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### Original Citation

Roach, Jason and Pease, Ken (2013) Police overestimation of criminal career homogeneity. *Journal of Investigative Psychology and Offender Profiling*. ISSN 1544-4759

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## **Police overestimation of criminal career homogeneity**

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### **Abstract**

Police presumptions about criminal career trajectories have been little studied. The exploratory study reported here involved 42 police staff of varying rank and experience. Participants were asked to complete a questionnaire which asked them to predict the type of offence that an individual was most likely to commit next from a given range of different offending scenarios. The findings suggested that police personnel substantially overstated the homogeneity of criminal careers. The implications for operational police decision making are discussed and held to be profound.

### **Introduction**

A criminal career has been defined as, “the characterization of the longitudinal sequence of crimes committed by an individual offender” (Blumstein et al., 1986a, p.12). Use of the term 'career' to describe a sequence of offences is an interesting one, conjuring up a mirror image of a 'legitimate employment' career comprised of elements such as roles, positions, organisations worked for, promotions and responsibilities held. With a 'legitimate career' it is commonplace to consider a longitudinal view of how an individual has moved through their working life, from place to place, job to job, role to role etc. A career, for example, can be one role or position, one role but many positions or as is perhaps most common nowadays, a plethora or diverse roles and positions throughout an individual's working life.

The notion that offenders have 'criminal careers' somehow analogous to legitimate mainstream careers, has on the whole, been useful to criminologists examining individual offending patterns over time (Wortley and Smallbone, 2005). All criminal careers definitely have a beginning (*onset*) and an end (*desistance or death*), with most displaying a high degree of offence versatility (often

referred to as *switching* in criminal career parlance). Much criminal career research shows a concentration on the onset of a criminal career (e.g. Farrington, 1988; Farrington et al. 1990) to identify factors such as when, how and why an individual is initiated into crime. This is commonly referred to as 'developmental criminology' (e.g. Farrington, 2002)

Within individual careers, sequences of offences are analysed and particular attention given to several cornerstones; type of offence committed, seriousness of offences (including escalation and de-escalation) and frequency of offending. Adoption of what has become known as the 'criminal career paradigm' (Blumstein et al., 1986) has facilitated a developmental approach to criminality, helping to identify risk and protective factors along pathways to crime, which some assert has led to more effective crime prevention policies and practices (e.g. Wortley and Smallbone, 2005).

There is a danger, however, in taking the career analogy too literally. Providing a career framework for an individual's offences over time can produce a misleading image of the organised individual who picks and chooses offences in a structured ambition-driven way. As with mainstream careers, what must be remembered is that a 'career' is subjective and may represent instead a catalogue of disorganised, seemingly random and opportunity based crimes, some of which will be considered unsuccessful by virtue of being brought to the attention of the authorities. A criminal career may often mirror a similarly disorganised legitimate career, perhaps along the lines of, *unemployed - MacDonald's - unemployed - Tesco - unemployed*. The point being made is that one needs to be acutely aware that the term career does not just represent positive attributes such as structure and choice it also covers uncertainty, indecision and periods of inactivity (voluntary or otherwise).

Requiring less caution is the fact that (like its legitimate counterpart) a criminal career will definitely have a beginning, will show degrees of diversity and/or specialization, will show differing levels of offending frequency and will definitely end at some point either through personal or enforced choice (e.g. imprisonment or death). These four dimensions represent the *corner stones* of the criminal career paradigm. It is the degree to which criminal careers show offence versatility as opposed to specialization that is the focus of the present paper.

Careers may, therefore, be homogeneous (specialist) or heterogeneous (versatile). In homogeneous careers, the same job type is held throughout. In heterogeneous careers, a range of

job types will be held. This is no less true of criminal careers than of other careers. Police and criminal justice presumptions about the homogeneity of criminal careers have profound implications for the organisation of responses to offending. The present paper seeks provisionally to establish police officer estimates of criminal career homogeneity, and discuss their implications.

The perception of offenders as crime specialists is as seductive as it is misleading. If rapists really only rape and terrorists only terrorise, then both detection and understanding would be facilitated (Roach, 2012). But does the research literature on criminal careers conveniently support this perception? The short answer is no.

