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## THE FACETS OF CRIMINALITY: A CROSS-MODAL AND CROSS-GENDER VALIDATION

Donna Youngs\*, David Canter, and Jemma Cooper

In order to establish if criminals carried out distinct sub-sets of criminal activity as opposed to being widely versatile in the type of crime that they committed, 54 female and 49 male offenders completed a self-report questionnaire that asked about their criminality in two modes: Convictions and actual commission. MDS analysis of the resulting data supported the hypothesis that there is a subset of general criminal activities that most offenders have been involved in, but that there is also a tendency for offenders to evince thematic foci to their activities that relate to dishonesty, violence or antisocial crimes. These three core themes are present both in male and female offenders and across data modalities, emerging in the crimes for which the offender has been convicted as well as those to which s/he admits.

### 1. Introduction

#### 1.1 *Criminal career research*

A long standing debate in criminal actions research has focused on the question of whether offenders are either specialised, offending in specific crime types, or versatile, with no discernible patterns within their crime repertoire. Historically, most studies on this issue have focused on juvenile offenders and have tended toward the view that offenders are versatile (see Klein 1984 for a review). More recently, Farrington, Snyder and Finnegan's (1988) major study of 70,000 juveniles also pointed to a small degree of specialisation only, superimposed on a great deal of versatility. The consensus has emerged then that juvenile criminal careers reflect a single underlying construct of delinquent tendency displayed in an overall versatility of offending.

Studying juveniles as the basis of criminal career research is however problematic due to the over inclusion of misdemeanour offences that are unrepresentative of involvement in the penal system. Moreover, as Stattin, Magnusson and Reichel (1989) point out 25% of males and 52% of females do not receive their first conviction until the age of 21. Certainly, studies of adult offenders do tend to find increased levels of specialisation. For example, in their study of criminals aged 40 or older, Peterson, Pittman and O'Neal (1962) do find some degree of focus among these offenders in either assaultive or non-assaultive crimes.

Blumstein, Cohen, Das and Moitra (1988) also examined specialisation in the arrest histories of offenders aged 17 and over, representing offenders throughout their career. Their analyses again indicate some specialisation across violent and property offence categories. The degree of this specialisation varied across crime types. High specialisation was seen for crimes of profit, while the more impulsive violent crimes of homicide, rape

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*Key Words and Phrases:* criminal specialisation, versatility, gender differences, crime data

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and weapon violations were among the least specialised.

In a further study, Donald and Wilson (2000) examined specialisation tendencies in their sample of ram raiders. These authors reported three broad crime patterns within the previous convictions. The first of these related to dishonest crimes such as theft, handling stolen goods and burglary. The second theme related to violent crimes such as possessing an offensive weapon, robbery and assault on police. A final theme emerged relating to antisocial crimes such as reckless driving and the possession of drugs. The present study explores the hypothesis that this thematic level of specialisation relating to Dishonesty, Violence and Antisocial crime will be revealed in the criminal behaviour of a broader sample of adult offenders. In exploring this hypothesis, the impact of both the form of measurement of offending and of gender is assessed.

### *1.2 Measurement of criminality*

Investigations into the criminal career have primarily used official records as the measure of offending. However, whilst this measure is pertinent to the justice system and accurate for dates, it does capture only a small proportion of offenders' criminal activity and moreover, a non-representative proportion of that activity (Williams and Gold, 1972; Jensen and Rojek 1980). Another potential source of data is the self report questionnaire in which the offender reports all involvement irrespective of whether or not this has resulted in a conviction. This form of criminal measurement offers the possibility of uncovering actual levels of offending but memory problems can reduce its reliability and validity (Huizinga and Elliot, 1986).

In an attempt to reduce the impact of these measurement problems, the present study drew on accounts of both the actual commission as well as conviction records (both self reported by the offenders) for a variety of offences in seeking to differentiate particular criminal styles within these.

