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Self-selection policing and animal cruelty: Investigating animal cruelty as an indicator of more serious and active criminality.

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MSc by Research
22,121 words
Supervised by Prof Jason Roach and Dr Melanie Flynn

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Abstract

Self-selection policing involves using the more minor crimes individuals commit to identify active, serious offenders. The present study aimed to investigate animal cruelty as a potential crime to be used for this purpose. To be effective, this required offenders to be versatile and commit both minor and serious offences, as well as being active around the time the animal cruelty offence was committed. Fifty-three criminal records of animal cruelty offenders were acquired from a police force, and types of additional offences and temporal differences between offences were analysed. It was found that overall, criminals were more versatile than specialised in all instances and a large proportion of offenders were found to be active in their offending. Specific sub-groups were also analysed, including older offenders and frequent offenders, in order to gain further insight into their criminality and the potential value of animal cruelty as an SSP trigger. As a result of this research it is suggested that animal cruelty offences should be more closely monitored, as there is potential for identifying more serious active offenders. Limitations and directions for future research are also discussed.

Introduction

Peter Sutcliffe, also known as the 'Yorkshire Ripper', is an English serial killer who was convicted of murdering 13 women and attempting to murder seven others between 1975 and 1980 (BBC, 2010). Sutcliffe operated in Leeds and Bradford and claimed that the voice of God had given him a mission to kill prostitutes. In January 1981, a police officer stopped Sutcliffe, who was accompanied by a 24year-old prostitute at the time, as the number plates displayed on his car were false. He was arrested and questioned about the 'Yorkshire Ripper' case as he matched the description of the perpetrator, however denied any involvement (BBC, 2010). The following day police returned to scene of the arrest and recovered a knife, hammer and rope which Sutcliffe had discarded when not in view of the police before being taken in; he claimed he really need to urinate. After two days of questioning, Sutcliffe admitted to the crimes (BBC, 2010). Although it could be argued that luck was responsible for the arrest and conviction, had it not been for the vigilance of the police officer who stopped Sutcliffe for a more minor offence, he may not have been identified until much later. This is just one example of a case in which a serious, active criminal was apprehended as a result of being identified for committing a minor offence. Further examples include Ted Bundy, who was caught for driving infractions (New York Times, 1978), as well as Harold Shipman, who committed the forgery of his murder victims' wills (BBC News, 2002). This could suggest that a focus on investigating minor crimes further could be a useful method for identifying active, serious criminals.

Self-selection policing (SSP) is a contemporary investigative tool that suggests serious offenders can be identified through the more minor offences they commit on a more regular basis (Roach & Pease, 2016). The principle concept is that criminals are versatile and "those who do big bad things also do little bad things" (Roach, 2007a, p.66). Minor crimes are both more apparent and occur more frequently, so arguably it may be easier to identify serious, active offenders from the minor offences they engage in. Offenders self-select for police scrutiny when they commit offences, so police can investigate these individuals further, whilst abiding by ethical police practice (Roach & Pease, 2016). Therefore, this could be a useful, complementary method to traditional policing.

SELF-SELECTION POLICING AND ANIMAL CRUELTY

Roach and Pease (2016) set out three principle assumptions in order for SSP to be applicable to police investigations. These are as follows:

- Most active, serious offenders are versatile in their offending and will commit a variety of crimes, as opposed to specialising in one type of crime.
- Active, serious offenders will also commit minor offences (in addition to the serious offences).
- Links exist between active, serious offenders and certain types of minor offence. So, specific types of minor offence, also referred to as 'trigger' offences, can be used as potential indicators of active serious criminality that will be revealed through further police investigation.

Previous SSP studies have begun investigating trigger offences and these have been focused on driving offences (Roach 2007b; Roach, 2017). However, Roach (2016), also suggested that animal cruelty could have the potential to serve as a trigger offence. The present study aims to investigate this further, through reviewing literature that explores animal cruelty's link to other types of offending, as well as conducting analyses on criminal records.

Literature Review

The following section will review the existing literature regarding criminal versatility (theoretical and empirical research) and specific SSP research. As well as using literature to provide justification for animal cruelty serving as a suitable 'trigger' offence. One of the central principles underpinning SSP is offender versatility, therefore, the first section will examine this critically. In exploring the concept of crime versatility, theoretical support is presented in the form of the role of opportunity theories and how the environment can influence offending behaviour. This is then followed by discussion of some 'general' theories of crime, which includes Gottfredson and Hirschi's (1990) 'General theory of crime' and Moffit's (1999) developmental taxonomy. Next, criminal careers research is critically discussed; this is a highly important aspect of research regarding versatility and provides ample support for this type of offending, whilst also providing insight into factors such as age and gender. Finally, further empirical evidence is synthesised, with examples of specific studies investigating the versatile offender and a focus on which offenders are most versatile.

The second section of the review critically discusses the limitations of existing police methods in order to provide justification for the inclusion and application of SSP. This is then followed by a section evaluating specific SSP research, focusing on the investigation of potential trigger offences, as well as directly testing the method in real world settings.

The aim of the present study is to investigate animal cruelty as a potential trigger offence. Therefore, the final section considers animal cruelty specifically, and focuses on reasoning for the offence serving as a suitable trigger; this is critically assessed using both theory and empirical research. The rationale and research questions are then summarised at the end of the review.

The Versatile Offender

Opportunity Theories

Although there are many arguments suggesting that there are certain individual characteristics that influence the likelihood of criminal behaviour (Hollin, 2006; Quinsey, 1995), it is also important to consider external, environmental and situational factors, which are explored in environmental criminology. There are three main 'opportunity' theories concerned with this area of criminology relevant to SSP; these are Rational Choice Theory (RCT), Routine Activity Theory (RAT) and Crime Pattern Theory (CPT). It has been suggested that opportunity and situational factors play an important role in criminal behaviour (Gottfredson & Hirschi, 1990) and that an offender will commit a crime if the situational factors are conducive to do so. There are various situational factors explored through these theories including the element of choice, deterrents to offending behaviour, offenders' routines, as well as geographical factors (Cohen & Felson, 1979; Brantingham & Brantingham, 1994; Cornish & Clarke, 2008).

RCT is concerned with the influence of the environment on behaviour and environmental/learning theories (Cornish & Clarke, 2008). Regarding offender behaviour, Cornish and Clarke (1986; 2008) suggest that criminal behaviour is based on rational decisions so an offender will conclude that the perceived benefits of committing a certain crime outweigh the perceived risks, in a given situation. From an SSP perspective, it can be suggested that an offender is unlikely to be deterred from committing a more minor crime if they have previously justified committing a more serious crime, as the risk of being detected is presumably lower. This theory also supports the offender versatility perspective as it suggests that opportunity is the principle cause of crime. So, offenders will commit crimes as the opportunities present themselves, as opposed to seeking out opportunities to commit a specific type of crime they have committed previously (Roach & Pease, 2016). A large volume of support for this theory has been demonstrated in the literature (Loughran, Paternoster, Chalfin & Wilson, 2016; Matsueda, Kreager & Huizinga, 2006; Piliavin, Gartner, Thornton & Matsueda, 1986), however limitations have also been identified. The principal criticism of the theory is that the act of rationally weighing up the benefits and risks is limited

when attempting to justify non-instrumental acts such as property crimes and acts with serious impacts such as violent offences (Pratt, Cullen, Blevins, Daigle & Madensen, 2006). It has also been argued that the theory fails to take into account factors such as impulsivity, expressivity, moral ambiguity and shame (DeHaan & Vos, 2003). However, research by Loughran, Paternoster, Chalfin and Wilson (2016) suggests that when analysing criminal behaviour using a comprehensive model of rational choice, individuals do appear to respond to rational choice perceptions and this was consistent across varying crime types, including violent crimes. Additionally, it is suggested that based on their results, RCT is as general a theory of crime as other theories such as social learning theories, control, and strain theories (Loughran, Paternoster, Chalfin & Wilson, 2016). In addition, the prior mentioned criticisms are more relevant to the motivations of offenders; so do not undermine SSP principles, which are more concerned with the environment's impact on crime versatility.

RAT explains the occurrence of criminal behaviour, through the co-occurrence of three factors: a motivated offender; suitable victim or target; and the absence of a capable guardian, which is anyone or anything that may deter an offender from committing an offence, such as a member of the public passing by (Cohen & Felson, 1979). This theory suggests that crime occurs because of the lack of controls to prevent it, as opposed to specific psychological attributes of an individual. Eck (1995) explains that this has been viewed as a micro-level theory, describing the most basic elements required for a crime event. However, the theory has macro-level implications as it can be applied in a manner that could explain actual crime levels; adjustments in numbers of suitable targets and guardians could have large-scale effects on crime rates (Eck, 1995).

Cohen and Felson (1979) discuss the importance of considering the environment and settings in which crimes occur in order to understand the reasons they occur. Individuals' daily routines can lead to the separation of people from those they trust and their valued property, as well as potentially causing those from different backgrounds to cross paths, which could influence the likelihood of criminal acts (Cohen & Felson, 1979). This theory has been developed further with Eck's crime

triangle (cited in Felson & Eckert, 2018), which models the process of a crime event. There is a small inner triangle connecting the three factors, the offender, the crime target, and the setting of the crime (place), which provides a visual representation of RAT and demonstrates the importance of the convergence of situational factors. Surrounding this triangle, the outer 'protective' triangle combines the types of supervision the offender must evade: a handler supervises potential offenders (e.g. a parent); a place manager, who supervises the place/area; and a guardian (previously described) (Eck, 1997, cited in Felson & Eckert, 2018). This model develops the understanding of the various factors involved in a crime event.

In terms of SSP, this is highly relevant as it suggests that environments are important for understanding the occurrence of crime, and an offender will commit a crime if the environment is conducive to do so, regardless of the type of crime opportunity. Also, the convergence of the prior mentioned factors (combined with low risk of being caught) is likely to be much more frequent for minor crimes, so people more likely to commit them, including more serious offenders. Additionally, the perception of an opportunity to commit a crime is also relevant; although the motivations behind this are not a principal focus (Pease, 2006; Roach & Pease, 2016). Pease (2006, p. 57) discusses affordance, which is defined as "the perception of what action comes to mind in a particular setting". It is suggested that this influences an individual's propensity to commit a crime as those associated with being criminal may be more likely to recognise an opportunity to commit an offence (Pease, 2006). Recognition of an opportunity to commit a crime is of central importance, as it links the environmental factors to the occurrence of a crime event. However, it also provides additional support for SSP, as Pease (2006) infers that frequent offenders have a criminal 'mind-set' that allows them to identify a situation as a crime opportunity, where other 'non-offenders' may not. Relating to RAT, individuals with this mind-set are likely to identify a vast array of crime opportunities, both minor and serious on a regular basis (when the three factors stated in RAT converge), as they are going about their daily lives. This provides further explanation for why offenders may commit a wide range of offences, as well as providing insight into why those who commit serious offences may also commit a number of minor offences.

The final environmental theory is CPT, which aims to provide a greater understanding of why crime occurs where it does (Brantingham & Brantingham, 1994). It is discussed that crime does not occur in a random manner geographically, but in clusters based on individuals' movements in their day to day life. Brantingham and Brantingham (1993, p. 273) suggest that the reasoning for this is that a crime event will only occur in an area where an individual is "comfortable or sure of what will happen" and offenders will have a mental template which defines a site deemed suitable for committing a crime. These areas are referred to as 'activity spaces' which are drawn out by connecting the paths between several primary 'nodes' such as home, work, and places of shopping and leisure (Brantingham & Brantingham, 1993). Offenders are most likely to commit crimes within these areas that are familiar to them, and this provides some explanation for why crime clusters in certain locations (Brantingham & Brantingham, 1994). A crime will occur when "a person with some readiness to commit a crime comes across a target judged suitable and in a situation sufficient to activate a 'readiness potential", readiness being defined as a "willingness to commit a crime" (Brantingham & Brantingham, 1993, p. 285). This again supports SSP, as the most influential factor for committing a crime is suggested to be a 'triggering event', reiterating the idea that criminal activity relies on opportunity. Brantingham and Brantingham (1993) go on to discuss how individuals make decisions regarding their criminal behaviour that could be considered normal/rational in the context of committing a crime, which relates to RCT (Cornish & Clarke, 2008). It could also be suggested that if offenders commit serious crimes at or between these 'nodes' in their 'activity spaces' they may also commit more minor crimes as part of their daily routines, potentially more often (Roach & Pease, 2016); this could be monitored by police and assist in identifying more serious criminality in specific areas. This could also be linked to Pease's (2006) ideas on affordance, as individuals may identify particular situations within their 'activity spaces' as being opportunities to offend. As mentioned previously, frequent offenders may be more likely to identify a situation as a crime

opportunity. This is likely to occur more regularly with minor crime opportunities, which may present themselves in the 'activity spaces' more often, however, serious crime opportunities may be identified through the same process.

