Further, when these co-citations are frequently found, one can identify groups of authors and documents, and implicitly, the kinds of topics these authors are studying (Garfield, 1955; Gmur, 2003; McCain, 1986; White & Griffith, 1981).

Different forms of co-citation analysis has been used to study nearly all fields in the sciences, such as chemistry (Garfield, 1986), economics (Cahlik, 2000; McCain, 1991), neuroscience (Braun, Glanzel & Schubert, 2001), and semiconductors (Tsay, Xu, Wu, 2003), and even the structure of science itself (Boyack, Klavans, Borner, 2005). Different forms of co-citation analysis have also been used in the study of various aspects of management, such as information systems, (Culnan, 1987), organizational behavior (Culnan, O'Reilly & Chatman, 1990) and strategic management (Ramos-Rodriguez & Ruiz-Navarro, 2004). And, there have been previous explorations of the field of entrepreneurship using bibliometric methods (e.g., Dery & Toulouse, 1996; Ratnatunga & Romano, 1997; Watkins, 1994; 1995). Thus, the use of co-citation analysis for studying the intellectual structure of a scholarly field has been widely used, has a long history, and has been shown to be both valid and reliable (Borgman, 1990; van Rann, 1988; White & McCain, 1989).

The Genesis of this Special Issue

As Jerry Katz has so thoroughly documented (c.f., Katz, 2003; and <http://eweb.slu.edu>), entrepreneurship scholarship has “exploded” over the past 20 years with a significant increase in new entrepreneurship journals, faculty positions, endowments, conferences, articles and books. Further, from an anecdotal perspective, attending any one of the many conferences where entrepreneurship scholars might congregate (e.g., Babson Kauffman Entrepreneurship Research Conference, RENT, Entrepreneurship Division of the Academy of Management), gives one a sense that a significant number of new scholars are involved in entrepreneurship research and that they are studying a wide variety of topics and issues. So, it would be understandable to ask: What are all of these people doing?

Concurrently, several scholars were also asking this question and presenting their insights through a number of presentations at various entrepreneurship research conferences (e.g., Gregoire, Dery & Bechard, 2001; Landstrom, 2001; Reader & Watrkins, 2001; Schildt & Sillanpaa, 2004; Watkins & Reader, 2003). It seemed appropriate to bring these findings

together into a special issue that explored the various intellectual communities that are emerging in the entrepreneurship field. In June 2004, during the Babson Kauffman Entrepreneurship Research Conference at Strathclyde University in Glasgow, we met as a group, to discuss these working papers and offer suggestions for how these findings might be presented as a whole. The four articles that follow are the result of that discussion.

Thoughts and Comments

Rather than offer an outline or reprise of the major findings of each paper, we will use the remaining pages of this introduction for some thoughts and comments about the nature of community in the entrepreneurship field. We should note that the displays of information presented in these special issue articles are visually rich and detailed with many insights into the structure of the entrepreneurship field. Even though these articles are much larger than those normally presented in this journal, the challenge that the authors of these articles faced in presenting these findings was to be judicious in their presentation and discussions of the themes/groupings. Much more could have been offered as interpretations, if these articles could have been even larger in size! Given the rich findings of these studies, we encourage readers to spend some time studying their diagrams as a way to come up with their own labels for the connections/groupings of authors. As Reader and Watkins (2006) suggest in their survey of many of the scholars that comprise these analyses, there seems to be many interpretations and labels that could be applied to specific connections and groups. It is hard to see what the essence of the connections among entrepreneurship scholars represents when, we ourselves, are also engaged in making these connections through the citations we make in our own research. So, again, please take some time to study the diagrams each article offers so that you can come to your own insights into the structure of entrepreneurship scholarship. Be-that-as-it-may, here are some insights that we see in these articles:

