
USING OPEN SOURCE DATA TO MAP CRIME – SEASONAL ANALYSIS

A Case Study of Burglary in Cleveland, Middlesbrough

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ABSTRACT

The establishment of police was forced by societal, demographic, and economic changes resulting from the urbanisation and expansion of the population during the industrial revolution. The British elite, in particular, were concerned about being victimised by the impoverished and unemployed in London. Sir Robert Peel, then-chief of the London Metropolitan Police, introduced the Metropolis Police Act in 1829 to restore "the social cohesion that was alleged to have been lost through urbanisation and industrialization." The police's principal goal is to keep the public safe from crime and disturbance.

The study is based on the use of open source data to map out crime, with a focus on burglary in Cleveland, Middlesbrough. Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICERS) rated Cleveland Police as the first force in England and Wales to be rated inadequate across all areas of performance in the Police effectiveness, efficiency and legitimacy 2018/2019 (PEEL) report of 2019. In order to verify the veracity of this report, the study used the statistical tools of Orange, Pandas, and Tableau to address the spatial dimension of Burglars.

The research through the study of environmental criminology observed the hotspot zone crime attractors are public facilities like shopping malls, high schools, taverns, convenience stores, apartment buildings and public housing projects. Different types of facilities increase or decrease crime in their immediate environment. Defensible space features of the built environment, demographics and, to some extent, the temporary environment are the major variables affecting the rates of crimes.

Conclusively, the research recommended PANDA, SARA and SPATIAL crime models which are all models used to support problem-solving policing. The main focus of the models is the need to reduce crime in urban and suburban communities

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CHAPTER ONE

INTRODUCTION

1.1 THE STUDY'S BACKGROUND

For decades, both government and personal operations have relied on open sources (OS) to gather data and information (Steele, 2002). The Cleveland Police region is made up of four local authorities: Hartlepool, Redcar and Cleveland, Middlesbrough, and Stockton on Tees. Cleveland Police, despite having the smallest geographical area of any force in England and Wales (except for the City of London Police), faces challenges similar to those faced by larger metropolitan forces, including high levels of deprivation and a variety of problematic socio-demographic and economic factors. The fact that Greater Manchester, West Yorkshire, Merseyside, Northumbria, and Humberside are all considered most similar' to Cleveland demonstrates this (The Changing nature and complexity of demand in Cleveland, no date).

As a case study, the study employs the term "burglary," making no distinction between commercial and domestic Burglary, as the case may be.

Earlier studies on Burglary included developing profiles based on crime and offender characteristics (Fox and Farrington, 2012), research on how burglars are prosecuted (Farrington and Lambert, 1997), studies of repeat victimization (Kleemans, 2001; Farrell and Pease, 2017), and extensive prospective mapping of Burglary (Kleemans, 2001; Farrell and Pease, 2017). Even though it is not the subject of this thesis, it is critical to note that burglaries result in a high recurrence rate. According to Kleemans (2001), repeat burglary victims may be because the offender is aware of what items are available to steal and what mode of transportation they will require to remove the items. After some time has elapsed, the objects taken in the first

place are likely to have been replaced through insurance. Repeat burglaries are also common since the criminal is now aware of what is available and the risks associated, such as ease of entrance. More work on Crime hotspots-based predictive policing has arisen from the analysis of repeat victims (Bowers, Johnson, and Pease, 2004; Farrell and Pease, 2017). According to Johnson and Bowers (2004), prior burglary victimization is an excellent indicator of future risk in their study of prospective hot-spotting. There is a vast quantity of research on Burglary; nevertheless, the current thesis focuses on hotspot locations, the prevalence of Burglary to seasonal fluctuations, and the public sector's behavioral element.

1.2 RESEARCH QUESTIONS

In 2019, the Cleveland Police was tagged the first force in England and Wales to be rated inadequate across all areas of performance by Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICERS) through the Police effectiveness, efficiency and legitimacy 2018/2019 (PEEL) report of 2019 (British Broadcasting Corporation, 2019). The HMICFRS's PEEL (police effectiveness, efficiency and legitimacy) assessment of Cleveland Police was designed to give information about how local police force is performing in several important areas, in a way that is comparable both across England and Wales, and year on year.

