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Problem officers? Analyzing problem behavior patterns from a large cohort

Christopher J. Harris*

Department of Criminal Justice and Criminology, University of Massachusetts, Lowell Campus, 218 Mahoney Hall, 870 Broadway Street, Lowell, MA 01854, United States

A B S T R A C T

This study explored varying patterns of police problem behaviors as officers gain experience. The policing literature offered little guidance for exploring problem behaviors over the course of officers' careers; therefore, the criminal career paradigm was employed as a means for framing and analyzing this phenomenon. Using a retrospective, longitudinal data set gathered from a large police department in the northeastern United States, patterns of citizen complaints for a large cohort of officers were examined using a semiparametric, group-based approach. Results indicated that multiple trajectories underlie the aggregate relationship between experience and misconduct, and varying demographic characteristics impact the likelihood that officers will belong to each trajectory. Descriptions of each trajectory and their profiles are presented, and theoretical and practical implications for policing are discussed.

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Introduction

There is an interesting parallel between research on criminal careers and research on police misconduct: both bodies of work had noted a group of "chronic offenders" exists—a small number of people who account for a disproportionate amount of deviance. Criminologists call their group "career criminals," while police scholars have labeled their group "problem officers." One key difference between these bodies of work is that criminologists have more generally broadened their focus from career criminals to the features of criminal behavior over time. Such a shift has enabled criminologists to more carefully explore patterns of criminal behavior as offenders age, thereby enhancing criminological theory and providing knowledge for informed policy (for a review see [Piquero, Farrington, & Blumstein, 2003](#)).

Unlike investigating criminal careers, problem officer research remains in its infancy, and as such, has squarely focused on problem officers without considering the broader patterns of police problem behaviors. While focusing on the most problematic officers makes intuitive sense, research has relied on a problem officer/non-problem officer dichotomy that examines only a brief portion of officers' careers, comparing the rates of problem behaviors among officers with varying levels of experience. Presumably, if problem officers differ in substantive ways from non-problem officers on key identifying features, such information could be employed to more effectively identify problem officers prospectively. Identifying problem officers prospectively is likely to be difficult, though, without knowledge of "normal" development—particularly regarding the relationship between these behaviors and officer experience—so

that one might pinpoint patterns. Such patterns might represent deviations from the modal officer involvement in problem behaviors, beyond assuming such involvement to be nonexistent or altogether homogeneous. Some have suggested that there might be multiple problem officer types, each emerging from varying antecedents and requiring different methods of intervention ([Scrivner, 1994](#)), but none have been investigated empirically.

To remedy this lack of a broader empirical investigation of problem behaviors, a paradigm is needed similar to that of the criminal career as a means of exploring problem behaviors across police careers; data on problem behaviors of a sufficient enough duration so that within-officer change over time can be observed; and a means for revealing groups of officers who display similar problem behavior patterns. Doing so could enhance police scholarship by providing information about problem behavior patterns beyond focusing on the most problematic officers, and could assist police administrators target limited resources to more effectively combat these behaviors.

This study presented a first step in exploring different longitudinal patterns of problem behaviors at the individual level. Using longitudinal data on citizen complaints from a large cohort of officers and guidance from the criminal career paradigm, this research was designed to address whether important differences existed in the career paths of problem behaviors for officers.

Background and conceptual framework

Little research exists on the relationship between police officer experience and problem behaviors. What has been done suggested that officers get involved in problem behaviors early in their careers, but then decline in involvement with increasing experience. Some of the first observations of police work noted that younger officers are often "gung ho," seeking to prove themselves to the more veteran

* Tel.: +1 978 934 4105; fax: +1 978 934 3077.
E-mail address: christopher_harris@uml.edu.

officers by displaying command over citizens in encounters and demonstrating no hesitation in applying their coercive authority (Hunt, 1985; Van Maanen, 1974). Other research had noted that younger, less experienced officers are “hungry” and will do more to detect crime and criminals (Crank, 1993; Friedrich, 1977; Worden 1989).

While being “gung ho” and “hungry” are likely to earn a rookie a solid reputation among his or her peers, such behaviors are also likely to generate friction between these officers and the citizens they police. Research has demonstrated that citizens tend to complain about police behaviors such as using unnecessary force, being rude or disrespectful, and dissatisfactory performance of duties (Lersch, 2002). Such acts, while certainly less serious than other forms of career-ending misconduct, are important in that they damage the perceived legitimacy of police as a public institution, and may, in fact, impair the ability of the police to accomplish their tasks effectively in the long run (Bayley, 2002).

While youth and inexperience have long contributed to problematic police behaviors, it has also been suspected that eventually inexperienced officers adopt the “lay low and don’t make waves” approach of their more veteran colleagues, while also improving the core aspects of police work (Bayley & Bittner, 1984; Van Maanen, 1974). Meredith (1984) noted that the three to four years following rookies’ closely supervised probationary period is the “adolescent phase,” where officers are most likely to be a danger to themselves and others. If they get past this phase, they become good officers. Such work has suggested that problem behavior patterns over time could be more or less stable across the police population, with officers getting into trouble early, but then curtailing their problem behaviors with age and experience.

Other research offered a different view—that some officers were much more involved in problem behaviors than others at more sustained rates over time. Such groups have been labeled *problem officers*, a group first noted by Goldstein (1977), but whose existence gained prominence among police administrators following the Christopher Commission’s 1991 investigation of the Los Angeles Police Department after the beating of Rodney King. The Commission noted that less than .5 percent of the Los Angeles Police Department (LAPD) officers accounted for 15 percent of citizen complaints of excessive force or improper tactics. They also noted that this disproportion could not be explained by assignment or arrest rates, implying these problem officers had a proclivity towards deviance (Independent Commission on the Los Angeles Police Department, 1991).

Such officers are significant in that their existence implies a group who might engage in a large number of problem behaviors over the course of their careers and not just in their “adolescent phase.” If such officers could be identified early and subjected to intervention, police departments could, as the thinking goes, have a significant impact on the overall level of problem behaviors. New police innovations such as early intervention (EI) systems are designed to accomplish just this (Walker, 2005).