Blumstein, Cohen, Roth, and Visher's classic work *Criminal Careers and Career Criminals* (1986a; 1986b) provided the first major empirical demonstration of how limited was the degree of specialization in most criminal careers. Other work of the same era confirmed the central fact of offence versatility. (e.g. Farrington, 1986; Gottfredson and Hirschi, 1990). The conclusion holds whether self report, arrest or conviction data is examined, a conclusion consistent with more recent research on the topic (Soothill, Fitzpatrick and Francis, 2009; Harris, Smallbone, Dennison, and Knight, 2009).

Farrington et al. (2006) using a 'Forward Specialization Coefficient' concluded in one study, in line with earlier research generally, that "there was a small but significant degree of specialization in offending superimposed on a great deal of versatility" (p208). Fisher and Ross (2006) also found evidence to favour a weak tendency to specialise. Even with regard to the example of a terrorist, there is an abundance of evidence to suggest that terrorist groups engage in more mainstream organised criminal activity (e.g. the illegal distribution of drugs) mainly to fund their terrorist operations (e.g. see Dandurand and Chin, 2004; Préfontaine and Dandurand, 2004).

Persistent offenders in particular have been found to be versatile in their offending (Cohen, 1986; Farrington, 1988; Kempf, 1987; Blumstein et al., 1988; Gottfredson and Hirschi, 1990; LeBlanc and Frechette, 1989; Tarling, 1993; Mazerolle et al., 2000). Terri Moffitt and colleagues have identified two types of offenders; the '*Adolescence limited*' group, typically constituting young males who will eventually grow up and out of low-level rule breaking; and the smaller (but arguably more significant) '*Life-course persistent*' group, which continues to offend throughout their lives, with

their criminal careers only curtailed by periods of incarceration or their offending cut short by their death. Moffitt identifies this group to be particularly versatile (Moffitt, 1997; 1999; 2003, Piquero and Moffitt, 2004).

Piquero (2000) found frequent violent offenders to be indistinguishable from non-violent offenders in respect of future criminal careers, whereas Deane, Armstrong and Felson (2005) found them more likely to commit further violent offences than their non-violent counterparts. Both studies nonetheless showed substantial versatility. Sex offenders are often considered to be the most specialised type of offender, exemplified by the way that in recent decades they have been 'set apart' from other types of offenders by bespoke policy and treatment programmes (Soothill and Francis, 1997). Referred to as a kind of 'criminal apartheid' by Soothill et al. (2000) they go on

The term 'sexual offenders' rather suggests that they are a homogenous and coherent group... In fact while some may be, there are many others whose sexual offending is just another type of behaviour they are displaying within a broad criminal repertoire (Soothill et al., 2009, p.116).

Cases involving the rape or sexual assault of women in their homes during the commission of burglaries are brought to mind.<sup>1</sup> Weisburd and Waring in a study of 'white-collar' criminals found offence specialization in criminal careers to be 'only moderate at best' (Weisburd and Waring, 2001).

It must be acknowledged that when calculating the degree of offence specialization within a criminal career several important considerations must be made. Fisher and Ross (2006, p. 154) in their paper exploring methodological issues in offender specialization, suggest the degree of specialization (as opposed to generalisation) identified in a criminal career is often affected by four key elements involved in the codification process of criminal behaviour. First, the data sources used to represent offending. For example, the fact that not all crime is reported, recorded or detected and what is depends on the interpretations of individual police officers and victims (e.g.

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<sup>1</sup> See Harris et al. (2009) or Soothill et al. (2009) for more comprehensive discussion of the offending careers of sexual offenders.

the difference between aggravated and non-aggravated burglary). Second, and perhaps most importantly, how offences are classified has an obvious effect. Violence, for example, is a commonplace category in criminal career research and is used to represent a whole host of different offences such as murder, robbery or sexual assault; mistakenly considered similar enough to class the criminal career to which they hail as 'specialized'. The degree of generality of classification influences the degree of specialization attributed to an individual criminal career. The number of categories used is also important especially where rarer offences are 'lumped' together in order to make a total number of working categories more manageable. We will return to this issue in the discussion section. Third (and last) in order to be able to make comparisons across offending episodes it is a requirement, for most criminal career analysis, that each is represented by a single offence category (e.g. burglary, robbery or violence). This is problematic when an event comprises several offences. One accepted method (e.g. by Farrington et al., 1988 and in Home Office crime recording conventions) is to categorise an episode according to the 'most serious offence' committed (MSO method) where each offence within a classification is given a 'seriousness ranking' - the highest ranked (most serious) offence chosen in a multi-offence episode. The most obvious problem with this approach is in representing mixed offending episodes with a single offence category (or code), it oversimplifies the episode itself, resulting in, as Lattimore et al. (1994) suggest, ignoring the fact it might be evidence of versatility in the first place, thus overstating specialization. The reverse is equally possible, for example, if an offender in episode one commits violence and drug offences, and then in episode two commits drug and property offences, then the MSO (taking the most serious offence) method would overstate offence versatility. It is perhaps more plausible, however, if we view our offender as a drug offence specialist, with the other offences (i.e. violence and property) more suitably viewed as by-products of drug offending.

