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HOW WE KNOW WHAT WE KNOW:
THE RELATION OF TOPIC TO METHOD IN
HIGHER EDUCATION JOURNALS

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ABSTRACT

Journals publish articles whose crafting shapes how we know about the topics addressed. In this paper we indicate the relation of sixteen article types to fifty-five topics of manuscripts published in the core higher education journals. The data are presented, as well, by journal of publication and by gender of senior author.

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INTRODUCTION

Academic journals serve many purposes: they establish the property rights of authors (Ravetz, 1971, p.250), serve as archivists for their fields, and provide the state-of-the-art literature which is read and discussed upon publication. It is probable that journals serve different purposes in different fields depending on the permeability of the areas' boundaries, the disciplines to which they relate, the methodologies and their philosophical foundations that are sanctioned, the role positions of the readers, and the cognitive levels and differentiation of the audience. Thus, journals may not have primary archival roles in a field whose members are not primarily researchers. The preservation of property rights may be a subsidiary purpose in a field that grows less through an internal dynamic than by monitoring the external environment which provides topics to its authors. State-of-the-art literature may not be read if the readership serves in roles that allow it to devote limited time to reading and if the readers' problem management activities do not require knowledge of the current literature.

Reading between the above lines one will recognize that journals in higher education serve unclear functions. General enlightenment and references for graduate student papers are meager though important outcomes but are hardly justification for the significant efforts of authors, editors, reviewers, and publishers. And only a cynic would suggest that author promotion and tenure and the needs of the academy to establish reward mechanisms are the prime functions.

It might be suggested that the meaning of a field's journals needs to be established indirectly, and it might be assumed that journals both create and mirror their fields. If journals in higher education provide both foundational and topical material it might be possible to begin establishing meaning by attempting to understand the relationship of epistemology to topic. Such is the purpose of this article. In the vernacular, it addresses how we know what we know: what topical areas have been presented in journals and through what structures. Of course, we can also ask how the topical areas have been tacitly subdivided by the fields' major journals, whether there has been change over time, and how the pattern is related to demographic characteristics of authors.

METHODOLOGY

Theoretical Framework

The theoretical framework for this research has been developed by Silverman (1982) whose schema includes sixteen

manuscript types (Fig. 1). The 4 x 4 framework is indebted to the earlier work of Mitroff and Kilmann (1978) and Berlyne (1971, 1974).

Mitroff and Kilmann (1978) present evidence for four types of inquirers: the analytical scientist, the conceptual theorist, the conceptual humanist, and the particular humanist whose contributions vary in terms of their definitions of science, the nature and guarantors of scientific knowledge, their implied ultimate aims of science, their preferred logics and sociological norms, and modes of inquiry, among other dimensions.

Very briefly, the analytical scientists' work is marked by "precision, accuracy, and reliability" (p.33); the conceptual theorists are imaginative, enjoy ambiguity and attempt to "seek out or produce multiple explanations for any phenomenon" (p.54); the conceptual humanists produce knowledge that contributes to the improvement of humanity as well as to our understanding; and particular humanists have "an intense concern with capturing and describing the uniqueness of particular human beings" (p.94).

Berlyne (1971, 1974) posits that four types of information are present in aesthetic objects: 1) semantic information--the topic, content; 2) syntactical information--the configurations, patterns, and relationships among elements of a work; 3) cultural information--the style, social norms, and artistic conventions; and 4) expressive information--the artist's personal style and psychological processes.

The heuristic framework (Fig. 1) resulted from an informed appreciation and application of these two sets of ideas to the journal literature in postsecondary education. The schema was refined through an intensive study of hundreds of articles appearing in postsecondary journals, and in Silverman's (1982) judgment represents the population of alternatives.

1) Analytical Science/Semantic - This article presents relationships among inferred, grounded or theoretically important variables, using traditional empirical procedures traceable to disciplines.

2) Analytical Science/Syntactical - This paper presents an analytical science model or pattern through which analytical science research can be conducted.

3) Analytical Science/Cultural - This contribution presents a distilled appraisal and/or synthesis of analytical science literature in a specific domain to establish the empirical worth of work from alternative paradigms or to establish the state of the art.

4) Analytical Science/Expressive - This article extends a specific line of analytical research based on an individual's or school's theory that has some recognition in the field.

5) Conceptual Theory/Semantic - This paper presents a concept or theory from another field to allow the receiving field to refocus on or consider new theoretical problems.

6) Conceptual Theory/Syntactical - This contribution explores theoretically-based problems through the agency of a broadly defined literature (theories, variables, concepts) from various fields.