Still, theory and research on problem officers is in its early stages. Few attempts have been made to identify problem officers, and more importantly, there has been little theoretical advance in providing a framework for considering problem behaviors more generally (for an exception, see Toch, 1996). Two studies, one by Lersch and Mieczkowski (1996) and another by Brandl, Stroschine, and Frank (2001), attempted to locate a problem officer group using citizen complaint data from two different police agencies. Specifically, Lersch and Mieczkowski (1996) used all citizen complaint data for a three-year period from a large police department in the southeastern U.S. They defined problem officers as those who received five or more complaints in the three-year study period, and compared these officers to the other (non-problem) officers who did not meet this criterion. Similarly, Brandl et al. (2001) identified problem officers from citizen complaint data regarding excessive force for a single year

in a large midwestern police department. The authors compared all officers who received three or more complaints in 1993 with a sample of those who had two or fewer complaints. Both studies found that the younger, more inexperienced officers were significantly more likely to be problem officers than their older, more experienced colleagues.

While significant, the above research was only able to examine a few years’ worth of data and compared officers at differing career points. As such, an important question arises—do young, inexperienced officers who appear to disproportionately engage in problem behaviors early in their careers continue to do so later? Put differently, what is the degree of continuity of problem behaviors across officer experience? Some prior research has implied an orderly relationship between problem behaviors and experience for most officers; therefore, any cross-sectional research is likely to detect officers whose problem behaviors are generally at their peak. Researchers have not been able to examine within-officer change over a significant portion of officer careers. One might therefore select a group of relatively inexperienced officers with very different careers ahead of them as problem officers. Some might be highly problematic at the start of their careers, but then decline from involvement in these behaviors with a bit more experience. Others might be more steadily problematic across their careers, to varying degrees, barring intervention or termination. These differences particularly refer to heterogeneity in officers’ underlying propensity to engage in problem behaviors, suggesting that different groups of officers exist that are problematic, and that their behavior patterns appear differently over time due to varying antecedents. Thus, the distinction between problem and non-problem officers is inherently limiting, as one might conceive of officers with varying levels of involvement in problem behaviors over time (Toch, 1996).

It is difficult to discuss this notion, however, as there has been little consideration of exactly *how* to examine differing patterns of problem behaviors more generally. The main problem stems from a lack of consensus on what constitutes a problem officer. Each piece of research has defined the problem group differently, based on varying criteria over different units of time. Is a problem officer one who receives three citizen complaints in a single year or across five years? This difficulty in operationalizing the problem officer stems from the lack of a framework in which to consider problem behaviors over time.

To some extent, criminologists have provided solutions to the difficulties noted above in their research on crime and antisocial behavior. Criminologists have identified the existence of *career criminals*—a small group of offenders who commit a disproportionate amount of crime. Unlike police researchers, criminologists went further and began to think about the careers of all types of criminals more generally and devised a way to organize and examine key elements of antisocial behaviors over time. Moreover, they developed techniques for uncovering varying patterns of antisocial or criminal behavior over time as a means of: (1) more accurately pinpointing the warning signs that indicate deviation from normal development, (2) providing knowledge about when to specifically target interventions, and (3) providing information regarding the continuity of criminal behavior over the life-course.

The prominence of characterizing criminal behavior in terms of a career framework largely began with the publications of Blumstein, Cohen, Roth, and Visher (1986). The criminal career itself is comprised of five elements: (1) *onset*, the beginning of one’s criminal career; (2) *frequency*, the number of offenses that occur while an offender is active; (3) *duration*, the length of a criminal’s career; and (4) *desistence*, the decline in offending that eventually leads to career termination. This model also implies that individuals come from two groups, criminals and noncriminals, which provide the final element of the criminal career: (5) *participation*, which is the percent of the population that is actively engaged or who has ever engaged in crime during some period.

The distinctions between these career elements are important when considering research results. Cross-sectional research will be able to examine participation and to some extent frequency, but will contribute little to explaining onset or desistance. Cross-sectional research on problem officers has examined participation and frequency of problem behaviors in a very limited capacity, but not onset, duration, or desistance. This is due to the uncertainty about the timing of any given complaint filed against officers (first, second, last, etc.) without career data. As such, the operationalization of the problem officer has been defined by only two of the five career elements previously described.

To explore the behavior patterns of problem officers, researchers should consider police involvement in problem behaviors from a perspective similar to that of the criminal career paradigm. Organizing problem behaviors from a career framework has several advantages compared to viewing such behaviors from a short-term, cross-sectional perspective. By way of analogy, criminologists have noted that age and crime are related in an orderly way in the aggregate, with mean offending rates slowly rising during childhood and into adolescence, peaking at age eighteen, and steadily declining thereafter (Farrington, 1986). This *age-crime curve* has been one of the most stable relationships in criminology.

Experience as a police officer and problem behaviors are also related in an orderly way in the aggregate. Harris (2009), using the same longitudinal data employed here, found a sharp rise and peak in the average number of citizen complaints during the first three years of experience, with a steady decline thereafter. The career features of what he termed the *experience-problem behavior curve* were also explored: the percentage of officers participating in problem behaviors was quite large (80 percent), but most officers accumulated only one or two citizen complaints over their career. The average time of onset was during the latter part of the third year of experience, but officers who received numerous complaints had a significantly earlier onset. Frequency tended to be low, averaging less than one-half of one complaint per year, and most officers desisted by their tenth year of experience.

Also by way of analogy, criminologists have considered if different behavior patterns underlie the aggregate age-crime curve. Research on cohorts of offenders has found that at the individual level, not all follow the general pattern of the aggregate curve. Instead, different patterns of development called *trajectories* have appeared, demonstrating that varying groups differ not only in terms of the frequency with which they commit crimes, but that this frequency fluctuates over age. Analyses using the semiparametric, group-based approach developed by Nagin (2005) and different longitudinal data had found evidence of multiple trajectories underlying the age-crime curve, although their number, patterns, and membership characteristics varied depending on the study under consideration (Bushway, Thornberry, & Krohn, 2003; D'Unger, Land, McCall, & Nagin, 1998; Nagin, Farrington, & Moffitt, 1995; Nagin & Land, 1993; Piquero, Farrington, & Blumstein, 2007; Sampson & Laub, 2003).

Along similar lines, police scholars could clarify and further distinguish among different types of problem behavior trajectories across police careers. This has the advantage of not limiting research to considering only problem and non-problem officers, and more fully specifying the characteristics of problematic officer careers. For example, because problem officers are assumed to be the most deviant, they would have an earlier onset, higher frequency, a later desistance point—and hence a longer career—than less problematic or non-problem officers. Harris (2009) reported considerable variation around the career features of officers' involvement in problem behaviors; therefore, it is at least plausible that different trajectories could underlie the experience-problem behavior curve. Conversely, if, as some work has suggested, a majority of officers engage in problem behaviors early in their careers, but then desist in such behaviors while gaining experience, then only one trajectory—

matching the aggregate experience problem-behavior curve—would exist.

