

## **Assessing the Quality of Doctoral Programs in Criminology in the United States\***

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This study assessed the quality of doctoral programs in criminology in the United States by examining publication records of program graduates in select criminology journals. Descriptive information and other measures of quality are also considered alongside the primary findings in an effort to move towards a more comprehensive evaluation of doctoral programs in criminology. Findings revealed that graduates trained at the University of Maryland, State University of New York at Albany, Florida State University, and the University of Cincinnati were the most productive scholars over the period examined here. Discipline-level trends and findings are also discussed.

In his 2001 presidential address to the Academy of Criminal Justice Sciences, Todd Clear posed the question: "Has academic criminal justice come of age?" (Clear 2001:1). Using data collected from a variety of sources, Clear (2001) compared criminology scholars and programs to those in other social science disciplines and concluded that "academic criminal justice is not easily distinguished from the established social science disciplines in terms of scholarly output... and that with regard to program size and matriculation numbers, criminal justice is certainly large enough to matter in the broad scheme of higher education" (Clear 2001:722-23).

In the four years since the publication of then-president Clear's address, several exciting things have happened in criminology and criminal justice academia which suggest the discipline has continued to evolve and confirm itself among the other already established social science disciplines. By the end

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of 2005, the number of schools offering a doctoral degree in criminology had increased from the 25 to 34 schools that were members of the American Association of Doctoral Programs in Criminology and Criminal Justice.<sup>1</sup> One of these new programs was established at the University of Pennsylvania, signifying the recognition of criminology as a separate and unique discipline by the Ivy League. In 2005, U.S. News & World Report included rankings of doctoral programs in criminology for the first time in its annual Guide to Graduate Programs, indicating that an objective and reputable news source acknowledges that criminology is a free-standing discipline.

The recognition by U.S. News & World Report is important not only because it indicated that a reputable news outlet views criminology as a stand-alone discipline, but also because it represents an evaluation of which doctoral programs may afford the best training for prospective criminology scholars. Such evaluations are important because they inform applicant decision making and offer feedback to programs about the quality of the training they provide. Studies of this nature also provide information about evolving trends in the discipline (see, for example, Sorensen and Pilgrim 2002). As Clear (2001) notes, criminology needs to evaluate itself as a discipline and continue to develop and strengthen its higher education.

On the other hand, an inspection of the methodology used by U.S. News & World Report to produce the rankings for criminology programs as well as the other social science disciplines revealed it was different from those used to evaluate many other fields (e.g., education). While both subjective (e.g., recruiter assessment) and objective (e.g., funded research) measures were combined when evaluating other disciplines, the rankings in the social sciences were based solely on the subjective measure of peer assessment. Our observation of this distinction left us with questions such as how important the other social science disciplines consider the U.S. News rankings. If the survey response rates are any indication, it appears not too much. U.S. News reported response rates of 50% or less ( $\bar{x} = 37\%$ ) for all the other social science disciplines. In contrast, the National Academy of Science's most recent assessment of doctoral programs in the social and behavioral sciences generated response rates of 50% or higher ( $\bar{x} = 56\%$ ) (Goldberger, Maher, and Flattau 1995). The National Academy of Science's evaluation was based on both subjective and objective measures of assessment and unfortunately did not include criminology programs.

While other social science disciplines may not have taken the U.S. News survey too seriously, judging from the high response rate of those surveyed regarding criminology programs, our field apparently did. U.S. News reported a response rate of 88% for criminology, leading us to other, and perhaps more important, questions such as how much faith we should put in the U.S. News

1. The term criminology, as used throughout, is used to describe criminology programs as well as those programs that offer related degrees that are not technically criminology (e.g., criminal justice; crime, law and society).

rankings of criminology programs and whether our peers have the necessary information to fairly evaluate doctoral programs in criminology. In other words, are the subjective evaluations of criminology faculty based on similar, and seemingly less important, influences (e.g., "halo effect") as those which have been found to guide evaluator decisions in other disciplines (Ostriker and Kuh 2004)?

While information regarding criminology programs does exist (e.g., Fabianic 2002; Flanagan 1990), it is scarce. Empirical studies are few, and those that are available have typically assessed program quality either through subjective peer assessment similar to U.S. News or through more objective measures of citation counts or publication productivity of the programs' faculty. Such assessments are clearly important; however, these studies are also limited in that they provide only a partial assessment of programs by limiting their analysis to only one indicator of quality. As Travis (1987) notes, the scholarly productivity of a programs' faculty is only one possible measure of quality and does not tell us whether the faculty are skilled at training future criminologists or securing funding for students. Truth be told, relatively little information exists about the graduates produced and trained by criminology programs. Studies that assess faculty productivity tap an aspect of the quality of those scholars who have chosen to work in criminology departments; however, those individuals typically have *not* been trained by a criminology program (see Clear 2001; Greene, Bynum, and Webb 1984). Perhaps another way of examining both whether criminology has come of age as a discipline and the quality of the doctoral programs in criminology is by assessing the quality of the graduates that doctoral programs in criminology have produced.

In this study, we add to the existing literature on the evolution and assessment of criminology by assessing the publication productivity of the graduates of programs which offer a doctoral degree in criminology. We also combine descriptive information and other indicators of program quality with information provided in recent studies addressing this topic in order to move towards a more comprehensive assessment of doctoral education in criminology.

### Towards Legitimacy: The Evolution of Criminology and Concerns over Quality

Criminology is still a young discipline when compared to other social sciences (e.g., psychology, sociology). As such, empirical assessments of program quality are relatively few in number. However, discussions of academic integrity and quality have arisen as criminology has developed as an academic discipline and sought acknowledgement as a legitimate field of scientific study.

In their classic criminology text, Sutherland and Cressey (1978) define criminology as the body of knowledge regarding crime as social phenomena, which includes the processes of making and breaking laws, as well as the reactions

thereto. From Sutherland and Cressey's definition, it follows that the scholarly objective of criminology as a discipline is to develop the body of knowledge regarding these processes through interdisciplinary scientific study. Indeed, the summer program at the University of California at Berkeley, which was initiated in 1918, and is widely believed to be the first attempt at teaching criminology apart from other disciplines (e.g., sociology) at a university (see, for example, Geis 1995), had interdisciplinary roots. Among the program faculty were August Vollmer, the chief of police in Berkeley, Alexander Kidd, professor of law, William Helms, a parasitologist, and Albert Schneider, professor of pharmacology (Morn 1995). The sessions were initiated by Vollmer and Kidd, who were concerned about the quality of the training, or lack thereof, that police officers had been receiving.

Under Vollmer's direction, the summer session continued for many years and several of its students became influential in starting non-degree police training programs at other universities, such as San Jose State Teacher's College and Washington State College (Morn 1995). Along with this growth, however, came apprehension about the variation in the education being provided across programs. In 1941, Vollmer, along with Robert Drexel, Vivian A. Leonard, Benjamin Pavone, Willard Schmidt, Orlando W. Wilson, William Wiltberger, and Frank Yee met at Vollmer's home under the title of the National Association of College Police Training Officials (NACPTO). NACPTO's main objective was to further police training in higher education and improve the quality of existing programs by establishing a standardized curriculum. NACPTO became the Society for the Advancement of Criminology in 1946 and was renamed the American Society of Criminology (ASC) in 1957 (Morris 1975).

The Society was influential in helping to establish the nation's first degree-offering school of criminology at Berkeley in 1950. A student of Vollmer's, O. W. Wilson, was appointed as Dean (Morris 1975). Following Wilson, Joseph Lohman, who had been sheriff of Cook County, Illinois, and an instructor in sociology at the University of Chicago, was appointed as Dean in 1961 (Platt 1976). It was Lohman who, despite having only a master's degree, oversaw the development of the first doctoral program in criminology in 1963 (Morn 1995).

In addition to the founding of the first doctoral program in criminology, 1963 also marked the establishment of the International Association of Police Professors (IAPP). At a retirement party for V. A. Leonard at Washington State College, and after many of the criminology educators who were present voiced concerns about the quality of the ASC's message, in that it had become dominated by sociologists and moved away from its original intent, the IAPP was formed (Morn 1995). The IAPP would be renamed the Academy of Criminal Justice Sciences in 1970. The close of the decade also saw the development of additional doctoral programs in criminology at State University of New York (SUNY) at Albany and Michigan State University.