7) Conceptual Theory/Cultural - This article assesses and/or integrates various conceptual frameworks or theories to determine their value in explaining or understanding phenomena.

8) Conceptual Theory/Expressive - This paper presents a new theory or theoretical point of view, building on an approach to theory development.

9) Conceptual Humanism/Semantic - This article presents a perspective or information on a direction, policy, issue, or opportunity.

10) Conceptual Humanism/Syntactical - This contribution presents a complex analysis of an issue or perspective, exploring foundations, consequences, and often presenting interesting pragmatic solutions.

11) Conceptual Humanism/Cultural - This paper suggests a formal intervention to assist others to improve the functioning of a living (usually organizational) system.

12) Conceptual Humanism/Expressive - This paper is the result of a person's experience in dealing with a problem or issue and encourages others to adopt the approach or attitude.

13) Particular Humanism/Semantic - This article explains, reports, or chronicles information about an individual or organizational system.

14) Particular Humanism/Syntactical - This paper extracts or discovers an issue or educational concern from the complex behavior of an individual or organizational system.

15) Particular Humanism/Cultural - This contribution presents an examination or interpretation of an issue in terms of systems' relationship (e.g. individual/organizational).

16) Particular Humanism/Expressive - This article is a probing, caring, intensely personal exploration of a system (usually an individual) that sheds much light on the author as well as the subject.

This author's experience in typing over a thousand articles in accordance with this framework suggests that the placement of articles is straightforward. In less than one percent of the cases articles had major sections that spanned two article types, for example, a formal meta-analysis (AS-Syn) and a traditional research project (AS-Se). In these few cases the paper was placed in that area that seemed to be the author's primary contribution; if unclear, it was placed in the first type that appeared. But at issue here are fewer than ten cases out of eleven hundred.

Data Source

Bayer (1983) reported that 209 journals occasionally publish articles with higher education content, twenty of these publish at least seven higher education articles each year, and ten journals have distinct editorial practices or policies to publish extensively in the field of higher education. This short list,

combined with two others from Bayer (1983), one noting those higher education journals frequently citing both Carnegie Commission and Jossey-Bass publications and another appearing on a reputation ranking of higher education journals, informed the selection of the eight core journals whose content is the focus of this study. The journals are: College and University, Educational Record, Higher Education, Journal of College Student Personnel, Journal of Higher Education, Liberal Education, Research in Higher Education, and the Review of Higher Education.¹

These core journals were examined for the publishing period 1975-1981, except in one case in which the journal, the Review of Higher Education, did not have a seven year publishing history. Using a table of random numbers, half the issues in each volume year were selected for analysis by the author who worked without the assistance of other parties.² One thousand one hundred three published papers were examined for this research.

This author did not make judgments regarding the quality of the articles that were typed. Of course, without reviewer reactions it would have been impossible to do so. This research represents an inventory of what exists rather than a judgment of the quality of what exists. It could be assumed, however, that what is published is the best of what is submitted and revised.

Data Base

Each of the 1103 articles that had already been coded by its epistemological structure was examined for its primary topic which was coded according to a modified Higher Education Bibliography Taxonomy prepared by D. Kent Halstead. In 1984 Halstead published a two volume higher education bibliographic handbook. Discussion with Halstead (1985) led this researcher to understand the imminent updating of this reference tool and the categorization of topics in somewhat different fashion for the new work. In an attempt to relate this paper to Halstead's anticipated work and to maintain a common bibliographic tool, the new taxonomy was employed here.

It should be noted that very minor modifications were made to Halstead's new scheme, through addition rather than excision. In addition, this researcher understands that authors surveying literature to place in various categories might have different decision rules. For example, this researcher included reviews of roles and missions and institutional climate studies in the category "institutional role and mission"; articles focusing on accreditation, evaluation, and effectiveness were included in "productivity and cost-benefit analysis." Another bibliographer might group these areas elsewhere. Nevertheless, the new taxonomy, as slightly modified, appears to be comprehensive and promises to allow separate bibliographic studies or works to be combined.

The Halstead taxonomy includes six major domains under which are forty-four topic areas. This researcher added nine topic areas and included two of the domain labels as topics. The additions were mainly more disciplines, institutional sectors and open-ended "other" categories. The broad domains were added for general treatments that did not allow this researcher to discern more specific topical treatment. Thus, the modified Halstead taxonomy as it was used in this research contains fifty-five categories into which data were fed.