An additional theory, which has been suggested to provide further support for SSP (Roach, unpublished) is Kahneman and Tversky's (2013) prospect theory, which posits that individuals frame their decisions around a reference point identified after evaluating the various prospects in a given situation. It is explained that individuals are risk-averse when considering potential gains and risk-acceptant with potential losses; individuals consider the importance of what they already have, rather than only considering what they could have (Kahneman & Tversky, 2013). Kahneman and Tversky (2013) identified two distinct phases in the choice process. First, the editing phase, involves the initial analysis of the options, possible outcomes, consequences of these, and the values and probabilities of the outcomes. The second phase concerns evaluating the situation, the preferred prospect is chosen after a reference point has been identified, and the potential losses and gains are assessed (Kahneman & Tversky, 2013). Regarding criminal behaviour, individuals are most likely to commit a crime, if they do not think the losses would be too much, as opposed to committing a crime because they think they will gain a lot (Johnson & Payne, 1986). This approach is important for SSP as it provides a more comprehensive explanation for why an individual will commit a crime; considering decision-making mechanisms and accounting for those whose decision-making is less systematic and logical (Guthrie, 2003). Johnson and Payne (1986, p. 174) also highlight that an individual's expectations can "influence the attractiveness of options", the options being whether or not to commit a crime. This is not included in detail in the prior mentioned theories such as rational choice, which is more basic, simply suggesting that individuals will commit a crime if they believe there are more benefits than drawbacks (Cornish & Clarke, 2008). Johnson and Payne (1986) suggest that prospect theory is limited, as decision-making is complex and understanding the framing of decision-making is not sufficient to predict criminal acts. However, this relates more to the implementation of prospect theory ideas to policing policies. The theory remains useful for understanding how individuals may decide to commit crimes when the

opportunity is presented. Regarding SSP, the theory provides further understanding for why criminals may be versatile. It could be suggested that the potential losses for committing a serious offence are much larger than for a more minor offence, as the punishment is worse. After committing a serious offence, it could be argued that if the opportunity to commit a minor crime arises, through the decision-making mechanisms of prospect theory and assessing risk, the individual would choose to commit the minor crime as the potential loss is much smaller, even if the gains are as well.

'General' theories of Crime

As stated, Roach and Pease (2016) suggested a number of assumptions, in order for SSP to be an effective investigative tool. The central principal is that most active, serious offenders are versatile in their criminal behaviour and will commit a variety of offences (both minor and serious), as opposed to being a specialist and only committing one type of crime (Roach & Pease, 2016). There appears to be an assumption that offenders are specialised, for example, in the nineteenth century, Lombroso (2006) categorised offenders by their physical features and used this as a predictor for the type of crimes they would commit. This idea of specialisation has tended to persist through criminology, with a vast array of literature focusing on specialisation (e.g. Kempf, 1987; Tzoumakis, Lussier, Le Blanc & Davies, 2012) and this has also been a central principle in policing (Roach & Pease, 2014). However, when considering most theories, there is little reason why this should be the case. Farrington (2003) conducted a review of developmental research in criminology and summarised the key theoretical and empirical issues. He established that criminals are versatile, as opposed to being specialised and also highlighted that versatility is not limited to criminal acts. It is suggested that crimes are "elements of a larger syndrome of antisocial behaviour", which also encompasses behaviour such as heavy drinking, promiscuity and bullying; offenders' versatility extends to these behaviours as well as committing a vast array of crimes (Farrington, 2003, p. 224).

Gottfredson and Hirschi (1990) proposed the 'General Theory of Crime' suggesting that crime is committed because of a lack of self-control, with

individuals possessing varying levels of self-control resulting from parenting practices (such as level of supervision, disciplining and affectional ties). The 'General Theory of Crime' further suggests that criminals are unlikely to specialise as the likelihood of commiting a crime is based on opportunity and situational factors. This is emphasised further by their idea that although individuals have differing levels of self-control, there are many opportunities to commit a crime that arise throughout their lifetime. Gottfredson and Hirschi (1990) explain that individuals with low self-control commit a broad array of crimes as low self-control can affect individuals in a wide variety of situations. Although the theory has been criticised, as support for the relationship between self-control and opportunity has not always been consistent, research has found that self-control was one of the strongest known correlates of crime (Pratt & Cullen, 2000). Regarding SSP, this theory is highly relevant as it provides support, as well as one explanation, for the potential versatility of offending behaviour.

Research by Moffitt (1999) also supports the idea of offender versatility and identified two types of offenders, life-course persistent offenders and adolescent limited offenders. Life-course persistent offenders begin offending early in life and continue committing a range of crimes throughout their life, due to a number of potential factors, which could include a predisposition to crime as a result of neuro-psychological factors (Moffitt, 1999). It is suggested that these individuals are unlikely to get the opportunity to change and are therefore likely to remain active, serious criminals with extensive offending histories compiled of a large array of offences (Moffitt, 1999). The alternative is the adolescent-limited offender, which is the larger of the two groups, and is characterised by much more minor offences committed in group settings, with peers influencing the behaviour (Moffitt, 1999). This group will commit a variety of minor offences during their youth but have characteristics and abilities that enable them to desist from offending as they grow up. In terms of SSP and offender versatility, both groups described by Moffitt (1999) will be versatile in their criminal behaviour, which supports SSP ideas. The life-course offenders committing a wide variety of offences, are unlikely to be deterred from committing minor offences and the adolescent limited group committing a variety of minor offences due to social

influences (Moffitt, 1999). Regarding the application of SSP, the life-course persistent offenders are of particular relevance as they remain actively criminal throughout their lives and commit a range of offences, both serious and minor. These offenders could be argued to be the most problematic and could cause the most harm if they remain undetected.

Following on from this, another aspect of the General Theory of Crime suggests that individuals with low levels of self-control begin offending much earlier and early starters are more versatile (Gottfredson & Hirschi, 1990). This has been the case in a number of empirical studies (e.g. Mazerolle, Brame, Paternoster, Piquero & Dean, 2000; Piquero, Oster, Mazerolle, Brame & Dean, 1999). Mazerolle et al. (2000) found that when combining the variables age and offending persistence (into adulthood), individuals who begin offending early on and persist into adulthood display much more diversity in their offending, than those who do not. This again provides support for the versatility of criminal behaviour, as well as important insight into the individuals SSP could potentially identify, as it could be suggested that these are the individuals most likely to be identified by the method. Additionally, this research, as well as Moffitt's developmental taxonomy (1999), is strongly linked to criminal careers research, which will be discussed in the next section.

Criminal Careers

Criminal careers research is also highly relevant to the issue of offender versatility. Blumstein, Cohen, Roth, and Visher (1986, p. 12) define a criminal career as "the characterization of the longitudinal sequence of crimes committed by an individual offender". The criminal careers paradigm focuses on the exploration of the onset, duration, frequency and seriousness of individuals' criminal behaviour (Piquero, Farrington & Blumstein, 2003), with frequency and seriousness being the most relevant for SSP. Roach and Pease (2016) highlight that if frequent offenders are also versatile, then the SSP method would be applicable to police investigations. Seriousness is highly relevant as SSP relies on individuals committing both serious and minor offences. Regarding seriousness, there are two types of offender versatility, horizontal and vertical (Piquero,

Farrington & Blumstein, 2003). Horizontal versatility describes the occurrence of different offences with similar seriousness, whereas vertical versatility describes the occurrence of both serious and minor offending. Both types of versatility are relevant, however Roach and Pease (2016) emphasise that vertical versatility is key for SSP methods.

The research conducted by Piquero, Farrington and Blumstein (2003) is comprised of a number of key studies relevant to criminal careers research such as Farrington's (2001) Cambridge Study in Delinquent Development, which analysed the offending behaviour of males in South London. The study found that most males convicted for a violent offence were also convicted for non-violent offences, with no predictable pattern for when violent offences would occur throughout the criminal career. Furthermore, it was found that a small number of offenders were responsible for committing a large proportion of the offences, according to both official and self-report data. Similar results were found in Wolfgang's Philadelphia Birth Cohort Studies (Wolfgang, Figlio & Sellin, 1972) which analysed the dynamics of specialisation, finding that 6% of the overall cohort (both delinquent and not delinquent) were responsible for 52% of all of the delinquency with little evidence to suggest offence specialisation. These examples support the principals of SSP regarding offender versatility, suggesting that it is much more common for offenders to be versatile in their criminal careers than specialised. This also highlights another relevant aspect of the criminal career's paradigm: the small group of chronic offenders who are responsible for most of the criminal activity that occurs (Piquero, Farrington & Blumstein, 2003). Wolfgang, Figlio and Sellin (1972) found that these individuals were not only responsible for a large proportion of offending in general (18% of the delinquent subset were responsible for 52% of all of the offences committed), but this group, specifically were responsible for an even larger proportion of the more serious, violent offences. This is relevant to SSP research as it seems reasonable to suggest that if a few individuals are committing a large volume and a variety of offences, SSP would be a more effective method for identifying these individuals and securing convictions against them.

Conversely, Blumstein, Farrington and Moitra (1985) critique the practical usefulness of criminal careers research, suggesting that it is limited, as not all persistent offenders are specialists, and future criminal activity cannot be predicted. However, this shows a gap in investigative strategies that SSP could fill, as it relies on the versatility of offending behaviour; predicting specific future offences is not necessary in order for the method to be effective. If investigations embraced the idea of versatile offenders, as opposed to seeing it as a limitation, methods such as SSP could be implemented and developed further. Based on the abundance of support for versatility (e.g. Farrington, 2001; Piquero, Farrington & Blumstein, 2003), it could be suggested that this could result in much more holistic investigative practices.

Criminal careers research also includes research regarding the role of both age and gender on career patterns. In both cases versatility of offending is apparent, albeit variable. Piquero, Farrington and Blumstein (2003) state that versatility may vary across different demographic subgroups, age being an important factor. Rojek and Erickson's (1982) research using transition matrices (modelling the probability an individual will move from one crime type to another) found that there were no significant differences between age-specific matrices. Piquero, Oster, Mazerolle, Brame, and Dean (1999) also found that when controlling for age by examining common offending periods and for different onset age groups, there was no relationship between onset age and offence specialisation. It was concluded that the physical impacts of age are more likely to affect offender versatility, as opposed to onset age, however likelihood of this remains low (Piquero, Farrington & Blumstein, 2003). So, although SSP is more concerned with the level of versatility of offenders, criminal careers research supports the notion that levels of versatility do not vary significantly with onset age. Therefore, conclusions drawn from research on any specific age-group could potentially be applied across all offenders and SSP methods could be applied in any context regardless of age.

As mentioned, criminal careers research has also looked at the effects of gender on versatility/specialisation. D'Unger, Land and McCall (2002) emphasised the

notion that overall, males offend at a much higher rate than females and that gender is one of the strongest predictors of criminality and delinquency. These ideas are important, however, regarding SSP the focus is on versatility and whether or not individuals commit both minor and serious offences. Piquero, Farrington and Blumstein (2003) highlighted the issue that there is a paucity of research into gender differences in relation to offender specialisation, however some studies have investigated this specifically. Datesman and Aickin (1984) conducted research focusing on offence specialisation and escalation among status offenders and found that females display more specialisation than males according to self-report data. However, Mazerolle, Brame, Paternoster, Piquero and Dean (2000) did not find any significant differences in the versatility of offences committed by males and females across five offence transitions. The same conclusion was also drawn from Piquero and Buka's (2002) study of specialisation in violence and no gender differences were found. The findings that males and females are more likely to be similar in the versatility of their offending behaviour is useful for SSP methods as it means that all investigations implementing SSP methods have the opportunity to be equally effective, regardless of gender.

Moffitt (1994) also discussed gender differences regarding the life-course persistent offender and adolescent-limited groups in her developmental taxonomy. It was suggested that males are more likely to belong to the life-course persistent offender group than females and females are more substantially represented in the adolescent-limited group. This is said to be due to males being more likely to experience the risk factors for life-course-persistent antisocial behaviour, such as a poor relationship with teachers and parents and relationships with peers that are destructive (Moffitt, 1994). Nonetheless, it is still possible for females to belong to the life-course persistent group (Moffitt, 1994). This holds important implications for SSP, as the target offenders are those belonging to the life-course persistent group. It could be suggested that if females are less represented in this group, that they are not as suited for the application of the method. However, if females are less likely to be life-course persistent offenders, they may not be as likely to be active, serious offenders and may be less

of a threat to society. In turn, most females may not as often need to be subject to investigation via the SSP method. An additional argument could be that due to SSP's focus on crime events rather than specific individuals, gender is less of an issue. Regardless of whether a man or woman commits a more minor offence that is identified by the police, those individuals could be the subject of further investigation and more serious criminal activity could be discovered. However, due to females being less represented in the life-course persistent group, it could be argued that they will be a minority in most research carried out, making it harder to draw and test conclusions. Therefore, regarding SSP, it could be suggested that conclusions drawn from male dominated research should be approached with caution for females, and future research should focus on females specifically.

Further empirical findings

There is also further empirical research supporting versatility outside of the confines of criminal careers research. Humphrey and Gibbs Van Brunschot (2017) conducted research investigating whether the labelling of offenders as highly likely to commit specific types of offences again (high-risk offenders) by the criminal justice system, is supported by existing measures of specialisation. They argued that it is difficult to determine whether individuals are specialists or versatile as there have been issues with how specialisation is measured. The study found that when analysing the mean number of other offences committed by the various groups, the most evidence for specialisation was in the child sex offender group, who committed an average of 5.67 property offences and 9.53 "other" offences. Conversely, those who commit violent offences appeared more versatile and committed substantially more property offences (M = 13.38) and "other" offences (M = 22.24) (Humphrey & Gibbs Van Brunschot, 2017). This is further supported by DeLisi, Drury, Elbert, Tahja, Caropreso and Heinrichs' (2017) research on sexual sadism and criminal versatility. Findings from this study suggest that sex offenders appear less versatile and have less extensive criminal careers in comparison to sexual sadists, who fall into the category of violent offenders. However, Humphrey and Gibbs Van Brunschot (2017) highlight that despite the variation between groups, there was much greater evidence for

versatility than specialisation in all groups; sex offenders were still committing a number of other offences. This further supports the underlying assumptions of SSP, as the method relies on support for the notion that offenders are versatile. Also the finding that violent individuals offend more frequently is important for assessing the potential effectiveness of SSP. In this case, violent offenders may be more likely to 'select themselves' for attention from the police by offending frequently, and diversely.