In the 1970s, the Law Enforcement Assistance Administration's Law Enforcement Education Program generated considerable interest in higher education among practitioners (mainly police officers). Only 50 universities offered an

associate's or bachelor's degree in criminology in 1960; however, more than 600 schools offered degree programs by the end of the 1970s (Crank 2003). Additional doctoral programs were started during the 1970s at Sam Houston State University, Florida State University, the University of Maryland, the University of California at Irvine, and Rutgers University. Along with the rapid growth, however, came increased concerns regarding program integrity, as well as the quality of program faculty and the instruction they were providing (see, for example, Sherman and the National Advisory Commission on Higher Education for Police Officers 1978). Interestingly, similar issues were raised regarding the program at Berkeley prior to the 1960s.

In 1976, the discipline suffered a setback when the School of Criminology at Berkeley was closed. Although University Chancellor Albert Bowker cited budgetary constraints and the isolation of the school's faculty from the remainder of the university as his reasons for closing the school, it is widely believed that it was the quality of the education being offered that was the underlying rationale (Geis 1995). Ironically, the school was criticized as being too academic; that is had moved away from being a professional school (Geis 1995; Schauffler and Hannigan 1974). During its existence, and in addition to those already mentioned, the school had boasted such full- and part-time faculty as Sheldon Messinger, Jerome Skolnick, Richard Korn, Barry Krisberg, and Caleb Foote. The school also produced nearly 100 Ph.D. graduates, among whom were scholars such as Anthony Platt (1966), David Fogel (1968), Michael Hindelang (1969), Gene Carte (1972), Joseph Weis (1974), Thomas Blomberg (1974), and Julius Debro (1975). The School of Criminology was replaced by a Law and Society program.

Although the Berkeley school's closing was a loss felt throughout the discipline (see Geis 1995 and Schauffler and Hannigan 1974 for further discussions of the school's closing), criminology continued to evolve. In response to the concerns regarding the quality of education being provided at many of the undergraduate programs created in the 1970s, the number of doctoral programs in criminology also increased (Crank 2003). The 1980s saw the creation of additional doctoral programs at the City University of New York (CUNY), Washington State University, the University of Delaware, and Indiana University of Pennsylvania. In the 1990s, programs were established at the University of Cincinnati, Temple University, American University, the University of Nebraska at Omaha, Pennsylvania State University, the University of Missouri at St. Louis, the University of Illinois at Chicago, Indiana University, the University of South Florida, and the University of Southern Mississippi. And in the current decade, doctoral programs have already been founded at Prairie View A&M, the University of Pennsylvania, North Dakota State University, the University of Florida, Northeastern University, and George Mason University. Along with two Canadian schools and those doctoral programs housed within other disciplines, the number of programs which were members of the American Association of Doctoral Programs in Criminology and Criminal Justice reached 34.

While this rapid expansion of criminology programs at both the undergraduate and graduate level has certainly aided in legitimizing the discipline (Crank 2003; Morn 1995), others have argued the rapid expansion has come at the expense of quality, especially at the doctoral level (Savelsberg and Sampson 2002). We make no claim in either direction but instead provide a preliminary inquiry into the matter by assessing the quality of the existing doctoral programs in criminology.

### Measuring the Quality of Doctoral Programs in Criminology

Many reports and studies containing information and profiles of doctoral programs and universities are produced each year by a variety of sources (e.g., U.S. Department of Education). Some of these reports contain information which taps program quality; however, few studies are comprehensive enough to influence specific policy or planning concerns (Golberger et al. 1995). Existing studies that have focused on criminology programs are no exception. As we noted previously, criminology has not stood alone as a discipline for many years. Moreover, criminology programs that offer doctoral degrees are still few in number, and most have been established in the last couple of decades. Thus, the body of literature evaluating the quality of criminology programs, although expanding, is limited. In evaluating quality, scholars have considered such measures as faculty publications (e.g., Cohn and Farrington 1998; Fabianic 2002; Parker and Goldfeder 1979; Sorensen, Patterson, and Widmayer 1992; Steiner and Schwartz 2006), faculty citation (Cohn and Farrington 1998; Thomas and Bronick 1984), peer evaluation (e.g., Fabianic 1979), and graduate publications (Cohn, Farrington, and Sorensen 2000). Each of these measures has its respective flaws (for reviews see Cohn et al. 2000; Travis 1987); however, most represent at least *one* aspect of program quality.

#### Faculty Citation Counts

Citation analyses involve tabulating the number of times particular publications or persons are cited in various sources. Such studies provide an indication of the influence of a particular publication or scholar on other scholars in the discipline (Cohn and Farrington 1998). Studies using the citation count method have examined both criminology journals and textbooks, while both individuals and programs have served as the unit of analysis. Regarding one of the more recent evaluations of doctoral programs, Cohn and Farrington (1998) examined citations in six criminology journals and revealed that the faculty from the University of Maryland, University of Cincinnati, Rutgers University, SUNY at Albany, and the University of California at Irvine were the most frequently cited scholars.

Citation analysis is still used to evaluate the impact of particular scholars or their work(s), and it used by the National Academy of Sciences in its evaluation

of programs in other disciplines (see, for example, Goldberger et al. 1995). However, its retrospective nature has constrained its use in program assessment in criminology. In using citation analysis, programs may be given credit for work that their current faculty completed while at their previous institution(s). Similarly, the inherent lag time it takes for a particular publication or scholar to have an influence (be cited) restricts the use of citation analysis to only more senior faculty, who may not currently be active in research and most likely did not graduate from any of the newer criminology programs, if a criminology program at all (Sorensen and Pilgrim 2002).

### Faculty Publication Counts

Program evaluation using publication counts entails summing the total publications of the individuals (faculty or students) from particular programs in order to determine which programs contain or produce the most productive scholars. Publication counts have been the most common form of assessment used in criminology and they are also used by the National Academy of Sciences in its evaluations of other disciplines (see, for example, Goldberger et al. 1995). Although there has been variation in the number of and which journals were examined, SUNY at Albany and the University of Maryland have consistently been found among the top five schools across the various studies of faculty publication productivity (see, for example, Cohn and Farrington 1998; Fabianic 2002; Parker and Goldfeder 1979; Sorensen et al. 1992; Sorensen and Pilgrim 2002). In the most recent study, Steiner and Schwartz (2006) examined eight criminology journals in order to replicate two earlier studies (Fabianic 2002; Sorensen and Pilgrim 2002). They revealed that the faculty from the University of Cincinnati, University of Maryland, SUNY at Albany, University of Florida, and Pennsylvania State University produced the most publications. Although the rankings changed slightly, with the University of Maryland moving to first, no change occurred among the top five schools when the publications were weighted equally to control for co-authorship. Similarly, Steiner and Schwartz (2006) found that among criminology doctoral programs, the same five schools produced the most publications and weighted publications per faculty member, although several schools with only master's programs (e.g., the University of South Carolina) were ranked ahead of Pennsylvania State University in the analyses which controlled for the number of faculty.

### Graduate Publication Counts

Studies of graduate productivity are uncommon when compared to institution and faculty output studies. The National Academy of Sciences noted the difficulty in conducting such studies, yet they advised that such information would be valuable to both the graduate programs as well as potential students

(Ostriker and Kuh 2004). Although evaluations of graduates and the programs that produced them have been conducted in sociology (e.g., Keith et al. 2002), economics (e.g., Collins, Cox, and Stango 2000; Laband 1985), management (e.g., Williamson and Cable 2003), and psychology (e.g., Mallinckrodt and Gelso 2002), our review of the criminology literature revealed only two such studies.

Cohn et al. (2000) evaluated the publication productivity of graduates from 12 programs that had produced at least 10 graduates by the end of 1997. Using all the journals in the criminal justice periodical index, they revealed that graduates from Sam Houston State University, SUNY at Albany, Michigan State University, CUNY-John Jay, and Florida State University produced the most publications. When they standardized the publication counts by years after graduation for all the graduates of each program, those scholars trained at the University of California at Irvine, Michigan State University, Sam Houston State University, SUNY at Albany, the University of Maryland, and CUNY-John Jay averaged the most publications per year. In a separate analysis restricted to 20 "academic" criminology and criminal justice journals, Cohn et al. (2000) found that the graduates from Sam Houston State University, the University of Maryland, Florida State University, SUNY at Albany, and Michigan State University produced the most publications. Graduates from the University of Maryland, University of California at Irvine, Michigan State University, Florida State University, and Sam Houston State University averaged the most publications per year.