1. Entrepreneurship scholars are not one group, but many. One of the benefits of presenting a set of articles with the same goal of applying bibliometric methods to documents in the entrepreneurship field is the value of seeing how different samples, sampling techniques and analytics, does appear to result in some consensus on the changing intellectual structure of the entrepreneurship field and its main topic areas. For example, while Gregoire, Noel and Dery (2006) use, as their sample, documents cited in the Babson Kauffman Entrepreneurship Research Conference “Frontiers of Entrepreneurship” series, and the other articles (Cornelius, Landstrom & Persson, 2006; Reader & Watkins, 2006; Schildt, Zahra & Sillanpaa, 2006) use the documents cited in the Social Science Citation Index, all four articles appear to generate “groups” or themes of similar co-cited authors/documents. There does seem to be a number of distinct groups of scholars who do not have significant intellectual overlaps in citations in the entrepreneurship field. We will offer such labels as: venture capital, corporate entrepreneurship, “the economists,” strategic entrepreneurship, and ethnic entrepreneurship as groups of scholars who have more clearly defined boundaries as to which scholars/documents they pay attention to. It would be difficult, then, to come up with an overarching theme that could easily encompass the specific issues of these distinct groups of scholars which could serve as a label for what entrepreneurship, as a topic (or community) overall, represents. Convergence, then, in terms of developing a community of entrepreneurship scholars, seems to be more about the development of communities of scholars that share similar interests in specific topics in the entrepreneurship area. These observations would support critics who see entrepreneurship as a set of loosely connected research groups that lack an organizing framework or a dominant paradigm (for a discussion, Zahra, 2005). To be sure, having diverse themes in a field is not unusual. What is unusual is to uncover such disconnectedness among these groups, as revealed by some of the papers in this issue (Schildt et al., 2006).

2. The influence of the disciplines in entrepreneurship scholarship. Most entrepreneurship scholars appear to bring with them the community of some other “home” discipline, be it psychology, sociology, economics, finance, or strategic management. We think that such an insight is to be expected, and for many observers of the entrepreneurship field, may appear to be rather obvious (Zahra, 2005). Yet, it is well worth noting that many of the issues that entrepreneurship scholars address are primarily oriented to core issues embedded in other disciplines. For example, if one’s background and training stems, primarily from the strategic management area, it would be likely that who one pays attention to, and what research issues are pursued, would come from the strategic management area. To illustrate this point, we offer a diagram, Figure 1, of the connections among joint memberships in the Academy of Management (Pearce, 2003). Every Academy of Management member has an opportunity to belong to a number of divisions within the Academy of Management, and nearly all members belong to more than one division. Figure 1 displays the connections among the various Academy of Management Divisions and Interest groups, where a line between two divisions represents a minimum of a 27% overlap in members. The “thicker” the line, the more overlap there is between two divisions, and the more lines between a division, the more connections there are between that division and other divisions. Figure 1 shows that there are two major clusters within the Academy of Management, OB (Organization Behavior) and BPS (Business Policy and Strategy), and that the “bridges” between these two clusters are OMT (Organization and Management Theory), MOC (Managerial and Organization Cognition), and MC (Management Consulting). Apropos to the discussion of entrepreneurship, the Entrepreneurship Division (ENT) is only connected to BPS. Indeed, the majority of members of the Entrepreneurship Division are members of BPS, probably because most entrepreneurship scholars have received their training in strategy groups within existing management departments or in stand-alone strategic management departments. It is no wonder, then, that the majority of research in the field of entrepreneurship has been focused on a "disproportionate pre-occupation among contributors with issues of success and failure, survival and death, and the relative economic performance of firms" (Venkataraman, 1994: 3). The issues of success and failure, survival and death, and the relative economic performance of firms are issues that are the fundamental concerns of business policy and strategy.

Put Figure 1 About Here

The current practice of entrepreneurship scholarship, as reflected in the activities of the Academy of Management, is therefore, a subset of business strategy (Busenitz, et al., 2003). But, this analysis could also be applied to members of the American Economics Association, or some other disciplinary group, and we would likely find that those entrepreneurship scholars are more connected to some aspect of their core discipline, as well. Clearly, we do not see the influences of various disciplines on entrepreneurship scholarship in a pejorative way. It is just worth noting that most entrepreneurship scholars are paying attention to scholars outside the groupings of entrepreneurship scholars, as well. Thus, when most entrepreneurship scholars talk to their own group within the entrepreneurship field, it is both to the group, as well as to others in their home discipline.

The analyses reported in the papers in this special issue reaffirm what we have observed: entrepreneurship researchers borrow heavily from their home disciplines and retain their academic loyalties to these disciplines. With the growing maturity of our research, however, it is important to give back to our sister (based) disciplines and enrich their research. Doing this can enhance our intellectual enterprise and promote effective dialog with

our peers. In turn, this dialog can induce greater innovation in the development of entrepreneurship as a scholarly discipline.