The Cleveland Police was inspected in the three core PEEL pillars and was graded inadequate in each of the three pillars, these includes the following (HMICFRS, 2019)

- The extent to which the force is effective at reducing crime and keeping people safe is inadequate
- The extent to which the force operates efficiently and sustainably is inadequate
- The extent to which the force treats the public and its workforce legitimately is inadequate

The research is a case study of burglary within the Cleveland using open source data from <https://data.police.uk/data/> for the year 2019 was a deliberate effort by the researcher to

investigate these inadequacies and proffer remedial measures through results and recommendations to the significant deterioration of the Cleveland public sector.

In order to achieve this, the research draws a focus on the hotspot areas, the rate of burglary in relation to seasonal changes and the behavioural aspect of the public sector, thus, the researcher arrived at the following research questions;

1. Which are the hot spot areas of Burglary within Cleveland?
2. How does the change in seasons reflect to this crime?
3. What is the response of the public sector to curtail this Crime?

1.3 OBJECTIVES OF THE STUDY

The Cleveland Police region encompasses the four local councils of Hartlepool, Redcar and Cleveland, Middlesbrough, and Stockton on Tees. There are four seasons in the United Kingdom, according to the London Perfect: Winter, Spring, Summer, and Autumn.

In addition, in response to Cleveland Police being named the first force in England and Wales to be rated inadequate in all areas of performance by Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICERS) in the Police effectiveness, efficiency, and legitimacy 2018/2019 (PEEL) report released in 2019, (British Broadcasting Corporation, 2019). The research used the case study of Burglary to ascertain the veracity of the PEEL's statement.

The best of Statistical packages and tools was employed to address the research questions, hence, the study presented the following specific objectives in order to address the research questions;

1. To identify hot spot areas.
2. To establish whether the changes in seasons is an effective channel through which burglary are predominant.
3. To investigate the response of the public sector to the variations of crimes within Cleveland.

1.4 ACADEMIC BENEFICIARIES

The research adopts an innovative methodology, bringing together sources of evidence through open-sourced data.

This research makes a substantial contribution to academic progress, both across and within disciplines, by advancing understanding, methods, theory, and application.

The research work has been able to identify two strands of disciplines where the research will be beneficial academically and otherwise.

Artificial Intelligence: Artificial intelligence is concerned with the creation of machines that can engage in human-like mental processes such as learning, reasoning, and self-correction. Artificial intelligence (AI) in policing refers to strategies developed through machine learning and other types of predictive analytics to reduce unnecessary labour, speed up various forms of police work, and encourage police forces to allocate their resources more efficiently in the prevention of crime and future harms.

However, the promises of AI technologies in terms of prediction and innovation do not always match reality; they frequently have substantial flaws, come at a high cost, and necessitate difficult trade-offs. The research will use past trends and current information to predict when and where crime is likely to occur, with the research results and findings serving as recommendations for remedial measures to the flawed "predictive policing" (PredPol) system in the United Kingdom (UK) and Cleveland as a case study.

Researchers: The project's Data and Analytical software will enable researchers who make references to the work to become active participants in creating knowledge rather than passive recipients. As a result, researchers and students will build personal and professional skills essential for graduate-level positions and beyond, allowing them to recognize the importance and applicability of the aforementioned statistical techniques to society and the economy.

However, it should be noted that the research work's suggestions are not confined to Cleveland Police and its jurisdiction; instead, they apply to the PEEL (police effectiveness, efficiency, and legality) assessment standard across England and Wales.

1.5 COMMUNITY DIFFERENCES AND BURGLARY: DO THEY MEAN SOMETHING?

Any quantitative examination of crime policy reform requires crime measurement (Ludwig & Marshall, 2015). The ability to understand how crime trends are distributed over space can help police operations and community-wide initiatives like Neighbourhood Watch become more effective (Brunsdon, Corcoran, & Higgs, 2007). Local awareness about crime hotspots, for example, will improve the police's ability to use preventative measures, hence boosting community safety (Bruce & Santos, 2011; Moore & Trojanowicz, 1988). As a result, city and regional planners, policymakers, and law enforcement agencies have all realized the need to correctly understand crime patterns (Murray, McGuffog, Western, & Mullins, 2001). A systematic method to analyzing crime and its extended determinants is interaction with political, social and observable traits in the regions where crime happens. It's an important part of the environmental criminality (Andresen, 2014). Wealth and other political, social and observable traits.