As such, the primary purpose of this research was to discover if multiple trajectories underlie the aggregate relationship between experience and problem behaviors. In this sense, this research was largely exploratory. One could expect three trajectories based on extant research: (1) a problem officer trajectory, whose pattern would indicate earlier onset, higher frequency, and longer duration in problem behaviors when compared to other groups; (2) a pattern mirroring the aggregate experience-problem behavior curve, which would comprise the modal officer experience in terms of onset, frequency, duration, and desistance; and (3) an “abstainer” group that never engages in problem behaviors, or does so at extremely low levels, thus exhibiting a later onset, a much lower frequency and duration, and an earlier desistance point than the other two groups. Other trajectories may exist as well and could vary by agency or the length of time over which data were collected (Eggleston, Laub, & Sampson, 2004).

Of course, if more than a single trajectory is uncovered, two questions remain. First, are there important differences in the demographic characteristics that comprise the groups? In addition to youth and inexperience, research on problem officers has noted that males and Black officers were at an increased risk of being labeled problems (Lersch & Mieczkowski, 1996). Other research has demonstrated that more educated officers demonstrated better performance, and were thus less likely to receive citizen complaints (Cohen & Chaiken, 1973). Conversely, prior military experience could increase the likelihood of problem behaviors, as military personnel might readily adapt to the quasi-military organization of policing, but have difficulty serving a civilian population.

Second, are there alternative explanations for the differences between these groups beyond a proclivity for deviance? Two important factors that may account for these differences—productivity and officer assignment—must be mentioned and relate to difficulties in measuring problem behaviors with citizen complaints. Lersch (2002) cautioned that officers who received many citizen complaints might not be problem officers at all, but instead merely productive ones. In her one-year study of citizen complaints from a large police department in the Southeast, Lersch (2002) found that measures of productivity were weakly-to-moderately correlated with citizen complaints. Assignment may also play a role and is linked with productivity. For example, officers in investigative or supervisory positions have less contact with citizens, and are therefore less likely to receive complaints than patrol officers, irrespective of their proclivity for deviance. Assignments also differ in terms of the amount of contact officers have with citizens and citizens' prior relationships with the department. Thus, some assignments, either because of the work load or the residents, place officers at an increased risk of citizen complaints.

This study's secondary purpose was to explore who comprises various trajectory groups and determine if significant differences existed. It also addressed alternative explanations as to why officers belong to different groups beyond proclivity for deviance, but this was limited by the available data, which is described below.

Data and methods

Data

The data used for this research were collected as part of an EI system project for a large police department in the northeastern United States.¹ Generally, these data were drawn from computerized records from different offices within agency headquarters, and contained several indicators of police behavior for all sworn officers ($n = 7,110$) who were employed by this agency from January 1, 1987 through June 30, 2001.

The late 1980s cohort

To maximize the advantages of the sample timeframe, officers who entered the police agency during the study period based on years of experience were selected and placed into a cohort. This cohort, which was termed the late 1980s cohort, consisted of officers who entered the agency between January 1, 1987 and December 31, 1990. These officers, by the end of the sample period, had the potential to serve 11.5 to 14.5 years. This represented a significant portion of their career term given that officers can retire with a full pension after twenty years of service.

Forming this cohort was based largely on a need to examine officers from the start of their careers for as long a time as possible, with a sufficient number of cases for analysis. All officers in the time period for which data were gathered were serving different portions of their career; therefore, one would be concerned that officers entering in different time periods would differ significantly from one another. As such, only officers who began their service during the timeframe were selected so they could be followed from the start of their careers until the data collection ceased. This left only the officers who entered between 1987 and 2001. The agency under study hired no officers in 1995, leaving an even number of preceding years upon which to divide in half based on the new decade of 1990. There were no detectable cohort effects (significant changes in training, hiring, or administrative practices) upon which to separate officers who entered between 1987 and 1990, and there was a sufficiently large number of officers (n = 1,427) who entered during these years. It seemed reasonable, therefore, to use this group. One could argue that each academy class was different, and should be analyzed separately. Doing so left many smaller groups with insufficient numbers for analysis. Besides, the few research studies on police socialization had suggested that what happens to officers when they first enter patrol has more profound effects on behavior, including problem behaviors, than academy training (Niederhoffer, 1967; Van Maanen, 1974).

Forming officers into a single cohort accomplishes little if most officers do not serve for the majority of the study period. Since the data included when an officer left the department, it was possible to explore attrition within this cohort. Approximately 70 percent of the cohort (n = 1,002) served until the end of the study period. Of those who left, 68 percent (n = 289) left before the end of their first year, and the vast majority of these officers never made it out of the academy. These officers differed significantly from the rest of the cohort in terms of their demographic characteristics and were thus excluded from analyses. This left only a small fraction of officers (n = 136) who did not serve for the entire period, but who managed to serve the department for more than one year. The officers appeared randomly distributed across the intervening years, with no more than eighteen officers leaving in a single year. The officers were not significantly different in terms of their demographic characteristics from the rest of the cohort, and were thus included in the analyses. This left a total of 1,138 officers in the cohort.²

In addition, a small number of officers in this cohort were involuntarily separated from the agency during the study period. While Internal Affairs staff assured the research team that no officers were terminated for accruing too many personnel complaints, twenty-six officers in this cohort were dismissed. The specific reasons for their dismissals were not provided to the research team, although Internal Affairs staff indicated many were dismissed because the officer committed a crime (e.g., domestic assault) or for drug use. These officers were included in the analyses, since the results did not change when they were excluded.

Table 1 lists the number of officers in this cohort by year of entry into the police academy. About one-third of the officers entered in 1987, another quarter in 1988, and the remaining two-fifths were evenly divided between officers entering in 1989 and 1990.

Table 1
Cohort population by year of entry

Year of entry	Number of officers
1987	373
1988	305
1989	230
1990	230
	N = 1,138

The demographic makeup of this cohort is described in Table 2, showing no significant differences based on year of entry. As one can observe, the vast majority of the officers were male, with less than one-tenth of the officers female. Nearly three-quarters of the officers were White. Most officers in this cohort did not earn a college degree either prior to or during the observation period, nor did the majority have prior military experience.