Some consider, however, that the question of whether offenders are either specialist or versatile to be unhelpful (Simon, 1997) and one which even 'plagues criminology' (Soothill et al., 2009). The dichotomy is clearly unhelpful, but the balance between presumptions of homogeneity and presumptions of heterogeneity will and should influence optimal tactics in terms of crime investigation, adequacy of situational prevention measures and the content of offender management programmes.

To restate, the consistent conclusion drawn from the accumulated work in the criminal careers literature favours offence heterogeneity, with only modest levels of offence specialization. A study not so far mentioned is the most relevant for the present study. Roger Tarling reported transition matrices between offence types and addressed the issue of stationarity (i.e. is the transition between different types at different stages in the criminal career?) He found that they were not. He concluded “...the probability of offence j being preceded by offence I was no different on the thirteenth court appearance from the second court appearance nor on any of the intervening court appearances “(Tarling, 1993, p129).) This justifies the use in the present paper of officially published transition matrices across the criminal career in lieu of the offence1-offence2 transition about which respondents were asked. The second point of reassurance is that the dated transition matrices to be found in Chapter 8 of the Tarling book are similar to recent matrices used here, suggesting that matters have not changed in salient ways over the last three decades.

So why might a common perception that offenders tend to specialise still prevail?

There are many reasons to hypothesise that people will overstate the homogeneity of criminal careers. The very language used to categorise offenders implies homogeneity. We speak of burglars, robbers, fraudsters and paedophiles, rather than, for example, ‘offenders whose most recent crime was burglary’. The very existence of a vocabulary of this kind suggests that offenders are framed in these more circumscribed ways. The popularity of perceiving serious offenders to be ‘crime specialists’ perhaps owes something to, and is certainly reflected in, popular crime literature, through colourful characters such as the Victorian gentleman ‘safe-breaker’ Raffles (Hornung, 1899), than it does to criminology. Investigative psychology is, however, sometimes vulnerable to criticism in its over-readiness to make correspondence assumptions about the homogeneity of method adopted within offence type (Bouhana, 2004).

The overestimation of offence specialization across a criminal career could be regarded as a consequence of the application of the representativeness heuristic identified by cognitive psychologists and behavioural economists, whereby information of little or partial relevance is used as a basis for making decisions (e.g. Bar-Hillel, 1982) Kahneman, 2011). One of the manifestations of the representativeness heuristic is confirmation bias, whereby the initial partially or non-relevant information (in this case the prior officially processed offence) restricts an

investigator's search space inappropriately. Confirmation bias is implicated in many cases of criminal investigative failure (Rossmo, 2009).

So instead of seeing criminals as crime specialists, what are the practical consequences of a recognition of offender versatility? They include the following:

- Investigative search spaces would not be prematurely restricted
- Coming to police attention for one offence type would not preclude scrutiny in the search for other offence clearances (offender self-selection, Roach 2007a; 2007b (discussed later)). For example, Jacqui Schneider, in a study focused on incarcerated burglars, found that almost all had committed shop theft far more frequently than burglary, concluding that shop thieves would be better considered 'burglars on their day off' than as simply small time shop thieves (Schneider, 2005).
- Rehabilitation efforts would address the common attributes of offenders rather than attributes inferred from particular offence types locating the driver of criminality on less specific factors such as an individual lack of self-control (Gottfredson and Hirschi, 1990).

This takes us to the question addressed in the current paper. Evidence about offender versatility means nothing if police and criminal justice practitioners do not know it, or know it and do not reflect it in their operational tactics. No research has been found which enables the gauging of police perceptions on this matter. This represents a surprising knowledge gap. Although it is not contested here that several published books purport to focus on cognitive bias and error in the police investigation process, which they do admirably (e.g. Stelfox, 2008; Rossmo, 2009), none has been found which considers an over-estimation of offence homogeneity within a criminal career as an important source of bias.