In metropolitan regions, disparities, educational attainment, Deprivation and the percentage of youths are frequently linked to criminality (Bandyopadhyay, and Han, 2010). These parameters operate as substitutes for, or activities and procedures of, the fundamental causes of violence in a system that links perpetrator behaviors, target routines, and atmosphere possibilities. The accuracy and representativeness of variables that serve as proxies, on the other hand, vary greatly. Still, they are all captured within the scope of the research activity utilizing the software visualization tool "Orange," which is discussed later in chapter 3, section 3.4. The phrase diversity refers to a group's cultural diversity, gender, sexuality, faith, ideology, fitness level, social class, and sexual identity (Goodin, 2014, p.7).

1.6 DISCUSSING THE CONNECTION BETWEEN DIVERSITY AND CRIME

Within United States and United Kingdom States, socio- demographic heterogeneity has indeed been connected with poverty.. Weakened social cohesion and a wide range of criminality in localities (Sampson & Groves, 1989; Bursik Jr & Grasmick, 1993). Within a neighborhoods, heterogeneity can suffocate informal communication and harm the development of cross-group social interactions (Letki, 2008;Browning et al., 2008; Laurence, 2011). In the Netherlands, Meer and Tolsma (2014) observed that community diversity contributes to low engagement and genuine interactions, undermining cross - functional and cross social cohesiveness. According to studies based on the Metropolitan Police Public Attitude Survey of London (METPAS), ethnically diverse neighborhoods, particularly those with significant migratory inhabitants, are generally defined by suspicion, weak social harmony, and significant levels of conflict (Sturgis et al. 2014), with potentially damaging consequences for individuals and also the entire demographic (Mellgren, 2011). According to recent Japanese study, areas with ethnic diversity, financial diversity, and characteristics such as age (as measured by surveys at the individual level) have high crime rates (Takagi & Kawachi, 2014). However, this link must be examined in the perspective of the United Kingdom..

Shaw and McKay's (1942) hypothesis of psychological dysfunction has been adopted by researchers to explain why incarceration rates differ between communities. According to the notion of social disorganization, racial diversity, housing instability, and societal deprivation undermine networks, resulting in increased juvenile levels of crime (Shaw & McKay, 1942). Shaw and Mckay's theory was empirically extended by Sampson and Groves (1989). They found that psychological dysfunction reduces members' capacity to collaborate in solving problems. Still, community dwellers' cohesion lowers criminality. (Raudenbush, Sampson, & Earls, 1997). Furthermore, Kristjánsson (2007) stated that strained social relationships reduce illicit social links.

A lack of community control exacerbates unpleasant actions. Burglary thrives in morally disordered and less integrated environments. (Piquero & Weisburd, 2008). Because of their weaker social cohesion, disorganized neighborhoods are likely going to have increased burglary crime rates than rich regions. Citizens' capacity to be on the alert for criminal activity is facilitated by solid social connections (Cullen, Burton, Dunaway, & Evans, 2000). Scholars frequently employ Routine Activities Theory (RAT) (Felson & Cohen, 1979) in explaining the recurrence of criminality like Break-in. It is based on the notion that committing a felony involves the simultaneous presence of three factors: motivated offenders, right environment, and the lack of competent protectors. According to a major research, communities with a number of features (employment, school, earnings, race, and residency) as well as poor social status cohesiveness and skilled supervision are more likely to experience Burglary (Louderback & Sen Roy, 2018). As a result, the psychological dysfunction theory and the RAT could be able to explain why community crime occurs (Eck & Weisburd, 1995).

In a research of socialisation in Berlin communities, Gruner (2010) uses Bourdieu's idea of 'habitus' (nationalised patterns that drive action) to analyze the pattern of distribution of communities in context of political, social and epidemiological structure. He discovered that different social traditions and minor communities' failure to assimilate, which he refers to as personality, are linked to the forms and distribution of settings. People who have similar patterns are drawn to one other and feel more at ease (Bourdieu, 1989). This theory is applied to investigating social theft and reported concerns are examples of such challenges related to migrant movements in urban areas (e.g., Shammass & Sandberg, 2015). Coming of age in a disorganized and crime-dominated neighborhood, for example, may have a significant impact on people's behavior, particularly among the youth (O'Connor, 2004), promoting delinquency (Tricia, 2016). This is particularly true in the environment where the study is taking place. Result of the series of research is that an increased level of variety in a community reduces social cohesion, which leads to an increase in neighborhood violence. There's evidence that variety hurts social cohesion (Meer & Tolsma, 2014), this appears to be particularly true when variety is combined with restriction (Cooper & Innes, 2009). Nevertheless, it is crucial to remember that degrees of heterogeneity and unity are not always inextricably linked and that cohesion can be

influenced favorably and adversely by factors other than ethnic or economic variety (Ariely, 2014).