Dependent variable

The dependent variable representing problem behavior in this study was citizen complaints. The data base that included this information was maintained by the agency's Internal Affairs Bureau and contained fields for the date of the incident, the source of the complaint (citizen or police), the nature of the allegations, and the complaint's disposition.

The indicator of problem behaviors was limited to citizen complaints for several reasons, even though data were available on all personnel complaints. First, citizen complaints included a variety of behaviors that one would consider problematic: misapplication of force, harassment, threatening behavior, discourtesy toward citizens, failure to perform police duties, and reckless driving. Second, some research had demonstrated a positive association between officers' citizen complaint rates and their levels of problem behaviors, suggesting that citizen complaints have some degree of validity (McCluskey & Terrill, 2005). Third, complaints filed internally by other officers may exhibit different trajectory patterns than those filed by citizens across officer experience; therefore, combining them might mask variation across these indicators.

Although all researchers investigating problem officers had used citizen complaints as the dependent variable, one must still be

Table 2
Cohort demographic and background characteristics of the late 1980s cohort

Characteristic	Percentage
<i>Gender</i>	
Male (%)	90.3
Female (%)	9.7
Total	100.0
<i>Race</i>	
White (%)	73.2
Black (%)	16.0
Hispanic (%)	10.3
Other (%)	0.5
Total	100.0
<i>Background characteristics</i>	
Military service (%)	8.2
No military service (%)	91.8
Total	100.0
Degree (%)	48.3
No degree (%)	51.7
Total	100.0
<i>Mean age of entry</i>	24.5
	N = 1,138

concerned with the ease of the complaint process, because some of the variation in this indicator is a function of how readily citizens can file complaints. In the agency under study, there was, at least officially, no authorized discretion in taking citizen complaints. Any citizen complaint made was to be recorded and forwarded to the appropriate personnel for investigation.³ This agency received citizen complaints by phone and in person at its various stations, which gave the personnel in these stations some control over complaints at intake. At the same time, this agency also took complaints anonymously and did not require the citizen to sign a complaint document.⁴ As long as the citizen provided enough information about the incident so that an officer (or officers) could be properly identified, an investigation into the allegation would occur.

In analyzing citizen complaints, all such complaints filed against officers were used. An alternative strategy would be to use only citizen complaints where the facts substantiate the specific allegation(s) of problem behavior. Such a strategy, however, is limiting. Previous research had demonstrated that in the majority of cases, the only person witnessing an alleged behavior is the complainant (Walker, 2005). Such cases become “swearing contests” in which the officer and citizen allege their version of events to be true, with the resulting disposition unsubstantiated. In other words, there is no way to prove or disprove the allegation. Moreover, since most cases are unsubstantiated, limiting analyses to only substantiated complaints would leave one with even more severe misconduct, as cases that were substantiated presumably would be the most serious.

In addition, all citizen complaints, regardless of complaint type, were examined here. The data provided information on complaint type, of which there were more than fifty. These types were devised and categorized by a single person responsible for maintaining the data. As such, the data did not contain definitions or criteria by which the types were determined. The agency at the time of the study was working to develop specific complaint types and procedures to categorize them, and as such it was suspected that the present categories lacked validity. About half of all citizen complaints in the cohort were accounted for by five categories: (1) improper police action (14.5 percent); (2) unprofessional conduct (10.8 percent); (3) excessive force (9.2 percent); (4) negligence of duty (8.9 percent); and (5) service (8.9 percent). As one can see, these were broad and not well defined. None of the remaining categories accounted for more than four percent of the citizen complaints filed and most accounted for 1 percent or less.⁵ Also, this agency recorded who investigated the complaint (a sergeant, a higher-ranking supervisor, or an Internal Affairs investigator), but most of these data (85 percent) were missing from the computerized records.

Independent variables

The independent variable in this research was the years of experience for the officer. Years of experience were calculated based on an officer's date of entry, and each citizen complaint was placed into a year of experience based on the date in which it was filed.⁶ Thus, for each officer, the officer-complaint file tallied the total number of citizen complaints for each year of experience until the observation period ended or the officer left the agency.⁷

The other independent variables, thought to impact the risk for problem behavior based on previous research, comprised the demographic characteristics of officers such as race, coded as White, Black, Hispanic; sex, coded as male or female; and background characteristics regarding prior military experience (yes/no) and attainment of a college degree (yes/no). This information was retrieved for each officer from the personnel data system at the agency headquarters.

Correlates of problem behavior

There were two correlates⁸ to consider: penal law arrests and assignment. The agency's Information Services Department main-

tained the data on penal law arrests. The arrest data base contained information on the arresting officer (e.g., name, shield number), the date of arrest, and the charges filed. Penal law arrests were relevant in this case, because one might suspect that officers who were more active in police work would be at an increased risk of citizen complaints, regardless of their actual propensity for deviance. Unfortunately, while data for penal law arrests were available for the entire study period, they were obtained for only a portion ($n=278$) of officers from the cohort.⁹

The personnel unit provided data on the officers' assignment. Examining officers' assignment, particularly career periods when officers were patrolling against times when officers were promoted to either investigative or supervisory functions was important in that one can reasonably assume that officers above the rank of patrol are less at-risk for personnel complaints. The data for the EI system project contained dates when an officer was first promoted and supported this contention: nearly four-fifths of all personnel complaints are filed against patrol officers. Limiting the analyses to patrol officers, however, would presumably truncate the careers of officers least likely to generate complaints, because skilled officers are presumably those promoted the fastest and might therefore bias the analyses. As such, analyses reported herein differentiated among all officers regardless of rank and considered only times when officers were assigned to patrol.

The other consideration of officer assignment was the actual location where officers worked. One might suspect that certain assignments carry with them higher work loads, and hence would impact the frequency with which officers have contact with citizens. All else being equal, officers who have busier assignments will have more contact with the public, and therefore would be at a greater risk for citizen complaints. Moreover, some assignments might contain more complaint-prone citizens, which relate to the nature and history of police-citizen relationships in varying locations.

The agency under study did not track officers' assignments across their career; therefore, data were only available on officers' current assignment. Assignment was recorded in the complaint data, but this did not provide a clear picture of officers' assignment histories, except possibly for those officers with a large number of complaints. The agency under study did rotate officer shifts regardless of seniority, and as such experience did not allow officers to work only days or nights. Actual assignments, however, were based on a bidding system, of which seniority was a considering factor; therefore, one might suspect that the younger officers were assigned to the most active areas. This agency, as mentioned above, was very large and thus had a correspondingly large number of assignments. This limited the generalizability of the findings to other agencies, but also minimized the likelihood that only a few assignments were disproportionately responsible for the number of complaints officers received due to work load or other factors unrelated to a proclivity for problem behaviors.