Further support for versatility is provided by Soothill, Francis, Sanderson and Ackerley (2000) who found that sex offenders can be either specialists or versatile and suggest that there could be an overlap. They found that although there was a reasonably high percentage of being convicted of a sexual crime on another occasion (58%), this ranged widely between groups. Those convicted for crimes against children being the most likely (76%), followed by indecent assault against females (63%), indecent assault against males (61%) and finally indecency between males (37%). Those committing heterogeneous offences (offences against the opposite sex) against females, were more likely convicted for other crimes such as violence against the person, property offences (e.g. burglary and theft) and criminal damage. In contrast the males committing sexual offences against males were much less likely to be convicted of the prior list of other crimes and were more likely to commit further sexual offences. However, the dataset was from 1973 and one of the groups included in this study was 'indecency between males' which is no longer considered an offence, so it could be argued that the inclusion of this group of individuals may skew the data as such behaviour is no longer perceived as criminal. The data reflects that the 'indecency between males' group contains the lowest percentages for committing all other types of crime for this time period; this makes sense as this would be considered a non-criminal group at the present time. Therefore, it could be suggested that, Soothill, Francis, Sanderson and Ackerley's (2000) research provides evidence for versatility amongst sex offenders, however, further research on those who offend against males could be necessary in light of changed social attitudes. This research contrasts the prior mentioned research by DeLisi et al. (2017), providing evidence

that sex offenders can also be versatile, which is useful for SSP as it means this group of offenders could potentially still be identified through this approach.

Simon (1997) reviewed existing literature on the specialisation of general crime offenders, sex offenders and domestic violence offenders. He found that existing research is more supportive of versatility, rather than specialisation and that this appears to be due to the prior mentioned ideas of the 'General Theory of Crime' and offenders' low self-control and impulsivity. Simon (1997) also argues that it is not effective to label individuals based on a specific type of crime (such as a sex offence) as his review suggests that this is not useful for predicting future offences. He further emphasised that the existence of sex registration laws and notification statutes may not be effective at preventing future crimes. It is explained that criminals are versatile so recording the whereabouts of one specific type of offender is not useful for preventing future crimes, as the next offence committed could be different (Simon, 1997). Also, if an individual's previous detected offence(s) was not a sex offence, they would not be included in records such as this, so if a subsequent sex offence occurs, they may not be in the pool of individuals investigated by the police and may evade detection. This demonstrates a limitation of current police methods, which are discussed further in the next section. Simon (1997) concludes his review by suggesting the need for research investigating whether or not criminal versatility is more predictive of future dangerousness, which somewhat resonates with the central principles of SSP.

Limitations of existing police methods

The traditional method utilised by police during investigations is targeting 'known' offenders, and a case is mainly constructed around specific individuals who are known to the police (Maguire, 2008). These individuals usually have an extensive history of offending and can be brought in for questioning with the expectation that they will confess or reveal useful information about their own criminal activities or associates. This is commonly referred to as a 'suspect-centred' approach (McConville et al., 1993) and a number of limitations regarding this type of approach have been identified. Maguire (2008) highlights the idea that investigations conducted in this manner can prioritise convicting individuals

'known' to be guilty of crimes, however the consideration of the rights of these individuals can be neglected. Also, Tong, Byrant and Horvath (2009) suggest that conducting investigations in this way alone leaves many unexplored avenues, which can weaken the strength of the case.

Townsley and Pease (2002) emphasise this issue further, suggesting a number of flaws with police nominating offenders as being 'prolific' within a specific crime category. It is suggested that some offenders may be misidentified as prolific, so although it is assumed they are highly likely to re-commit a specific type of crime in the future, they may not. Prolific offenders may also not be nominated, so as mentioned previously, they may not be present in the pool of offenders identified for further investigation. Also, offenders' offending rates can vary across time, so an offender may appear prolific at one point in time and not another. In addition, rates of co-offending are high, so although a prolific offender may be imprisoned their associates will continue to offend (Townsley & Pease, 2002).

Humphrey and Gibbs Van Brunschot (2017) presented further issues in their prior mentioned study regarding the labelling of offenders as highly likely to commit specific types of offences again by the criminal justice system. They suggest that the criminal justice system and the public are more likely to identify specific groups as more specialised than empirical research such as theirs suggests. Based on this, it is highlighted that the focus on utilising specialised policing units that investigate specifically classified groups of offenders could be problematic (Humphrey & Gibbs Van Brunschot, 2017).

Chenery, Henshaw and Pease (1999) also highlighted that police have used 'sting' operations, whereby police focus heavily on the locations and actions of individuals believed to be frequent offenders. However, there can be issues with this approach as it relies on always having accurate knowledge of offending patterns and it could also be argued to be harassment in certain circumstances. Chenery, Henshaw and Pease (1999) suggest that taking further interest in the actions of individuals as opposed to conditions is more effective, as criminal

actions warrant the attention of police. As already noted, this forms the central premise of SSP.

Roach and Pease (2014) investigated police officers' estimations regarding criminal homogeneity (specialisation). It is suggested that it is important that the knowledge of those involved in the criminal investigative procedures, is reflective of the crimes that actually occur (Roach & Pease, 2014). The study found that many more police officers operated under the assumption that an individual's previous offence type(s) was/were indicative of future offending and that they significantly over-estimated crime homogeneity. This could be an issue in investigations as those committing minor offences may also be serious offenders, but remain overlooked as they are not categorised as serious offenders, or offenders of that type. Roach and Pease (2014) also emphasise the potential dangers for frontline officers, who may approach individuals viewed as minor offenders with little caution, when they may also be serious offenders. If crime versatility was more widely recognised this could potentially address these issues and have a positive impact on the investigative process.

Development and application of SSP

The following section will discuss more recent specific research surrounding the SSP method. The research by Roach (2007a) includes the study entitled 'Operation Visitor', whereby visitors to a Youth Offenders Institute (YOI) were investigated during their visit, to further explore the SSP idea. During a 12-month period, over 600 visitors were searched, and 210 vehicles were checked. Overall one in ten visitors were found committing a prosecutable offence. Of the crimes committed, one third of the offences were drug offences, specifically intent to supply 'class C' drugs to inmates and 58% of the overall offences were motoring and road traffic offences. These individuals were checked against the Police National Computer, which revealed 30% to be of interest to the police and suggested that a significant number of visitors who committed offences during the operation had a history of offending. Further analysis of those with a known offending history found that overall, the group were versatile and had collectively committed a range of offences. This provides support for the view of criminals being versatile in their

offending, as well as demonstrating how minor crimes can be used to flag up an array of other offences. Roach (2007a) also found that seven of the offenders were considered active and had committed an offence within 18 months of the operation (or intelligence has indicated this), providing further support for the self-selection method being useful for identifying active/serious offenders. This support is emphasised by the fact that 25 arrests were made as a result of the operation, demonstrating the potential success of implementing such a method.

It is obviously important to investigate potential usefulness of implementing the SSP method, as shown in the previous study, as well as beginning to explore the types of crime committed by individuals. However, one of the most important areas of research for SSP is the identification of suitable trigger crimes to use for identifying active and serious offenders, which is the mission of the present study. Roach (2007b) conducted a study, focusing on the potential of using the nonproduction of documentation after being issued with an instruction to do so via a Home Office Road Traffic 1 (HO/RT1 form, requires an individual to produce their documents e.g. driver's licence/insurance certificate), as a method of identifying active, serious offenders. After 38% of individuals involved in the study failed to produce the required documentation within the required time frame, their criminal records were analysed. Results of the analysis showed that almost 30% of the overall group had committed a previous offence and 75% of the offences on record had been committed by those who failed to produce documentation (the no show group). In addition to this, Roach (2007b) found that these individuals also had a much higher rate of offending and 42% of the no show group had committed more than three separate offences, compared to only 6% for the group that did produce documentation on request. These offences included crimes against property, theft, fraud and deception, driving whilst disqualified, as well as weapons offences.

This provides further empirical support for self-selection as a method of policing as individuals committing minor infractions, such as failure to produce documentation, are significantly more likely to be committing other more serious offences and to be offending more often. The results also further demonstrate the

utility of SSP, as it was found that 30% of the no show group committed crimes during the 18-month period after they had failed to produce the documentation required, showing that they were 'active' offenders; this was only the case for 8% of the show group (Roach, 2007b). This is supported further by Wellsmith and Guille's (2005) research on using fixed penalty notices issued for driving offences as self-selection triggers. They found those committing low-level traffic offences were more likely to be active criminals than those in the general population. This was not a significant finding, potentially due to the types of offences being so common, to the extent that they have little value as trigger offences; meaning the offences (such as speeding) are too frequent to separate out active, and potentially serious, offenders from the general population. However, it is suggested that individuals' offending behaviour warranting the issue of multiple fixed penalty notices may serve as a more effective trigger. This is a logical assumption, as those committing more crimes and subsequently being issued with more fixed penalty notices are likely to be more active offenders than those only issued with one, however this requires further investigation.

Although HO/RT1 documents are now used less, Roach's study (2007b) provides further evidence for versatility and also demonstrates that it could be beneficial for police to scrutinise those committing comparable offences such as driving without insurance or up-to-date MOT tests, however further research is needed. It could be suggested research based purely on police detections could have impacted the results, as there could be many offences that remain undetected. However, it can also be argued that this may demonstrate even stronger support for SSP, as a large proportion of the no show group were considered active, even with the potential exclusion of other unknown crimes they may have committed. Although the same could be said for the show group, the results of Roach's (2007b) study showed a substantial difference between the criminal activity of the two groups. Therefore, it could be suggested that based on proportionality, the show group's potential undetected criminal activity would also be substantially lower, with the no show group remaining more active.

Roach (2019) also explored offences committed by disqualified drivers and the timings of these offences to determine whether or not driving whilst disqualified could be a potential self-selection trigger crime. The results of the study found that a sample of 50 disqualified drivers had a total of 704 recorded convictions between them and only 14% had no further convictions following the driving whilst disqualified offence. Roach (2019) calculated diversity indices, which assess versatility by finding the proportion each defined offence type is committed over a fixed period of time. Three levels of versatility were established for the analysis: low = 0 - 0.2, medium = 0.30 - 0.5, high = 0.6 - 0.9. It was found that 63%of the sample had a medium to high versatility index, which provides convincing support for the versatility argument. Also, 68% proceeded to commit other detected offences less than one year after their driving whilst disqualified conviction. This indicates that driving whilst disqualified has the potential to be a useful self-selection trigger offence for police to detect active criminality. However, limitations regarding data sharing and access to data could have an impact on whether or not these findings could be generalised, as police data does not include every offence and therefore may not be representative (this is discussed further in the limitations section of the discussion). Additionally, as mentioned previously, research can only be based on offences detected by the police. Nonetheless, despite the fact that the figure may not encompass every crime event committed, it is promising for SSP that such a large percentage (68%) were found to have gone on and committed further crimes within a short time.

Chenery, Henshaw and Pease (1999) investigated the criminal activity of those parked illegally in disabled bays. It was found that 21% of the parked cars were of immediate interest to the police, compared to only 2% of cars that were parked legally. As well as this, 18% of the illegally parked vehicles had been used in crimes in the past, which was not the case for any of the legally parked cars. This amounted to a quarter of the illegally parked cars warranting police actions, compared to only 2% of legally parked cars. The results of this study led to the integration of this method of self-selection into police intelligence gathering practices in Huddersfield. It was found that a third of illegally parked vehicles were connected to a range of other offences including unpaid tickets, drugs,

assault, vehicle crime, theft and burglary (Chenery, Henshaw & Pease, 1999). This demonstrates the effectiveness of implementing the SSP method alongside existing methods of investigation.

This is further supported by Roach and Hatton's pilot study (in press), which directly tested the method. The study also focused on driving offences, such as dangerous driving and parking offences, and the use of these as SSP trigger offences. Police officers stopped drivers mostly due to manner of driving, which accumulated a sample of 36 individuals, 20 of whom had previous recorded convictions. This provides some support for the SSP principal that individuals committing minor offences may also commit other crimes. However, there was no control group in this study so it cannot be confirmed what proportion of the general population have recorded offences as a comparison. Despite this it is important to highlight that two of the vehicles stopped were also identified as being associated with Organised Crime Groups, with firearms markers, and five individuals were consequently arrested. This demonstrates some success of the method being implemented, even with a relatively low number of vehicles being stopped, as serious offenders were identified through routine police activities. Additionally, this shows the vertical versatility of offenders, as they are committing both minor driving offences, as well as serious organised crimes.

Roach and Hatton's (in press) pilot study identified a number of offences including violent, drugs and weapons offences, however the most commonly occurring offences were serious acquisitive crimes (SACs). It could be suggested that certain types of minor offences are better at predicting particular serious offences. Based on RCT and the previously mentioned mechanisms of prospect theory, it could be suggested that although offenders are likely to be versatile (Cornish & Clarke 2008; Kahneman & Tversky, 2013), this may have a limit and individuals may not be able to rationalise committing all types of crime. Also, in RAT terms, offenders' lifestyles may mean that certain types of crime are more commonly presented to them than others (Cohen & Felson, 1979). Therefore, offenders are versatile and will commit a variety of crimes but may commit some of these crimes more often due to the higher frequency of certain opportunities presented in their daily

routines; and this may vary between groups of offenders. From this research, driving offences appear to be most useful for identifying serious acquisitive offenders. However, other types of more minor crime may be suited for identifying those involved in other types of serious crime. It is important to explore a range of potential trigger crimes to ensure the most effective use of SSP in identifying those involved in serious criminal activities.