### **The present study**

The present study seeks to establish police officer estimates of the versatility-specialization question. Several 'straws in the wind' led the writers initially to believe that, consistent with the implications of the representativeness heuristic, police officers and other practitioners might grossly overstate the homogeneity of criminal careers. First, as a result of numerous conversations with police officers about offending patterns. Second, the tendency to favour offence

homogeneity has been reflected regularly in Government policy, exemplified by the raft of projects funded by the Home Office (the ministry responsible for policing in England and Wales) on street robbery. Here emphasis was exclusively upon the homogeneous robbery career<sup>2</sup>. Third, by police practice, where it is commonplace for police facing the challenges posed by serious offenders to organise along crime categories by creating dedicated teams of officers charged with combatting drugs, robbery and vice (Schneider, 2005). Such an approach is consistent only with a collective police perception of serious offenders as offence homogeneous. As such, overestimation of offence homogeneity may result in the crime versatile robber not being identified as a candidate for the burglaries, drugs and motoring offences he commits – or the burglary or drug offender escaping attention as a possible suspect for the robbery (Roach, 2007a). Fourth, the issue is evident in the investigation of serious crime, and the relaxed and superficial investigation of those offences which may flag concurrent active criminality of more serious types. The error permeates the Review of Policing – Final report (Flanagan, 2008) subsequently reflected in the Policing Green paper (Home Office 2008), and by crime ‘solvability’ policies introduced in recent years by most police forces.

The hypothesis arrived at was therefore one-tailed: police service personnel would grossly overestimate the homogeneity of criminal careers.

A sample of 43 police participant perceptions of offence homogeneity was explored using a specially devised questionnaire asking for predictions as to likely next offence from given offender scenarios. The findings were compared with Home Office offender re-conviction data from the same year as the study was conducted, in order to gauge whether participants had overestimated offence homogeneity. Offender reconvictions are the most accessible benchmark against which to assess the extent of offence homogeneity/heterogeneity. It is acknowledged that it is likely to understate the less serious – more serious transition probabilities in particular, since encounters which result in no further action will be overwhelmingly trivial, and will not appear in a conviction dataset. It is a moot point as to how many less serious offences, if more rigorously policed, would have resulted in a conviction for a more serious offence (Roach, 2007a; 2007b).

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<sup>2</sup> <http://www.crimereduction.homeoffice.gov.uk/toolkits/sc03.htm>, accessed 8<sup>th</sup> January, 2012. The full report is apparently no longer available.

## Method

Police perceptions of offence homogeneity/heterogeneity were obtained in a pilot study by asking officers to predict likely next offences from brief offence histories. For example, officers were asked to predict the likely next offence that would be committed where an individual had a previous history of burglary. This led to the development of a scenario based survey design, the Predicting Re-offending Questionnaire<sup>3</sup> (hereafter PRQ) whereby participants were invited to give their answers as a percentage. For example, instead of ranking sexual offences as the least likely next offence, they were able to answer with a 0% for 'extremely unlikely' sexual offence, up to 100%.

To provide apt comparison with the most recent Home Office reconviction data available at the time of the study, it was considered appropriate to follow the same format as much as possible. For example, to use the same offence categories. In their reconviction analysis of the two-year proven re-offending rates of adults aged 18 years (and over at date of sentence or on release from prison) in the first quarter of 2004, Cunliffe and Shepherd (2007) used 19 offence categories, most representing what can be considered as being of the serious variety such as robbery, violence to the person and sexual offences, with a few representing arguably more minor offences (e.g. motoring, theft and criminal damage). Whilst needing to adhere as much as possible to offender reconviction studies to facilitate appropriate comparison, 19 offence categories was considered too many for the PRQ as this would make it very time consuming and cumbersome for the participant (e.g. they would be asked to predict a likelihood for each of the 19 offence types in every given scenario). It was considered prudent by the authors to instead trim the 19 to a more manageable 10 offence categories by combining some similar categories (e.g. theft with handling and other burglary with burglary) and discounting a few others (e.g. absconding and bail offences, taking and driving away). An inter-rater agreement of 100% was achieved between authors regarding the crime type categories used.