In addition, the trajectory estimation procedure did not provide a means by which geographic assignment could be taken into account, because assignment—being a correlate—unfolded with the dependent variable over time. A criminal careers analogy would be arguing that one should take into account neighborhood-level conditions as a means of controlling for such effects on crime over time as offenders switch addresses, somehow including them in trajectory models of criminal behavior. This would not be possible, even though desirable. The consideration of rank and (for the sample) arrest productivity would illuminate the issue of assignment to a limited degree, even though no data on geographic assignment were available.

Regarding the issue of certain assignments containing more complaint-prone citizens, the EIS team conducted analyses using all officers in the sample timeframe ($N=7,110$) and calculated citizen complaint rates for each assignment for 2000 to 2001 based on officers' current assignments. No single assignment was found that stood out as more complaint-prone than any other. This was surprising; there was

nearly as much variation *within* assignments as there was *between* them. This appeared to indicate that as a unit of analysis, assignments had considerable variation in terms of complaints filed. This likely reflected the variation in officers' propensities for problem behaviors within them, more so than other factors such as shift (day/night), work load, or the characteristics of citizens who resided in certain assignment locations.

Analytic strategy

The trajectories of problem behaviors were analyzed using the semiparametric, group-based approach developed by Nagin (2005).¹⁰ The general procedure for using this approach involved two steps. First was to estimate the optimal number of trajectory groups. Since count data were employed here, the Poisson model was appropriate. In the late 1980s cohort, however, more zeros were present than would be expected based on the Poisson distribution; therefore, the zero-inflated Poisson (ZIP) distribution was used. To evaluate model fit, the Bayesian information criterion (BIC) was employed (Nagin, 2005). The trajectories were also estimated using four different polynomials (intercept-only, linear, quadratic, and cubic) to determine which best characterized the trajectories of officers in the cohort.

Once the number of groups was decided upon, the second step involved sorting the cohort members into their respective trajectories using the highest posterior probability of group membership. Based on these probabilities, officers were assigned to the trajectory that best fit their complaint histories. This allowed exploration of the "average" characteristics of each trajectory, creating profiles of group membership. This step also provided a second calculation, the average posterior probability (AvePP) of assignment, which was useful in assessing the quality of the model's fit to the data (Nagin, 2005).

Results

Trajectories of citizen complaints

The question central in this study was whether there exist specific career pathways that underlie the experience-problem behavior curve presented in Fig. 1. In selecting the number of groups, testing was done for one, two, three, four, five, and six groups. For this cohort, a cubic function was employed to link problem behaviors with experience, since the aggregate curve demonstrated a sharp rise and

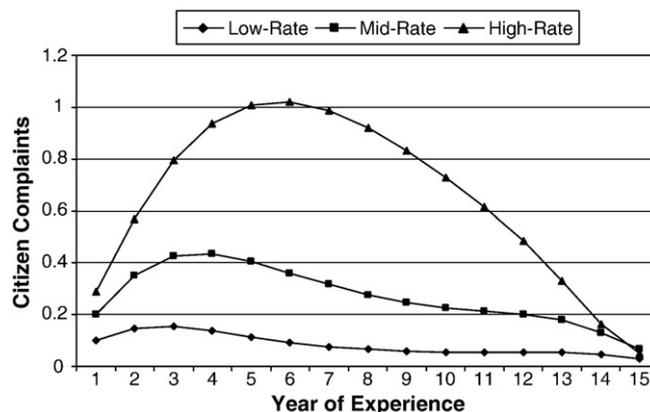


Fig. 2. Three group predicted trajectory model for late 1980s cohort.

steady decline in citizen complaints over time. The BIC continued to rise when more groups were added until the fifth group, which lowered the BIC. The two-group model differentiated between a low- and high-rate group, and the three-group model differentiated between a mid-rate group, approximating the aggregate curve, and a higher-rate group. The four-group model did not reveal any important additional features to the data, and three of the groups' AvePP of assignment fell below .7. Analyses, therefore, were based on the three-group model.¹¹

Fig. 2 displays the shape of the three predicted trajectories. The majority of the officers were located in the low-rate trajectory, which comprised about 59 percent of the cohort. The next largest group was the mid-rate trajectory, which comprised just more than one-third of the cohort. Finally, the smallest group was the high-rate trajectory, which accounted for only 5 percent of the entire cohort. Analyses revealed that no officers from any particular year of entry significantly comprised membership in one particular trajectory.

Table 3 presents the various career dimensions of the three trajectory groups.¹² As can be seen from this table, the three groups differed from one another in important but expected ways. A total of 3,070 citizen complaints were filed against the officers in the late 1980s cohort during the study period. The majority of these complaints were filed against officers from the mid-rate group, who accounted for nearly 60 percent of all complaints filed. The remaining complaints were evenly accounted for by the low- and high-rate groups, which each accounted for about one-fifth of the citizen complaints filed, even though the officers were not evenly distributed across trajectory groups. The high-rate officers, who comprised only 5 percent of the cohort, accounted for almost as large a percentage of citizen complaints as the low-rate officers, who accounted for nearly 60 percent of the cohort's population. The mid-rate officers also accounted for a large share of the complaints, comprising a little more than one-third of the cohort, but accounting for more than one-half of all the citizen complaints filed.

Table 3
Cohort citizen complaint trajectories and misconduct career dimensions

Variable	Low-rate (n = 670)	Mid-rate (n = 407)	High-rate (n = 61)
Cohort member (%)	58.9	35.8	5.4
Total number of complaints	699.0	1,761.0	610.0
Mean number of complaints	1.0	4.3	10.0
Cohort complaints (%)	22.8	57.4	19.9
Mean year of onset	4.6	3.3	2.5
Number of active officers	34.0	385.0	61.0
Mean frequency	.28	.45	1.1
Mean career duration	6.6	6.5	8.1
Mean year of desistance	8.8	9.5	10.6

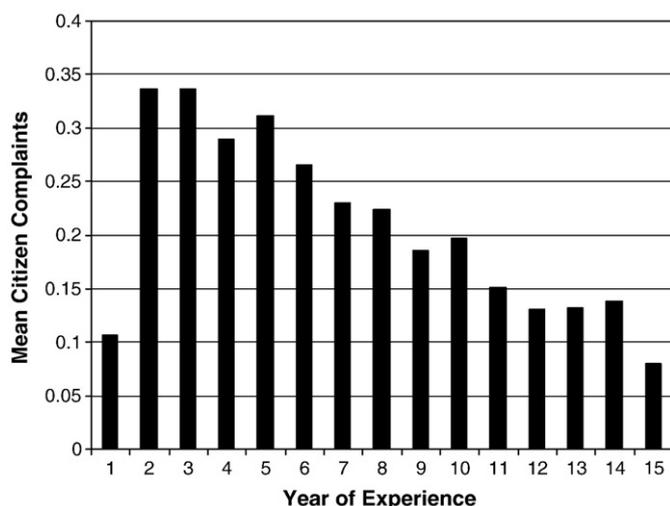


Fig. 1. Average citizen complaints by year of experience for cohort.