Previous studies assessing validation of different modes of criminal activity have found the correlation between official records and self-report data to be mostly positive and statistically significant (Hindelang, Hirschi and Weis 1981; Farrington 1989). In his study, for example, Farrington showed that self-reported levels of actual involvement in burglary, theft of and from vehicles, shoplifting, theft from machines, assault and drug use were significantly related to the offenders' official records for these offences. For some offence types, however, he found rather less correspondence between these two forms of criminal measurement. Levels of self-reported involvement in theft from work, vandalism and fraud were not indicative of convictions for these crimes. Similarly, Mathur, Dodder and Sandhu (1992) found that reported actual drug use did not correlate with the official data on this, particularly among female offenders (Sampson, 1985). Despite these differences on a few offences, however, it would be expected that in general a robust model of criminal differentiation will remain stable whether based on conviction data or data on actual commission levels.

### *1.3 Criminality and gender*

Research into gender differences in offending patterns has identified some differences in criminal style. In a study of the criminal career of heroin addicts, for example, Faupel (1986) showed that females gravitated towards shoplifting, then prostitution, drug dealing and finally forgery. Males, on the other hand, were most likely to be involved in drug dealing, followed by burglary, shoplifting, pimping and, finally, forgery. Faupel argued that these differences could be explained in terms of differences in gender-specific societal roles and activities.

Hindelang, Hirschi and Weis (1981) assessed gender differences in self-report delinquency, revealing some interesting differences in relation to both theft and violent crimes. For theft, their study showed that as the value of stolen goods increased so did the gender ratio, such that the higher the value of the stolen goods, the higher the ratio of male to female offenders. The violent offences showed a higher male prevalence, with only drug offences being quite similar across gender. They concluded that the main gender difference in offending was that males commit more serious and physically forceful offences.

For a model of criminal differentiation to be robust, it should remain stable across gender, even if the frequency with which some offences occur is different. In sum then, the objective of this study is to assess the thematic association of offences, validated over mode and gender. It is hypothesised that while there will be a subset of generalised criminal activities, in which most offenders have been involved, but there will be a further tendency for offenders to evince thematic foci to their activities that relate to dishonesty, violence or antisocial crimes. It is hypothesised that this pattern will remain stable across mode of measurement and gender.

## **2. Method**

### *2.1 Sample*

The sample was matched for age across gender. It comprised 54 females and 49 males involved in the penal system in the Liverpool area. They were either on bail ( $n = 37$ ; 35.9%), undertaking community service ( $n = 35$ ; 34.0%), or in prison ( $n=31$ ; 30.1%).

The mean age for the female sample was 29.2 years, ranging from the minimum age of 16 to a maximum of 53 (S.D. 8.1). The male sample ranged from 16 years to 54 years with a mean age of 28.7 (S.D. 8.7).

### *2.2 Measures*

Offenders self-reported both their convictions and their actual offence commissions. The convictions were reported across 21 offence categories. The commission measure comprised 21 behaviour items matched to these conviction categories (see Table 1).

Table 1: Self-report questions for commission of offences and abbreviation labels.

