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Characteristics of Forensic Science Faculty within Criminal Justice Higher Education Programs

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ABSTRACT: In 1980, the Joint Commission on Criminology and Criminal Justice Education and Standards surveyed more than 3600 faculty members from approximately 560 graduate and undergraduate criminal justice and criminology programs in the country. This paper compares the responses of faculty who indicated expertise in the forensic sciences with those of the larger group of criminal justice faculty members. More than 40% of the 61 faculty who specialize in forensic science have backgrounds in law enforcement and are teaching at two-year institutions. Less than 10% of these faculty have crime laboratory work experience. Teaching is clearly the primary activity of these faculty, with a small percentage of their time devoted to research and writing. The forensic science faculty are also notable in that they customarily teach in an adjunct status and do not hold academic appointments that will lead to permanent status with a college or university.

KEYWORDS: forensic science, surveys, education

The Joint Commission on Criminology and Criminal Justice Education and Standards was formed in 1977, with the assistance of a grant from the Law Enforcement Assistance Administration's (LEAA) Office of Criminal Justice Education and Training. The Commission's goal was to undertake an assessment of the quality of criminology and criminal justice education and to develop a data base suitable for use in identifying emerging educational standards in these programs. The reader may wish to consult the final project report, *Quest for Quality* [1] for a comprehensive review of the field of criminal justice higher education. One of the Commission's accomplishments was the administration in 1980 of a national faculty survey which was mailed to more than 3600 active faculty members from approximately 560 graduate and undergraduate criminal justice and criminology programs in the United States. Of the 1358 respondents, 106 (7.8%) reported that they had expertise in forensic science, and 61 (4.5%) of these individuals reported forensic science to be one of their top three areas of specialization. While not necessarily representative of all forensic science educators in the country, these respondents do represent those individuals who are teaching and doing research in the forensic science field, using a criminal justice program as their base. An earlier survey of institutions offering undergraduate and graduate degrees in forensic science/criminalistics [2] found that about 40% of such programs are located in departments of criminal justice or criminology.

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The survey responses of these faculty with expertise in forensic science will be discussed and compared with those of the larger group of criminal justice faculty members. Henceforth, the 61 faculty respondents reporting forensic science expertise will be referred to as the *forensic science* faculty, while the remaining 1297 faculty respondents will be referred to as the *criminal justice* faculty. The survey was divided into seven primary sections: (1) background characteristics of the respondents, (2) current position description, (3) current assignment, (4) academic and agency experience, (5) attitudes toward education, (6) criminal justice values and philosophies, and (7) self-identification.

Background Characteristics

The background characteristics of the respondents included their age, sex, race, and type of institutional affiliation. The forensic science faculty is 100% male and 91% white. The criminal justice faculty is 91% male and 92% white. A chi-square test of significance shows the sexual difference of the two groups to be significant at the .05 level. Approximately 50% of the criminal justice faculty are under 40 years of age and most (41%) are between the ages of 30 to 39 years. Given the dramatic upsurge of programs in criminal justice over the past decade the youthfulness of the faculty is not at all surprising. The age distribution of faculty in the forensic science sample is similar, but deviates in one respect; it is distinctly bimodal: 37% of the faculty are in the 30 to 39 year range and 31% are in the 50 to 59 year range (see Fig. 1). As will be discussed in a later section of this paper, this age differential suggests two different means of entry into the forensic science teaching world: the younger faculty who enter via a traditional academic career ladder upon completion of a graduate degree, and those in the older age group, most of whom joined the teaching ranks upon retirement from an operating agency.