### *Sample descriptives*

From a total of 80 distributed questionnaires a response rate of 53% (n=42) was achieved drawn from a single police Basic Command Unit in the North of England, reflecting all ranks, units and departments. Participants comprise two-thirds male with one-third female. The mean age of

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<sup>3</sup> Available on request from the first author j.roach@hud.ac.uk

sample respondents was 37 years (age range 23-52 years and a standard deviation of 8 years). All but two respondents were white British.

Participants comprised police officers (n=37) with Police Community Support Officers (PCSOs) constituting the remainder (n=5). 76% (n=32) of participants were police constables, 10% were of senior officer rank, affording some basic and tentative comparison of perceptions of senior officers with front-line officers. With regard to participants' 'current department of work', 43% stated 'policing', 40% CID, 12% traffic policing and 5% failed to specify. The sample thus reflects officer opinion across different areas of policing such as mainstream policing (uniform), serious crime detection (plain clothes) and road traffic policing.

The average length of police service was found to be 12 years (range = 1-32 years, standard deviation = 9 years). It was found that 20 participants had 9 years or less police experience, leaving 22 who had experience of 10 plus years. The sample, therefore, comprises a range from those who might be termed 'experienced' and some very 'inexperienced' officers, permitting comparison of responses according to level of experience. This is important to discerning whether an over-estimation of offence homogeneity is universal or varies according to policing experience (explored later).

In sum, it can be argued that the police sample achieved in the PRQ study was defensible for an exploratory study of this nature, containing a range of personnel by gender, age, years of service, rank and department, suitably reflecting the wider composition of police in England and Wales.

## **Analysis/Results**

The results are presented in the question order they appear on the Predicting Re-offending Questionnaire (PRQ). The first question was included as the simplest possible formulation, intended to accustom respondents to the thought processes invited.

### *Question 1. Predicting likelihood of re-offence (any type) by first offence type*

Participants were given the following instruction

*In the table below is a column of first offence types. Please predict for each first offence the likelihood that a male committing it will go on to re-offend in the future. Please use exact percentages for each (i.e. out of 100 - e.g. burglary 75%, violence 43%, theft 90% etc.)*

Question one asked respondents to predict, from a given first offence type, the likelihood that the offender would re-offend, *irrespective of the type of second offence*. In essence, respondents were asked to provide a risk analysis of future offending based on the type of first offence committed.

Table 1 below displays the number of police participant predictions of re-offending for all ten first offence types which were below and the number above the 'official' rate. The stars indicate probability of the split by binomial test. To facilitate comparison actual reconviction rate, data is displayed alongside (from Cunliffe and Shepherd 2007 p.8) referred to hereafter as 'official re-offending rate'.

*Insert table 1 here*

All four significant splits occurred where there was overestimation, for the offences of drugs supply, violence, public order and sexual offences. This shows the direction of difference, but not its magnitude. Table 2 (below) shows 25<sup>th</sup> and 75<sup>th</sup> percentiles and hence indirectly the degree of discrepancy with the 'official' rate.

It should be stressed that Table 1 does not demonstrate overestimation of any kind, since the question was couched in terms of reoffending rather than reconviction, and it is likely that the police estimates are more realistic than the official figures, given demonstrations of the huge attrition between offending and official process (Farrington & Jolliffe, 2005).

*Insert Table 2 here*

Table 2 presents data on quartiles. One quarter of participants saw for example, motoring offences as indicating future criminality in less than 25% of cases. Given the prominence of motoring offences amongst self-selection triggers identified to date (e.g. Chenery, Henshaw and Pease, 1999; Roach 2007b) this is perhaps indicative of a training need.

Looking at the data in a different way, for all save two of the offence types (the 'middle-class' offences, drink-driving and motoring) the median expectation of further offending was greater than 50%. Most participants saw an offence as being the prelude to other offences far more often than not. This generally downbeat view of human nature erring once is unsurprising.

*Question 2. Predicting the likelihood of same-type second offences from a given first offence type (offence specialism)*

In this section participants were asked to predict next offence type *given* prior offence of a particular type (e.g. a one prior offence burglar's next offence). Participants were asked the following;

*In the table below is a column of first offence types. Please predict for each the likelihood that the next offence committed will be of the same type (e.g. 1<sup>st</sup> offence burglary, second offence 75% likely to be burglary).*

Put simply, participants were asked to express, as a percentage, how likely they considered an offender was to commit a second offence of the same type as their first (e.g. burglary second after a first offence of burglary). This form of questioning assumed that a second offence would occur.