CRIME/ CONVICTION	SELF-REPORT QUESTION/ COMMISSION	ABBREVIATION
1. Theft	Taken things from a wallet/purse (or the whole wallet/purse) while the owner wasn't around or looking?	theft
2. Shoplifting	Taken things of high value (worth more than £100) from a shop without paying for them?	shoplift
3. Handling stolen property	Bought something you knew had been stolen?	handling
4. Robbery	Threatened to beat someone up or use a weapon if they didn't give you money or something else you wanted?	robbery
5. Burglary house	Broken into a house and taken money or something else you wanted?	burg hou
6. Burglary other	Broken into a warehouse and stolen goods worth more than about £500?	burg oth
7. Taking cars	Taken a car for a ride without the owner's permission and then abandoned it?	take car
8. Theft from cars	Broken into a locked car to get something from it?	theft car
9. Taking bicycle	Taken a bicycle belonging to someone you didn't know with no intention of returning it?	take bike
10. Fraud	Used stolen credit cards or cheques to pay for things or to get cash?	fraud
11. Murder	Planned to kill someone and then killed that person?	murder
12. Violence	Beat someone up so badly they probably needed a doctor?	violence
13. Firearms offences	Used or carried a gun to help you commit a crime?	firearm
14. Offensive weapon	Carried a razor, flick-knife or some other weapon with the intention of using it in a fight?	weapon
15. Dealing in drugs	Sold drugs to others?	dealing
16. Possessing drugs	Used heroin (smack)	possess
17. Drunk or disorder behaviour	Been loud, rowdy or unruly in a public place?	disorder
18. Criminal damage	Broken into a house, shop, school or other building to break things up or cause other damage?	damage
19. Arson	Set a large building, such as a school, factory or hospital on fire?	arson
20. Sexual offences	Forced another person to have sex with you when they did not want to?	sex off
21. Prostitution	Been paid for having sex with someone?	prostitute

Crime (c) will reflect

(versatile)		<i>Range</i>
(anti-social)		
(dishonest)	styles of offending, in which offenders →	(will) be involved
(violent)		(will not)

Figure 1: Mapping Sentence for the proposed model of criminal differentiation

### 2.3 Facet Analysis

The hypothesised model of criminal differentiation can be represented in the form of a mapping sentence (Shye, Elizur and Hoffman 1994).

It is hypothesised that this structure will remain stable across data modality and across gender.

The support within the SSA-I for the proposed differentiation is explored using the facet theory approach to research (Canter 1985). The family of non-metric multidimensional scaling (MDS) procedures developed by Guttman and Lingoes (Lingoes 1973, 1979) are particularly appropriate for a facet analysis. The SSA-I procedure from this family was used in the present study. Like all the MDS procedures, SSA-I allows the underlying structure of a set of variables to be appreciated by generating a spatial representation of the relationship of every variable to every other variable. SSA-I bases the representation on the rank order of some index of similarity between variables, typically the inter-correlations. The variables are plotted as points in space such that the relative magnitude of the correlations between two variables is inversely related to the distance between the points. In short, the closer two points, the more likely the variables are to co-occur. The structure of the relationships among variables can, therefore, be readily examined through consideration of the configuration of points.

The goodness of fit between the SSA space and the correlation matrix from which it is generated is measured by the coefficient of alienation. The smaller the coefficient of alienation, the better the fit. A coefficient of alienation smaller than 0.15 is considered a good fit (see Guttman, 1968).

For the facet analysis the data were recoded to indicate levels of participation so that any reported involvement in each behaviour, from 'Once or twice' through to 'Very often (more than fifty times)' was indicated by a 1; no involvement ('Never') as a 0. The SSA-I was then carried out on an association matrix of Jaccard's coefficients. The Jaccard's coefficient for binary data takes no account of joint non-occurrence in a data set. It is, therefore, particularly suitable for the present data since this contains cases in which respondents have neither specified involvement in a behaviour at a particular level, nor explicitly denied it on the questionnaire.

Within the facet approach, regions are drawn on the SSA-I for each facet on the basis of the contiguity of the items on the plot. Empirical support for a particular facet or distinction within a given phenomenon is considered to exist where regions of items with the same element coding can be drawn.

### 3. Results

A three-dimensional SSA solution was found to have a satisfactory coefficient of alienation of 0.17 in 100 iterations for the male sample, and 0.13 in 100 iterations for the female sample. In the figures, the points represent the 21 behaviours. The corresponding frequency of occurrence within the respective male or female samples is indicated in brackets for each behaviour.