Animal Cruelty

Animal-related offences can encompass a number of elements. The Animal Welfare Act (Legislation, 2006) states that individuals must abide by certain rules to ensure that animals are cared for correctly, the central welfare needs are:

- need for a suitable environment
- need for a suitable diet
- need to be able to exhibit normal behaviour patterns
- need to be housed with, or apart, from other animals
- need to be protected from pain, suffering, injury and disease.

Individuals who do not conform to this legislation can be formally warned and then subsequently prosecuted if necessary (RSPCA, 2019a). However, there are also other more specific offences recorded by police forces. Statistics regarding animal offences, provided to the author by a police force (a different force to that who provided data for the study), recorded the following offences between 2005 and 2015:

Offence Description	Total
CAUSING UNNECESSARY SUFFERING TO AN ANIMAL	548
INTERFERING WITH BADGER SETTS	32
OFFER / EXPOSE FOR SALE LIVE / DEAD SCHEDULE 5 WILD ANIMAL	30
RESPONSIBLE PERSON FAIL TO PREVENT THE CAUSING OF UNNECESSARY SUFFERING TO AN ANIMAL - ANIMAL WELFARE ACT 2006	25
CAUSE UNNECESSARY SUFFERING TO A PROTECTED ANIMAL - ANIMAL WELFARE ACT 2006	21
WILFULLY KILL A BADGER	13

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INFLICTING UNNECESSARY SUFFERING TO A WILD MAMMAL	11	
BREACH A DISQUALIFICATION IMPOSED AFTER CONVICTION - ANIMAL	5	
WELFARE ACT 2006		
PERSON IN CHARGE ABANDON ANIMAL IN CIRCUMSTANCES LIKELY TO	4	
CAUSE	•	
FAIL TO DELIVER DOCUMENTS RE CONDITION OF ANIMALS - PROTECTION	3	
OF ANIMALS		
DAMAGE / DESTROY SCHEDULE 5 WILD ANIMAL SHELTER	2	
CAUSE A POISONOUS / INJURIOUS DRUG / SUBSTANCE TO BE TAKEN BY A	1	
PROTECTED ANIMAL - ANIMAL WELFARE ACT 2006	_	
DISTURB SHELTERING SCHEDULE 5 WILD ANIMAL	1	
Total	696	

Many of these offences include violations of the Animal Welfare Act (2006), however, more specific offences are also listed. The most common type of offence was 'causing unnecessary suffering to an animal', which accounted for 78% (548). Ascione (1993, p. 228) defined animal cruelty as "socially unacceptable behaviour that intentionally causes unnecessary pain, suffering or distress to and/or death of an animal". This definition was stated in a review of international literature, so it could be suggested that it could be applied internationally. However, the majority of the reviewed literature is from the US, so it may be most applicable to animal crime in an American context. Nonetheless, Roach and Pease (2016) suggested investigating animal cruelty as a potential trigger crime and the present study, which seeks to do this, applies Ascione's definition.

Based on this, animal cruelty appears to be the most common type of animal crime committed. Statistics from the RSPCA (2019b) also support this notion, and animal cruelty is the most commonly recorded offence under the Animal Welfare Act 2006, with 1,626 convictions secured in 2018 alone. This figure has increased annually, with 1,434 convictions the previous year. Therefore, in the context of animal-related crime, cruelty appears to have the most potential as a self-selection trigger offence; it is not so common that it would be difficult to monitor or be

considered ubiquitous, however it occurs enough to be worth investigating further.

Theoretical support for the link between animal cruelty and other types of offending

In order for animal cruelty to be a potential SSP trigger offence, it is important to establish a theoretical and empirical link between it and other types of crime, thus providing justification for why it could be indicative of other criminal behaviour. Linzey (2009) begins to discuss why there may be a strong link between animal cruelty and violence against humans, suggesting that through committing acts of animal cruelty, individuals may desensitise themselves as a 'side-effect'. This subsequently enables individuals to inflict pain and suffering on others, animals or humans, and not feel sufficient empathy to deter from offending. He also suggests that this is made worse by habituation, and there could be a point when violence is considered normal. Linzey (2009) highlights that this does not explain any direct link between the two acts, however it could begin to demonstrate how individuals can commit acts of cruelty.

MacDonald's Triad is also an important theoretical approach regarding animal cruelty and violence against humans (MacDonald (1963), cited in Petersen & Farrington, 2009). The theory suggested that the three factors enuresis, firesetting and animal cruelty are characteristic behaviours of those involved with homicide. This has been empirically tested by a number of people, the first being Hellman and Blackman (1966) who applied the triad to 84 violent inmates. The triad was present for 75% of the inmates, compared to only 28% of a sample of non-aggressive offenders. Wax and Haddox (1974) analysed case studies of 6 individuals who demonstrated the triad out of a sample of 46 offenders. It was concluded that the presence of the triad was strongly indicative of abnormal development in the individuals' personality structures and Wax and Haddox (1974) suggest that this theory should be applied as a screening process for identifying potentially dangerous individuals. This also provides some evidence for a link between animal cruelty and violent behaviour towards humans.

However, the triad and studies supporting it have been subject to criticism. Heath, Hardesty and Goldfine (1998) argued that earlier studies were methodically poor and so they conducted a study on 204 admissions to a general child psychiatric clinic. This study found a link between the factors of the triad; however, this was more complex than other studies had concluded. Although there was a significant relationship between enuresis and fire-setting, this was independent of the animal cruelty factor. As well as this there was a significant relationship between cruelty to animals and fire-setting, but not enuresis. This indicates that although there appears to be a link between the individual factors, or a combination of some of them, and human violence, the triad as a whole may not always be predictive of violent criminal behaviour. Regarding the present study, the most important variable of the triad is cruelty to animals and establishing a possible link to violence against humans, as well as to other offending behaviour.

Empirical support for the link between animal cruelty and other types of offending

There is also an abundance of empirical research supporting the concept of the link between animal cruelty and other types crime and it is suggested that animal cruelty could indicate other types criminality, both violent and non-violent (Arluke, 1999; Linzey, 2009; Petersen & Farrington, 2009). Arluke (1999) investigated the relationship between animal abuse and other types of antisocial behaviour, with a focus on violence against humans. He found that those who abuse animals were not only more likely to commit violent crimes against others, but also more likely to commit property, drug and public order offences. This demonstrates the versatility of animal cruelty offenders, which is of central importance for the present study. It is also fundamental that offenders in this study were no more likely to commit animal cruelty offences before violent offences than after (Arluke, 1999), which is highly relevant to the present study as SSP seeks to identify *active*, serious offenders. Therefore, it is important for the present study that offenders do not graduate from animal cruelty offences to cruelty against other humans, rather, they concurrently commit both types of crime.

Febres et al. (2014) provides further support for this link in their research regarding adulthood animal abusers who were arrested for domestic violence. In this sample of 307 men, it was found that 41% committed at least one act of animal abuse during adulthood, compared to only 1.5% of men in the general population (Febres et al., 2014). After controlling for antisocial tendencies and alcohol use, Febres et al. (2014) concluded that there was a significant association with physical and psychological intimate partner violence and animal abuse. Research by Ascione et al. (2007) provides further support for this relationship, finding that 54% of a sample of women living in domestic violence shelters reported that their abusive partner either hurt or killed their pets, compared to only 5% of a nonshelter group who had self-reported no experience of domestic violence (Ascione et al., 2007). This provides evidence for the link between animal cruelty and violent crime, as well as demonstrating that a much lower proportion of the general population appear to commit animal offences. This is highly relevant to SSP and the present study as it shows that animal cruelty crimes are more likely to identify serious offenders, as opposed to only identifying individuals from the general population. It is also important that these individuals were committing the acts of animal cruelty in adulthood and alongside their other offences (Ascione et al., 2007; Febres et al., 2014), showing that they are more likely to be active offenders and in turn more likely to be identified using SSP methods. These studies were all conducted in the USA; however, it could be suggested that the findings should be at least partly applicable to the present study due to the similarities between UK and US societies. It could be suggested that overall, individuals in the UK have relatively similar lifestyles and culture to the those in the USA and have somewhat similar attitudes towards animals in the circumstances of the prior mentioned research (Arluke, 1999; Febres et al., 2014).

Summary

To summarise, ideas surrounding versatility (a central SSP principle) have been discussed, including both theoretical and empirical research. Opportunity theories were presented as a potential explanation, suggesting that offenders generally offend based on environmental factors and the opportunities presented to them. This means that they will commit a wide variety of crimes as opposed to

choosing to seek out and commit an offence type they have previously committed. Following this, Gottfredson and Hirschi's (1990) 'General theory of crime' and Moffit's (1999) developmental taxonomy were also discussed as key arguments for versatility. The 'General theory of crime' suggesting that offenders lack self-control and will therefore commit a vast array of offences (Gottfredson & Hirsch, 1990). Moffit (1999) proposed two types of offender, adolescent limited and life-course persistent offenders, who are both described as versatile. The life-course persistent offenders were identified as a key group for SSP, as they are unlikely to desist from offending and will continually commit both serious and minor offences (Moffit, 1999).

Criminal career research was then presented and critiqued, providing further evidence for versatility, as well as introducing age and gender as potentially influential factors. Further empirical research was then discussed, providing insight into the potential varying levels of versatility of offenders. This was then followed by a critique of existing methods of policing, which provided an understanding of the potential limitations and demonstrated where SSP could be a useful additional tool. SSP research was then discussed in detail to establish how other potential trigger offences have been investigated, as well as demonstrating empirical support and the prior successes of implementing the method.

Finally, animal cruelty was proposed as a potential trigger offence, with theoretical and empirical support. It was found that previous research has established a link between animal cruelty and crime, with a focus on violent offending (Arluke, 1999; Linzey, 2009; Petersen & Farrington, 2009), therefore suggesting that it could be a suitable SSP trigger offence.

Rationale

Based on the review of the literature and theory, the present study chose to focus on animal cruelty as a potential self-selection trigger crime. It was determined that criminal records of individuals who have committed animal cruelty offences would be analysed to identify what types of other crimes these individuals committed, with the timings of these offences also being analysed. Due to the large

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amount of support for a link between animal cruelty and violence against humans, such offences are particularly considered. However, the research is not limited to only violence, as there is the potential for animal cruelty to be an SSP trigger for any number of different types of serious offence.

The aim of the present study, then, is *to assess the potential usefulness of animal cruelty as an indicator of more serious and active criminality*. This is achieved by analysing the criminal records of those who have committed at least one animal cruelty crime to answer the following research questions:

- 1. What other types of crime are committed by those individuals with recorded animal cruelty offences and how versatile are they?
- 2. What is the most commonly occurring non-animal crime?
- 3. How active are the offenders?
- 4. Considering specific groups of offenders (e.g. age, sex, those who commit certain numbers of offences), who may be more likely to be identified using the SSP method?

Methodology

The following will discuss the methodology used for the research. This begins with a brief discussion of the research design and how this influenced the researcher's choice of method. Data collection and the issues surrounding this are then discussed and the section is completed with the method, which states the strategy and procedure.

Research Design

The present study takes a realist worldview, so it is assumed that the data being analysed will represent what the police deal with on a regular basis when investigating crime. Based on this epistemological position, a quantitative approach was used to conduct the research. This approach was favoured as the study required the analysis of recorded crime data to objectively determine the usefulness of animal cruelty as a self-selection trigger crime. This could only be established using a quantitative research strategy (Bryman, 2016), collecting and analysing statistics relating to the types of offences individuals commit and the timings of these offences. Regarding the design frame, the present research contains both cross-sectional and longitudinal elements. The study was cross-sectional and uses secondary analysis of police recorded data. This enabled the researcher to access data quickly, which was important due to time constraints for producing the research. However, the data used had been collected by the police over the course of 10 years between 2009 and 2019, suggesting that there was also a longitudinal element, which was necessary for this type of analysis.

Data Collection

Sample/Participants

The data collected comprised of 53 criminal records of offenders who had committed recorded crimes against animals between 2009 and 2019 in the North of England. The latest animal cruelty legislation is the prior mentioned Animal Welfare Act 2006 and there have been no changes to this legislation regarding the definition or methods of reporting/recording animal offences during the time period covered by the data used for this research (Legislation, 2006). This data

was acquired after requests made via email (Appendix A). This is the total population of individuals who committed an animal cruelty offence in the time frame who were charged by this police force. However, this is not the total population of individuals committing this type of crime in this area, as most cases of animal cruelty are handled and prosecuted by the RSPCA, and information is not regularly shared with police forces. However, data could be retrieved regarding the cases dealt with by the force. Based on the nature of the research conducted, it was necessary to use police data as other recorded crimes committed by the identified individuals were required in addition to the animal cruelty offences they had committed. Any data from the RSPCA would not include this vital additional information.

Using secondary data was appropriate for the present study as the researcher would otherwise not have been able to access this type of data. However, it is recognised that there can be some general issues with this approach. Smith (2008) suggests that this type of data is not always collected and recorded for the purpose of research, which can impact analyses, as the data were not necessarily intended to be utilised in the manner a researcher proposes. Also, certain information required for analyses may not always be collected/collected fully, therefore, the results may not always be representative and may lack validity. However, when conducting research regarding criminal behaviour, it is extremely common to use police recorded crime or incident data and a large volume of previous research utilises such sources (for example, Soothill, Francis, Sanderson & Ackerley, 2000; Roach, 2007b; Roach 2017). A further advantage was that the results could be considered as being representative for the specific force, as a full data-set (as opposed to a sample) was provided.