1.7 OVERVIEW OF CHAPTERS

There are five chapters in this thesis. The first chapter is concerned with Research questions, objective of the study and Academic beneficiaries. The research questions focus on the hotspot areas, the rate of Burglary in relation to seasonal changes, the public sector's behavioural aspect; the Objective was addressed using the appropriate statistical packages and tools. The Methodology and the existing Literature on burglary are reviewed in the first two substantial chapters (2 and 3). Chapter 3 begins with the Methodology, followed the Method of Data collection and Data Mining method, then Data and Statistical Analysis.

Chapter 4 explains the results and findings obtained from the results. It begins with an Introduction, then a table showing the total number of burglaries within the Cleveland County for the year 2019, a Geo map showing the spatial dimensions of burglary, and lastly, a Pie chart showing the percentage of Burglary in Cleveland across the four seasons in the UK for the year 2019.

The thesis concludes with Chapter 5, which explains the Conclusion and Recommendations.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 INTRODUCTION

Burglars aim home or business properties, with some being industrial and others not. This chapter focuses on Burglary, the distinction between commercial and residential Crime are sometimes less obvious. As a result, a public school would be barred from participating in a commercial burglary investigation, whereas a private school would be. Burglary of a small business may also include the owner's home; farm crimes may consist of both agricultural equipment and personal items, and a break-in to an office may include theft of employees' personal belongings.

Burglary has different legal definitions in different countries. On the other hand, Burglary is defined as when someone enters a property without permission to steal anything, according to the International Crime Victim Survey (ICVS). That is, forced entry is not necessary; instead, Burglary is distinguished from theft by the act of entering without permission. As a result, several different burglary scenarios have been identified:

- Forcible entry by a door, a window, or the roof.
- To gain entry to a closed door or window without causing harm, use a different method (such as a credit card).
- Use an open window or door to get access.
- When the criminal gains admission through fraud, enter without authorization.

Forced entry through a door or window is the most common type of commercial Burglary, with ram-raiding being particularly extreme and unusual (Donald and Wilson, 2000; Jacques, 1994). Subterfuge is a current topic, usually associated with home burglary, where government actions in the United Kingdom have focused on distraction burglary targeting the elderly (Distraction Burglary Task Force, 2002; Home Office, 2002). Hotel rooms may be robbed by professional burglars who work as service staff or by crooks who trick reception staff into turning over room keys. However, there has been no previous research on hotel crime that has looked into such approaches.

The Literature of my study will comprise of

- The Conceptual Literature
- Empirical Literature

2.2 CONCEPTUAL FRAMEWORK

2.2.1 Burglary

In England and Wales, burglary is defined as a violation of section 9 of the Theft Act 1968 (TA 1968), that combined the ancient Crime of Burglary (that also made reference to break-ins into habitations by the dark with the intention to cause harm) with a wide range of other crimes that had built up over time, such as property-breaking (which included entrance in a residence by the dark with a criminal motive) with a wide range of many other offences which has built up over years. Under the aforementioned Act, an individual is now responsible for the Crime if:

(1) (a) He goes into any facility or portion of a structure as a misdemeanor with the motive to inflict any of the offences listed in subparagraph (2) below, or (b) after accessing a given structure or portion of a structure as a misdemeanor, he robs or tries to take anything in the structure or portion of it, or perpetrate any malicious body injury on an individual therein.

(2) Theft of everything else in the structure or portion of a structure in concern, causing severe physical harm on any person inside, sexually abusing any lady inside, and perpetrating illegal damage to the structure or something within are the offences referred to in subsection (1a).