3. From the many to the few (Rickey & Monteleone, 1995). In general, it takes many scholars publishing a few articles in order to have a few scholars who publish many. Indeed, this was first observed by Lotka (1926): ". . . the number (of authors) making n contributions is about $1/n^2$ of those making one; and the proportion of all contributors, that make a single contribution, is about 60 percent." It has shown to be true in most fields of scholarship that out of all the authors in a given field, 60 percent will have just one publication, 15 percent will have two publications ($1/2^2$ times .60), 7 percent of authors will have three publications ($1/3^2$ times .60), and so on. The entrepreneurship field is no different in this regard. While holding multiple loyalties most entrepreneurship scholars, therefore, are not transients in the field, rather, from the perspective of Lotka's law, they have made their one contribution to the field, and, that is it. Somewhat of a corollary to Lotka's Law is Price's principle of cumulative advantage:

"Success seems to breed success. A paper which has been cited many times is more likely to be cited again than one which has been little cited. An author of many papers is more likely to publish again than one who has been less prolific. A journal which has been frequently consulted for some purpose is more likely to be turned to again than one of previously infrequent use." (Price, 1976)

The phenomenon of multiple publications by an author or set of co-authors, then, is actually rarer than we would like to believe. Most academic papers will not be cited at all, while only a few will seem to garner the lion's share.

4. What is, is. We are very hesitant to offer any "call to action" as it pertains to changes in scholarly behavior in the entrepreneurship field. The articles that portray changes in the entrepreneurship field over time (Gregoire, et. al., 2006; Cornelius, et. al., 2006) seem to indicate that certain topics ebb and flow and gather or lose scholars. Whether any one particular idea, topic, or article will gain currency will depend on factors that are somewhat unfathomable. The groups/themes that these special issue articles identify are markers on a territory that is dynamic and changing. The manifestation of the visible or invisible college of entrepreneurship scholars will be whatever individuals who can "get published" and cite others, makes it. It might be wise for all entrepreneurship scholars to gain more familiarity with the wide variety of topics and research that exist in the field, but, that would likely violate the most basic observation of bibliometrics offered by Zipf (1949):

"The Principle of Least Effort means... that a person ... will strive to solve his problems in such a way as to minimize the total work that he must expend in solving both his immediate problems and his probably future problems..."

In other words, it may be too much to expect scholars to pay more attention to other scholarship beyond their immediate circle. This is especially true with the ever growing rate of publishing in any given area, the complexity of the review process, and changing methodological traditions. May we be the exception to this rule.

References

- Borgman, C. L. (1990). *Scholarly Communication and Bibliometrics*. Thousand Oaks, CA: Sage.
- Boyack, K. W., Klavans, R. & Borner, K. (2005). Mapping the backbone of science. *Scientometrics*. 64 (3): 351-374.
- Braun, T., Glanzel, W. & Schubert, A. (2001). Publication and cooperation patterns of the authors of neuroscience journals. *Scientometrics*. 51: 499-510.
- Busenitz, L. W., West, G. P., Shepherd, D., Nelson, T., Chandler, G. N., Zacharakis, A. (2003). Entrepreneurship research in emergence: Past trends and future directions. *Journal of Management*. 29 (3): 285-308.