Cohn et al. (2000) also observed that half of the graduates from criminology programs had no publications at all, and 22 (6%) of the graduates (later dubbed "academic stars") accounted for 39% of all publications by graduates in the 20 "academic" journals. The University of Maryland produced the most (eight) academic stars followed by Michigan State University (four) and Sam Houston State University (four). In a follow-up study, Rice, Cohn, and Farrington (2005) tracked the career trajectories of these academic stars through October of 2003 and revealed that scholars from the University of Maryland averaged the most publications per graduate, while graduates from Sam Houston State University averaged the most weighted publications per graduate. When they standardized those numbers by years after graduation for all the graduates of each program, the scholars from the University of Maryland averaged the most publications and weighted publications per graduate.

### Peer Evaluations

In view of their subjective nature, peer evaluation studies are nearly as rare as those evaluating graduate productivity. Fabianic (1979) surveyed members of the Academy of Criminal Justice Sciences and criminal justice educators in order to assess the quality of nine doctoral programs in criminology across several characteristics (e.g., faculty as teachers). After averaging across the different characteristics, he revealed that SUNY-Albany, Michigan State

University, and Florida State University were the most highly rated programs. Perhaps more importantly, Fabianic (1979) revealed that *several* characteristics, one of which was the faculty as researchers, were of comparable importance to the quality of doctoral programs. Library facilities were ranked as the most important.

The most recent peer evaluation of criminology programs was conducted by U.S. News & World Report. Using data collected from a survey of faculty at 32 doctoral programs who were members of the American Association of Doctoral Programs in Criminology and Criminal Justice in the summer of 2004, they revealed that the University of Maryland, SUNY at Albany, the University of Cincinnati, Rutgers University, the University of California at Irvine, and the University of Missouri at St. Louis were the highest rated programs (Butler 2005).

Critics of peer evaluations have argued that program size or the "halo effect," where the perceived quality of a program is raised by being located in an institution that has a good reputation, has often been correlated with perceived quality. A program's national visibility or whether it has a few "academic superstars" can also enhance its overall quality ratings. Although peer evaluations are subject to such biases, they are not without merit. The National Academy of Sciences' study revealed a strong correlation between subjective evaluations and other indicators of quality. Additionally, subjective information can provide a balance when considered alongside other more objective quantitative measures (Ostriker and Kuh 2004).

### Other Possible Indicators of Quality

More comprehensive assessments of other disciplines conducted by either U.S. News & World Report or the National Academy of Sciences have simultaneously included peer evaluations, faculty publications, and citation counts. These indicators were also considered alongside other measures of quality (e.g., funded research) in order to provide a more comprehensive assessment which could answer possible questions that potential students and the evaluated programs may be interested in. In these studies, both the number of faculty and students were considered, as well as student/faculty ratio (Goldberger et al. 1995; U.S. News & World Report 2005). Some assessments have incorporated the number of specializations a program offers and the graduation requirements (e.g., Flanagan 1990), whereas other evaluations have included the total number of graduates or the number of graduates per year (e.g., Goldberger et al. 1995). Several studies have also examined the placement of each program's graduates (Laband 1985; U.S. News & World Report 2005). Fabianic (1979) revealed that the school's library facilities, followed by the faculty's abilities as researchers and teachers, and the faculty's academic background were the most important characteristics of a doctoral program to criminal justice educators and ACJS members.

Despite the evolution towards more comprehensive evaluation in other disciplines through the use of multiple indicators of quality (see, for example, Goldberger et al. 1995; Ostriker and Kuh 2004), no studies have considered descriptive information along with multiple indicators of quality in the assessment of doctoral education in criminology. We offer the current study in order to move in this direction.

## Methods

The purpose of this study was twofold. First, we sought to compare the publication productivity of the graduates from criminology doctoral programs. Second, we also wanted to provide descriptive information and additional measures of program quality to supplement the information provided by U.S. News and the findings from other recent scholarly work. The target population for the study included all doctoral programs in the United States that offered degrees in criminology and were members of the American Association of Doctoral Programs in Criminology and Criminal Justice (AADPCCJ) as of 2005.

## Data and Measures

We began with the 34 schools listed on the AADPCCJ's website. From this list, we examined each department's website in order to determine what type of *Ph.D. degree* (e.g., criminology) it grants; what, if any, *areas of specializations* it offers; the *number of faculty* listed as full-time graduate faculty; how many of those faculty hold a Ph.D. from a criminology program; and what the *course-work credit hours requirements* are for the doctoral degree.<sup>2</sup> We acknowledge the limitation of using department websites, since the information they provide may not reflect the current conditions of the programs. However, the primary source of information for prospective students is likely to be the department websites. Information from department websites has been used in prior assessments of criminology programs (e.g., Cohn and Farrington 1998; Fabianic 2002; Steiner and Schwartz 2006). Additionally, the National Academy of Sciences recently recommended that evaluations of doctoral programs be conducted more frequently and that basic information on a host of factors, many of which were not used here, be readily available on individual departments' websites (Ostriker and Kuh 2004). Furthermore, the American Historical Association, which is the analog to the AADPCCJ, recently conducted a study on the education of historians for the 21st century and recommends that departments use the World Wide Web to make available 20 different items that may be of potential importance to prospective students.

2. From the department websites it was not clear whether the schools operate on a semester or quarter system. As such, that information is not reported here.

Our review of the department websites revealed that four of the schools (the University of Arkansas at Little Rock, University of Central Florida, University of South Carolina, and Tiffin University) that were on the AADPCCJ list do not actually grant a doctoral degree in criminology. The University of Arkansas-Little Rock and the University of Central Florida have a criminal justice track contained within other programs (e.g., public policy). The University of South Carolina offers a combined degree program which permits a student to obtain both a Juris Doctor in Law and a Master of Arts in Criminal Justice degree. Tiffin University offers only a Master of Science degree in Criminal Justice. We chose to exclude these programs from our sampling frame because we felt they would not be fairly represented, given the measures of quality we selected and will subsequently describe. For similar reasons, we also excluded the two Canadian schools, namely the University of Montreal and Simon Fraser University.

Using the list of the remaining 28 schools, we conducted an Internet survey (see Dillman 2000) of the graduate directors of each program in order to ascertain the year their program was established, the number of doctoral students who enrolled for each of the years 1998 through 2003, the *number of graduates* they had produced through 2004, and a list of all their graduates who received a doctoral degree in criminology.<sup>3</sup> After numerous follow-up mailings, we received responses and data from 24 schools. Data were not received from American University, Prairie View A&M University, or Temple University. Arizona State University advised that its doctoral program in Justice and Social Inquiry was not to be considered a criminology program. Thus, after excluding Arizona State University, our final response rate was 89%. Table 1 displays the schools that responded, along with descriptive information retrieved from each department's website.<sup>4</sup>

In addition to the measures described above, we also calculated the *average cohort size* for the years 1998 through 2003 for all the schools and the *average*

3. Pennsylvania State University's Crime, Law, and Justice program was established in 1996. Prior to 1996, Pennsylvania State University offered a doctoral degree in Administration of Justice, which was established in 1988. Complete data were available only for the graduates of the Crime, Law, and Justice program, thus only those graduates are included here. The Crime, Law, and Justice program is contained within the Department of Sociology and Crime, Law, and Justice at Pennsylvania State University. The entire department has 21 full-time faculty, however, only 11 of those are considered faculty in the Crime, Law, and Justice program. Since only the graduates of the Crime, Law, and Justice program were included here, only the faculty designated at Crime, Law, and Justice were counted for measures created for this study. Washington State University's Criminal Justice program was established in 2004. Prior to 2004, Washington State University offered a doctoral degree in Political Science with an emphasis in Administration, Justice, and Policy, which was established in 1982. Complete data were available for all the graduates of the Political Science with an emphasis in Administration, Justice, and Policy program. The University of California at Irvine's Criminology, Law, and Society program was established in 1992. Prior to 1992, the University of California at Irvine offered a doctoral degree in Social Ecology with an emphasis in Criminology, Law, and Society, which was established in 1975. Complete data were available for all the graduates of the Social Ecology program with an emphasis in Criminology, Law, and Society program. Since prior studies have included these schools (e.g., Cohn et al. 2000; Fabianic 2002), the complete data from both Washington State University and the University of California at Irvine were included here.