An Individual is also commits "aggravated burglary" if he "commits any burglary while having any firearm or imitation firearm, any weapon of offense, or any explosive with him at the moment."

Even though the Home Office categorization is used in the legal documenting and tallying of unlawful conduct, burglary in residence (also known as household Burglary or residence Crime) is never a distinct crime in legislation.

Intrusion, particularly home invasion, has a long history of being harshly punished by lawmakers and judges. For example, until the early eighteenth century, forcing entrance in residences at night was punishable by death, and the mandatory sentence for Burglars then under Theft Act is fourteen years, with aggravated Burglary carrying a life sentence. According to Chappell (1965:3-9), the high penalties associated with burglary stem from the law intended to punish attacks on the safety of a structure or community – and indeed among they people – rather than theft of its contents. Britton reported one of the earliest known definitions, which covered housebreaking and the breaking of city walls or gates around the year 1300. The psychological toll on contemporary domestic break-ins victims could indeed adopt a holistic safety concerns, with survivors disclosing anxiety, a feeling of infringement, as well as a loss of confidence around their own dwellings; Judges are motivated by this, not the extent of the economic damage, to continue to inflict relatively heavy penalties on burglars.

There are five most categories of burglary (prime alert, 2021), but the study concentrates on the two most common ones, which are;

- Domestic Burglary or Residential Burglary

- Commercial Burglary

2.2.2 Domestic Burglary

This form of theft is also known as residential burglary; it occurs in homes and flats that are attractive to robbers. Crowbars lock picks, screwdrivers, and other prying instruments are often used by thieves to unlock already weak locks on doors and windows.

These robbers typically target residences where the residents have not taken further security precautions.

2.2.3 Commercial Burglary

This is defined as forcing entry into a store, showroom, business, factory, or any other form of firm assets. By exploiting security holes, they gain entry to the premises and steal valuable objects. They frequently gain entrance by forcing the padlocks to obtain access.

2.3 EMPIRICAL LITERATURE

It is undeniable that crime statistics and trends differ across civilization. Changes in politics, economics, society, and culture, for instance, have a big effect on delinquency statistics, including trends. They're also impacted by the legal context in which different sorts of criminals are classified and punished, including how the Criminal Justice System (CJS), that comprises the authorities with the justice system, handles crime situations. Conceptual opinions and how legislators and criminal justice agencies interpret offending impact decisions about how to solve crime problems in every particular country. Classical criminological theories hold criminals accountable for their actions and hence believe that punishment is required to compensate for the harm they do to community. According to the same perspective, the CJS is in charge of

defending of the populace from the unlawful intents of a tiny group of people who break the law in order to infringe on the rights of others. Positivist approaches, on the other hand, see criminals as individuals whose actions are motivated by economic and societal constraints. Such delinquency is attributed to a combination of reasons, including severe economic distress, inefficient family inspection, and uneven school standards, which have all contributed to a society that fails to initiate citizens who abide by the law. Treatment and rehabilitation realist policies concepts try to mitigate the emotional and societal consequences of such an inefficient system.

Many researches have looked into the origins of crime using these punitive and rehabilitative approaches to criminality. Despite the fact that they classified correctly all of the social determinants that significantly lead to the formation of criminals in community, such efforts have proven useless in mitigating crime rates. It's owing to the fact that crime is the outcome of a series of interrelated events. Furthermore, the amount and manner in each of which variable has an impact on various offenders is unclear, making it nearly impossible to control such features. Furthermore, social intervention activities by a number of organizations that have impacted the emergence of unlawful conditions may take quite some time, or even at all, to bear fruit.

Meanwhile, a number of foreign governments have attempted to focus emphasis on practices that deliver better results in terms of crime control administration. They've taken stances that prioritize the ecosystem and the illegal chances it produces, and they've implemented strategies to minimize crime rates by eradicating or limiting criminal chances (Mayhew, et al.1976). Emerging environmental criminologists has considered the concepts of 'season' and 'location,' saying that illicit activities happen at specific season and in specific areas, where criminal possibilities are generated. Such viewpoints were based on victims' "regular activities" and "lifestyles," which held individuals outdoor for a large portion of the day, and allowed criminality to flourish by allowing potential offenders take advantage of opportunities (Cohen and Felson, 1979). Notable contextual factors in the United Kingdom (UK) included initiatives like community watch to raise vigilance and notify questionable behaviour to the authorities,

civilian policing, increasing safety via goal technics, and so on, and the whole eliminate reoffending.