The dataset consisted of 79% (n = 42) males and 21% (n = 11) females ranging from 10 to 61 years (M = 33.7, SD = 13.0), statistics that were in line with similar studies (Roach, 2006; Roach, 2017).

Ethics

Ethical approval for the research was granted by the School Research Ethics panel.

Data was then formally requested from a police force in the North of England and permission was granted. The request was for anonymised records of those individuals recorded by the force as having had committed crimes against animals within the 10-year period. Names and addresses were neither required or provided. This ensured the study complied with ethical requirements of the British Society of Criminology (2015) and Data Protection Act (1998).

Data was stored on the researcher's personal university drive and was password protected. It was also stated on the ethics application that the lead supervisor will have access to the data as they were retrieving this on the researcher's behalf and will act as custodian of the data for the recommended 10-year time period (data will be destroyed after this period of time). They will also be storing the data on their university computer, where it will be password protected. Additionally, the research complies with GDPR requirements.

The aim of present study was to investigate animal cruelty as a potential trigger crime to be indicative of other active criminality. This aim is purely related to developing a potential tool, which could be beneficial to police investigations alongside existing methods, as opposed to negatively portraying police forces and investigations. However, some critique of the current approach to investigation was necessary, in order to justify the need for the SSP method. This was not specific to force that provided the data.

Method

Procedure

The Microsoft Excel database provided was imported into SPSS and was cleaned and coded used the following fields: ID number, age, sex, animal crime 1, animal crime date 1, animal crime 2, animal crime date 2, ... animal crime x, ... animal crime date x, non-animal crime 1, non-animal crime date 1, non-animal crime 2, non-animal crime date 2, ... non-animal crime x, ... non-animal crime date x. The process of cleaning and coding of the data is set out in the results section of the research.

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Subsequent analysis explored whether animal cruelty would serve as a suitable self-selection trigger crime. This was achieved by analysing the other types of crimes committed by individuals who had also committed acts of animal cruelty, to determine whether individuals were criminally versatile and, if so, were they committing other more serious offences against humans. The temporal distances between the animal cruelty crime and the other non-animal offences were also analysed to determine whether the offender was criminally active at the time the animal cruelty offence was committed. reported in both days and months. This was due to the wide range of temporal distances; using months to conduct statistical tests provided results that were easier to interpret, but days were more appropriate when reporting the minimum values.

To summarise, secondary data was retrieved from a police force for quantitative analysis, after ethical approval. Data was then cleaned and coded, followed by in depth analyses exploring the versatility and activity of offenders in the dataset.

Results

The following section will state the results of the various statistical tests conducted on the data. Variables, coding and approaches to analysis are discussed throughout as they become relevant, and potential implications of the findings begin to be explained.

General

Overall, 53 individuals were identified by police analysts for the present study, 79% (n = 42) males and 21% (n = 11) females, all of whom had committed at least one act of animal cruelty (the first being referred to as the index animal cruelty offence henceforth). The secondary data provided only contained the type of animal that was victim to the cruelty and no information regarding the nature of the cruelty was available. The maximum number of recorded animal crimes committed by an individual was two and only one individual committed more than one animal offence. 125 non-animal crimes were included in the data overall with the maximum number of recorded non-animal crimes being 20 (ranging from one offence to 20 offences (M = 3.97, SD = 4.69)). Ages ranged from 10-61 years, with a mean of 33.7 years and a standard deviation of 13.0 years. Of the total population of offenders identified by the contributing police force, who had committed an animal cruelty crime (53), 35.8% (n = 19) had not committed any other crime besides the index animal cruelty offence, while 64.2% (n = 34) of offenders had also committed at least one non-animal related offence.

Offending versatility

In order to analyse offender versatility, the offence data was recoded into categories by crime type. The categories used were the ten used by the National Crime Agency (2018): theft; property offences; violent offences (including both those that did and did not result in injury); police, courts and prison offences; fraud; sexual offences; public order offences; weapons offences; drugs offences; and miscellaneous offences (i.e. any type of crime not encompassed by the other categories).

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To assess versatility, a diversity index (DI) was calculated for each offender using the formula (k-1)/k (Soothill, Fitzpatrick & Francis, 2013), and as ten categories were used, the maximum versatility was .90. The DI scores ranged from .00 to .86 (M = .39, SD = .31)

Table 1. DIs of offenders

DI	Frequency	Percent	Cumulative Percent
.00	19	35.8	35.8
.50	19	35.8	71.7
.67	5	9.4	81.1
.75	4	7.5	88.7
.80	3	5.7	94.3
.83	2	3.8	98.1
.86	1	1.9	100.0
Total	53	100.0	

As shown in Table 1, 35.8% (n= 19) of the population had DI scores of zero, which suggests that these individuals were more specialized in their offending behaviour, and no offender had the highest score of .90 for versatility. If low, medium and high versatility are represented by the scores 0 - .20, .30 - .50 and .60 - .90 respectively, then approximately one third of the population fits into each group. These score categories were based on those used in a similar previous study conducted by Roach (2019). Results showed that 35.8% (n= 19) displayed low versatility, 35.8% (n= 19) displayed medium versatility and 28.4% (n= 15) displayed high levels of versatility in their offending behaviour. This demonstrates that although a moderate proportion of the population appear to be more specialised and only committed an animal cruelty crime, the majority of offenders in the population do display some level of versatility. Regarding offence type, the most common type of non-index offence committed was violent offences (28.3%, n= 15)

For the present dataset, those with a DI of zero had only committed the index animal cruelty offence (that had been recorded by the force). As SSP intends to

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identify serious active offenders, committing both minor and serious offences, it is important to assess the versatility of those who commit multiple offences. When excluding the individuals whose only recorded offence was the index animal cruelty offence, the scores ranged from .50 to .86 (M = .61, SD = .13). As shown in Table 2, the majority of this dataset (56.3%, n = 18) had committed two types of offence, therefore displaying medium levels of versatility. The remaining 43.7% (n = 14) had committed three or more different types of crime and displayed high levels of versatility. This shows that the target group of individuals for the application of SSP are crime versatile. However, these results apply to the population of offenders identified by a specific force and may not be generalisable to the overall population of those who commit animal crimes. Regarding the types of offence committed, violent offences remained the most common non-animal offence committed by the dataset (Figure 1). However, the percentage of individuals committing this offence obviously increased substantially to 43.8% (n = 14) when those only committing the index animal cruelty offence were excluded.

Table 2. DIs of offenders committing more than the one index animal cruelty offence

DI	Frequency	Percent	Cumulative Percent		
.50	18	56.3	56.3		
.67	4	12.5	68.8		
.75	4	12.5	81.3		
.80	3	9.4	90.6		
.83	2	6.3	96.9		
.86	1	3.1	100.0		
Total	32	100.0			

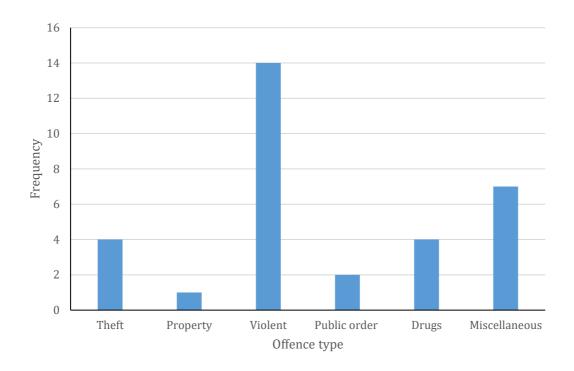


Figure 1. Types of non-animal offences committed

Temporal distances between offences

Temporal distances between the index animal cruelty offence and the first recorded non-animal offence were also computed in both days and months as mentioned previously. This was to analyse the concurrency of offending, as SSP is concerned with active criminality as opposed to crimes that are temporally disparate (or future prediction). Therefore, the index offence must occur close enough in time to other types of more serious offences being committed. It is important to highlight that due to the nature of the recording of police data, it cannot be completely certain whether or not the crimes occurred on the exact days they were recorded. However, in most case, the range is likely to be no more than a matter of hours or days, which is acceptable for present research

Temporal distances ranged from -12.0 to 83.0 months (M = 13.6, SD = 20.5). There were two individuals in the data who had committed a non-animal offence 76 and 83 months after the index animal offence. These individuals were considered outliers and excluded from this particular analysis, so as not to skew the findings. Another individual had committed their first recorded non-animal offence 12 months before the index animal cruelty offence, and no offences after the index

animal cruelty offence. Committing crimes earlier than the index offence does not undermine the SSP concept (the trigger offence does not have to be the first offence ever committed), however, as SSP aims to identify on-going criminality inclusion of a case with a negative temporal distance would have affected the meaningfulness of the results. Therefore, this individual was also excluded from this particular analysis. These three cases demonstrate situations where SSP would not be useful, as the main utility of the method is to identify those who are criminally active. However, the data only contains offences the police force was aware of, which could be highlighted as a potential limitation of this type of research. These individuals may well have committed other crimes, in closer temporal proximity and post the trigger offence, but for the purpose of the current analysis they were treated as purely outliers.

The temporal distances ranged between zero days, meaning more than one offence was recorded on the same day for an individual, and 1,126 days or 37 months (M = 9.5 months, Mdn = 7.0 months, SD = 12.2 months). 20.0% (n = 10) of the dataset committed the non-animal offence within less than a month. Four individuals had crimes recorded on the same day as the index animal cruelty. From the data provided it was not possible to determine if the non-animal offence(s) were part of the same crime event or not (in which case they would not be considered a separate offence). 34% (n = 17) of the dataset committed the non-animal offence within eight months of the index animal cruelty offence, showing that the majority of those in the dataset who commit another offence do so within a relatively short time period of time, therefore having the potential to be considered active.

Excluding under 18s

In order to compare the offending behaviour of younger and older offenders those under the age of 18 were excluded; this provides insight into whether or not age would be an issue for SSP. As shown in Figure 2 the range of diversity indices remained the same, from .50 to .86 (M = .59, SD = .13), however, 61.5% (n = 16) displayed medium versatility and 38.5% (n = 10) displayed high levels of versatility in their offending behaviour. This shows that for those who were aged

18+, the DIs were lower than for the overall dataset. Therefore, the younger offenders were more likely to display more versatility in their offending behaviour than the older offenders.

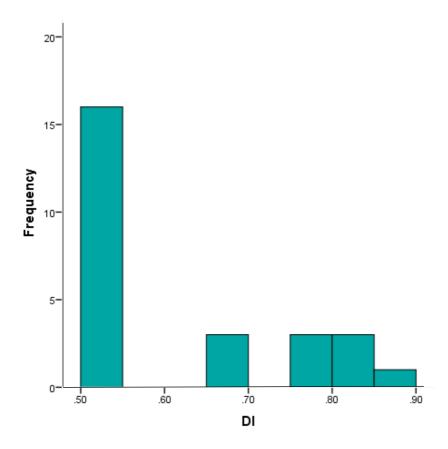


Figure 2. Histogram showing DI frequencies of those over 18 years of age

In terms of the temporal distances between offences, these did not change when those below the age of 18 were excluded. However, the proportion of those committing each type of offence was affected and the percentage of those committing violent offences increased to 50.0% (n = 13). This demonstrates that older offenders who commit animal cruelty offences tended to be more likely than younger offenders to commit one or more violent offences.

Frequent offenders

The target group of offenders for the application of SSP are more active offenders, so individuals must commit crimes more regularly. The temporal distances between the index offence and the first non-animal offence were analysed,

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specifically for those committing at least two or more non-animal offences (labelled as frequent offenders for the purpose of the research), to see whether there was variation in the timings compared to the overall dataset. This was not the case and the range of temporal distances remained the same, however a higher percentage (57.1%, n = 12) committed their first non-animal crime within the first eight months of committing the trigger offence. This could demonstrate that those who offend more often are more likely to commit crimes closer in time.

Regarding the DI of the more frequent offenders, this increased (M = .66, SD = .14), but the minimum and maximum DI remained the same. As shown in Table 3 there were higher percentages of individuals with high-level DIs and a large proportion of individuals had scores ranging between .67 and .83. This could show that those committing higher numbers of offences display more versatility in their offending behaviour. However, it could also be argued that the more crimes committed, the more opportunity an individual has to be versatile. Nonetheless, for the purposes of SSP it is more important to demonstrate that frequent offenders appear to be versatile than how this versatility compares to less frequent offenders.

Table 3. DI scores for those committing two or more non-animal crimes

DI	Frequency	Percent	Cumulative Percent		
.50	8	38.1	38.1		
.67	3	14.3	52.4		
.75	4	19.0	71.4		
.80	3	14.3	85.7		
.83	2	9.5	95.2		
.86	1	4.8	100.0		
Total	21	100.0			

Table 4. Offence types committed by those who commit two or more additional offences

Type of Crime	Frequency	Percent			
Theft	3	14.3			
Property offence	1	4.8			
Violent offence	8	38.1	38.1		
Public order	2	9.5			
Drugs	2	9.5			
Miscellaneous	5	23.8			
Total	21	100.0			

Due to the purpose of SSP being to produce an effective tool for identifying active, serious offenders using the more minor crimes they commit; it is important to investigate the types of offences the most active offenders in the dataset are committing. Therefore, it was necessary to focus on the frequencies of non-animal crimes, to assess the most commonly occurring offences. As shown in Table 4, the most common category of non-animal crime was violent offences (38.1%, n = 8), followed by miscellaneous other offences (23.8%, n = 5), including mostly nonnotifiable offences (offences not reported to the Home Office and not included in crime statistics), and then theft (14.3%, n = 3). The proportion of those committing violent offences was lower for frequent offenders compared to the overall dataset of those who committed more than just the index offence. This could show that frequent offenders are less likely to commit violent crimes, however, it could also be due to there being less offenders in this group (n = 21) compared to the overall dataset (n = 35). Nevertheless, the aim of the research was to assess whether animal cruelty could be used as a 'trigger crime' to identify more active serious offending, and if so which types of serious crimes it could help to identify. Therefore, it remains important that the results show that the most active offenders within the dataset were committing violent offences more than other types of offence.