4. Although department websites were examined earlier in the study, the numbers reported in the tables were downloaded on November 25, 2005.

*number of graduates per year* for each school that had conferred a doctoral degree in criminology. Using the faculty information from the search of the department websites and the survey data, we created the measures *graduates currently placed at AADPCCJ programs* and *student/faculty ratio*. For the first of these measures, we used the faculty information from all programs that were members of the AADPCCJ. For the latter of the two measures, determining the number of students who could be considered active was somewhat problematic. Although we had each program's enrollment data for the years 1998 through 2003, we had to account for students who graduated and the rate of attrition. Reisig and Dejong (2005) have revealed that doctoral students in criminal justice at Michigan State University typically take about four and a half years (8.4 semesters) to earn their degree. Other studies have found higher numbers (e.g., 7.5 years) for other disciplines in the social sciences (Ad Hoc Panel on Graduate Attrition Advisory Committee 1997). Given these findings, we chose five years as the typical time it takes a student to complete his or her degree. For our attrition rate, we chose 40%. Reisig and Dejong (2005) found that nearly 42% of the students in their sample completed their degrees, while close to 32% had dropped out. The remainder were still considered active status, but had been enrolled for more than four years. Of this final 26%, only 65% were considered to be actively working on their dissertation. Considering Reisig and Dejong's (2005) findings, we felt that our 40% was appropriate and, if anything, overly conservative. Findings from studies in other social science disciplines report attrition rates between 47% and 55% (Ad Hoc Panel on Graduate Attrition Advisory Committee 1997). After establishing standard graduation and attrition rates, we determined the number of students who were active in each program in 2003 by totaling the latter five years of enrollment data (90% of those students in the 1998 cohort would have graduated or dropped out) after we had removed 40% of the students from the 1999, 2000, 2001, and 2002 cohorts to account for attrition.<sup>5</sup> We then added the remaining 10% of the 1998 cohort to account for those students who had not graduated or dropped out. After obtaining the number of active students in 2003, we created the ratio measure using the faculty totals taken from the programs' websites. We acknowledge the limitation of combining 2003 student data and 2005 faculty data to create the ratio measure; however, the 2005 cohorts had not enrolled when we conducted our survey. Thus, given our data, this measure was the closest approximation we could provide. Measures were not created for North Dakota State University, the University of Florida, or the University of Pennsylvania because their programs were not established until after 2001. Mean substitution was used to determine 1998 enrollment for Florida State University and the University of Southern Mississippi, as neither school could provide data for 1998.

In their earlier study, Cohn et al. (2000) correctly noted that many graduates of criminology programs may not be working in academic settings, instead serv-

5. We realize that removing 40% of the students at one time does not account for students dropping out at different times in their academic career. However, we had no reason to believe this would vary by program. Thus, we do not believe our standardized measure, which was distributed evenly among the programs, unfairly disadvantaged any particular program.

ing in more practical capacities. While some schools did offer to provide current placement information on their graduates, other schools could not. As such, we examined whether each graduate was a member of ASC or ACJS in 2005. Once we determined whether a graduate was a member of either professional organization we created a proxy measure for each program called *proportion graduates active in discipline*.<sup>6</sup>

Our next measures of program quality were intended to capture the scholarly productivity of the graduates from the various criminology programs. Only those schools that had produced at least 10 graduates were included in the program-level analyses, whereas all graduates from the programs included in the study were included in the discipline-level analyses. Also, correlational analyses were conducted using the information from only those schools that had produced at least 10 graduates (see Appendix B). Following the most recent studies of graduate (e.g., Cohn et al. 2000; Rice et al. 2005) and faculty (e.g., Fabianic 2002; Sorensen and Pilgrim 2002; Steiner and Schwartz 2006) scholarly productivity, publication counts were used to create the outcome measures. In an effort to limit the analysis to more influential, and ideally higher quality, publications, articles were selected only if they appeared in one of the more prestigious criminology journals.

The journals from which articles were selected for this study included *Criminology*, *Justice Quarterly*, *Journal of Criminal Law and Criminology*, *Journal of Criminal Justice*, *Criminal Justice and Behavior*, *Journal of Quantitative Criminology*, *Journal of Research in Crime and Delinquency*, *Law and Society Review*, and *Crime and Delinquency*. The majority of these journals have been used in the recent studies of graduate (e.g., Cohn et al. 2000; Rice et al. 2005) and faculty (e.g., Fabianic 2002; Sorensen and Pilgrim 2002; Steiner and Schwartz 2006) productivity, and most of them have been regarded as the top journals in criminology and criminal justice by scholars of the subject (Poole and Regoli 1981; Regoli, Poole, and Miracle 1982; Sorensen and Pilgrim 2002). Several of the recent graduate and faculty productivity studies have included the *British Journal of Criminology*. Given our intent, we did not include this journal here. The *British Journal of Criminology*, while a high-quality journal, is dominated by foreign scholars, few of whom have been trained by criminology programs in the United States (Sorensen and Pilgrim 2002). Similar arguments could be made regarding whether to include any of the high-quality journals from other disciplines (e.g., *American Sociological Review*, *American Psychologist*). As such, it is unlikely that our findings would have changed had we included any of those journals. After selecting the nine journals, each article was examined and entered into a database once for each author's name. We also coded the number and order of authors for each article. As in other productivity studies (e.g., Fabianic 2002; Sorensen and Pilgrim 2002), only articles and research

6. Not all members of ASC or ACJS allow their name to be provided for public use. For example, in 2005 about 6% of the individual ACJS memberships were faculty who did not allow their name to be public record. Since we had no reason to expect the excluded names were not distributed randomly, we felt comfortable including the measure here.

Table 1 Characteristics of criminology doctoral programs in the United States, 2005

School name	Ph.D. degree	Year established	Areas of specialization	Coursework credit hour requirements <sup>1</sup>	Number of faculty
SUNY-Albany	Criminal Justice	1968	Nature of Crime, Law & Social Control, Planned Change, Criminal Justice Process & Policy	60 <sup>2</sup>	17
Michigan State	Criminal Justice	1968	Problems of Crime, Crime Control, Justice Administration	48 <sup>2</sup>	25
Sam Houston State	Criminal Justice	1970	Criminological Theory, Law & Judicial Process, Criminal Justice Administration	46	32
Florida State	Criminology & Criminal Justice	1971	NG	24 <sup>2</sup>	18
California-Irvine	Criminology, Law, & Society	1975	None	39 <sup>2</sup>	26
Maryland	Criminology & Criminal Justice	1975	To be determined by student and faculty	15 <sup>2</sup>	16
Rutgers	Criminal Justice	1976	To be determined by student and faculty	60 <sup>2</sup>	12
CUNY-John Jay	Criminal Justice	1980	Criminology & Deviance, Forensic Psychology, Law & Philosophy of Criminal Justice, Criminal Justice Policy & Practice, Forensic Science	60 <sup>2</sup>	49
Washington State	Criminal Justice	1982	To be determined by student and faculty	48 <sup>2</sup>	9
Indiana-Pennsylvania	Criminology	1986	To be determined by student and faculty	54	18
Delaware	Criminology	1989	Collective Behavior/Disaster Studies, Criminology, Deviance, Gender, Law, & Society, Methodology/Statistics, Race, Theory	31	23
Cincinnati	Criminal Justice	1992	Nature of Crime, Criminal Justice Systems, Corrections, Policing, Crime Prevention	90 <sup>2</sup>	20

Table 1 Continued

School name	Ph.D. degree	Year established	Areas of specialization	Coursework credit hour requirements <sup>1</sup>	Number of faculty
Nebraska-Omaha	Criminal Justice	1994	To be determined by student and faculty	73	21
Pennsylvania State	Crime, Law, & Justice	1996	To be determined by student and faculty	55	11
Missouri-St. Louis	Criminology & Criminal Justice	1996	None	48	15
Indiana	Criminal Justice	1997	Nature of Crime & Delinquency, Law & Society, Criminal Justice Systems & Processes, Cross-Cultural Studies	60 <sup>2</sup>	23
Illinois-Chicago	Criminal Justice	1997	Law & Society, Criminology, Organizations	NG	10
South Florida	Criminology	1998	To be determined by student and faculty	66 <sup>2</sup>	16
Southern Mississippi	Administration of Justice	1999	To be determined by student and faculty	84 <sup>2</sup>	12
Pennsylvania	Criminology	2001	To be determined by student and faculty	60	13
North Dakota State	Criminal Justice	2002	Criminology, Corrections, Policing	57 <sup>2</sup>	18
Florida	Criminology, Law, & Society	2003	Crime & Justice, Law & Society	66 <sup>2</sup>	16
Northeastern	Criminology & Justice Policy	2004	None	64	5
George Mason	Justice, Law, & Crime Policy	2005	Justice & Law, Justice Organizations, Administration & Leadership, Crime & Security	48	9

1. All programs require comprehensive examinations and a dissertation.

2. Program requires student to complete a methods/statistics tool class in addition to the required core or earn a passing grade on a methods/statistics proficiency exam.