Twenty-eight percent of the criminal justice faculty are affiliated with two-year institutions, while 41% of the forensic science faculty have such an affiliation. This difference is significant at the .05 level. This strongly suggests that much forensic science teaching is being offered at the junior/community college level in programs that culminate in an associate's degree. Because no forensic science degrees per se are present at the two-year level, one

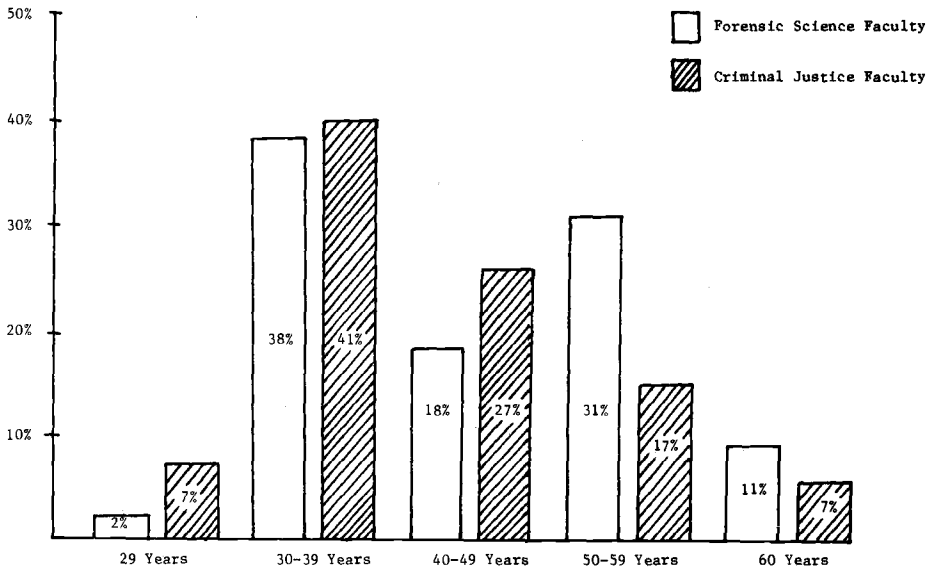


FIG. 1—Age characteristics of faculty.

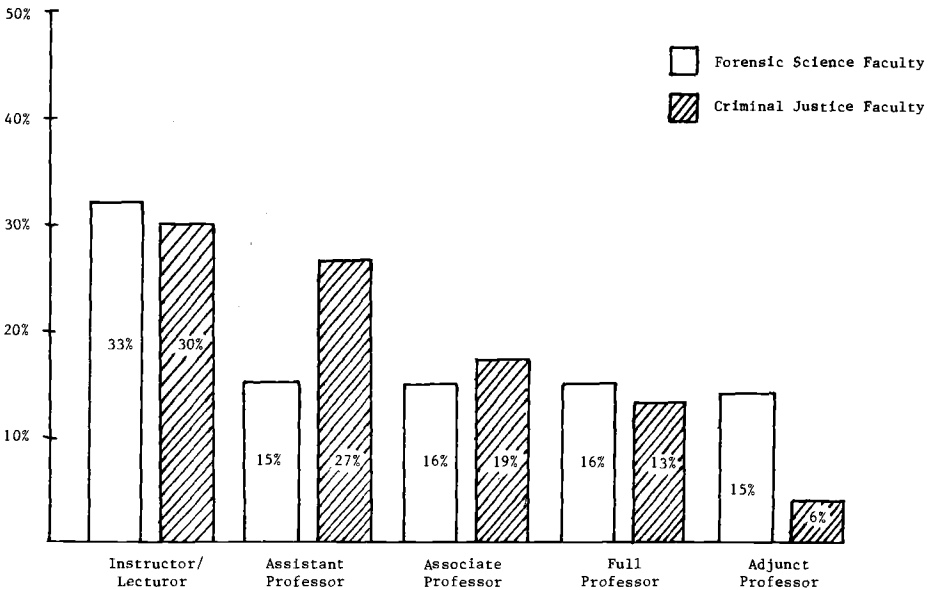
may infer that this coursework is offered within the context of a law enforcement/criminal justice degree program. Such teaching would be aimed primarily at the collectors (police officers) and users (police and pre-law students) of forensic science, but not the fledgling forensic scientist, where a four-year degree would be a minimum acceptable credential.

Current Position Description

The survey instrument collected information describing the academic rank, administrative appointment, tenure status, years in position, and employment characteristics of respondents. The forensic science faculty does not differ greatly from the criminal justice faculty in these respects. The youthfulness of the forensic science faculty is reflected by their lower academic rank, lack of administrative appointments, and length of time in these positions.