The topical areas are noted below and include in parentheses some of the article foci that might not be self evident. Included in the appendix is the original Halstead classification scheme (1984). The subcategories noted there below the major topic areas informed this researcher in the classifications executed in this paper.

Higher Education Bibliography Taxonomy

D. Kent Halstead (1985)

[modified by author]

- 100 ACADEMICS & RESEARCH
- 101 Teaching and Learning [Grading, Performance,
 Evaluation of Instruction & Faculty]
- 102 Curriculum [the Disciplines]
- 103 Educational Communication and Technology
- 104 Research and Research Administration

200	PERSONNEL
201	Faculty
202	Student Characteristics and Development [Retention]
203	Administrators and Support Staff
204	Other
300	INSTITUTIONS
301	Institutional Role and Mission [Review, Climate]
302	Recruitment, Admissions, and Articulation
303	Leadership and the Presidency [Decision Making, Problem Management, Institutional Governance]
304	Management [Quantitative Approaches, Records]
305	Institutional Advancement [Public Affairs]
306	Finance and Budgeting
307	Business Administration
308	Planning, Studies, and Analysis
309	Computing Services
310	Campus and Building Planning
311	Physical Plant Management
400	STATE AND NATIONAL
401	National Policy and General Reference [General, National Issues]
402	Comparative National Systems
403	Statewide Issues and Planning
404	Governance and Coordination [Politics of Higher Education, Consortia]
405	Finance

406 Resource Allocation and Budgeting
407 Productivity and Cost-Benefit Analysis
[Accreditation, Effectiveness, Evaluation]
408 Educational Opportunity
409 Student Financial Assistance
410 Work and Education

500 DISCIPLINE APPROACHES

501 Demography
502 Economics
503 Anthropology
504 Sociology
505 Philosophy
506 History
507 Law
508 Psychology
509 Geography
510 Other

600 SECTORS

601 Independent Higher Education
602 Community Colleges
603 Private Career Schools
604 Lifelong Learning
605 Libraries
606 Students Affairs
607 Athletics
608 Health Science Education
609 Public Service

- 610 Other Institutional Settings
- 611 Associations
- 612 Accrediting Agencies
- 613 Unions
- 614 Black Higher Education

This author, at times, would have preferred using a topical taxonomy that was more specific, but a 16 x 55 matrix seemed sufficiently discriminating. A larger framework would have meant many more empty cells or cells with one article.

The articles were assigned a topic by the researcher whose decision was informed by the articles' titles, their statements of purpose, and their conclusions.

RESULTS

The central question posed in this research is "What is the relationship between the content of the higher education literature and the articles' structures?" Clearly, similar topics treated in various ways attract different readers and, in fact, draw out different reactions in the same reader. For example, a paper on faculty development written as a traditional empirical piece (AS-Se) might demonstrate the relation of career age to professional needs and to the taking advantage of development options. An alternative might be a highly personalistic account (PH-Ex) of one professor's coping to remain professionally, institutionally, and personally alive in the face of a rapidly changing discipline, declining resources, and death of a spouse. The same faculty member who shared her life in the

latter example could be part of a sampled population for the former study. But very different meanings of being a faculty member, and both valid, would be the consequence.

How we know what we know is evident in Table 1. There are a number of associations that bear examination and some will be noted below. Nevertheless, the reader is likely to have special interest in this and other tables that might not be the object of this researcher's comments.

The Topics

As is evident, the most populated epistemological categories are AS-Se, CH-Se, CH-Syn, and CH-Cu. However, the 1103 articles array themselves over the entire framework.

An examination of the "total" column on the far right of Table 1 suggests that the largest dimensions in the core higher education literature are student characteristics and development (202) and student affairs (606), due to the publishing agenda of the Journal of College Student Personnel. The largest category that seems not to be tied to a particular journal is teaching and learning (101), which has a larger literature than that which pertains to the curriculum and the disciplines.

The reader might examine the relative silence of the core literature as well as its voices. Though many areas, such as libraries, have their own journals that speak to their constituencies, lack of attention in the core literature suggests that non-specialists are not becoming aware of certain aspects of higher education. In addition, some might argue that the core

journals are among the most rigorous in higher education and that the failure to treat certain topics might also influence the quality of knowledge in a domain.

It can be observed that from 1975-1981 little was published about educational communication and technology, institutional advancement, business administration, computing services, campus and building planning, and physical plant management to name but some areas. The field tended not to use the disciplines in directing its attention at higher education. The core literature does not treat, in any number, the community college or the black college, or athletics.