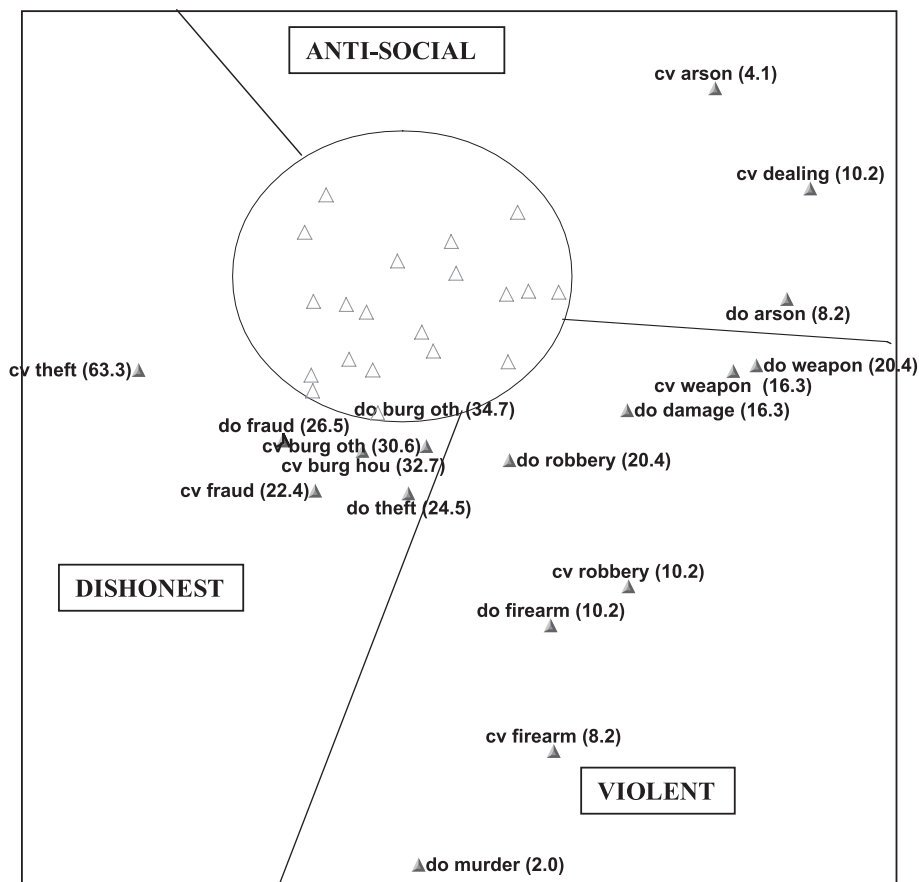


Figure 2: SSA showing male themes in offence commission (do) and conviction (cv) variables (with male sample % frequency) for abbreviations see Table 1. Central variables are represented in Figure 3.

### 3.1 The facets of criminality

#### 3.1.1 Male themes

The SSA-I for the male sample revealed a radex model of criminal differentiation, with little thematic variation at the centre of the plot. Spanning out from the central region (Figure 2) are three distinct regions of offending: Dishonesty, antisocial crimes and violence. The offences in the region for dishonesty clearly reflect a facet describing taking property from other people whether in the form of goods, household items or money. Drug dealing and arson produce the region of antisocial crimes, depicting socially unacceptable and taboo behaviour. Robbery, weapon, firearms and murder produce the violent offence region, all clearly being forceful offences.

#### 3.1.2 Male generic offences

The generic offences close together at the centre of the plot, (Figure 3, enlargement of