- Cahlik, T. (2000). Search for fundamental articles in economics. *Scientometrics*. 49: 389-402.
- Cornelius, B., Landstrom, H., & Persson, O. (2006 – in this issue). Entrepreneurial studies: The dynamic research front of a developing social science. *Entrepreneurship Theory and Practice*. # (#): ##-##.
- Culnan, M. J. (1987). Mapping the intellectual structure of MIS, 1980-1985: A co-citation analysis. *Management of Information Systems Quarterly*. 11: 341-353.
- Culnan, M. J., O'Reilly, C. A. & Chatman, J. A. (1990). Intellectual structure of research in organization behavior, 1972-1984. A co-citation analysis. *Journal of the American Society for Information Science*. 41: 453-458.
- Davidsson, P. (2004). *Researching Entrepreneurship*. Boston: Springer.
- Dery, R. & Toulouse, J. M. (1996). Social structuration of the field of entrepreneurship: A case study. *Canadian Journal of Administrative Sciences*. 13 (4): 285-305.
- Garfield, E. (1955). Citation indexes for science: A new dimension in documentation through association of ideas. *Science*, 122: 108-111.
- Garfield, E. (1986). The evolution of physical chemistry to chemical physics. *Current Contents*. 3:3-12.
- Gartner, W. B. (1985). A framework for describing and classifying the phenomenon of new venture creation. *Academy of Management Review*, 10 (4): 696-706.
- Gmur, M. (2003). Co-citation analysis and the search for invisible colleges: A methodological evaluation. *Scientometrics*. 57 (1): 27-57.
- Grégoire, D., Déry, R., & Béchar, J.-P. (2001). Evolving conversations: a look at the convergence in entrepreneurship research. In W. D. Bygrave, et al. (Eds.), *Frontiers of Entrepreneurship Research* (pp. 644-657). Wellesley, MA: Center for Entrepreneurial Studies, Babson College.
- Greguire, D., Noel, M. X., Dery, R. & Bechar, J-P. (2006 – in this issue). Is there conceptual convergence in entrepreneurship research? A co-citation analysis of 'Frontiers of Entrepreneurship Research' 1981-2004. *Entrepreneurship Theory and Practice*. # (#): ##-##.
- Hertz, D. H. (1987). Bibliometrics, history of the development of ideas in. *Encyclopedia of Library and Information Science*, 42 (Supplement 7). New York: M. Dekker, 144-211.
- Katz, J. A. (2003). The chronology and intellectual trajectory of American entrepreneurship education 1987-1999. *Journal of Business Venturing*. 18 (2): 283-300.
- Landstrom, H. (2001). Who loves entrepreneurship research? Paper presented at the XV RENT Conference. Turku, Finland, November.
- Lotka, A. J. (1926). The frequency distribution of scientific productivity. *Journal of the Washington Academy of Science*. 16: 317-323.
- Low, M. B. (2001). The adolescence of entrepreneurship research: Specification of purpose. *Entrepreneurship Theory and Practice*. 25 (4): 17-25.
- Low, M. B. & MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*. 14: 139-161.
- McCain, K. W. (1986). Cocited author mapping as a valid representation of intellectual structure. *Journal of the American Society of Information Science*. 37: 111-122.
- McCain, K. W. (1990). Mapping authors in intellectual space: A technical overview. *Journal of the American Society of Information Science*. 41: 433-443.

- McCain, K. W. (1991). Mapping economics through the journal literature: An experiment in journal cocitation. *Journal of the American Society for Information Science*. 42: 290-296.
- Osareh, F. (1996a). Bibliometrics, citation analysis and co-citation analysis: A review of literature I. *Libri* 46 (3): 149-158.
- Osareh, F. (1996b). Bibliometrics, citation analysis and co-citation analysis: A review of literature II. *Libri* 46 (4): 217-225.
- Pearce, J. 2003. President's message: A bifurcated Academy? *The Academy of Management News*. 34 (1): 1-2.
- Potter, W. G. (1988). Of making many books there is no end: Bibliometrics and libraries. *The Journal of Academic Librarianship* 14: 238a-238c.
- Price, D. J. D. (1963). *Little Science, Big Science*. New York: Columbia University Press.
- Price, D. J. D. (1965). Networks of scientific papers: The pattern of bibliographic references indicates the nature of the scientific research front. *Science*. 149: 510-515.
- Price, D. J. D. (1976). A general theory of bibliometric and other cumulative advantage processes. *Journal of the American Society for Information Science*. 27: 292-306.
- Ramos-Rodriguez, A. R. & Ruiz-Navarro, J. (2004). Changes in the intellectual structure of strategic management research: A bibliometric study of the Strategic Management Journal, 1980-2000. *Strategic Management Journal*. 25: 981-1004.
- Ratnatunga, J. & Romano, C. (1997). A "citation classics" analysis of articles in contemporary small enterprise research. *Journal of Business Venturing*. 12: 197-212.
- Reader, D. & Watkins, D. (2001). The intellectual structure of entrepreneurship: An author co-citation analysis. Paper presented at the XV RENT Conference. Turku, Finland, November.
- Reader, D. & Watkins, D. (2006 – in this issue). The social and collaborative nature of entrepreneurship scholarship: A co-citation and perceptual analysis. *Entrepreneurship Theory and Practice*. # (##): ##-##.
- Rickey, B. & Monteleone, J. J. (1995). *Branch Rickey's Little Blue Book*. New York: MacMillan.
- Schildt, H. A. & Sillanpaa, A. (2004). Who, where, what, and with whom? A bibliometric study of the evolution of entrepreneurship research. Paper presented at the Babson Kauffman Entrepreneurship Research Conference. Glasgow, United Kingdom, June.
- Schildt, H. A., Zahra, S. A., & Sillanpaa, A. (2006 – in this issue). Scholarly communities in entrepreneurship research: A co-citation analysis. *Entrepreneurship Theory and Practice*. # (#): ##-##.
- Shane, S. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25 (1): 217-226.
- Small, H. G. (1973). Co-citation in the scientific literature: A measure of the relationship between two documents. *Journal of the American Society for Information Science*. 24: 265-269.
- Tsay, M. Y., Xu, H., Wu, C. W. (2003). Journal co-citation analysis of semiconductor literature. *Scientometrics*. 57: 7-25.
- Van Raan, A. F. J. (1988). *Handbook of Quantitative Studies of Science and Technology*. Amsterdam: North-Holland.
- Venkataraman, S. (1994). Associate Editor's note. *Journal of Business Venturing*. 9: 3-6.
- Watkins, D. (1994). Changes in the nature of UK small business research, 1980-1990. Part one: Changes in producer characteristics. *Small Business and Enterprise Development*. 1 (3): 28-31.