Indices of specialization were compared with the transition matrix for offence types.

*Insert table 3 here*

Table 3 presents official proven adult reoffending transition probabilities for the year 2009 published by the Ministry of Justice. The analysis was also conducted for juvenile proven reoffending rates, with essentially the same results, so only the adult comparisons are to be found in Table 3. Methodological details about the calculation of proven reoffending statistics are published online by the Ministry of Justice.<sup>4</sup> As noted earlier, confidence in the appropriateness of these figures as a benchmark for police estimates is increased by the Tarling (1993) demonstration of stationarity and the similarity of his transition matrices with the 2009 figures. As with Table 1, Table 3 presents the number of police officer judgements above and below the official figure and the probability of the observed split by binomial test. It will be seen that for all offence types, significantly more respondents overestimated than underestimated offence homogeneity.

As was the case with Table 1, Table 3 does not indicate the degree of overestimation. This is remedied by Table 4, which shows the difference to be very large.

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<sup>4</sup> <http://www.justice.gov.uk/downloads/statistics/reoffending/proven-reoffending-definitions-measure-2012.pdf>

*Insert Table 4 here*

While there appeared on average to be an overestimation of specialization by participants, as before with the measures of dispersion, there was huge variation in judgements. The range went from one participant who believed that any second offence would be the same as the first in 24% of cases where there was a second offence, to another who believed that any second offence would be of the same type as the first in every single case!

To explore any link between the probability of re-offending and the probability of any offending being homogeneous (i.e. roughly between persistence and specialization in the criminal career) product-moment correlation coefficients were calculated between the judged probability of re-offending of any type (question 1) and the probability of such re-offending as occurred being of the same type as the first offence (question 2). The results are presented in Table 5 below.

*Insert table 5 here*

With predicted offence homogeneity high across offence types, it was felt that this might be influenced by participant police experience levels (i.e. years of service). To explore the possibility further, participants were divided into two groups, those with 9 years or less police service experience (group 1) and those with 10 or more years (group 2). Predictions for second offence homogeneity were the same generally across the ten given first offence types for both groups irrespective of length of service. Independent t-tests were conducted to test for significant differences between the two groups and just one statistically significant difference was found where the group with less than ten years' experience considered fraud a less likely homogenous second offence than the ten years and over experience group ( $t=2.25$ ,  $DF=40$ ,  $p=0.03$ ). Therefore, it was fair to conclude that level of experience had little effect on predictions of offence homogeneity.

To test for statistically significant differences, paired-samples t-tests were conducted for participant predictions to questions one and two. No statistically significant difference was found for any pair (i.e.  $p>.05$ ). This suggests that when participants were asked to predict the likelihood of a second offence (any type) from a given first offence, the second offence predicted was consistently of the same type. There were of course individual officers who were exceptions, but

the general question raised is what the effect of a general bias toward offence homogeneity is likely to have on police decision making?

## **Discussion**

To rehearse what was found here before moving to discussion of its significance to police decision making, all next offence predictions showed that police participants consistently favoured offence homogeneity across all offence scenarios. This suggested that participants considered an individual's previous offence types (or type) as the best predictor of their future types of offending, irrespective of the type of offence history presented. Put simply, whatever the first offence type, participants predicted that the most likely next offence would be of the same type (e.g. for an offender with previous offence of robbery, the most likely next offence prediction was robbery). Indeed, for the vast majority of offenders and offence types, the average for participant predictions of offence homogeneity was in excess of 50% where reconviction studies estimate a more modest 30% (Cunliffe and Shepherd, 2007).

It should not be assumed that offenders re-offend in the same category as their original offence: i.e. that an offender convicted of a motoring offence will commit another motoring offence if they re-offend. The evidence in this sample is that offenders do not specialise on the whole (Cunliffe and Shepherd 2007, p.6).