As expected, the officers in the high-rate group averaged more complaints across their careers than either the mid- or low-rate group. Not only did high-rate officers average more problem behaviors, but their mean year of experience for onset was earlier than the other two groups.

Examining the dimensions of “active” officers¹³ also illustrated the differences in problem behaviors between the trajectory groups. Not only did the high-rate group have an earlier onset, but their desistance point was later; hence their career duration was longer than either the mid- or low-rate groups. Also, the high-rate trajectory's average frequency of citizen complaints was greater than either of the other two trajectory groups. The mid- and low-rate trajectory groups were somewhat similar in their career dimensions of duration and desistance, even though the mid-rate group had, as one might expect, a greater frequency when active.

In short, patterns of problem behaviors were not uniform across officer careers. While experience and problem behaviors were related in an orderly way in the aggregate, officers differed in their patterns of problematic behavior over time in important ways. The analyses uncovered a group whose problem behaviors started earlier, lasted longer, and were more frequent than other groups. Both the high- and mid-rate officers, however, could certainly be considered problematic in terms of their behavior.

Profiles of citizen complaint trajectories

Profiles constructed for the cohort examined demographic and background characteristics of the three trajectory groups and are displayed in Table 4.¹⁴ As the previous literature found, the most problematic group tended to be predominately male and had a greater percentage of Black officers. Also, the higher-rate groups had greater percentages of officers with prior military service and officers without college degrees.

Many of these demographic characteristics were significant predictors of group membership, as shown in Table 5. Each coefficient estimate in the table measured how the demographic characteristics influenced the probability of group membership in a particular trajectory relative to membership in a specified comparison group. Here, the comparison group was the low-rate trajectory. The table can be thought of as reporting two separate binary logistic regression

Table 4
Cohort group profiles of citizen complaint trajectories

Demographic variables	Low-rate (n = 670)	Mid-rate (n = 407)	High-rate (n = 61)
<i>Cohort</i>			
% of population	58.9	35.8	5.4
<i>Gender</i>			
Male (%)	87.9	93.1	98.4
Female (%)	15.2	6.9	1.6
Total	100.0	100.0	100.0
<i>Race</i>			
White (%)	79.0	65.8	59.0
Black (%)	11.8	20.4	32.8
Hispanic (%)	8.5	13.5	8.2
Other (%)	0.7	0.3	0.0
Total	100.0	100.0	100.0
<i>Background characteristics</i>			
Military service (%)	5.6	7.4	14.8
No military service (%)	91.9	92.6	85.2
Total	100.0	100.0	100.0
College degree (%)	53.6	43.0	26.2
No college degree (%)	46.4	57.0	73.8
Total	100.0	100.0	100.0

Table 5
Demographic predictors of citizen complaint trajectory membership

Variable	Coefficient estimate	Standard error	t-statistic
<i>Mid-rate</i>			
Male	1.04	0.40	2.76**
Black	1.02	0.30	3.42**
Hispanic	1.09	0.34	3.18**
Military	-0.68	0.44	-1.55
Degree	-0.52	0.21	-2.51**
<i>High-rate</i>			
Male	1.80	1.03	1.70*
Black	1.49	0.37	3.94**
Hispanic	-0.42	1.00	-0.31
Military	0.61	0.45	1.26
Degree	-1.36	0.41	-3.22**

Note: Comparison group is the low-rate trajectory; n = 1,132.

* t < .10.

** t < .05.

analyses that contrast the mid-rate and high-rate groups with the low-rate group (Nagin, 2005). For both the mid- and high-rate trajectories, being male or Black increased the likelihood of group membership relative to the low-rate group, while having a college education lowered this likelihood. While officers with prior military service comprised a greater percentage of the mid- and high-rate trajectories, it was not a significant predictor of membership in either group relative to the low-rate trajectory.

Why might Black officers increasingly comprise the higher-rate trajectories? To the extent that Black officers are found to be more proactive, this could account for the difference in performance. This hypothesis was not supported, however, as the rates of penal law arrests for Black officers (at least for officers with available data) were the lowest when compared to White and Hispanic officers.¹⁵ Examining the citizen complaint categories also revealed no significant differences by race.

A difference in education among the trajectory groups was also found. Officers with college degrees tended to be in the mid- and low-rate trajectories when compared to the high-rate group. Of course, this variable only indicated that an officer received at least an associate degree prior to, or sometime during, the course of his or her career. Thus, a problem of temporal ordering exists, as education while on the job was a correlate, yet education prior to employment could be considered a factor that would likely mitigate the chance of problem behaviors. If instead education is viewed as a constellation of traits, such as interest in career advancement, ambition, or an internal desire to excel, then temporal ordering would not be an issue. If one thinks of officers who obtain a college degree as those most interested in advancing their career, then finding such officers located in the lower rate group is not surprising.

Trajectory correlates

Additional analyses were conducted on the three-group model to examine the two correlates of problem behaviors: assignment and arrests. Separate analyses were conducted on assignment, examining citizen complaint patterns when officers served on patrol duty only

Table 6
Average primary arrests by trajectory group

	Low-rate (n = 137)	Mid-rate (n = 121)	High-rate (n = 20)	F-ratio
Primary arrest rate	15.23	16.76	20.82	2.903*

* p < .10.