Several studies, such as those by Jacobs (1961), Jeffery (1971), Newman (1972), and Poyner (1983), have claimed also that natural culture has a strong impact on crime rates but that neighborhoods and structures must be built to facilitate for natural access. Researchers too were anxious about different housing options, stating that some types of housing are liable to specific crimes, such as burglary, which is more common in households with little security. Houses with insufficient bolts and fasteners, gloomy locations without any illumination, which allow criminals to hide in the streets, especially in corners, and an ineffective security monitors, among other things, constitute a community an appealing prey for crimes and larceny.

Remarkably limited information about business burglaries have been released (Clarke, 2003). That's also largely due to the focus on domestic or family crime in the past. Community case studies, for example, were more popular in the previous 30 years, whereas corporate case studies are far more modern. While the British Retail Consortium (2013) conducts an annual comprehensive retail crime report, the Home Office's more detailed industrial victimisation questionnaire for England and Wales only was launched in 2012. (Smith and Harvey, 2010; Home Office, 2013). It's also due to the challenge of interpreting crime stats. In English crime statistics, for example, the sole distinction made is between home thefts versus 'other' crimes that might typically involve storage shed or attached garage pull to commercial burglaries or other property ownership burglaries (Redshaw and Mawby, 1996).

The majority of what is stated fits into one of four categories. For starters, research on burglary in general have been conducted that compare domestic and commercial offences (Mawby, 2001). Second, studies of commercial victimisation enable comparisons of burglary to other types of commercial crimes. In 1994, the International Crimes Against Businesses Survey (ICBS) which was held in eight European nations, with parallel studies in Australia and South Africa (van Dijk and Terlouw, 1996). This was arguably the first large-scale research; however it was primarily focused on the re-sale business. In England, the Home Office participated to the ICBS, which included the Commercial Victimization Study (CVS) (Mirrlees-Black and Ross, 1995), and

then performed a corresponding national survey in 2002 (Taylor, 2004) and a subsequent in 2012 (Taylor, 2004). Other countries, such as Scotland (Burrows et al., 1999; Hopkins and Ingram, 2001) and Australia, have done national surveys (Burrows et al., 1999). (Walker, 1996; Perrone, 2000). Statistics from a variety of local assessment across England and Wales is also readily accessible (Johnston et al., 1994; Mawby, 2003; Tilley, 1993; Wood et al., 1997) Finally, other studies concentrate on crime in specialised corporate settings, such as hotels (Ho et al., 2009; Huang, 2009).

Burglary can be discussed in homes (e.g., et al., 1998; Jones and Mawby, 2005) or on farms (e.g., et al., 1998; Jones and Mawby, 2005). (e.g., et al., 1998; Jones and Mawby, 2005). (Ladikos and Kruger, 2006; Barclay and Donnermeyer, 2011). Finally, some studies, such as those conducted in England and Wales (Redshaw and Mawby, 1996; Taylor, 1999), the United States (Bichler-Robertson and Potchak, 2002; Hakim and Gaffney, 1994), and the Netherlands (Bichler-Robertson and Potchak, 2002; Hakim and Gaffney, 1994), have focused solely on commercial burglary (Bichler-Robertson and Potchak, 2002; Hakim and Gaffney, 1994). (Hakim and Gaffney, 1994; Bichler-Robertson and Potchak, 2002). (Kruissink, 1995; Kruissink, 1996; Wiersma, 1996; Kruissink, 1995; Kruissink, 1996; Wiersma, 1996; Kruissink, 1995; Kruissink, 1996; Wiersma, 1996; Kruissink, 1995; Kruissink, 1996; Wiersma, 1996; Kruissink, 1995; Kruissink Laycock (1985) investigated problems with chemist's shops, Beck and Willis (1991) investigated burglary data kept by 22 out-of-town superstores, and Jones and Mawby (2005) investigated hotel burglary. Clarke (2003) focused at retail burglary in a review of research from throughout the world.

2.4 CHARACTERISTICS OF PERPETRATORS AND CRIME EXPLANATIONS

What types of individuals break into the homes of others, and why do they do so? There is no easy answer: perpetrators differ in age, background, motivation, tenacity, abilities, and levels of the organization, just as they do in any other sort of Crime. However, there are a few distinct patterns to be seen.