Offenders committing other non-animal offences within six months

In order to be considered active offenders, individuals must commit their offences relatively close together, so these individuals from the dataset (n=16) were focused on (30.2% of offenders). Four individuals were recorded as having committed crimes on the same day, which, as explained previously, could have been part of the same crime event. Of the 16 individuals who committed another non-animal crime within six months of the index animal offence, four of them had committed two within this time, three had committed three, and one individual had committed four other crimes in this time period. 62.5% (n = 10) committed the first offence within one month of the index animal cruelty offence and 18.8% (n = 3) did so within a two-month period. The DIs of this group of offenders were similar that of the overall group who committed additional offences (M = .64, SD =.15), however a larger proportion of this sample displayed high-levels of versatility with 50% (n = 8) falling into this category, compared to 43.7% (n = 14) of the group that included those whose recorded offences occurred temporally further apart. Additionally, violent crimes were again the most common type of offence represented, with 62.5% (n = 10) of the sample committing this type of crime. When including the additional crimes committed by this group of offenders, violent offences remained the most common (50.0%, n = 10), followed by miscellaneous offences (25.0%, n = 4) and public order offences (12.5%, n = 2). One of the individuals had also committed a weapons offence during this time period, demonstrating further versatility.

Temporal distances of crimes committed by those with five or more recorded offences

Further temporal distances were calculated for those who committed five or more other offences in addition to the index animal cruelty offence. This was to focus on whether or not the additional offences occurred close in time to the index offence, or other offences committed throughout the career. Only one individual's offences were all committed relatively close to the index animal cruelty offences. The individual had 16 offences recorded in the dataset and six of these offences occurred within one year and no more than three months apart. When focusing on the type of offences committed by this individual, three of the six offences

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committed within a year were violent offences, and over the entire time period they committed nine violent offences. Other offences committed close to the index animal cruelty offence were public order offences and miscellaneous offences (non-notifiable offences in this case).

Public order offences were the most common type of offence to be committed close in time to the index offence by this group of offenders, as shown in Figure 4. However, when the overall sum of offences was calculated (n = 85), including those occurring later, violent offences were the most common crime committed (31.8%, n = 27) with all apart from one offender committing a violent crime.

ID	M1	M2	М3	M4	M5	M6	M7	M8	М9	M10	M11	M12
738	РО										CD	
50525												
235493						NN	PO					
277097												D
309510	V											
473971		NN										
678033	V		PO, V	NN				V		NN		
1106654			PO, CD						PO			
1388963		В										

Figure 4. Chart showing types of crime committed the following months after the index animal cruelty offence. M = Month, PO = Public order, V = Violent, NN = Nonnotifiable, B = Burglary, CD = Criminal damage, D = Drugs

Other individuals in this sample committed crimes relatively close together, however most occurred at least one year after the index animal cruelty offence. As mentioned previously, SSP's aim is to use minor offences (trigger offences) to identify more serious, active offending, so it is not useful to consider crimes that occurred a long time after the trigger offence.

Gender differences

An independent groups t-test was conducted to assess whether or not there was any significant difference between the DIs of the men and women in the sample of those who had committed more than just the index offence. Levene's test for equality of variances was not significant (p = .27) so equal variances could be assumed, and skewness and kurtosis were not an issue. Kolmogorov-Smirnov statistics were significant for males (p < .001) and females (p = .008), showing a distribution that is not normal. However, Boneau (1960) found that violating the assumption of normality results in only a very minimal effect on the result and concluded that the t-test is sufficiently robust to use in such circumstances. This was therefore used for the present study. There was no significant difference (t (30) = .37, p = .70 (t-tailed) and men (t = .62, t = .14) only displayed slightly higher levels of diversity compared to women (t = .60, t = .12). This suggests that both men and women in this sample display a similar level of offence versatility.

The temporal distances (in months) were also analysed for differences between men and women. Levene's test for equality of variances was not significant (p = .42) so equal variances could be assumed, and skewness and kurtosis were not an issue. Men (M = 7.8, SD = 11.3) appeared to commit their first non-animal crime much sooner than women (M = 15.4, SD = 14.1) after committing the index animal offence, however, this difference was not significant (t = 1.49, t = 1.49, t = 1.49).

A 2 x 2 contingency table (Table 5) shows the number of male and females who offended/did not offend again after committing the index animal cruelty offence; offences committed before the animal cruelty offence were not considered as 'offending again' for this analysis. As shown, the observed and expected counts were very similar and the chi-square test confirmed that there was no statistically significant association between sex and whether or not the individual offended again after committing the index animal cruelty offence (χ^2 (1) = .45, p = .50).

Table 5. Contingency table for sex and offending again after index animal cruelty offence

Offended		Female	Male	Total
Again				
No	Count	4	20	24
	Expected Count	5	19	24
Yes	Count	7	22	29
	Expected Count	6	23	53
Total	Count	11	42	53
	Expected Count	11	42	53

Further analysis investigated whether there was a difference between males and females, when considering those who committed their next offence within six months of the index animal cruelty offence. A 2 x 2 contingency table (Table 6) shows the number of males and females that committed a non-animal offence within six months of committing the index animal offence; this included the 54.7% (n = 29) of the population that offended again after the index offence. As shown, there was again no significant difference between the expected and observed counts and the chi-square test confirmed that there was no statistically significant association observed between sex and offending within six months of the index animal cruelty offence (χ^2 (1) = .34, p = .56).

Table 6. Contingency table for sex and offending within six months after index animal cruelty offence

Offended	within	six		Female	Male	Total
months						
No			Count	5	13	18
			Expected Count	4.3	13.7	18
Yes			Count	2	9	11
			Expected Count	2.7	8.3	11
Total			Count	7	22	29
			Expected Count	7	22	29

Discussion

Existing research has found that driving offences are useful indicators of active serious criminality (Chenery, Henshaw & Pease, 1999; Roach, 2007b; Roach, 2017), but other types of 'minor' offending, such as animal cruelty, could also assist in identifying those involved in other types of crime. The over-arching aim of the present study was to investigate the potential use of animal cruelty as an SSP trigger crime, for identifying more serious active criminality. In order to achieve this aim, a number of research questions were proposed:

- 1. What other types of crime are committed by those individuals with recorded animal cruelty offences and how versatile are they?
- 2. What is the most commonly occurring non-animal crime?
- 3. How active are the offenders?
- 4. Considering specific groups of offenders (e.g. age, sex, those who commit certain numbers of offences), who may be more likely to be identified using the SSP method?

The following section will discuss the findings from the analysis, with a focus on how they assist in answering the research questions. The overall results regarding versatility and temporal distance will initially be discussed and related to the literature as well as their impact on the application of SSP. This will then be followed by discussion of more specific groups identified from the dataset. The limitations will then be discussed in detail, followed by the implications of the findings and ideas for future research. Finally, overall conclusions of the study will be drawn.

General versatility

The first research question was concerned with what other types of crimes were committed by the offenders in the dataset and how versatile these individuals were. This was important as it is necessary for offenders to be generally versatile in their offending, in order to apply SSP methods (Roach & Pease, 2016). Excluding the index animal cruelty crime itself the present study identified six types of non-animal crimes committed by individuals within the dataset. As previously stated,

these were based on the categories used by the National Crime Agency (2018). 35.8% (n = 19) of the dataset had only committed the index animal cruelty offence, from which we may infer that these individuals were more specialised in their behaviour. It could be suggested that those who committed the index offence closer to the end of the 10-year time frame have not yet had the opportunity to engage in more criminal behaviour, however only one offender committed the index offence less than a year before the end of the studied period. There may eventually be more versatility shown by those offenders included in the dataset, however, this is not the case at the present time, and regardless, the present study was focused on individuals who could be deemed active at the time of the animal cruelty offence. Overall, however, the data showed that the majority of the dataset committed more than just the index offence, indicating at least some degree of versatility; appearing completely specialised in this analysis was less common overall. This is consistent with the abundance of research that demonstrates versatility in offending behaviour (e.g. Humphrey & Gibbs Van Brunschot, 2017; Simon, 1997).

A diversity index was calculated for all offenders in the dataset, other than those who had only committed the index offence. These were computed in order to assess the levels of versatility of those who had the potential to be considered active. It was found that the most commonly occurring DI was a score of .50. This represented two types of crimes committed by an individual and demonstrated medium levels of versatility, based on the levels of versatility used by Roach (2019). However, the largest proportion of this set of individuals (43.7%, n = 14) committed three or more different types of offences, therefore, displaying high levels of versatility. This shows that the target group of offenders are more likely to be versatile than specialised, which is supportive of SSP principles and demonstrates that there is potential for the method to be applied to this type of offender. It is also important to highlight the breadth of the crimes in each category. The National Crime Agency (2018) crime categories group together crimes such as arson and criminal damage, which could be argued to be (at least in many cases) quite different types of crime, and those committing both of these offences and other types of property offences could actually be considered highly

versatile. Therefore, it could be suggested that in reality, this group of individuals are likely to be more versatile than depicted by the current analysis. However, it was considered necessary to group crime types in order to be comparable to previous studies using similar categorisations and the use of too many categories makes the process of categorising meaningless (Roach, 2019).

Addressing the second research question, the most commonly occurring type of offence committed by this sub-group of offenders was violence (43.8%; n = 14). This contrasts with statistics for the general population of recorded offenders, whose most commonly occurring offence has been theft for the past 10 years (Office for National Statistics, 2018). Based on these statistics alone, it could be suggested that the most commonly occurring non-animal crime in the present study should be theft. The results from Arluke's (1999) study also vary from the present study, finding that property offences were the most commonly committed non-animal crime. However, as mentioned in the review of the literature, there is a large volume of support for a relationship between those who are cruel to animals and those who are violent towards humans (Ascione et al., 2007; Febres et al., 2014; Linzey, 2009; Petersen & Farrington, 2009). Based on the focus on this relationship in the literature, it is less surprising that violent offences appear to be the most likely offence to be committed by this specific group of offenders. Previously mentioned research by Roach and Hatton (in press) and Roach (2017) found theft to be the most commonly occurring offence committed by those committing driving offences. Therefore, it could be suggested that whilst overall theft is committed most often, it is more likely to be committed by those who commit driving offences rather than those who commit animal cruelty crimes. Regarding the present research, it could be suggested that animal cruelty offences may be most appropriate for specifically identifying active offenders who commit violent crimes against humans.

Prior mentioned research by Ascione et al. (2007) focused more specifically on the relationship between domestic violence and animal cruelty. This is important to highlight as although violence against humans does not appear to be committed by those who are cruel to animals in every instance, it appears considerably more

common amongst these offenders than individuals in the general population (Ascione et al., 2007). This holds important implications for SSP as it demonstrates that when applying the method to animal cruelty, it is reasonable to suggest that more serious offenders will be identified than non-offenders. Therefore, one may infer that animal cruelty has the potential to serve as an effective SSP trigger offence. However, it could also be suggested that serious, violent offences are more likely to be reported and detected by police. This could explain why more (recorded) violent offences appear to be identified through animal cruelty offences. Based on the idea of the versatile offender, it remains highly likely that these violent offenders have committed other types of crime (such as theft) that have not been detected. If individuals are committing these 'less-detectable' offences, animal cruelty may also have the potential to reveal their involvement in this.

Age and gender of offenders

As mentioned previously, criminal careers research has investigated the impacts of age, therefore the present study also looked at those considered adults (excluding individuals below the age of 18) to investigate whether this affected the results. It was found that overall the range of DIs remained the same, however there was a slightly higher proportion of individuals in the medium versatility group (61.5%, n = 16) and a slightly lower proportion in the high versatility group (38.5%, n = 10). Therefore, it was concluded that the younger offenders in the dataset were more likely to display high levels of versatility compared to the older offenders, however, this was not a substantial difference. This is in line with the criminal careers paradigm which found that older offenders were more likely to show some specialisation, but not significantly (Piquero, Farrington & Blumstein, 2003). The results of the present study support the use of SSP, as offenders across all age-groups appear to be more versatile than specialised, therefore, if utilising animal cruelty as an SSP trigger crime, the age of the offender is not likely to have a substantial impact on its effectiveness.

When focusing on the types of offences the adult offenders commit, it was found that the number of those committing violent offences increased to 50% (n = 13),

suggesting that the older offenders appear to be more likely to commit violent offences. This could relate to research by Moffitt (1999), as life-course offenders (who are the older of the two groups) are stated to commit more serious offences. The results of the present study somewhat reflect this, with violent offences (which could be considered more serious) appearing more common amongst older offenders. It could be suggested that although, overall SSP could be applicable to offenders of all age groups of animal cruelty offenders, it may identify slightly more violent offenders if the targeted perpetrator is older.