Table 7
Citizen complaint categories for each trajectory group

Categories	Low-rate		Mid-rate		High-rate	
	Rank	Percent	Rank	Percent	Rank	Percent
Improper police action	1	14.3	1	14.6	1	15.0
Unprofessional conduct	4	6.7	2	11.7	2	14.8
Excessive force	3	8.9	3	9.6	3	8.6
Service	5	4.7	5	5.7	4	8.1
Negligence of duty	2	11.3	4	8.4	5	6.0*

* Negligence and verbal abuse were tied for fifth place among the high-rate group.

and all officers regardless of their rank. The results were virtually indistinguishable; therefore, the trajectory results presented above were not sensitive to rank.¹⁶

One might suspect that officers in the high-rate group might share the same, or a limited number of, very active assignments. As mentioned, the agency collected no data on officers' history of geographic assignments, except for their most current assignment. The citizen complaint data, however, *did* contain information on where the officer was stationed at the time of the complaint filing. This, however, painted an incomplete picture of an officer's assignment history, except for the high-rate officers. Examining the assignment from the complaint data was conducted for the high-rate group, which revealed these officers averaged four-and-a-half different assignments during the data collection period, but no single assignment or small group of assignments were significantly overrepresented. This indicated that the most problematic officers managed to obtain citizen complaints across a number of different assignments.

Analyses were also undertaken to determine if trajectory groups differed on their mean annual arrest rates for the sample of officers with these data. Results are presented in Table 6. The results revealed no statistically significant differences in mean officer arrest rates at the conventional .05 probability level (but, $p = .06$), yet the results were in the expected direction: the high-rate officers had the highest rates of arrests, while the low-rate officers had the lowest arrest rates and the mid-rate officers fell between these two groups. Although the differences between arrest rates were rather small for the three groups, the high-rate group had a rate of arrest 27 percent greater than the low-rate group, which was not insubstantial.¹⁷

Although the citizen complaint categories were considered problematic in terms of their validity, each trajectory group members' citizen complaint types were examined to determine if officers in each group differed based on the type of complaints filed. The same five complaint categories comprise about one-half of the complaints filed across the three groups: (1) improper police action, (2) unprofessional conduct, (3) excessive force, (4) service, and (5) neglect of duty.¹⁸ These were the same five complaint types that comprised about half of the complaints filed by citizens for the entire cohort. Interesting, though, was that these five were not of the same proportion or rank for each trajectory, as can be seen in Table 7. While improper police action comprised the category with the largest percentage across all categories for all trajectories, the low-rate officers had a greater percentage of neglect of duty complaints than the other groups. The mid- and high-rate officers were more likely to have larger percentages of unprofessional conduct complaints, even though these differences were not large.

Discussion

The results from analyzing the citizen complaints filed against officers in this cohort demonstrated that not all officers followed the aggregate pattern between experience and problem behaviors at the individual level, and that certain characteristics made the probability

of belonging to a certain trajectory more or less likely. Such findings highlighted the benefit of taking a career view of officer behavior, specifically in relation to using career elements to frame the patterns of problem behaviors over time.

While each of the three trajectories displayed a rise, single peak, and decline over time, they differed in ways not initially expected. A mid-rate trajectory was found that mirrored the aggregate experience-misconduct curve and comprised about 36 percent of the cohort, but accounted for more than one-half of the complaints. Thus, some officers in this cohort behaved much like the aggregate pattern, although this was not the modal experience. Instead, the modal experience for officers was the low-rate trajectory. This group comprised 59 percent of the cohort, but accounted for less than one-quarter of all citizen complaints. This group was not the abstainer trajectory as initially hypothesized, but it did contain all of the officers who received zero complaints during the data collection period. The high-rate group comprised only 5 percent of the officers, but received almost 20 percent of all complaints. This group was certainly the most problematic of the three uncovered. Even its rates of citizen complaints, however, declined by the end of 2000 to match those of the other two trajectories.

The three trajectory groups differed from one another in expected ways. The higher-rate groups displayed an earlier onset and averaged more complaints per year overall, while taking the longest to desist from problem behaviors. Membership in the trajectories varied by officers' demographic and background characteristics as well. Officers who were male, Black, and had no college degree were more likely to be in the higher-rate trajectories when compared to the low-rate group. More educated officers had a decreased likelihood of belonging to the higher-rate trajectories.

The reason for the differences between the trajectory groups was not altogether clear. Officer rank had no bearing on the analyses and the high-rate group did not appear to disproportionately share the same assignments (a finding consistent with Brandl et al., 2001). The higher-rate (and hence more problematic) officers, however, were certainly more productive, which was consistent with prior research (Brandl et al., 2001; Terrill & McClusky, 2002), but not the Christopher Commission's report (Independent Commission on the Los Angeles Police Department, 1991). While the difference between trajectories in penal law arrests rates was not vast between the officers in this data, it did appear likely that some of the variation between the trajectories was due to officer productivity. The extent to which productivity contributed to citizen complaints remains unknown, as the trajectory estimation procedure could not accomplish this and was complicated by the notion that officers can be both productive and problematic (see Terrill & McClusky, 2002).

While the finding of multiple trajectories underlying the experience-problem behavior curve was important, it was limited due to the indicator of problem behavior; that is, citizen complaints. Such complaints can both over- and under-represent problem behaviors, because not all citizens treated poorly by the police complain or are successful if they attempt to file a complaint. Walker and Bumphus (1992) estimated that "official complaints received by police departments represent about one-third of all incidents of alleged police misconduct" (p. 11). To complicate matters, some citizen complaints may be without merit, since citizens may complain about treatment by an officer when, in fact, no violation of the law or departmental policy has occurred. Citizens may also complain as a retaliatory act when they are interrogated or arrested by an officer, even if the officer is performing well. Such complaints are also impacted by an officer's frequency of contacts with citizens, which are in part attributable to their geographic assignment, their shift, their rank, and their "operational styles" (Brown, 1988).

Using citizen complaints also posed several specific problems when examining problem behavior over time. For example, the results indicated at both the aggregate and individual level that police

problem behaviors declined over time. Reasons for this decline beyond professional maturation or routine supervision are unknown; however, one must also consider that this decline might imply that officers get better at avoiding citizen complaints over time or shift to a less proactive work style among other behaviors. The decline seen in the trajectories of problem behavior may also be due to the range of antisocial behaviors captured by citizen complaints, the expression of which may change over the officer's career course. For example, officers in their early years may be inappropriately proactive and tend to abuse their authority or employ improper tactics, thus earning the ire of citizens who complain. Later in their career, however, officers might curtail this behavior, and instead manifest other antisocial behaviors not typically covered by citizen complaints (e.g., economically-related deviance such as graft).

Given the limitations of the EI system project data, the findings presented above are largely exploratory. The results have, however, provided grist for theory as to why some officers appear to engage in problem behavior much earlier, and sustain that behavior much longer and at a greater rate, than the majority of the cohort, even while all officers declined in rates of problem behaviors over time.