NG = Information not given on the department's website.

notes were included in the analysis. Book reviews, comments, rejoinders, court case reviews and the like were excluded.

After creating the article database, we matched the graduate data to the articles.<sup>7</sup> While other studies have used the *Criminal Justice Periodical Index* (e.g., Cohn et al. 2000), we chose not to do so in order to assess how many of the total publications could be accounted for by the graduates of criminology programs. Since we were interested in the quality of the graduates that the programs have produced, only articles which were published in the year each scholar graduated or after were counted in the analysis. Of course, several students do manage to publish while still in graduate school (see Cohn et al. 2000); however, these students are few and far between. While we do not believe that including within-school publications would have changed the findings substantively, the number of publications and lead-authored publications by students who had not graduated at the time of the publication of an included article are presented in Appendix A.

After merging the two sources of data, we created a separate database which included only those publications produced by the graduates of criminology programs. We subsequently aggregated the data by graduate program and created measures of total *publications*, *first-authored publications*, *proportion who published*, and the *proportion with first-authored publication*. Similar to other studies (e.g., Fabianic 2002; Rice et al. 2005; Sorensen and Pilgrim 2002; Steiner and Schwartz 2006), we also created a measure of *weighted publications* to control for co-authorship. In creating this measure, we equally distributed each article among the number of co-authors. For example, a program received one-third of a publication for an article which had three authors. If all three authors graduated from the same program, the program received one article. The same weighting procedure has been used in other studies which have assessed scholarly productivity (e.g., Fabianic 1981, 2002; Rice et al. 2005; Sorensen 1994; Sorensen and Pilgrim 2002; Steiner and Schwartz 2006).

We also control for the opportunity to publish. At the program level, opportunity could function in two ways, namely the number of graduates who had the opportunity to publish and the period of time after completing a degree that each graduate had to publish. In order to account for both types of opportunity we created a publication rate. Each school's publications, first-authored publications, and weighted publications were standardized by the total number of years of the study (2000-2004) that each of their graduates had to publish. For example, graduates who completed their degree in 2000 or before were standardized by five years, as they had each of the years examined here to publish. Those individuals who graduated in 2003 were standardized by two years, reflecting the two years they had available to publish. This procedure yielded the average number of *publications*, *first-authored publications*, and *weighted publications* per graduate per year. A similar method was used by Cohn et al. (2000).

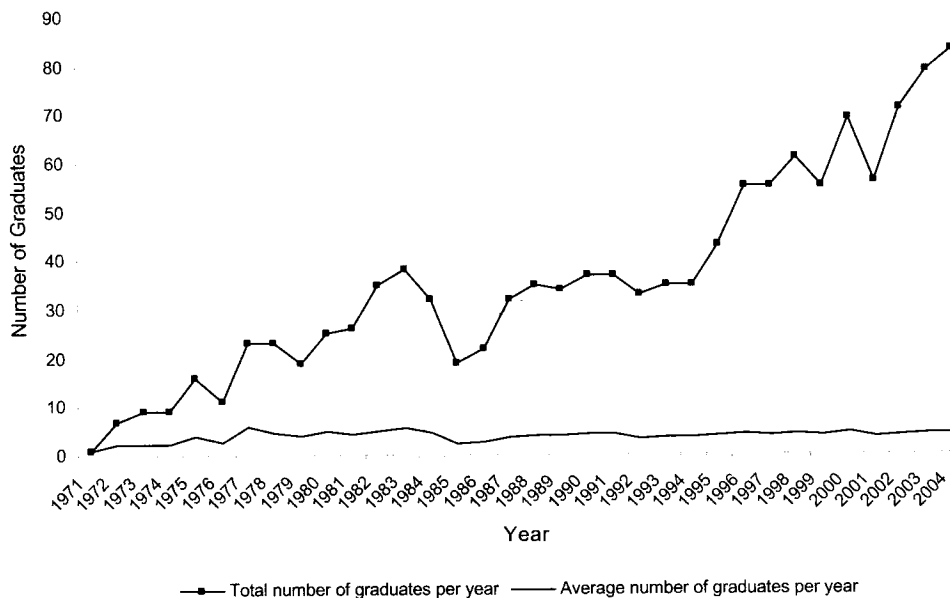
7. Although most of the schools had updated information for most of their graduates, it is possible that some graduates were not given credit for their publications because they changed their name.

## Findings and Discussion

Figure 1 displays trend lines depicting the total and average number of doctoral graduates per year from 1971, the year of the first graduate, through 2004, when 83 doctoral degrees were conferred. On average, the discipline has produced about 36 new criminologists per year. As Figure 1 and Table 1 make clear, the number of doctoral graduates has been increasing along with the number of programs that offer doctoral degrees. The relative stability of the trend line illustrating the average number of doctoral graduates per year seemingly confirms this. An inspection of Figure 1 reveals that the average number of graduates increased in the 1970s and through the early 1980s; however, the trend declined around 1984 and has remained relatively stable through 2004. Currently, the average program produces around four graduates per year. Clear (2001) observed similar levels in his earlier study.

## Program-Level Indicators of Quality

Table 2 contains the individual schools, ordered by the year they were established, and several measures of quality. Those indicators which were not discussed earlier were taken from previously published studies (e.g., U.S. News) and are noted at the bottom of the table. As Table 2 indicates, the number of graduates is primarily a function of program age ( $r = -.84$ ), with programs established before 1990 producing the bulk of the graduates. On the other hand,



**Figure 1** Total and average number of doctoral graduates from criminology programs, 1971-2004.

Table 2 Indicators of quality of criminology doctoral programs in the United States, 2005

School name	Number of graduates	Average number of graduates per year	Proportion of graduates active in discipline	Average cohort size, 1998-2003	Students/faculty	Library rank <sup>1</sup>	Graduates currently placed at AADPCCJ programs	Publications/faculty <sup>2</sup>	Peer evaluation <sup>3</sup>
SUNY-Albany	200	6.06	.52	13.33	2.50	95	42	3.06	4.7
Michigan State	105	3.09	.37	4.50	.66	39	13	1.68	3.6
Sam Houston State	198	6.00	.39	14.83	2.17	n/a	9	.52	2.5
Florida State	163	4.94	.39	6.60	1.30	51	16	.74	3.2
Maryland	96	3.56	.43	12.00	2.43	50	17	3.89	4.9
California-Irvine	60	2.61	.47	5.30	1.07	65	5	NG	4.0
Rutgers	104	4.33	.51	9.00	3.08	29	15	NG	4.0
CUNY-John Jay	76	3.80	.38	19.83	1.53	n/a	5	NG	3.2
Washington State	23	1.28	.74	3.50	1.47	97	3	NG	2.9
Indiana-Pennsylvania	53	4.08	.62	9.50	1.71	n/a	2	NG	NG
Delaware	8	.89	.25	10.67	1.75	105	1	NG	3.1
Cincinnati	50	5.56	.54	10.17	1.72	47	7	3.43	4.1
Nebraska-Omaha	27	3.38	.67	6.50	1.61	n/a	5	1.21	3.3
Pennsylvania State	24	2.67	.63	5.17	1.51	14	5	2.14	3.6
Missouri-St. Louis	12	4.00	.67	4.83	1.17	n/a	3	2.06	4.0
Illinois-Chicago	3	1.00	n/a	7.00	2.10	77	1	NG	2.8
Indiana	5	1.67	n/a	7.17	1.07	12	1	NG	2.8
South Florida	1	1.00	n/a	4.00	1.61	n/a	1	1.94	NG
Southern Mississippi	11	2.75	.18	9.80	2.88	n/a	0	NG	n/a
Pennsylvania	1	1.00	n/a	NG	NG	20	0	1.83	3.3