In some sense, the filled and empty spaces speak for themselves. For example, we do not know about teaching and learning (101) by using concepts from disciplines (CT-Se) or examine teaching and learning issues from a broad range of theory sources (CT-Syn). We have virtually no theoretical treatment (CT) of faculty (201) as compared with examinations of variable interactions pertaining to faculty behavior and demographics (AS-Se). Six percent of the faculty literature pertains to intervention (CH-Cu); clearly, how to influence faculty behavior is not a large segment of the faculty literature.

There is modest treatment of topics pertaining to the "state" (403), and among them are no points of view (CH-Se), approaches to intervention (CH-Cu) and others.

Of course the presence of large filled categories should not suggest that there is redundancy among topics; content areas have significant variety. However, the low and empty cells suggest

that by concentrating on the core literature we remain unaware of many appropriate topics in higher education, not to speak of the bias in what we know. What might it mean when the field has no published theory (CT) or individual or personalistic account of recruitment (PH), admission, or articulation (302)? Or, with a single exception, of the presidency and leadership (303)? Certainly the pictures and images that are held of areas are not only less than comprehensive in their cognitive dimensions but also biased in the absence of these alternative epistemological treatments.

At the same time, it is obvious that certain combinations of topic and treatment may make little sense. For example, a conceptual theory treatment of physical plant management (311) is ludicrous. What may be more telling is that the core higher education literature does not present to its readers material that would help them understand higher education institutions as physical places that have clear existential impacts.

The articles were classified by primary topic, except in 111 cases in which the secondary topic was also assessed. Papers that focused on comparative systems were about certain aspects of these systems; papers growing from disciplinary sectors treated a theme from the knowledge base. The associations are noted in Table 2.

The comparative literature focuses on national policy issues (401) of the respective countries or teaching and learning (101), as the two strongest secondary topics. There are various relationships between the disciplines and secondary topics,

associations that are not surprising. Thus, the economic perspective is related to finance (405), resource allocation (406), and productivity (407); sociology plays a part in treating institutional role and mission (301), governance (404), and recruitment (302); law relates to student affairs (606), faculty (201), and educational opportunity (408), among others; and psychology deals with teaching and learning (101) research (104), and the curriculum (102).

Once again it can be argued that the most striking finding is the limited scope of the disciplines in understanding topical dimensions of higher education. This is not to say that concepts or variables whose origins are the disciplines are absent. Certainly the literature deals with role studies, as an example, and sociology or psychology are the origin of the relevant concepts. However, the disciplines are not the conduit for the examination of higher education in the core literature. Unlike Sweden and other countries whose national systems commission disciplinary faculty to study dimensions of higher education, our literature may use but does not emanate from the fields of study. The involvement of disciplinary bases in the study of higher education might lead to stronger scholarship and to somewhat different authorship that might displace some higher educationists whose scholarship might not stand such a competition. It is interesting to ask how the disciplines might be affected in their directions if they were more responsible for scholarship in higher education.

The Influence of the Journal

Table 1 shows the relationship between the epistemological structure and article topics. Table 3 denotes the impact of four of our eight journals and how they influence the display for certain topical categories. We note, for example, that the Educational Record publishes in the teaching/learning area (101) but from CH-Se and CH-Syn perspectives. The Journal of College Student Personnel, in this topical area, publishes about the interaction of variables (AS-Se) and interventions (CH-Cu); the Journal of Higher Education includes a highly personalistic treatment of teaching (PH-Ex) in its contribution to the field; and Research in Higher Education focuses on the four AS categories and is the only one to include replications or extensions of such work. (AS-Ex).

We consult different journals to know differently about the same topical area. Of course, journals publish works on the same topic that have similar structures. An examination of the AS-Se column in Table 3 makes it clear that the presence of all four journals are felt here, though this style may have less salience for some. Each journal, then, publishes a different array of literature on a topic and each shares some similarities with other journals on a topic.

As a consequence it is likely that journals have different author expectations. It is difficult if not impossible to understand the relation between authors and journals without focusing on surveys, manuscript reviews, and correspondence, but some data bearing on this question will be presented.

In Table 4 we show the average number of references in each of four journals for three topical domains. This breakdown does not include epistemological type, for the cells would be very small.³ But the reader can observe interesting differences that might be expected given one's knowledge of the literature.

Authors treating the same topic in different journals bring in other literature to various degrees. The papers are more or less firm in their groundings in the literature as opposed to grounding in authors' wisdom or experience. In a sense, each journal has different zones of what is believed to be appropriate treatment and this has consequences for the variety of structures and the amount and sources of support for the arguments.