Watkins, D. (1995). Changes in the nature of UK small business research, 1980-1990. Part two: Changes in the nature of output. *Small Business and Enterprise Development*. 2 (1): 59-66.

Watkins, D. & Reader, D. (2003). Using bibliometrics as a tool to understand the literature of entrepreneurship. Paper presented at the XVII RENT Conference, Lodz, Poland, November.

White, H. D. & Griffith, B. C. (1981). Author co-citation: a literature measure of intellectual structure. *Journal of the American Society for Information Science*. 32: 163-171.

White, H. D. & McCain, K. W. (1989). Bibliometrics. *Annual Reviews of Information Science and Technology*. 24: 119-186.

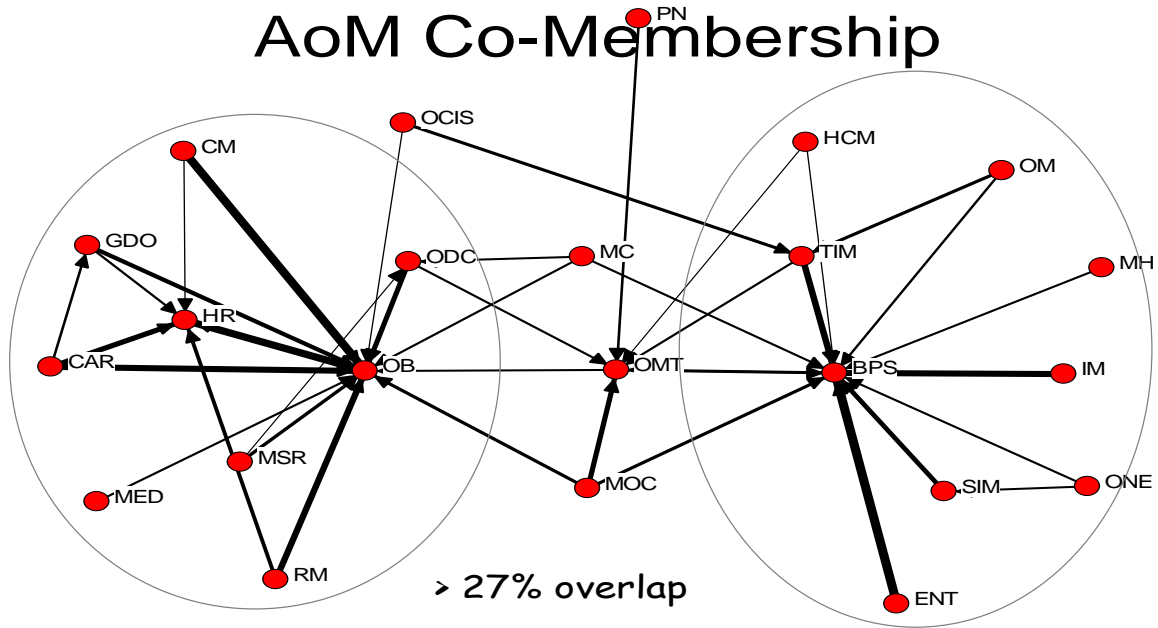
Wortman, M. S. (1987). Entrepreneurship: An integrating typology and evaluation of the empirical research in the field. *Journal of Management*. 13 (2): 259-279.

Zahra, S. (2005). Disciplinary research and entrepreneurship scholarship. In S. A. Alvarez, R. Agarwal & O. Sorensen (Eds.) *Handbook of Entrepreneurship Research, Vol. 2*. New York: Kulwer, 253-268.

Zahra, S. & Dess, G. G. (2001). Entrepreneurship as a field of research: Encouraging dialogue and debate. *Academy of Management Review*. 26 (1) 8-10.

Zipf, G. K. (1949). *Human Behavior and the Principle of Least Effort*. Addison-Wesley.

Figure 1
Academy of Management Co-Membership



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