The instructor rank is the most common academic level reported, with 33% of the forensic science faculty and 30% of the criminal justice faculty holding this rank. There are two major differences between the two faculties with respect to rank: a much higher percentage of the criminal justice faculty hold the rank of assistant professor (27%) than forensic science faculty (15%) (see Fig. 2). On the other hand, forensic science faculty are two-and-one-half times as likely to be teaching on an adjunct basis than criminal justice faculty (15 to 6%), the difference of which is significant at the .01 level. The greater percentage of forensic science faculty in the adjunct category is just one of several indicators that suggest this faculty has a more tenuous relationship with academe than the criminal justice faculty.

The majority (61%) of the forensic science faculty do not hold administrative appointments and, consistent with their age and academic rank, 44% of them have held their current positions for less than five years. The responses of the criminal justice respondents are similar with 64% not holding administrative appointments and over 50% having been in their current position for less than five years.



* In addition 5% of Forensic Science Faculty and 6% of the Criminal Justice Faculty held other miscellaneous positions.

FIG. 2—Academic rank of faculty.

In examining the issue of tenure, a difference is detectable (although not significant statistically): 44% of the forensic science faculty are tenured in comparison to 36% of the larger criminal justice group. An examination of the percentage of nontenured faculty who are on a "tenure track" reveals a different relationship: 43% of the nontenured criminal justice faculty are on tenure tracks while only 25% of the nontenured forensic science faculty are on tenure tracks (significant at the 0.05 level). Consistent with the prior discussion of academic rank and percentage of forensic science faculty teaching on an adjunct basis, the higher percentage of forensic faculty not on tenure tracks signifies their affiliation with the university is temporary and not likely to result in a stable, long-term relationship.

Current Assignment

The questions posed on the Current Assignment Section of the survey concerned themselves with teaching load and time devoted to research and writing. The teaching load is measured in terms of number of courses taught at three levels: freshman-sophomore, junior-senior, and graduate. Forty-one percent of the forensic science faculty teaching at the lower division undergraduate level are teaching fewer than five courses, with another 33% who did not respond. At the upper division, 41% teach fewer than five courses; however, 52% did not respond to this question. At the graduate level 20% report they teach fewer than five courses, but 80% did not respond to this question. The high no-response rate to this latter question may mean either these faculty do not teach graduate courses, or are at two- and four-year institutions that do not have graduate programs. The teaching load averages of the criminal justice faculty do not differ significantly.

A very important question concerns the balance of time faculty devote to research and teaching. The responses are not heartening, at least from a research perspective. Of the 37 forensic science faculty members responding to this question, 95% reported they spent less than 25% of their time on research (24 or 39% did not respond), and none of the respondents reported that they devoted more than 50% of their time to research activities. For the criminal justice faculty, 80% of respondents spent less than 25% of their time on research, and only 4% reported spending in excess of 50% of their time on research. While neither group is heavily involved in research, the forensic science faculty report they devote less time to research than their social science colleagues.

Academic and Agency Experience

The variables describing academic experience on the faculty survey include: degrees held, degree major field, and, if the respondent was currently pursuing a higher degree. Upon examining Table 1, one sees that practically all respondents possessed bachelor degrees, and approximately three quarters held masters degrees. It is evident that a higher percentage of the criminal justice faculty holds degrees beyond the masters level than the forensic science faculty (54 to 31%). When members in the two faculty groups who hold Ph.D.s or Doctors of Criminology (D.Crims) are contrasted with one another, we find 21% of the forensic science faculty hold such research degrees, while 36% of the criminal justice faculty ($p < 0.02$).

Of the 13 forensic science faculty holding doctorates, only two reported their major field of study to be in a natural or physical science. Thirty-seven of the masters degree holders provided information on their major field of study and, of these, only eight (22%) reported their degree to be in a natural or physical science. The remainder hold majors in criminal justice/law enforcement (43%) or in a social science area (35%). It is quite evident, therefore, that the great majority of these forensic science faculty have been educated primarily in the social sciences.