Conclusion

The primary objective of this research was to employ a career framework to explore the possibility that different pathways underlie the aggregate relationship between experience and problem behaviors. At a minimum, the uncovered trajectories demonstrated a limitation in the current conceptualization of the problem officer. Sorting officers into problem and non-problem groups did not appear to accurately reflect the underlying heterogeneity in officers' propensity for deviance. In this study, all three trajectories displayed different patterns of problem behavior over time.

These findings also have implications for attempts to combat problem behaviors. Like previous cross-sectional research, any EI system is likely to select potential problem officers whose deviance is at its peak, but it is unclear whether these officers will persist in their unwanted conduct. Prospective identification of officers in the high-rate or even mid-rate trajectories will likely prove difficult, although the continuity of problem behaviors in this study did suggest officers should be more closely monitored beyond the typical rookie probationary period.

Criminologists have all but abandoned the notion of prospective identification of career criminals and have instead embraced the *risk factor prevention paradigm*. This paradigm is based on identifying the key risk factors for offending and the key protective factors against offending, then implementing prevention methods to counteract the former and enhance the latter (Farrington, 2000). Rather than attempting to locate at-risk personnel that surpass some set threshold of problem indicators, police administrators might have a greater impact on problem behaviors by mitigating risk factors for deviance, such as early onset, while simultaneously enhancing protective factors (i.e., education). More research is needed to both identify and examine various risk and protective factors on the timing of the career elements of problem behavior (see Hickman, Piquero, & Greene, 2004).

While the demographic and background characteristics examined here could not be used in a risk factor paradigm, results did indicate—similar to findings in criminal career research—that early onset was a significant risk factor for prolonged and involved deviance. This suggested that the *amount* of deviance might not be as important as the *timing* of such deviance. Officer education emerged as a protective factor here, but what it was thought to represent; that is, an interest in career advancement or an overall internal desire to excel, may be an important trait worth future investigation.

Future research should attempt to determine if the aggregate relationship between experience and problem behaviors holds across different agencies and whether different trajectories underlie this

aggregate curve. Such analyses would contribute to policing in much the same way as similar analyses have contributed in criminology. First, understanding developmental pathways can help more accurately pinpoint the warning signs that indicate deviance from normal development. Specifically, one can discover what level of problem behavior is typical of officers and how and when other officers deviate from the normal pattern. Second, such analyses would also provide knowledge about when to target specific interventions. For example, if there is a time in officers' careers when problem behavior spikes, this suggests a critical period in which influential processes are operating that facilitate that increase. This can direct researchers to more closely examine proximal causal mechanisms or risk factors that prompted the behavior. Third, these analyses would reveal something about the probability that problem behaviors will be maintained over the course of an officer's career. This study's results suggested that the concept of a problem officer needs refinement to include more specific career dimensions, rather than assuming such officers are continually problematic across their careers, barring termination or intervention. It is plausible that officers in the higher-rate groups do, to varying degrees, internalize the lessons of complaints and approach their work differently over time.

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Notes

1. As part of the agreement between the research team and the police agency under study, the agency can only be referred to in these terms; no additional identifying characteristics can be provided.

2. The results were identical whether these 136 officers were included or not.

3. The agency that assisted this research took citizen complaints in person, by mail, by phone, by fax, and via e-mail from the agency's Web site.

4. Some police agencies have required citizens to sign legal documents stating that their complaints are valid. If it is found not to be so, the citizen can be the subject of legal action for registering a false complaint. It is suspected that this requirement was instituted to dissuade citizens from filing complaints.

5. It should be noted that an attempt was made to choose complaint categories most congruent with the problem officer concept (e.g., excessive force, abuse of authority, verbal abuse) and analyze these complaints separately. The results did not substantially deviate from what was presented here, except that the complaint rates of the three trajectories were much lower and the career dimensions more truncated, because fewer complaints were considered.

6. Some complaints were missing a filing date; therefore, the date was estimated based on the ordinary time lag between receiving a complaint and the date that reports were either due or received.

7. Information was available on the date when all officers left this agency; therefore, the data could distinguish between observation periods where an officer received zero citizen complaints and observation periods after an officer left the agency. Periods subsequent to an officer leaving the agency were treated as missing data for analytic purposes.

8. A correlate refers to factors that occur at the same time as the dependent variable and that statistically covary with it (Loeber, 1990).

9. Acquiring all penal law arrest data from the agency's archaic computer system was impossible; therefore, four years were selected: 1987, 1992, 1994, and 1996. Arrest data were gathered for all officers entering during these years, with 278 of these also in the late 1980s cohort and used for analyses. This sample of officers did not significantly differ in terms of their demographic characteristics from the larger cohort.

10. A special procedure for use in SAS called Proc Traj, developed by Jones, Nagin, and Roeder (2001) was employed for trajectory estimation. Related documentation is available on-line at <http://www.andrew.cmu.edu/user/bjones> regarding the Proc Traj procedure.

11. Due to space limitations, parameter estimates were not included, but are available upon request from the author. The posterior probabilities for group assignments for the low-, mid-, and high-rate groups were .80, .76, and .83, respectively.

12. The results presented in this table were inspired by Piquero et al. (2007) who conducted similar analyses with the six trajectories emerging from the Cambridge Study in Delinquent Development data.

13. Officers were considered active if they had at least three complaints. The first was taken as the point of onset, the last as the point of desistance, and the complaints in-between these two points were used in estimating frequency. Officers who had two complaints but left the agency before the study period expired were also included, using the date they left as the desistance point. This added only a handful of cases and did not substantively change the career estimates of active officers. While admittedly a

crude indicator of desistance, it was in line with early criminal career research that took an offender's first arrest as an onset point, his/her last arrest as a desistance point, and the intervening number of arrests as a measure of frequency (see Blumstein & Cohen, 1979).

14. Mean age at entry was not included as it did not vary by trajectory group.

15. Average arrest rates for Whites were 19.0 per year, Hispanics were 11.5, and Blacks were 9.9. A one-way ANOVA revealed these differences were statistically significant ($F = 16.259$).

16. This was likely because the majority of officers were not promoted until their tenth year of experience or after.

17. Year-to-year correlations between citizen complaints and arrests, while statistically significant, were weak and never exceeded a peak of .23 during the fourth year of experience.

18. Most of the other complaint categories accounted for less than 1 percent of the complaints filed.

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