The effect of gender was also analysed in order to assess whether or not there were any significant variations between the offending behaviour of males and females. Overall, there were no significant differences between the DIs of males and females. This in line with research by Mazerolle, Brame, Paternoster, Piquero and Dean (2000) and Piquero and Buka (2002), which concluded that there were no significant differences regarding the versatility of males and females. Therefore, it could be suggested that females committing animal cruelty crimes are just as likely as males to commit other types of crime, and could be suitable for the application of SSP. However, there is a paucity of research in this area and females are commonly under-represented in research, most likely due to females offending at a much lower rate than males (D'Unger, Land & McCall, 2002). Therefore, although the present study suggests that SSP could be applied to males and females in a similar manner, further research should be conducted on larger samples of female offenders in order to ensure reliability. Interestingly, the results of the present study contradict research by Datesman and Aickin (1984) who found that females were more specialised in their criminality than males. However, status offences were analysed in this research (Datesman & Aickin (1984), which are arguably different to animal cruelty offences, so it could be reasonable to suggest that the results of the present study would differ from these results.

Temporal Distances

In order to address the third research question regarding whether or not offenders are 'active', temporal distances between the index offence and the first

non-animal crime committed by those in the dataset were analysed. This is highly relevant for SSP as the method seeks to identify active, serious offenders and it can be inferred that individuals committing a number of offences close in time are more criminally active. After excluding those considered to be outliers, a wide range of temporal distances were present in the data, however, approximately one third (34%, n = 17) committed a non-animal related offence within eight months. When narrowing down the time frame to one month, a fifth (n = 10) of the offenders committed a non-animal crime in this time. This demonstrates that a substantial proportion of the offenders appeared to be active in their criminality and provides further support for animal cruelty offenders being a potentially suitable group for the application of SSP methods. When focusing on age of offenders, these results did not change. It is recognised that analysis of recorded crime data (that is, only detected offences) could be viewed as a limitation of this type of research, as the records of individuals may not reflect an accurate picture of their actual offending behaviour. However, regarding the present research aims, this could be viewed as highly promising for the SSP method, as this can only be an under-estimate of the extent to which the offenders are currently criminally active. The Home Office (2019) report regarding crime outcomes stated that suspects are not identified in 44% of crime cases and only eight per cent of crimes result in a charge. This indicates how many offences may remain unconnected to offenders, whose criminal 'records' will be subsequently incomplete. Awareness of their additional criminality would only provide further support for the usefulness of the SSP approach, as opposed to detracting from it.

When focusing on a more specific time frame, offending within six months, both offenders were less likely to offend again than not. From this it could be suggested that overall, those who commit animal cruelty offences are less likely to commit another non-animal offence a much shorter time after the cruelty offence, which would negatively impact the support for the application of SSP. However, this result was not significant and could have again been impacted by the issue of undetected offences.

When comparing the criminal activity of males and females, it was found that there were no statistically significant differences. However, men appeared to commit their first non-animal offence much sooner after the index animal cruelty offence than women, which could suggest that they are more active in their offending. This appears logical due to females generally offending much less than males (D'Unger, Land & McCall, 2002), so they have less opportunities to offend more regularly and in turn would be considered less active. Regarding SSP, it could be inferred that women are less likely to be identified using the method, based on criminal activity. However, SSP uses offences to identify individuals rather than the inverse, therefore, if a female appears very active then SSP could still be appropriate. Additionally, it could be suggested that males are potentially more likely to be targeted and detected than females in criminal investigation. Due to males generally offending more than females (D'Unger, Land & McCall, 2002) as well as the overwhelming focus of research efforts into male offending, it could be reasonable to suggest that investigations could potentially assume males to be the offender, more often than females. It could be suggested that there may not be enough evidence to suggest that males are more active than females, due to a lack of detections. However, this could also be indicative of a potential area where SSP could be useful, as it is focused on offences rather than individuals and their gender becomes less relevant; investigations may be less likely to be biased towards a focus on males.

The present study conducted further analyses, assessing the likelihood of males and females offending again, after committing the index animal cruelty offence. The results of this showed that was no significant association between sex of the offender and whether or not an individual offended again. However, the analysis showed that both males and females committing an animal cruelty crime were more likely to offend again than not. Therefore, it could be suggested that females who commit animal cruelty crimes are equally likely as males to offend again, however not as soon after the cruelty offence as males. From an SSP perspective, males remain more likely to be identified due to appearing to be more active. Nonetheless, females who are cruel to animals may still commit further crimes

and should, therefore, still be considered as seriously as males when conducting investigations.

Previously mentioned research by Roach (2007a), showed that seven offenders out of 58 were considered active in their offending (committing an offence within an 18-month time period), which is fewer than the results of the present study. However, as Roach's (2007a) study involved searches of cars and individuals who were visiting those in prison, an offence trigger was not used, whereas everyone in the dataset in the present study had committed at least one animal cruelty offence. When comparing the present results to those of Roach (2007b) in a different study, it appears that both found an identical proportion of the offenders to be active, with 34% of the sample being considered active. However, Roach (2007b) used an 18-month time period to classify offenders as 'active', whereas the present study used a much shorter eight-month time period. This was decided, as the researcher considered a shorter time period would represent 'current' activity more accurately. Also if an offender continued to offend with shorter intervals between crime events, they could be considered more frequent offenders than those offending with longer intervals, and therefore be more suitable for the application of SSP. If the time frame for classifying 'active' offending was extended to 18 months for the present study, a larger proportion of the dataset (77.4%, n = 24) would be considered active which is substantially larger than that found in Roach's (2007b) research. More recent research by Roach (2019), investigating disqualified drivers, found 68% of the sample to be active offenders (offending again within 12 months), demonstrating that a large proportion of those committing this type of driving offence appear active in their offending. Using a similar 12-month time frame in the present study, would have resulted in the proportion of offenders committing another crime being a comparable 71% (n = 22). When comparing the results of the present study to that of Chenery, Henshaw and Pease (1999), where 32% of individuals appeared criminally active, animal cruelty also appears to be a more effective trigger. However, this study was conducted in a different manner, with individuals being categorised based on whether they were of immediate interest to the police (Chenery, Henshaw & Pease, 1999), making it difficult to compare, and

demonstrating the problem of determining who should be defined as an 'active' offender. Prior research has used a relatively broad range of time frames to classify 'activity'. It is therefore suggested that further research is required to assess what temporal distance should be considered appropriate for classifying as 'currently active'. Overall, however, when considering the comparable research, it could be suggested that animal cruelty appears to be the most successful trigger for SSP, perhaps only less so than illegal parking in disabled bays.

For SSP to be effective, individuals must be active as well as vertically versatile, committing both minor and serious offences (Roach & Pease, 2016). However, based on the comparison of the present study and the studies by Roach (2007a; 2007b), it could be suggested that the crimes most suited for acting as triggers cannot be too minor. Based on the results of the present study, animal cruelty appears to be appropriately serious, so that more active offenders are more likely to be identified. When acknowledging opportunity theories, this appears logical as RCT suggests that an individual will commit a crime if they believe the benefits outweigh the risk (Cornish & Clarke, 2008). Based on this, it is likely that an individual who commits serious offences will more easily justify committing more minor offences, however when reversing this idea, those who commit minor offences will not necessarily be willing to commit more serious offences. Therefore, those committing very minor, extremely common offences may be more representative of the general public than of people willing to commit very serious offences. Developing this further, prospect theory, would suggest that individuals will commit a crime based on considering the potential losses (Kahneman & Tversky, 2013). This could be related to the potential 'activity' of offenders, as it could be suggested that committing crimes more frequently would create a higher potential loss compared to lower rates of offending, as an offender has a higher probability of being caught. When implementing this theory, it could be inferred than those who can justify committing serious crimes with large potential losses, are also more likely to justify committing minor crimes more frequently (Kahneman & Tversky, 2013). Conversely, those who commit very minor crimes may not have the propensity to offend frequently, or more seriously. Therefore, although some individuals who commit very minor offences may also

be active and serious offenders, it is likely that a large proportion of them are not. However, those who commit slightly more serious offences (such as animal cruelty or driving whilst disqualified) may be more likely to also be active, serious offenders, thus these types of crimes are likely to act as better trigger offences.

In order to further explore the third research question, the present study analysed offenders who committed a non-animal offence within six months of the index offence (as explained previously, four individuals with offences recorded on the same day were excluded). It was found that almost two-thirds of the individuals in this group committed their first non-animal offence within one month, and this increased to over 80%, when extending to two months. Also, during the first month after the index offence, eight of the offenders had committed more than one non-animal offence. This demonstrates that those offending within the shortest amount of time after committing an animal cruelty offence, appear to be very active offenders again supporting the utility of the SSP approach. These offenders also appeared more highly versatile than the overall group whose offences were spread further over time. Offences committed by these individuals were violent, public order, and miscellaneous offences. One individual had also committed a weapons offence, demonstrating further vertical versatility. However, violent crimes again appeared the most likely offence to be committed compared to other types of crime, even when including the additional crimes committed by the group.

Frequent offenders

Addressing the final research question, for SSP, it is useful to understand certain types of individuals who commit animal cruelty offences. Frequent offenders are a key group, as these individuals are most likely to be identified when applying the method (Roach & Pease, 2016), so it is useful to gain a further understanding of their criminality. The present study found that the range of temporal distances of those committing two or more offences was comparable to the overall dataset, however, a higher proportion of this group committed their first recorded non-animal offence within eight months (57.1 %, n = 12). This could be indicative of a more active group of offenders, which would be reasonable to suggest as these

individuals were committing more crimes within the same overall, 10-year time frame. Pease's (2006) research regarding affordance could be used to explain this further, as it is suggested that frequent offenders are more likely to identify a situation as a crime opportunity. Those considered 'frequent' offenders in the present study may commit crimes more regularly as they identify more crime opportunities than those who commit less offences. Regarding SSP, this provides further support for the method, as individuals who commit two or more offences appear to do so closer in time, compared to those who commit less. This is useful for the method as these individuals appear more criminally active and are, therefore, there criminal behaviour is more likely to be identified by the application of this method. However, it could also be suggested that these individuals may be focused on more by police in investigations and are, therefore, caught more often. This relates to the prior mentioned 'suspect-centred' approach whereby individuals are known to the police and targeted in investigations (McConville et al., 1993). Evidently, regarding the present study, this has appeared somewhat effective as active offenders have been identified, however, as mentioned previously there are some limitations to this approach (Maguire, 2008; Tong, Byrant & Horvath, 2009; Townsley & Pease, 2002). Many more individuals in the present study may also be 'frequent' offenders, however this may not have been identified as these individuals could have been overlooked in the investigative process. If SSP was applied alongside existing methods to animal cruelty, it could be suggested that further offences could be identified, as the focus is not placed on specific offenders, and in turn, more offenders may be identified as 'frequent'.

The present study also found this group of individuals to be more versatile in their offending than the overall dataset and 61.9% (n=13) fell into the high-versatility group. This could be indicative of frequent offenders being more versatile, which is essential for SSP as it relies on versatility. Gottfredson and Hirschi's (1990) 'General Theory of Crime' could provide support for this as it could be suggested that due to having much lower levels of self-control, frequent offenders are more likely to commit a broader array of offences. Conversely, those who commit fewer crimes may have slightly higher levels of self-control. It could be suggested that

animal cruelty crimes could serve as an effective trigger crime as versatility appears to increase as more crimes are committed, increasing the likely hit-rate (likeliness of identifying individuals for committing offences) for SSP. However, as mentioned previously, it could be suggested that those committing more offences simply have more opportunity to display versatility and if less frequent offenders committed more crimes, they may be equally versatile. Regardless, it is more relevant for SSP that those who offend more often are versatile, as these individuals are the most likely to be identified, when utilising animal cruelty as a trigger offence. Those who offend less frequently are simply less likely to be identified, based on probability, and are less likely to be subject to investigations using SSP, as they would not appear to be criminally active.

For frequent offenders, the proportion of those committing violent offences also decreased to 38.1% (n = 8). Although, as mentioned previously, this is lower than the proportion of the overall dataset of offenders who committed a non-animal offence, it remains the most common crime committed by this particular subgroup. This is consistent with the explanations offered above and emphasises the prior mentioned inference that violent offenders may be the most likely to be identified via the application of SSP to those committing animal cruelty offences.

Temporal distances for chronic offenders

The target group of offenders for the application of SSP are those who are criminally active and vertically versatile. So, the present study conducted an additional analysis on the individuals who appeared to offend the most (committing five or more offences), in order to assess whether or not these offenders were criminally active around the time of the animal cruelty offence or not. As previously stated, only one of the offenders appeared very active, with 16 recorded offences in the dataset. It was also found that this individual was highly diverse and committed public order and miscellaneous offences in addition to the animal cruelty offence. However, the most common offence committed was violent offences and the individual committed nine overall and three within a year of the index offence. It could be suggested that SSP would be useful for identifying

a criminally active individual such as this, as the trigger offence occurred close in time to other, serious, offences.

Regarding the rest of the offenders in this group, it was found that, although a number of individuals committed a large number of offences, most of these offences were not committed close in time to one another or the index offence. Therefore, it could be suggested that these individuals were not as active in there offending around the time of committing the index offence meaning their additional offending would not have been identified through the mechanisms of SSP. However, this is undoubtedly impacted by the reliance on police recorded crime data, which was comprised of only detected offences. To reiterate, in reality, it is likely that these individuals will have committed a number of other crimes between the detected crimes. It could also be suggested, that this further criminality could be detected when applying SSP and following up on individuals as a result of a trigger offence, though this requires further practical investigation. Nonetheless, these individuals committed a vast array of offences: public order offences, violent offences, non-notifiable offences, burglary, criminal damage, and drugs offences.