Twenty-four percent of the forensic science group were currently pursuing a higher degree, compared to 20% of the criminal justice group. Among those forensic science faculty

TABLE 1—*Degree characteristics of forensic science and criminal justice faculties.*

Degrees Held	Forensic Science Faculty, % <i>n</i> = 61	Criminal Justice Faculty, % <i>n</i> = 1297
Ph.D.	16	35
D.Crim.	5	1
Ed.D.	0	2
J.D./LL.B.	10	15
M.A./M.S.	72	74
B.A./B.S.	93	93

pursuing a higher degree, 40% were seeking a Ph.D. and 20% a Doctor of Education degree. Approximately 45% of the criminal justice faculty group who were seeking an advanced degree were pursuing a Ph.D. and 12% were in pursuit of a Doctor of Education degree. In addition to these faculty members pursuing doctoral degrees about one third of both the criminal justice and forensic science faculties were seeking masters' degrees.

When the work experience of the forensic science faculty is examined (Table 2), we find 73% of this group has been employed full-time in a law enforcement agency compared with 54% of the criminal justice faculty. About 42% of the forensic science faculty were employed in a local law enforcement agency, 15% were employed in a state law enforcement agency, and another 15% employed in a federal law enforcement agency. A most disconcerting finding is that only 9% of the total forensic science faculty respondents had experience in a crime laboratory. These responses indicate that individuals with predominantly law enforcement training and experience nonetheless view themselves as forensic scientists and are teaching such courses at the college level. While the title and content of courses taught by these faculty were beyond the scope of this survey, it certainly is an area meriting further inquiry. A cursory review of college catalogues indicates these courses would likely fall in such areas as evidence recognition, collection and preservation, photography, and such rudimentary forms of evidence evaluation as fingerprint comparisons and physical pattern matching, rather than forensic science per se.

This section of the questionnaire also sought information on the publication record of respondents. In general, the forensic science and criminal justice faculty have few publications. The number of articles published in refereed journals is one of the most commonly used measures of research productivity used by academic institutions. We find 59% of the forensic science faculty have no refereed articles published (Table 3). The criminal justice faculty sample is comparable with 60% having no publications in refereed journals. The

TABLE 2—*Type of criminal justice agency experience.*

Criminal Justice Agency	Forensic Science Faculty, % <i>n</i> = 33	Criminal Justice Faculty, % <i>n</i> = 505
Local law enforcement	42	47
State law enforcement	15	6
Federal law enforcement	15	1
Probation/parole	0	8
Corrections	3	14
Courts	3	4
Crime laboratory	9	1
U.S. military	0	1
Other	12	18

TABLE 3—Journal articles published.

Number of Articles	Forensic Science Faculty <i>n</i> = 61		Criminal Justice Faculty <i>n</i> = 1297	
	Refereed, %	Nonrefereed, %	Refereed, %	Nonrefereed, %
None	59	69	61	72
1 to 2	10	11	15	11
3 to 4	7	8	8	6
5 to 10	13	5	8	4
More than 10	11	7	8	6

publishing record in the area of books and monographs is less (Table 4); about one third of the forensic science faculty reported publishing one or more book chapters and one quarter a complete book. Sixteen percent reported editing a book, publishing a monograph, or producing a government report. The criminal justice faculty produced fewer books but more monographs and government reports.

With respect to the issue of salary, 17% of the forensic science respondents' salaries fell at the \$16 000 and below range, 46% in the \$16 000 to \$24 000 range, 29% in the \$24 000 to \$32 000 range, and 7% above \$32 000. This salary range is comparable to the criminal justice faculty.

Attitudes Towards Education

Fifty-nine percent of the forensic science faculty identified foremostly with the descriptor "criminal justice educator"; only 16% of this group chiefly identified with the label "forensic scientist." This broader professional identification is probably the result of two factors: their professional identities have broadened as a result of their years in academe and associating with their social science colleagues; it may also mean that these faculty have always held this wider professional identification and the teaching of forensic science related courses is a secondary interest which has been acquired over the years.

Approximately 39% of the forensic faculty respondents perceive criminal justice education as a combination of social science, liberal arts, and professional education, which is comparable to the perceptions of the criminal justice faculty (41%) who see it in the same way. On the other hand, 23% of the forensic faculty thought the best description of a criminal justice education to be either vocational or professional, while only 16% of the criminal justice faculty felt this way. The greater professional orientation of the forensic science faculty is further supported by the fraction who see criminal justice education strictly as a social science/liberal arts endeavor: 15% of the criminal justice respondents see it in this fashion but, only 7% of the forensic science respondents (*p* < 0.01). The difference is even greater when the faculty were asked to describe the *future* of criminal justice education and 15% of

TABLE 4—Major publications.