Again, comparison with reconviction data is useful here as it shows that this could be considered a gross over-estimation of offence homogeneity, with a large variation in homogeneity according to type of offence shown in reconvictions. The offences where most officers estimate reconvictions at above the 'official' rate are those where there is particular opprobrium attaching to the offence. Hence police officers anticipate future criminality more when the current offence is distasteful. For example, 'official' reconviction data has shown that those convicted for violent offences are least likely to be reconvicted for any type of offence (Cunliffe and Shepherd, 2007). In contrast, those committing violent crimes were consistently predicted as most likely to commit future offences particularly those of violence by our police sample. Predicting offence homogeneity from previous convictions is therefore certainly not as high as shown in the PRQ study, although the differences that the two-year offending period taken in re-conviction analysis purports, is again acknowledged.

These results are interesting and hold significant practical importance for understanding police decision making. To provide some context, it will be recalled that judgements about probability of further offending after a given first offence were very diverse among the sample of police officers, as were presumptions about offence specialization. These differences cannot be accounted for in relation to experience or other participant characteristics. A consistency was found, however, between estimates of the probability of further offending and specialization. Moreover, it appeared that whatever the offence type, the judgement that there was likely to be further criminality went together with the judgement that that criminality would be of the same type as the first offence. Put crudely, those participants who were pessimistic about the future were also those who believed most in offender specialization. We consider the implications of this for operational policing in more detail later, but it suffices to say here that this means that those police most convinced that previous criminal record predicts future criminality were also those most blinkered to the range of future offences which the erstwhile offender might go on to commit. That is, they were most biased to offence specialization.

There are some difficulties which must be acknowledged when directly comparing participant predictions of offence homogeneity with the 'official' reconviction data, as the latter does not provide a level of detail with regard to first offence and second offence across individual offence categories, preferring a more 'global' analysis. Cunliffe and Shepherd (2007) did find however that 58% of those originally convicted of theft went on to re-offend with theft as their first offence. By contrast, of those who were originally convicted of drugs supply, only 4% had drugs supply as their first re-offence (2007). They conclude, that overall, 30% of those reconvicted committed their first re-offence in the same offence type as their original (2007, p.6). As far as reconvictions go, and in line with the criminal careers literature generally, offence homogeneity appears relatively low.

With participants predicting high second offence homogeneity across offence types (well above 30%) this might be taken as evidence for an over-estimation of second offence homogeneity by police in this sample. The caveat that the official data are time-limited has less force in this instance. It is known that reoffending tends to happen quickly, if it happens, but adjusting the official data to take account of this would have required too many assumptions. The writers are less than completely exercised by the time-limiting problems, simply because the official rate captures such a small proportion of offences committed (Farrington & Jolliffe, 2005) and almost certainly overstates homogeneity, since offenders will be sought on the basis of the nature of their

prior offending. In other words, the tendency of police to overstate offending homogeneity will itself feed the detection process in ways which inflate 'official' offence homogeneity.

A second caveat concerns the phrasing of the questions. In any replication it must be stressed that in question 2 the denominator is 100%. This would exclude the possibility that the correlation between probability of reconviction and degree of specialization is not an artefact.

Third, as acknowledged in the introduction, studies that attempt to measure offence specialization in criminal careers are heavily influenced by the crime categories they use. The present study is open to such criticism, as only 10 crude crime categories were made available for participants to choose from (e.g. burglary, violence, and public order offence). However, further research (not yet published) suggests that people tend to still favour predicting further offences of the same ilk (e.g. last offence burglary, next offence aggravated burglary; or last offence illegal parking next offence speeding).

Fourth, we must acknowledge also how the human tendency to elevate the importance of any information given can have dramatic effects on judgement, especially with regard to the predictions given by our participants who were given very little information about the offenders they were predicting next offences for (e.g. previous offences include violence). As such there is a danger that they sought to confirm rather than refute. Their answers arguably being a result of confirmation bias (Stelfox and Pease, 2005; Rossmo, 2009).

It can be argued that the participant sample, although not extensive in numbers, can be considered representative of an average police division as it comprised equal numbers of uniformed and CID officers and a smattering of PCSOs and road traffic officers. It is fair to suggest, therefore, that predictions of high offence homogeneity spanning position, rank, current department and policing experience (length of service), are reflective of the wider police perception of offenders as offence homogenous, with offenders specialising rather than being crime versatile, but any future study of this ilk should seek to employ a much larger number of police personnel than was available to the present study.