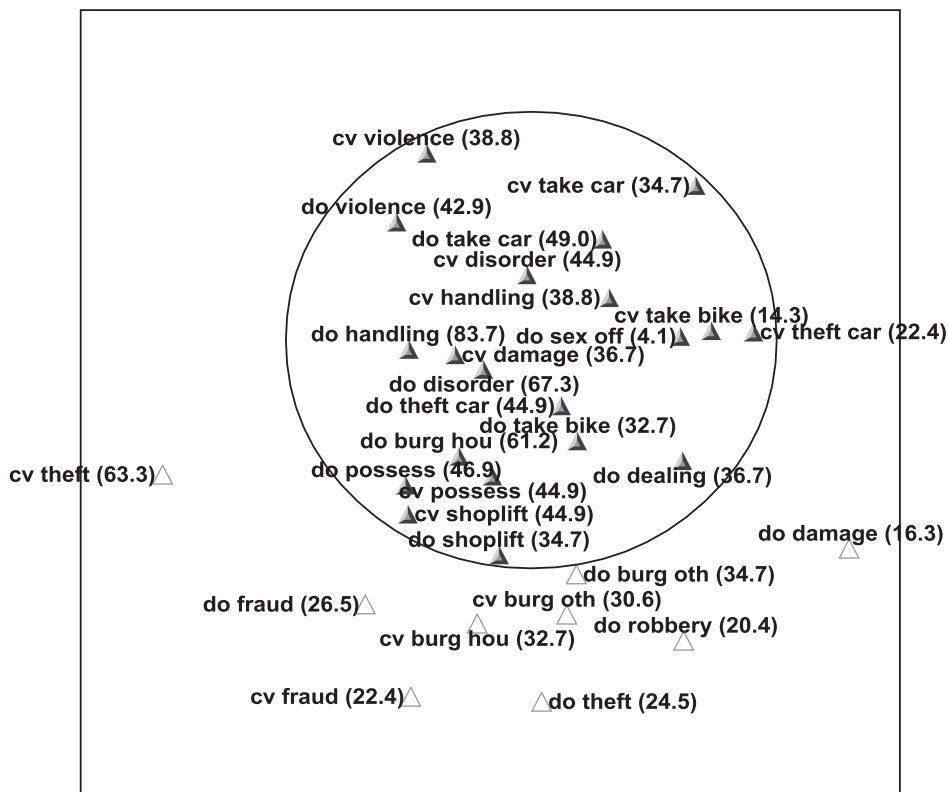


Figure 3: Enlargement of centre of figure 1 SSA showing generic male offence commission (do) and conviction (cv) variables (with male sample % frequency) for abbreviations see Table 1.

centre of Figure 2) indicate a universal quality within the sphere of offending. The generic offences can be considered as the staples of criminal activity in which offenders show a versatile involvement. This region shows a predominance of stolen property variables, for example, handling stolen goods, car offences, taking bicycles and shoplifting, also with the offences of disorder, drug possession and violence. The generic offences do not have an underlying theme, but describe the basis of male offending behaviour.

### 3.1.3 Female themes

The same general radex structure of criminal differentiation is revealed within the female sample (Figure 4). As with the male sample, as we move out from the undifferentiated central region, three regions of dishonest, antisocial and violent offending emerge within the female sample. The facet of dishonesty again reflects taking items from other people, whether in the form of goods, household items, or money. The antisocial variables are mainly the sex-related variables of sex offence and prostitution. Also within this region are the variables of arson, damage and disorder, which reflect offences that result in no instrumental gain. The variables of robbery, weapon, firearm and murder describe the violent offence theme all relating to offences of force.