Type of Publication (One or More)	Forensic Science Faculty, % <i>n</i> = 61	Criminal Justice Faculty, % <i>n</i> = 1297
Books	26	18
Edited books	16	12
Monographs	16	21
Chapters in books	33	23
Government reports	16	26

the criminal justice group saw these curricula taking a social science/liberal arts direction, but only 2% of the forensic science faculty saw it taking such a turn.

The next section of the questionnaire asked for the faculty's views on theory and research in the field of criminal justice education. The results of these questions may be summarized as follows:

- when asked if "research in the field should concentrate on theory development," the criminal justice faculty were ambivalent, while the forensic science faculty tended to disagree with the statement;
- both faculty groups disagreed with the statement "too much emphasis is being placed on empirical research";
- the forensic science faculty tended to agree with the statement "research in the field should concentrate on agency oriented problems" while criminal justice faculty disagreed with it; and
- criminal justice faculty agreed with the statement that "what is being taught in the field is too prescriptive" while the forensic science faculty were ambivalent.

Self-Identification

The final section of the survey had two elements: the previously reported "self-identification," and a "personal importance" assignment. The personal importance element is a list of specific activities and the respondents were asked to rank these in order of personal importance.

The responses of the two faculty samples were quite similar on most of the questions asked. The items in which there was the greatest difference of opinion were: the importance of graduate teaching and theory testing and development (this was assigned greater importance by criminal justice faculty) and importance of evaluating local projects (given greater importance by the forensic science faculty).

Summary

Approximately 5% of the faculty responding to the Joint Commission on Criminal Justice Education and Standards' national survey reported that forensic science was one of their top three areas of specialization. A substantial percentage of these faculty are located at two-year institutions and have backgrounds in law enforcement. Less than 10% of these faculty have crime laboratory working experience. One may view this situation from two perspectives; concern over the scientific content of courses taught by these persons with law enforcement backgrounds or, on the other hand, satisfaction that these individuals with law enforcement backgrounds are interested in forensic science and are exposing criminal justice students to basic concepts of forensic science at the two- and four-year college level.

The forensic science and criminal justice faculties are overwhelmingly involved in teaching as their primary activity. This concentration seems to be at the expense of engaging in research and writing, the lack of which hinders the faculty member's long-range professional development and learning. It also retards the development of new scientific procedures and knowledge that are crucial to the growth of the forensic science profession.

Minimal activity in the area of research goes hand in hand with a sparse publication record. One cannot escape the fact that publications constitute the primary means by which faculty are evaluated and in this regard the record of the forensic science faculty, and for that matter the criminal justice faculty, is not impressive.

Another issue raised by the survey is the use of adjunct faculty. While the use of adjuncts can certainly add realism and practicality to a university department, heavy reliance on adjuncts can impair the basic education, research, and theoretical development qualities of a program. Not only does the loyalty of the adjunct remain with his principal employer, the

adjunct also has less time to spend with students, to engage in research, and to make contributions to the scientific literature.

The problems centering around the faculty member's commitment to an academic program is further illustrated by the high ratio of forensic science faculty not on a tenure track. Individuals in such a status cannot be expected to dedicate themselves to an educational institution in a way that a full-time faculty member can.

Three major recommendations can be drawn from this survey:

1. Forensic science educators must consider two-year criminal justice programs when discussing faculty and curricular needs. Much teaching is going on at this level and forensic scientists must remain abreast of the nature and quality of such coursework.
2. The employment of adjunct faculty in forensic science and criminal justice programs should be evaluated to determine the proper role of such individuals and their contributions to the overall teaching and research goals of the individual programs.
3. Forensic science faculty should become much more active in research and writing. Greater institutional support of such activities would be most desirable, including greater incentives for conducting university-based research in combination with a lessening of teaching loads and responsibilities.

References

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