Table 2 Continued

School name	Number of graduates	Average number of graduates per year	Proportion of graduates active in discipline	Average cohort size, 1998-2003	Students/faculty	Library rank <sup>1</sup>	Graduates currently placed at AADPCCJ programs	Publications/faculty <sup>2</sup>	Peer evaluation <sup>3</sup>
North Dakota State	n/a	n/a	n/a	13.50	n/a	n/a	NG	NG	NG
Florida	n/a	n/a	n/a	8.00	n/a	38	NG	2.88	3.2
Northeastern	n/a	n/a	n/a	n/a	n/a	n/a	NG	.96	3.1
George Mason	n/a	n/a	n/a	n/a	n/a	n/a	NG	NG	NG

1. Reported in Association of Research Libraries Annual Report (2005).

2. Reported in Steiner and Schwartz (2006).

3. Reported in U.S. News & World Report (2005).

n/a = Not applicable; NG = not given.

the average number of graduates per year does vary considerably between programs and does not correspond highly with program age ( $r = -.34$ ). For example, the University of Missouri at St. Louis, despite being a relatively new program, produces four graduates per year, while the University of California at Irvine, an older program, confers fewer than three doctoral degrees per year.

The average cohort sizes of the programs also differ noticeably. John Jay averaged nearly 20 students per year, while Washington State University averaged fewer than four. Cohort size was highly correlated with the number of faculty ( $r = .66$ ), which helps explain why there was little variation between programs in the student-to-faculty ratios, although the standard graduation time and attrition rate used to create our measure probably had some influence as well. Perhaps most interesting was that cohort size was not too strongly correlated with the average number of graduates ( $r = .54$ ), although it maintained the strongest relationship of any of the possible explanatory measures considered here, other than number of graduates. Apparently, there is a considerable amount of attrition among the doctoral programs in criminology. Future studies might explore this further.

Library rank was not provided for enough schools for us to conduct more in-depth analyses; however, we did find it encouraging that many of the schools with doctoral programs in criminology were ranked in the top 50 in 2004 by the Association of Research Libraries. Fabianic (1998) previously observed that many doctoral programs in criminology were not located at many of *America's Best Colleges*, as ranked by U.S. News. If library quality can be considered a proxy for the research quality of an institution, then half of the schools which were assessed by the Association of Research Libraries and also examined here ( $N = 14$ ) were ranked among the top 50 schools.

The number of graduates that a program placed at AADPCCJ member doctoral programs was primarily a function of the number of graduates that a program had produced ( $r = .76$ ). Program age also had a strong effect ( $r = -.64$ ), with older programs typically placing more graduates at AADPCCJ member programs. Although the number of graduate publications was highly correlated with the number of graduates that a program placed at AADPCCJ programs ( $r = .77$ ), we expect that reciprocal effects were influencing the strength of this relationship. While publications would probably aid a graduate in attaining a job at an AADPCCJ program, a graduate placed at an AADPCCJ program would also be likely to have a lower teaching load and have more resources at his or her disposal (e.g., graduate assistants) which could aid in the ability to publish. In any event, teasing out the temporal order of the individual-level relationship was not possible with the data assessed here.

The number of graduates placed at AADPCCJ programs also had some influence on peer evaluations ( $r = .56$ ), suggesting that faculty who were surveyed may have merely ranked their former program high. However, we also found that faculty publications ( $r = .62$ ) and most of the measures of graduate publications (see Appendix B) were also highly correlated with the peer evaluations, which indicates that faculty and graduate research skills or findings from earlier

assessments of faculty and graduate productivity (e.g., Cohn et al. 2000; Fabianic 2002; Sorensen and Pilgrim 2002) may have influenced peer evaluations. Interestingly, the number of faculty and average cohort size, which could be proxies for program size, and the year the program was established were not related to the peer evaluations, suggesting that the subjective evaluations of criminology faculty were not, for the most part, influenced by factors which critics argue often guide subjective assessments in other disciplines (see Ostriker and Kuh 2004).

Only about 26% of the faculty at all the doctoral programs who were members of the AADPCCJ received their degrees from criminology programs. None of the faculty at either the University of Southern Mississippi or Rutgers University were trained in criminology, while 56% of the faculty at Michigan State University received their training in criminology. This finding indicates that doctoral-level education in criminology is still interdisciplinary. The proportion of faculty at a program who were trained in criminology had little effect on most of the measures considered here.

Of all the graduates of the programs evaluated in this study, approximately 46% of them are still active in the discipline, although, as Table 2 makes clear, there is some variation between schools. While findings regarding some of the older programs (e.g., Florida State) should be interpreted cautiously due to career attrition, if our measure is accurately capturing career outcomes of the graduates of criminology programs, some schools may be better suited for training their graduates for academic settings, whereas others may prepare their students for more practitioner oriented positions. In any event, future studies should explore the placement of program graduates further.

### Graduate Publication Productivity in Select Journals

The next analyses involved the publication productivity of the graduates of criminology programs. Between 2000 and 2004 there were 1,220 articles in the journals examined here, and the graduates of criminology programs were the lead authors on approximately 23% of them (.23 per graduate). Consistent with findings in other publication studies (e.g., Fisher et al. 1998; Rice et al. 2005; Sorensen and Pilgrim 2002), over 70% of the articles examined here were co-authored, and each article averaged over two authors. There were 2,663 authorships among all the articles, and 19% of those were accounted for by the graduates of criminology programs (.42 per graduate). The following analyses are based on only those publications accounted for by the graduates of criminology programs.

Table 3 reports the total, lead-authored, and weighted publications for the graduates of those schools that had produced at least 10 graduates through 2004. Graduates from the University of Maryland produced the most publications and weighted publications, while SUNY at Albany's graduates produced the most lead-authored articles. Table 3 also reveals that the graduates from the

**Table 3** Publication productivity of Ph.D. graduates from criminology programs, in select criminology journals, 2000-2004<sup>1</sup>

School name	Publications	Lead-authored publications	Weighted publications	Proportion who published	Proportion with lead-authored publication
Maryland	114	55	52.60	.34	.23
SUNY-Albany	95	56	48.97	.27	.18
Florida State	62	32	31.45	.15	.10
Cincinnati	61	29	21.66	.44	.32
Rutgers	35	22	15.87	.15	.13
Sam Houston State	29	15	12.83	.07	.05
Michigan State	27	10	12.15	.15	.07
Washington State	21	13	10.37	.30	.17
California-Irvine	19	14	10.79	.15	.10
Nebraska-Omaha	17	11	9.23	.30	.22
Indiana-Pennsylvania	14	7	6.62	.09	.06
Pennsylvania State	10	5	4.66	.21	.13
Missouri-St. Louis	6	5	3.00	.33	.25
CUNY-John Jay	1	1	1.00	.01	.01
Southern Mississippi	0	0	.00	.00	.00

1. Only those schools that have produced at least 10 graduates were included in these analyses.

University of Cincinnati had the highest proportion of their graduates publish and the highest proportion of their graduates to publish a lead-authored article. Consistent with Sorensen and Pilgrim's (2002) prediction, and Cohn et al.'s (2000) previous finding, faculty publications and both the number of graduate publications ( $r = .70$ ) and the proportion of a program's graduates who publish ( $r = .73$ ) were highly correlated. Whether this finding can be considered indicative of the level of mentoring that occurs at these programs should be the subject of future studies. On the other hand, we did find it interesting that not even half of the graduates from any program published in these journals during the time period examined here. As discussed above, it could be that many of the graduates of criminology programs do not pursue careers in higher education, thus making publishing less important. Indeed, our measure of the proportion of each school's graduates who were active in the discipline was highly correlated with the proportion of students who publish ( $r = .64$ ).