To begin with, research suggests that home thieves in the UK and the US — fact, to the best of our knowledge, in most nation on this planet — are abnormally youthful, men, and impoverished. According to Kent's (2007) research of the 2005/06 BCS, survivors are able to define the perpetrator's traits in 43 % of burglaries; in 83 percent of these incidents, the perpetrator or culprits have been men, and about 2 were assumed to be under 25 years old. Young males are also prevalent among sentenced burglars: in 2007, almost 95% of all those convicted for Burglary (of any kind) in England and Wales were male, and 43% were under 21 (Ministry of Justice, 2008). Few official statistics exist on social class, however, research papers of intruders premised on incarceration conversations or oral history survey methods in the neighbourhood (most of which utilised non - probability methods to find participants instead of depending on tests of those recognised to the officials) highly recommend that the large bulk benefit from low families (see, for example, Maguire and Bennett, 1982; Shover, 1991; Wright and Decker, 1994; Cromwell and Olson, 2004).

Second, persons guilty of burglars do have strong potential of repeat offending, such as a strong probability of perpetrating other thefts. Whilst also 'each' or 'occasional' perpetrators, such as young kids dabbling with wrongdoing by breaking into residences in his\her local vicinity, are acknowledged, the 'home invasion issue' is primarily composed of members (who mostly are indeed extremely new) whom has evolved a trend of prevalent, and in certain instances, influential wrong doing. This section will focus upon that category, which includes those who are much more talented, choosy, or 'skilled' than many others.

Finally, burglary is not the only type of crime committed by many criminals, nor is it the only type of crime they do during their criminal careers. Residential burglary was a "phase" for several repeat offenders when they were youthful, until they identified newer profitable and less stressful methods to make wealth unlawfully. Most times individuals that break into residences over a long period do so as part of a more extensive repertoire of criminal activity. For instance, all but five of the 40 inmates quizzed by Maguire and Bennett (1982) who had already been indicted of Break - ins were known to employees or other inmates (or personally) as "intruders" had committed multiple of crimes: the findings indicate perhaps a more precise

tag should be "thieves whose main line is burglary" (for other exhibit on crime inconsistency and specialization, see for instance Blumstein et al. 1986; Wolfgang et al. 1987).

There's no evidence to suggest that the distal roots of Burglary (especially amongst repeat offenders) are considerably different from those proposed by decades of researchers to describe the origins of criminal behaviour in whole: Human psychopathology, neglect of children, subculture influence, etc . Whereas these elements have a role in influencing the interactional situations in which burglaries is considered, they are not the only ones, explanations in general like these provide little understanding into how criminals view and deliberate on their behavior, nor of the distal reasons of actual instances of criminality - that is, the factors that influence and maintain peoples choices to perpetrate a household burglary in the days prior to the crime. Accordingly, several researchers performed in-depth interviews with jailed or actively active offenders to acquire a better grasp of these challenges (see, among others, Walsh, 1980; Maguire and Bennett 1982; Bennett and Wright, 1984; Wright and Logie, 1988; Nee and Taylor, 1988; Shover, 1972, 1991; Cromwell et al., 1991; Wright and Decker, 1994; Hearnden and Magill, 2004).

2.5 'OCCUPATION,' 'PARTYING,' OR 'SURVIVAL,' WHICH IS IT?

In most of the studies mentioned above, the most prevalent motive cited by offenders as motivating their engagement in burglaries is lust for wealth; comments about looting 'for the thrill' are far less significant and largely limited to juvenile people. Therefore , whereas most burglary targets perceive the invasion in their property as significantly more frightening and unpleasant than a mere immoral act, most perpetrators view trespassing into a property as just one of several unlawful ways to obtain money. There are significant differences in the

situations in which they use this 'alternative,' as well as the existence, magnitude, and intensity of the finances they strive to satisfy, varying of those who classify Break - ins to some extent as a 'vocation,' offering a relatively consistent stream of revenue, to the few who commit crimes once they have an immediate want for funds, such as to satisfy a heroin addiction or feed. After all, this has consequences for however they want victims and, as a result, for security measures.