Differences in Two Time Periods

The social institution we label "higher education" over time changes in its agenda for action and likely promotes the production of relevant literature. Of course our content categories are broad and flexible and modifications in the social agenda need not be reflected in category changes, as opposed to modification of foci within categories. However, to gauge possible transitions from one domain to another we constructed Table 5. We recognize that had we included data between 1975 and 1981 that the trends suggested in the table might be interpreted differently. We are comfortable in using these data as speculative.

The Educational Record was chosen because it made a significant structural transformation between 1975 and 1981, becoming a professional magazine from its former scholarly status. The Journal of Higher Education and Research in Higher Education have had stable leadership and appear to be responsive to broad topical interests, scholarly and research based.

Table 5 presents the number of articles in the topical categories for three journals for two volume years. Sampling half the articles for these (and other) years results in a small data base. Nevertheless, we can note what appear to be publishing foci as well as differences for the journals in both individual categories and broader domains.

The Educational Record published more in the latter period on academics and research (100), less on personnel (200) and less on state/national (400). Lifelong learning (604) is not a later priority. The Journal of Higher Education appears to have published less in the first domain (100) in the later year and more in the state/national area (400). Research in Higher Education's focus on teaching and learning (101) is in sharp contrast to the Journal of Higher Education's 1981 treatment of this area. There appears to be congruency in Research in Higher Education's earlier and later years, below the initial domain. Each journal published about the same number of categories in the two years. Clearly, the field should better understand the relation between manuscript submission and acceptance by topic within temporal dimensions.

Gender and Content

A more comprehensive display of the foci for the eight journals is developed in Table 6. In addition to the number of articles in each journal, arrived at by adding the numbers in parentheses in the male and female columns, it denotes the gender of the articles' senior authors.⁴ We can determine what the journals are publishing and the gender of authorship for each area.

We note, of course, that journals publish different percentages of men and women for reasons that cannot be answered with these data. It is of interest that women appear to be responsive to some journals in some categories but not others. For example, in College and University women are publishing in the first two domains but are hardly represented in the other four. There appears to be the presence of both genders in the Journal of College Student Personnel. Males write in seventeen topical areas in the Review of Higher Education and women in five. Men write exclusively about the presidency and leadership in some journals and women have a voice in others. As was the case for Table 1, the reader will likely have an interest in specific comparisons by, for example, following one category across journals.

Analyses can also be generated for various content dimensions. The Journal of College Student Personnel does live up to its name by publishing about student characteristics and development (202), but also about administrators (203)! But why not about faculty (201) who influence student development? This

journal also publishes few papers on state and national policies dealing with students, such as educational opportunity (408), student financial assistance (408), and work and education (410). The Journal of Higher Education, on the other hand, publishes more about faculty (201) than other constituencies combined. Liberal Education, as might be expected, publishes a great deal about the academic and research domain (100), with most papers dealing with the curriculum and the disciplines (102). But of modest value are papers that focus on the deliverers (201) or receivers (202) of the curriculum. It is also surprising that more articles on independent higher education (601) do not appear in this journal.

CONCLUSION

Using unobtrusively collected data we have examined the content of core higher education journals from 1975 to 1981. The content has been displayed by its epistemological style, journal of publication, gender of author, and time period of publication.

It would appear that many issues are embedded in this paper's data, from the uneven epistemological treatment of certain topics to the virtual ignoring of others, to the self or other segregation of women authors to certain topics in some journals, to the failure of journals to treat as many topical areas as they might, to the appearance of literature after rather than before an issue emerges, requiring a delay in

relevant or background information, to a publishing complexity not matched by equally comprehensive information to prospective authors.

This article has raised questions for the specialty "higher education." It can be argued that each specialization in education should attempt to understand its knowledge base by conducting research that will allow the field to raise important questions and its editors to develop policy grounded in the data of the field as published.

FOOTNOTES

1. The Jossey-Bass New Directions series were not included since they are not strictly journals.
2. Over half the number of issues were examined for volumes having an odd number of issues.
3. The total reference for Teaching/Learning is: AS-Se/10.4; CH-Se/13.1; CH-Syn/22.2; for Students: AS-Se/9.9; CH-Se/5.0; CH-Syn/5.6; for Administrators/Supp Stf: AS-Se/8.9; CH-Se/7.1; Ch-Syn/9.1. The first area does not make intuitive sense.
4. There are 36 articles missing from Table 6 because the gender of some authors could not be determined from the articles' bylines. Twenty-one of this number are in Higher Education and the remainder spread over the other seven journals.

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