Table 4 contains the publication rates for the three measures of the publication productivity of the graduates from the various programs. As the table makes clear, once opportunity was controlled, some significant changes occurred in the rankings. The graduates from the University of Cincinnati averaged the most publications, and, along with the University of Maryland's graduates, the most weighted publications per year. Graduates from the University of Missouri at St. Louis averaged the most lead-authored publications. By comparing these findings with the previous results (see Table 3), we found that the

**Table 4** Publication rates of Ph.D. graduates from criminology programs, in select criminology journals, 2000-2004<sup>1</sup>

School name	Publications per year	Weighted publications per year	Lead-authored publications per year
Cincinnati	.34	.12	.16
Maryland	.26	.12	.12
Washington State	.23	.11	.14
Missouri-St. Louis	.20	.10	.17
Nebraska-Omaha	.18	.10	.12
Pennsylvania State	.14	.06	.07
SUNY-Albany	.10	.05	.06
Florida State	.08	.04	.04
Rutgers	.08	.04	.05
California-Irvine	.07	.04	.05
Michigan State	.06	.03	.02
Indiana-Pennsylvania	.06	.03	.03
Sam Houston State	.03	.01	.02
CUNY-John Jay	.00	.00	.00
Southern Mississippi	.00	.00	.00

1. Only those schools that have produced at least 10 graduates were included in these analyses.

graduates from the University of Maryland remained high across measures; however, the graduates from SUNY at Albany and Florida State University, both of whom were ranked high in the unstandardized rankings, dropped considerably across all the measures once opportunity was controlled. As was the case with the previous findings, faculty publications maintained the strongest relationship with the publication rate of the graduates of any of the measures considered ( $r = .68$ ), although the proportion of graduates active in the discipline was also highly correlated with the publication rate ( $r = .63$ ).

#### Post-1995 Graduate Publication Productivity in Select Journals

SUNY at Albany and Florida State University are two of the older programs which, as a result, have produced a substantial number of graduates (see Table 2). It may very well be that many of their early graduates published frequently in the years after they graduated and then after achieving tenure, aged out of publishing or began focusing on other matters (e.g., writing books, administration). We investigated this possibility by conducting a cohort analysis of the entire pool of graduates. The findings revealed that over 70% of the articles and roughly 67% of the authorships produced by graduates were accounted for by those scholars who had graduated in the 1995 cohort or later. This finding is interesting in itself and may be supportive of a "tenure effect" among criminology scholars. With these

**Table 5** Publication productivity of post-1995 Ph.D. graduates from criminology programs, in select criminology journals, 2000-2004<sup>1</sup>

School name	Publications	Proportion who published	Publications per year	Weighted publications per year	Lead-authored publications per year
Maryland	107	.49	.45	.21	.22
Cincinnati	61	.44	.34	.12	.16
SUNY-Albany	40	.31	.17	.10	.12
Rutgers	22	.16	.11	.05	.07
Florida State	17	.20	.07	.04	.04
Nebraska-Omaha	17	.30	.18	.10	.12
Washington State	16	.29	.26	.15	.18
Michigan State	16	.21	.10	.05	.05
California-Irvine	13	.14	.07	.04	.05
Pennsylvania State	10	.21	.14	.06	.07
Sam Houston	13	.12	.05	.02	.03
Missouri-St. Louis	6	.33	.20	.10	.17
Indiana-Pennsylvania	5	.10	.03	.01	.01
CUNY-John Jay	1	.02	.01	.01	.01
Southern Mississippi	0	.00	.00	.00	.00

1. Only those schools that have produced at least 10 graduates were included in these analyses.

findings in mind, we performed a separate analysis of the productivity of only those individuals who had graduated in 1995 or after. Table 5 contains the results of these analyses.

As the table reveals, the post-1995 graduates from the University of Maryland had the highest number of publications and the highest proportion of their post-1995 graduates publish in the journals examined here. The post-1995 graduates from the University of Maryland also had the highest rates of publications, weighted publications, and lead-authored publications per year. As expected, the publication rates of several of the older programs (e.g., SUNY at Albany) increased substantially once the pre-1995 graduates were removed from the analysis. As was the case with the productivity measures in the earlier analyses, all of the publication measures in Table 5 were highly correlated with faculty publications (see Appendix B).

When we compared our results to Cohn et al.'s (2000) earlier findings regarding publication rates in "academic journals," we found that the graduates from the University of Maryland performed well across studies. We also found that many of the newer programs, which Cohn et al. (2000) could not include in their study, such as the University of Cincinnati, Washington State University, and the University of Missouri at St. Louis have produced graduates who publish more frequently in these journals than the graduates from schools such as Michigan State University and the University of California at Irvine which were ranked highly in the Cohn et al. (2000) study.

### Disaggregating the Program-Level Findings

Similar to the findings from this study which are reported above (see Table 2), Cohn et al. (2000) revealed that at least half of the graduates from each of the criminology programs they evaluated did not publish in an "academic journal." They also observed that 22 (6%) of the graduates, which they dubbed "academic stars," accounted for 39% of all publications by criminology graduates in the "academic" journals. Cohn et al. (2000) also found that the number of academic stars each school produced, all of whom averaged .50 publications or more per year, strongly influenced each school's total publication rate. In light of Cohn et al.'s (2000) findings, we examined the influence of "academic stars" on the program-level findings reported here.

Of the 1,218 graduates from the criminology programs considered here, only 61 (5%) published three or more times (.60 publications per year) between 2000 and 2004 in the journals examined for this study. These scholars also accounted for 60% of all the authorships produced by the graduates of criminology programs. Similarly, only 61 of the program graduates (5%) were the lead author of at least two articles (.50 lead-authored articles per year). Using Cohn et al.'s (2000) term, these "star" graduates were the lead authors for about 69% of the articles published by criminology program graduates. Table 6 contains the number of star graduates that each doctoral program has produced and their combined contributions to the total publications and lead-authored publications produced by all of their school's graduates.

As Table 6 reveals, the University of Maryland produced the most star graduates, followed by SUNY at Albany and the University of Cincinnati. The University of Maryland also produced the most academic stars in Cohn et al.'s (2000) earlier study. Also consistent with Cohn et al.'s (2000) findings, the academic stars from each program were heavily responsible for their school's totals. For example, the stars from the University of Maryland accounted for 77% of the publications and 80% of the lead-authored publications produced by their graduates. When they restricted their analysis to only academic journals, Cohn et al. (2000) found that the University of Maryland also produced the highest percentage of academic stars. In this study, the University of Cincinnati produced the most star graduates proportionately, although when only lead-authored articles were considered the University of Missouri at St. Louis graduated the most high-rate publishers.

As noted above, the findings from this cross-section of articles in select criminology journals suggested a "tenure effect" among criminology scholars. In order to adjust for this here, we conducted a separate analysis of the productivity of the academic stars who graduated in or after the 1995 cohort. Table 7 contains the results of these analyses. As was the case in the previous analysis, the University of Maryland, along with the University of Cincinnati and SUNY at Albany, produced the most academic stars. In these analyses, however, we found that the University of Maryland and the University of Cincinnati produced twice as many academic stars as most of the other schools. Also consistent with the findings from our earlier analyses, the total publications and lead-authored

Table 6 Publication productivity of "star" graduates from criminology programs, in select criminology journals, 2000-2004<sup>1</sup>

School name	Graduates with $\geq 3$ publications	Proportion of school's graduates	Proportion of school's publications accounted for	Graduates with $\geq 2$ lead-authored publications	Proportion of school's graduates	Proportion of school's lead-authored publications accounted for
Maryland	11	.11	.77	11	.11	.80
SUNY-Albany	10	.05	.41	10	.05	.54
Cincinnati	10	.20	.75	8	.16	.72
Florida State	8	.05	.63	8	.05	.72
Rutgers	4	.04	.57	5	.05	.59
Sam Houston	4	.02	.59	3	.02	.60
Washington State	3	.13	.76	3	.13	.92
California-Irvine	3	.05	.63	3	.05	.79
Michigan State	3	.03	.37	3	.03	.60
Nebraska-Omaha	2	.07	.47	3	.11	.73
Pennsylvania State	2	.08	.70	1	.04	.60
Indiana-Pennsylvania	1	.02	.64	1	.02	.71
Missouri-St. Louis	0	.00	.00	2	.17	.80
CUNY-John Jay	0	.00	.00	0	.00	.00
Southern Mississippi	0	.00	.00	0	.00	.00