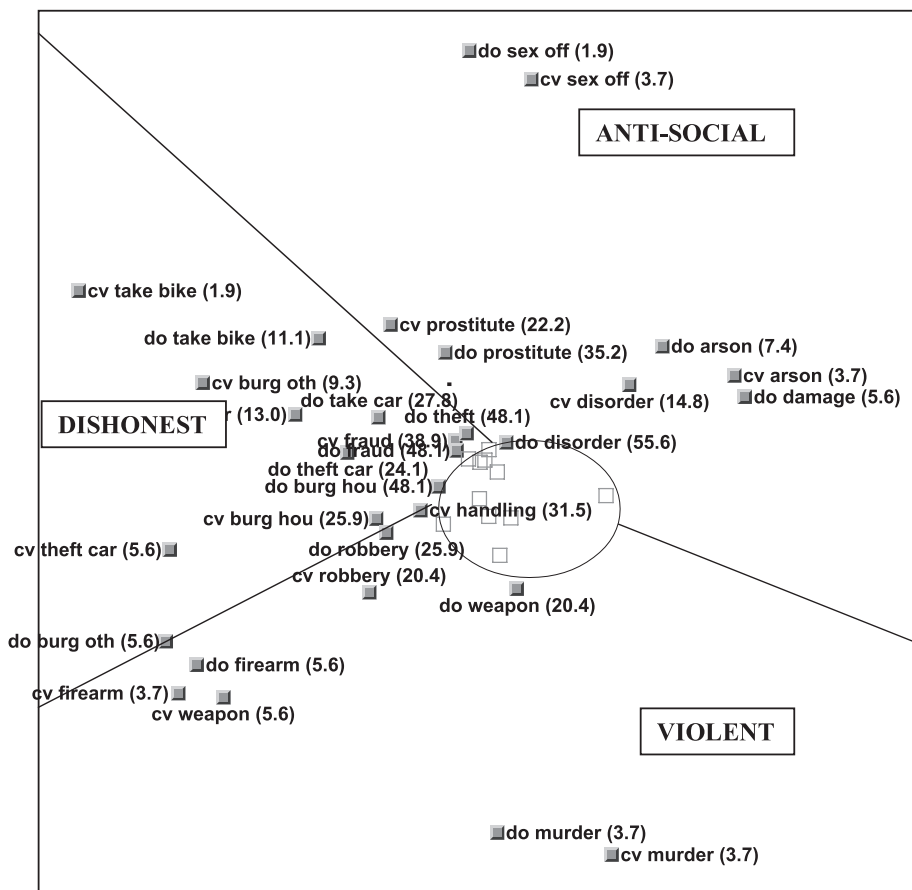


Figure 4: SSA showing female themes in offence commission (do) and conviction (cv) variables (with female sample % frequency). For abbreviations see Table 1. Central variables are represented in Figure 5.

### 3.1.4 Female generic offences

The female generic offences (Figure 5, enlargement of centre of Figure 4) include stolen property, drug possession, drug dealing, shoplifting, and violence. Again, this is a region of varied, staple criminal activity.

### 3.1.5 Specialisation vs. versatility

Examination of the frequencies of the offence variables provides further support for the regional hypothesis that there will be a sub-set of general criminal activities that most offenders have been involved in with a tendency for thematic foci relating to dishonesty, violent and anti-social crimes. Due to the associative significance of the variables and the pattern of the frequency of the offences being the highest in the centre of the plot, the generic offences represent crimes that most offenders have been involved in, which are highly associated. This is supported by the alpha coefficients of 0.82 for the male (m)