Additionally, this subset of offenders (17%, n = 9) committed 85 offences, out of a total of 125 (not including the index animal offence), which is 68% of the offences. This is consistent with criminal careers research regarding chronic offenders and Piquero, Farrington and Blumstein (2003) who found that there are a small group of offenders, who are responsible for most of the offending that takes place. This is evidently the case for the present study, and supports SSP, as these are the offenders who are most likely to be identified using the method, so it is promising that this idea can also be applied to those who commit animal cruelty offences. As mentioned previously Blumstein, Farrington and Moitra (1985) criticised criminal careers research, due to findings around versatility and the inability to target specific types of offenders. However, the present research suggests that SSP could be applied to these versatile 'chronic' offenders and they could be identified through their more minor offending. This demonstrates that although versatility

has previously been a problematic issue for criminal investigations, the SSP approach instead relies on this versatility, to be effective.

As mentioned, most offenders in the present research committed their crimes temporally quite far apart, which could increase the difficulty of identifying them using the SSP method. It could be suggested that this sub-group of offenders are not actually that active, and animal cruelty may be a better predictor of future (than current) criminality. The criminal careers paradigm (Piquero, Farrington & Blumstein, 2003) discusses the development of criminal behaviour, with offenders' earlier criminal behaviour indicating potential future criminality as opposed to identifying present, concurrent criminal behaviour. This idea would detract from the support for animal cruelty as a trigger offence, as an offence must be capable of indicating active, rather than future, criminality for SSP to be effective. However, it could also be suggested that the pattern of offending could be indicative of what these offenders are doing but have not been caught for. As emphasised throughout, it is only possible for police recorded data to include detected offences. Therefore, it is highly likely that undetected offences have also taken place between the recorded offences in the present study's dataset (assuming the offender was at liberty). This would mean that many of the studied individuals could have been more active during this time period than is apparent, though this would require further investigation. Self-report studies could allow further insight into this issue, as they provide an opportunity for individuals' to report all of the offences they have committed.

Limitations

As previously mentioned, the main limitation identified was the lack of data sharing between organisations. Due to the RSPCA being responsible for most animal cruelty prosecutions, the dataset of 54 individuals provided by the police force was much smaller than the overall offending population, with the RSPCA (2019) reporting 1,626 convictions in 2018. This means that the results of the study may not be generalizable, however, they still provide a further understanding of the criminal behaviour of those committing animal cruelty offences and assist in assessing the potential usefulness of animal cruelty as an

SSP trigger crime. The police data used in the present study was also the complete records possessed by the police force for a specific time period, so, due to the fact that the aim of SSP is to be utilised by the police; it could be argued that the data is representative for this force. However, this issue highlights a need for more collaboration and data sharing between organisations. It could be argued that due to the large number and wide range of offences committed by the animal cruelty offenders in the present study, it could be beneficial to the police to have access to the information collected by the RSPCA. Based on the findings from the present study regarding versatility it is likely that individuals receiving the attention of the RSPCA are also committing other types of offences and should be considered for further police investigation.

An additional limitation of the small sample of animal cruelty offences identified by the police force relates to the principles of SSP, as the method requires the trigger offence to be commonly occurring. It could be suggested that animal cruelty does not occur (or get reported) enough for it to serve as an effective trigger offence. However, as previously mentioned, an alternative force had a much higher incident rate of 548 animal cruelty cases (around ten times greater) between 2005 and 2015. This could suggest that animal cruelty may have the potential to serve as an effective trigger offence in the area this force operates, however this would require further investigation based on data from this specific force.

Another limitation was that the present research did not have a control group of non-criminals for comparison. This was due to an inability to access data on those who had not committed any offences. The present study was, however, still able to assess how many times individuals detected for animal cruelty did not go on to commit further offences, which addresses the aims of the study. An alternative comparison could have been made between the sample of offenders in the present study and a random sample of offenders active during the same time period. This would have enabled a comparison between the activity and temporal distances between crimes of those who have committed offences other than animal cruelty. However, the data provided was all that was accessible within the time constraints

of the research. Those engaging in future research of this nature should also consider the need for such controls or comparative samples for establishing a baseline and this information should be requested at the outset of collection.

Also, as highlighted previously, the nature of police recorded data means that the crimes may not have occurred on the exact days recorded. However, as previously mentioned, this was not an issue and it could be assumed that the crime events occurred very close in time to when they were recorded.

The HMICFRS's (2017) crime reporting process highlights other potential limitations including incident reporting and the decision if a crime should be recorded. As previously mentioned, it is plausible that many offences, including animal cruelty offences as well as other non-animal offences, remain undetected, so the recorded crimes provided by the police force may be incomplete. As well as this, an incident will only be recorded as a crime if there is suitable evidence. Therefore, a number of crimes may not have been recorded because of a lack of evidence, even if a crime took place. These issues with recording crime could impact the reliability and validity of the results as missing crimes could have an effect on the reported versatility of offenders (offenders may be more versatile than calculated) as well as the activity of offenders as temporal distances could be skewed (a missing crime could portray an offender as less active than in reality). However, as stated previously, the results of the present study showed more evidence for versatility compared to specialisation, which provides support for SSP principles and applying typical definitions of 'active offenders', animal cruelty achieved a similar, or higher, 'hit rate' than other published research in this field. The addition of undetected offences would only provide increased support for these conclusions.

It is important to note that Beirne and South (2007), among others, discuss issues regarding animal rights, expressing that these should be considered much more seriously than they are presently. Whilst violence against humans is considered a more serious offence in the legal system, it could be suggested that cruelty to animals is also a serious offence. Therefore, based on ideas of RCT (Cornish &

Clarke, 2008), it could be reasonable to suggest that there is less of a difference between the seriousness of these two types of offence; if an individual can justify one, then they could potentially justify the other. This could be viewed as a potential limitation for SSP, as the method operates on the assumption of vertical versatility and the idea that minor crimes are more commonly occurring. However, prospect theory (Kahneman & Tversky, 2013), suggest that individuals consider potential losses more than potential gains and animal cruelty crimes generally have less serious punishments compared to violent offences. Therefore, even if an offender can justify committing both animal cruelty and violent offences, it is proposed that animal cruelty is more likely to be committed and occur more commonly, as the potential punishment is likely to be less. Furthermore, although both crimes could be considered serious regarding their effect on the victim, violence against humans is viewed more seriously in the penal system. This supports SSP, as it demonstrates why individuals may be more likely to commit violent crimes as well as animal cruelty crimes, whilst also suggesting that animal cruelty is likely to occur more often, making it a potentially useful trigger offence.

Implications

Overall, in all cases where offenders committed additional crimes to the index animal cruelty offence, offenders appeared more versatile than specialised, which provides some additional support for the criminal heterogeneity argument (e.g. Humphrey & Gibbs Van Brunschot, 2017; Simon, 1997; Roach, 2017). Those committing more than one offence were also found to be active, with frequent offenders appearing very active and versatile; this was the case, even despite the non-inclusion of undetected offences. When focusing on the age and gender of offenders, it was found that there were no significant differences, which suggests that SSP could be appropriate for application in all instances of animal cruelty offending and yield similar results. This is reasonable to suggest as the method focuses on offences rather than individuals, so regardless of age and gender, an active offender would be brought to the attention of the police.

However, a third of offenders in the dataset only committed the index animal cruelty offence and the number of animal cruelty offences reported for this force

was relatively low. This demonstrates that although the key principles of SSP are supported, the present research alone does not provide enough evidence to support practical implications of animal cruelty as a trigger offence. Animal cruelty could have the potential to serve as a more effective trigger offence with the sharing of data between organisations. However, due to this not being the case at the present time, the police force involved in the present study does not have access to enough of this data operationalise animal cruelty as an SSP trigger offence. However, based on the large proportion of offenders found to be versatile in the present research, further research using data from police forces with larger numbers of animal cruelty cases may be worthwhile.

When compared to other potential trigger crimes, animal cruelty appeared to identify the most active offenders, indicating that it could be the most successful trigger offence. However, other offences such as driving offences, which have been the main focus of SSP research (e.g. Roach, 2007; Roach 2017), are much more commonly occurring than animal cruelty, with over 200,000 convictions for motoring offences alone in 2018 (Ministry of Justice, 2019). These types of offences are also more routinely monitored and therefore come to the attention of the police more easily, making them potentially more suited to the SSP method. However, as previously mentioned, more cases of animal cruelty have been reported to an alternative police force, which could warrant further investigation, although this is still substantially lower than cases of driving offences. Nonetheless, it was also found that violent offences appeared to be the most common offence committed, in the case of the present research, differing from studies involving driving offences, where acquisitive crimes were identified most often. Therefore, although driving offences may appear more suitable for the application of SSP, it could be suggested that animal cruelty could provide some insight when attempting to identify serious, violent offenders.

Future research

The low number of animal cruelty cases identified in the present study could indicate that animal cruelty may not occur, or be reported, often enough for it to serve as an effective trigger offence. However, the present study only analysed

data provided by one police force. It could be beneficial to review the number of cases of animal cruelty reported to other police forces across the country (potentially through a Freedom of Information Act request), to assess whether this is a consistent trend or whether there are areas where the crime occurs more often. If animal cruelty is reported more commonly in other areas, it may be beneficial to conduct a similar investigation to the present study, to assess the effectiveness of animal cruelty as a trigger offence in these areas.

Existing research also demonstrates there is variation in what time frame is used to classify an offender as versatile and as active. Future research could investigate this in more detail, in order to produce a generally agreed definition of an 'active' offender. Also, it was stated that the present research used police data for the analysis, however the RSPCA investigate and prosecute in most cases of animal cruelty. Therefore, it would be beneficial to conduct a similar analysis to the present study, using data from the RSPCA, in order to gain a more holistic view of the criminality of those who are cruel to animals.

It was also highlighted that females are commonly underrepresented in this type of research. Future research could specifically analyse the criminal behaviour of females who are cruel to animals, as well as analysing their levels of versatility in general, in order to gain further insight, as this has previously been overlooked. Additionally, the issue of undetected offences has been frequently mentioned throughout the present study. It would be useful to conduct research that includes self-report data, as offenders have the opportunity to include all of their previous offences. However, self-report data has been criticised for its reliability as those participating may not be entirely truthful, therefore, this type of research should be approached with caution (Bryman, 2016).

Furthermore, the intention of SSP research is to provide a useful tool to assist in investigations. Therefore, the opinions of police officers and others involved in the investigative process is important, if the method is to be used effectively. Qualitative research analysing this would provide valuable insight into police

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views on criminal versatility, using animal cruelty as a trigger crime, as well as the SSP method in general.

Conclusion

To conclude, the present research provides a further understanding of the offending behaviour of those who commit animal cruelty offences. It was found that these individuals are generally versatile and active, therefore, could be well-suited for the application of the SSP method. However, limitations regarding information sharing between organisations could hinder the process, suggesting more collaboration between organisations is required. Also, the low number of animal cruelty cases reported to the police force supplying data for the present research indicates that animal cruelty may not occur often enough to be used effectively via SSP methods. Therefore, research into the occurrence of animal cruelty across different police forces is required to investigate this further.

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Appendices

Appendix A:

[EMAIL]

To [Police Force],

I was advised to contact you by my university supervisor Dr Jason Roach regarding permission to access data and participants for my Masters research project. The study is in relation to the use of animal cruelty related crimes as self-selection trigger offences. Self-selection policing is an evidence-based method of investigation developed by Roach and Pease (2016) whereby active criminality is identified through the more minor crimes individuals commit.

Regarding the present study, I am looking into the offending behaviour of those who commit animal cruelty related crimes. Specifically, what other crimes are committed in a similar time frame to the animal cruelty related crimes committed and therefore, can animal cruelty possibly indicate other (possibly more serious) offending behaviour. The underpinning idea is that more minor offences may be much easier to identify, so it could be beneficial to monitor these types of offences, which are flagged up through routine police work, in order to identify serious active offenders.

In order to quantitatively investigate animal cruelty as a trigger crime, I will need to analyse the criminal records of individual who have committed crimes against animals. The variables I would need would be the age and gender of offenders as well as the type of animal crimes they have committed and the dates these were committed, and then any other non-animal crimes and the dates these were committed.

Also, as this is a contemporary area of research and it is important to consider the possibility of implementing these practices alongside current policing methods. I would also like the opportunity to conduct interviews with police officers from your Force (preferably 6) to discuss the extent of the knowledge police have about the method, as well as the advantages/disadvantages and potential barriers of implementing such a method in a wider context.

If any data is provided it will be stored securely on the researcher's university drive, in accordance with GDPR requirements. Data collected from interviews will be confidential and pseudonyms will be used to protect the identity of participants and any potentially identifiable details will be excluded from the write up to

ensure data, including quotes, cannot be identified to an individual. You will not have access to individuals' data collected from interviews due to ethical regulations regarding participant confidentiality and anonymity, however you will have access to the final report. The lead supervisor (Dr Jason Roach) will act as custodian of the data for the recommended 10-year time period to ensure integrity of research. They will also be storing the data on their computer, where it will be password protected. Data will be destroyed after this period of time.

Also to abide with GDPR requirements:

- The University of Huddersfield is responsible for the secure management of the data i.e. the 'data controller'
- The legal basis for the collection of the data is usually 'a task in the public interest'.
- The researcher or research team (including transcribers) is the recipient of the data i.e. 'the data processor'.
- The data subject should contact the University Solicitor (as the Data Protection Officer) if they wish to complain about the management of their data. If they are not satisfied, they may take their complaint to the Information Commissioner's Office (ICO).

Research will be presented in the researcher's university thesis and may also be published either fully or in part in suitable academic, industry and/or police publications. Additionally, research could be presented at conferences or form part of related training programs and you will be notified if this occurs.

If you could provide me with any of the requested data/access to participants for my research, please let me know and thank you for your interest in this research.

Kindest Regards,

Renée Farquharson (Researcher) University of Huddersfield

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