1. Only those schools that have produced at least 10 graduates were included in these analyses.

Table 7 Publication productivity of post-1995 "star" graduates from criminology programs, in select criminology journals, 2000-2004<sup>1</sup>

School name	Graduates ≥3 publications	Proportion of school's graduates	Proportion of school's publications accounted for	Graduates ≥2 lead-authored publications	Proportion of school's graduates	Proportion of school's lead-authored publications accounted for
Maryland	10	.19	.79	11	.21	.86
Cincinnati	10	.20	.75	8	.16	.72
SUNY-Albany	4	.06	.48	5	.08	.61
Rutgers	3	.05	.68	3	.05	.64
Nebraska-Omaha	2	.07	.47	3	.11	.73
Washington State	2	.12	.75	2	.12	.91
California-Irvine	2	.05	.69	2	.05	.80
Pennsylvania State	2	.08	.70	1	.04	.60
Sam Houston	2	.03	.54	1	.02	.38
Michigan State	1	.02	.13	3	.06	.75
Florida State	1	.02	.18	2	.04	.50
Missouri-St. Louis	0	.00	.00	2	.17	.80
Indiana-Pennsylvania	0	.00	.00	0	.00	.00
CUNY-John Jay	0	.00	.00	0	.00	.00
Southern Mississippi	0	.00	.00	0	.00	.00

1. Only those schools that have produced at least 10 graduates were included in these analyses.

publications of each school's graduates were strongly influenced by their academic stars. Using the University of Maryland as an example again, their academic stars accounted for 79% of the total publications and 86% of the lead-authored publications produced by all their post-1995 graduates. While the University of Cincinnati and the University of Missouri at St. Louis produced the most star graduates proportionately, depending on whether publications or lead-authored publications were considered, many of the other schools' proportion of academic stars produced increased once pre-1995 graduates were excluded (e.g., the University of Maryland). Whether newer programs like the University of Cincinnati and the University of Missouri at St. Louis can continue to produce productive students over time, like the University of Maryland, is a question that will have to be answered by future studies.

### Conclusions

The assessment of criminology and its doctoral programs is important because it allows us an opportunity to take stock of where the discipline is today and evaluate the programs that are responsible for training the scholars who will shape the discipline tomorrow. The findings from this study revealed that a doctorate in criminology is still very much an interdisciplinary degree. Doctoral graduates from all the programs which were assessed here are instructed by scholars who were themselves trained in a variety of different disciplines. This study also revealed that the number of doctoral students entering the market is growing rapidly every year. Has this growth come at the expense of quality? From the findings of this study, we cannot be sure. If publishing in the prestigious journals is the only measure of quality, then perhaps quality has suffered. The graduates of criminology prestigious journals not even account for a fourth of the publications in their own prestigious journals. However, publishing is not, of course, the only measure of quality (Travis 1987). It may very well be that many of these graduates are providing sound instruction in method and theory to the individuals charged with the day-to-day administration of justice. Some of these graduates may be conducting agency research that helps shape policy and improves the services brokered by a component of the criminal justice system. Additionally, a number of these graduates could be heading agencies that are information driven and are therefore implementing best practices. The point here is simply that an interdisciplinary education will probably ensure interdisciplinary outcomes such as research, teaching, or practical application.

At the program level, the findings here, when considered with those from earlier studies (e.g., Cohn et al. 2000), suggest that the University of Maryland is training those scholars who have the ability to publish in the more influential criminology journals. Other promising programs are the University of Cincinnati, SUNY at Albany, and the University of Missouri at St. Louis. Newer programs interested in producing graduates who can publish frequently may want to consider adopting characteristics of some of these programs.

On the other hand, it should be noted that although we have restricted the productivity analyses in this study to only the more influential, and ideally higher quality, journals, there are no guarantees that the graduates of programs who generate the most publications produce the most important publications. For example, several graduates of criminology programs have produced important scholarly work that has been published as a book (e.g., Sampson and Laub 1993).

Many scholars have charged that criminology lacks an intellectual or theoretical core (e.g., Marenin and Worrall 1998; Owen 2005; Savelsberg and Sampson 2002), while some have argued that there is a rich history in criminological theory (e.g., Bernard and Engel 2001). We do not weigh in on this debate here but merely point out that very few theories applied to the study of crime or the responses thereto were offered by scholars trained in criminology (for exceptions see, for example, Duffee 1990; Gottfredson and Hirschi, 1990). While the findings from this study only allow for speculation as to why this has occurred, we do point out that all the programs we reviewed offer courses in criminological or criminal justice theory, but very few offer course in theory construction. Thus, it may very well be that the new criminologists are being adequately trained in method and analysis, but not necessarily in the development of new ideas [Feeley and Simon (1992) make a similar argument with regard to "actuarial" criminology].

In any event, perhaps the most important contribution of the current study was its attempt to move towards a more comprehensive evaluation of the doctoral programs in the discipline. Additional evaluations of this sort which move beyond the current study are sorely needed. Other measures which could be examined in future assessments might be the amount of funded research a program and its graduates attain, placement rates at both academic and agency positions, subjective evaluations of programs by their graduates, or graduation and attrition rates. While we did not combine measures in a weighted format and provide overall performance scores here, future studies, upon attaining additional measures, may want to do as such. Only after we can comprehensively evaluate ourselves can we expect to improve criminology by determining the sources of both the problems and solutions.

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## Appendix A

**Table A1** Publication productivity of students from criminology doctoral programs in select criminology journals, 2000-2004<sup>1</sup>

School name	Publications	Lead-authored publications
Cincinnati	16	7
Nebraska-Omaha	11	7
Pennsylvania State	11	2
Michigan State	9	3
SUNY-Albany	7	1
Sam Houston State	6	2
Maryland	5	3
Missouri-St. Louis	5	2
Florida State	4	1
Rutgers	2	0
CUNY-John Jay	1	0
California-Irvine	1	1
Indiana-Pennsylvania	0	0
Southern Mississippi	0	0
Washington State	0	0

1. Only those schools that have produced at least 10 graduates were included in these analyses.

## Appendix B

Table B1 Correlation matrix of select measures<sup>1</sup>

	Year established	Number of graduates	Number of faculty	Proportion faculty trained in criminology	Average number of graduates per year	Proportion of graduates active in discipline	Average cohort size 1998-2003
Year established	-						
Number of graduates	-.84	-					
Number of faculty	-.32	.28	-				
Proportion of faculty trained in criminology	-.28	.10	-.03	-			
Average number of graduates per year	-.34	.72	.25	-.02	-		
Proportion of graduates active in discipline	.28	-.34	-.37	.33	-.18	-	
Average cohort size 1998-2003	-.24	.45	.66	-.28	.54	-.42	-
Student/faculty	.03	.22	-.27	-.55	.30	-.26	.46
Graduates placed at AADPCCJ programs	-.64	.76	-.07	.12	.55	-.09	.26
Publications/faculty	.01	.13	-.21	.22	.34	.18	.03
Peer evaluation	-.36	.27	.04	.01	.19	.25	-.04
Publications	-.51	.57	-.19	.27	.47	-.03	.21
Proportion published	.18	-.18	-.43	.34	.07	.64	-.35
Publication rate	.29	-.31	-.41	.32	-.03	.61	-.30
Publications, 1995	-.23	.21	-.18	.20	.23	.05	.17
Proportion published, 1995	.01	-.01	-.38	.39	.14	.51	-.24
Publication rate, 1995	.06	-.12	-.38	.28	-.02	.45	-.15

1. Only those schools that have produced at least 10 graduates were included in these analyses.

Table B1 Correlation matrix of select measures (continued)

Student/ faculty	Graduates placed at AADPCCJ programs	Publications/ faculty	Peer evaluation	Publications	Proportion published	Publication rate	Publications, 1995	Proportion published, 1995
.31	-							
.02	.48							
-.14	.53	.62						
.31	.77	.70	.56					
-.14	.20	.73	.62	.49				
-.10	.00	.68	.49	.43	.96			
.28	.43	.77	.55	.87	.62	.65		
-.07	.32	.83	.67	.67	.96	.92	.79	
.06	.20	.77	.59	.64	.89	.92	.85	.95

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