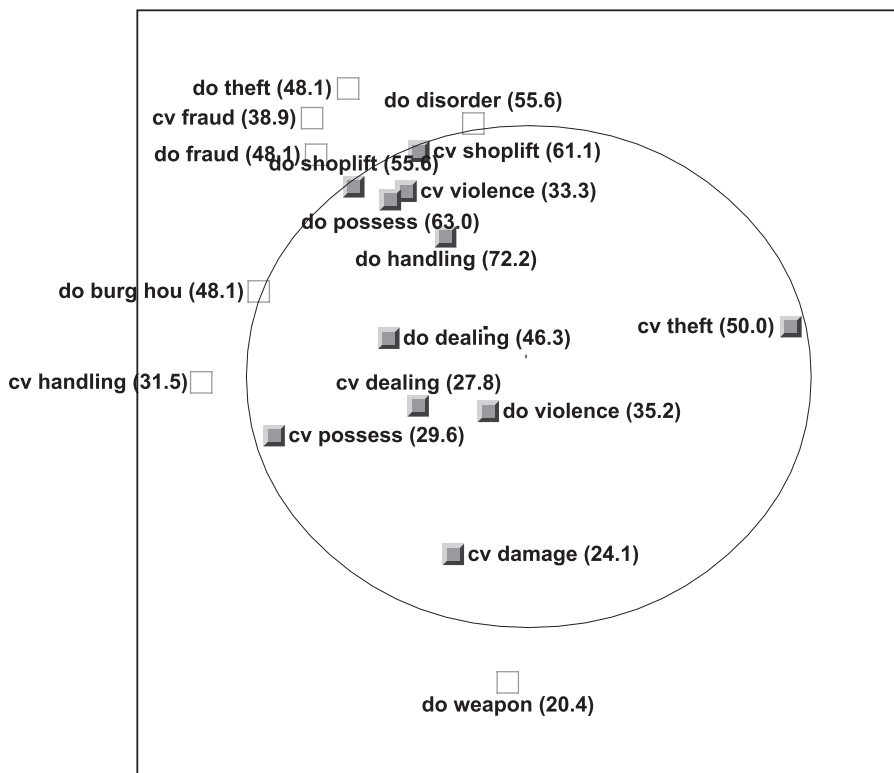


Figure 5: Enlargement of centre of figure 3 SSA showing generic female offence commission (do) and conviction (cv) variables (with female sample % frequency) for abbreviations see Table 1.

sample and 0.76 for the female (f) showing high association between the offences in this region.

Radiating out from the generic offences are the less frequent, more specialised offences, thus the thematic foci of dishonesty, violence or anti-social crimes. Within the themes the outer most offences are the least frequent, and further apart in the plot, indicating little co-occurrence with other offences. It is noteworthy that these most specialised crimes are the most extreme, including murder in the violent theme and arson in the anti-social theme. Amongst the thematic foci it is possible to see that the dishonest themed variables are quite centrally placed on the plot, of high frequency in relation to the violence and anti-social themes. This suggests that the dishonest offences are more central to the criminal career than antisocial and violent themed offences. The alpha coefficients for the dishonest region (m 0.82; f 0.82) were higher than for the violent offences (m 0.61; f 0.68) and considerably more so than the anti-social offences (m 0.29; f 0.49). This suggests a greater breadth or versatility of involvement within the dishonest theme.

### 3.2 Gender Comparison

The hypothesised model of general criminal activities with emerging thematic foci of dishonesty, violence and anti-social crimes was supported across both male and female samples. However, some subtle gender differences relating to specific offences did emerge. For empirical assessment of the differences between the males and females independent t-tests were done for both the actual commission and conviction of each offence. Table 2 shows the offences for which the means differed significantly.

As would be expected, the greatest gender differences related to prostitution, which was a central and frequent antisocial offence for the female sample, but was not found in the male sample. The main generic offences for the female sample were drug related with the frequency of female drug offences was nearly a third higher than the male drug offences (f drug possession 63.0% commission (do) and 29.6% conviction (cv), m possession 46.9% do and 44.9% cv; f dealing 46.3% do and 27.8% cv, m dealing 36.7% do and 10.2% cv). Further, conviction for drug dealing was in the antisocial region for the male sample, and the only significantly different drug offence across gender ( $p < 0.05$ ,  $t = 2.33$ ).

The male generic offences differed to the female in relation to the vehicle-related offences. These vehicle offences appear to be the “daily bread” provider of the criminal career for the males, yet are dishonest offences for the females. The frequencies reflect this, with male ‘taking car’ 49.0% do and 34.7% cv, female ‘taking car’ 27.8% do and 13.0% cv; ‘theft from a car’ 44.9% do and 22.4% cv for males and 24.1% do and 5.6% cv for females. Both the commission and conviction of these variables have significantly different means between gender (see Table 2).

The offence of disorder is a generic offence for the male sample, yet an anti-social

Table 2: Significant t-tests testing gender differences in commission and conviction of offences.