A police over-estimation of offence homogeneity, with particular regard to serious criminals, as we have suggested, appears to be pervasive with specialist squads and teams organised to combat criminals according to the type of crimes they commit (e.g. robbery squads), and can be construed to some degree to be suitable evidence that police do not see serious offenders as generalists. If

indeed the over-estimation of offence homogeneity is a collective police perspective then this poses a significant problem for policing methods which seek to identify active, serious offenders from more minor infractions of the law such as *Self-Selection Policing*. Here those who do 'big bad things' are flagged up to police by the 'little bad things' that they do' (Chenery, Henshaw and Pease, 1999; Roach, 2007A; 2007b) and is clearly at odds with police perception of serious offenders and their homogenous offending found in the present study. Self-Selection Policing in this instance would remain relegated to uniform with CID dealing only with serious crime. There are, therefore, important implications for police policy attached. For example, in the Flanagan Report (2008), a review of policing with an eye on the future, it is suggested that minor offences should be considered solely the remit of minor offenders.

Perhaps this incidental finding, that officers have widely different assumptions about the progression of the criminal career, is at least as important as the overestimation of homogeneity. Whether by overestimating homogeneity or simply having widely dispersed views, the use of prior criminality to inform risk of future criminality appears limited.

Last, a police over-estimation of offence homogeneity carries implications for the safety of frontline officers, where the pervasive tendency is to approach those stopped for more minor infractions as simply 'minor offenders', when they are in fact violent criminals. The possible consequence of such an encounter where the police officer is so unprepared does not bear thinking about.

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Tables and Figures

**Table 1. Police estimates of reoffence probability by first offence type compared with 'official' reconviction data (Cunliffe and Shepherd, 2007 p.8).<sup>5</sup>**

	<i>Responses lower than official rate</i>	<i>Responses higher than official rate</i>	<i>'Official'; re-offending rate</i>
Burglary	15	24	70
Theft	20	22	72
Drugs supply***	8	37	32
Violence to person***	8	34	46
Robbery	17	25	55
Public Order*	14	28	47
Sexual**	11	31	27
Motoring offences	26	1628	62
Fraud	26	16	40
Drink driving	23	19	33

\* p<.05 \*\*p<.01 \*\*\*p<.001

**Table 2. Quartile values for re-offending based on first offence type**

<b>First Offence</b>	<b>25<sup>th</sup> Percentile</b>	<b>75<sup>th</sup> Percentile</b>	<b>'Official'; re-offending rate</b>
Burglary	60	90	70
Theft	54	90	72
Drugs supply	50	80	32
Violence to person	54	85	46
Robbery	49	81	55
Public Order	38	76	47
Sexual	25	81	27
Motoring offences	25	75	62
Fraud	20	60	40
Drink driving	14	50	33

<sup>5</sup> Numbers have been rounded to facilitate comparison with reconviction study data.

**Table 3. Police estimates of reoffence type by first offence type compared with 2009 proven reoffending type.**

<b>First Offence</b>	<b><i>Responses lower than official rate</i></b>	<b><i>Responses higher than official rate</i></b>	<b>Proven reoffending by type ie same-same type (adult 2009)</b>
Burglary***	2	40	18
Theft**	11	31	52
Drugs supply***	5	37	32
Violence to person***	6	36	28
Robbery***	0	42	4
Public Order**	12	30	31
Sexual**	11	31	43
Motoring offences*	14	28	34
Fraud***	7	35	18
Drink driving***	2	40	6

\* p<.05 \*\*p<.01 \*\*\*p<.001

**Table 4. Quartile values for prediction of same type reoffence**

<b>First Offence</b>	<b>25<sup>th</sup> Percentile</b>	<b>75<sup>th</sup> Percentile</b>	<b><i>Known re-offending rate</i></b>
Burglary	60	90	18
Theft	54	90	52
Drugs supply	50	80	32
Violence to person	54	85	28
Robbery	49	81	4
Public Order	38	76	31
Sexual	25	81	43
Motoring offences	25	75	34
Fraud	20	60	18
Drink driving	14	50	6

**Table 5. Product-moment correlation coefficients between the judged probability of re-offending (any type) and the probability of such re-offending as occurred being of the same type as the first offence**

<b>First Offence</b>	<b>Association between probability of second offence and specialization index.</b>
Fraud	.72**
Drink	.68**
Public Order	.68**
Robbery	.66**
Motoring offences	.65**
Theft	.64**
Burglary	.63**
Violence	.55**
Sex offences	.52**
Drugs	.43**

\*\* $p < .01$ , two-tailed test.