OFFENCE	T-VALUE
Commission theft	2.557*
Commission shoplifting	2.150*
Commission burglary other	-3.856***
Conviction burglary other	-2.745**
Commission take car	-2.236*
Conviction take car	-2.626**
Commission theft from a car	-2.245*
Conviction theft from a car	-2.486*
Commission take bike	-2.683**
Conviction take bike	-2.311*
Commission fraud	2.308*
Conviction drug dealing	2.329*
Conviction disorder	-3.466**
Commission prostitution	5.364***
Conviction prostitution	3.891***

\* significant at  $p < 0.05$

\*\* significant at  $p < 0.01$

\*\*\* significant at  $p < 0.001$

offence for the female sample. Whilst there are only 11.7% more male offenders committing disorder offences the conviction gender difference is significant, with just over a 30% difference.

The other generic offence that was significantly different was the commission of shoplifting due to a higher occurrence in the female sample (55.6%), compared to the male sample (34.7%)

In the dishonest offence region, a gender difference was previously noted in relation to vehicle offences with these operating as core crimes for males, but falling within the dishonest theme for females. 'Burglary-other', whilst being in the same region for both genders, was significantly different in both the commission data ( $p < 0.001$ ,  $t = -3.856$ ) and conviction data ( $p < 0.001$ ,  $t = -2.745$ ) due to increased male commission and conviction of this offence. Theft commission was also differed significantly across gender ( $p < 0.05$ ,  $t = 2.557$ ) with higher proportions of females involved.

### *3.3 Data Mode Comparison*

Within the SSA configurations the commission and corresponding conviction of each offence were predominantly found in the same region, although some differences did emerge. For the male sample, the commission of house burglary was in the higher frequency generic region, whilst the conviction was in the dishonest region. Similarly, actual commission of drug dealing fell within the generic region while the conviction was in the anti-social region. These differences could reflect the low detection rates for these particular offences.

For the female sample, the actual commission of 'handling stolen goods' fell in the generic region while the conviction fell in the dishonest region. Also the conviction for theft was in the generic region whilst actual self reported commission of this was in the dishonest region. For both the male and female sample convictions for the offence of criminal damage was in the generic region and the commission was in the anti-social region for females and violent for males.

## **4. Discussion**

Analysis of patterns of co-occurrence within the self-reported data on both the actual commission and the conviction records on 21 offences supported the hypothesised model of criminal differentiation describing a subset of general criminal activities in which most offenders have been involved in, along with distinct styles of criminal activity relating to dishonest, violent or anti-social crimes. Being able to differentiate between individuals in terms of their offending patterns in this way is potentially useful in relation to crime control policy, rehabilitation efforts and criminal justice decision making.

There were some indications that specialisation in these offence styles may vary across themes. The dishonesty offences were committed most frequently compared to offences in the other themes of violent and antisocial behaviour. They were also the most interrelated acts as a group, in which involvement was most versatile. This homogeneity among theft and stealing offences has been reported previously by Blumstein et al. (1988). A more

offence-specific specialisation was revealed within the violent and antisocial offences.

The themes replicate those revealed by Donald and Wilson (2000) on a general offender sample. The emergence of these themes from a background of generalised criminal activity may be considered consistent with the indication in many previous studies of ‘weak specialisation tendencies’ (e.g. Farrington, Snyder and Finnegan 1998).

The model was broadly supported across both the male and female samples, with minor differences only across gender. This suggests that, as a whole, female offending activity is characterised by the same substantive type and range of criminal themes as is male offending. It indicates that, at the aggregate level at least, the same broad differences exist between female offenders as between male offenders. The general model also held across data modalities with the same broad themes emerging within the accounts of both convictions and actual commission. This suggests again that at the aggregate level, police data does accurately capture the range of differences in offending style. Of course, the stability of the model across gender and data modalities may also be seen as a form of validation for the proposed structure of criminal differentiation in terms of dishonest, antisocial and violent offence styles.

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