Within the 1970s and 1980s, criminologists studying burglars (or offenders who committed a variety of property crimes) attached great importance to respondents' claims on how they comprehended and coordinated their illegal behavior. 'They considered themselves to be professionals' to some level – albeit with a wildly exaggerated impression of their immediate actions and talents. This perspective is reflected in the titles of Letkemann's (1973) book, 'Crime as Work,' and Shover's (1971) Ph.D. thesis, 'Burglary as an Occupation.' Other similar studies were conducted in the United States (e.g., Irwin 1970; Reppetto 1974), Canada (Waller and Okihiro, 1978), and the United Kingdom (e.g., Irwin 1970; Reppetto 1974). (e.g., Irwin 1970; Reppetto 1974, Walsh, 1980; Maguire and Bennett 1982; Bennett and Wright, 1984).

For instance, in Maguire and Bennett's (1982) research on Burglary in European Towns, they discovered that a large percentage of crimes were committed by "moderate range" (rather than "weak" or "excessive" level) city criminals. Those were all recidivists, who mostly identified and harmed with one another, and who inclined to describe themselves – and to be identified by the authorities – as 'crooks' or 'intruders,' with the career of making a living via criminality. Most people developed mental images of a major criminal 'lifestyle,' which included careful target selection, profitable stolen goods hauls, and avoiding prosecution. Nevertheless, they routinely committed crimes, received little compensation each offence, and frequently went to jail. The problem, they believed, really wasn't that they'd be "tried and found guilty" - most of them were highly proficient – but then possessed less skills and discipline to maintain their activities secret from the authorities. They rarely generated significant profit from residential burglaries (buying stolen goods at rock-bottom cost), causing criminals to conduct number of crimes, increase their risk of being caught and prosecuted Thieves too were susceptible to

informants (usually rival thieves and recipients), and the cops had a solid image of these connections since they spent so much time socializing in company of other 'career' criminals.

Burglary study began to stray from the 'occupation' concept later on. Wright and Decker (1994), for example, discovered that the majority of criminals they spoke with (a snowball's selection of convicted and unconvicted thieves) characterized the crime as just a reaction to current demands. The majority claimed to be looking for money to solve a pressing problem rather than for its reason or achieve some form of long-term goal. Burglary, in their opinion, was a way of survival.' Offenders claimed to utilise the stolen property to meet their daily requirements in some cases, and this was taken literally in others. 'I'm poor and unkempt, and I need basic sustenance and boots,' an actual burglar told Wright and Decker when questioned (1994:37). So I'll have to come up with a way to make some money. So be it; if it has to be the wrong way, so be it.'

While perpetrators could describe their motivations for breaking into houses as "survival," the study points out that when asked how they spend the profit they earn from their misdeeds, numerous, though not all, chronic intruders concede that most of it is expended on so-called "club activities" such as heavy alcohol and drug use. The choice to engage in burglary is often taken during a particularly continued frenzy of clubbing with the explicit intent of prolonging it. Bennett and Wright (1984:32) interviewed a prisoner who his imprisonment occurred because "we progressed developing out of narcotics and this guy discussed acquiring some money to purchase some more." Self-perpetuating behaviors like this are described by Lemert (1953:34) as "dialectical self-enclosed systems of behavior" based on intrinsic logic or "false structure". Participants in such a loop, according to Lemert, are under a great deal of psychological pressure to keep it running, even if it means risking incarceration.

This decadent way of living represents the modern street worth culture in the United States, in particular. This society lauds the never-ending quest of criminal activity, which a large number of burglars have succumbed firmly (see Katz, 1988). In this perspective, the offenders' common claim that they perpetrate larceny to feed really is not that doubted. The majority of them see their fate as inextricably linked to the demands of street culture, and are thus eager to "party

hard by whatever 's needed," including committing larceny (Wright and Decker, 1994:38-42). Generally, the term "clubbing" does not imply that individuals involved are always joyful and carefree. Furthermore, notwithstanding the poor evident statistics for burglaries, someone who makes a large number of offenses is more likely to make a mistake at some time; therefore, persistent thieves are more likely to get detected and serve a significant time of jail term. Second, repeated drug usage is expected to cause habit, and criminals tends to become progressively compelled to pilfer – They are frequently in a desperate state, leading individuals to undertake unnecessary risks in order to satisfy an uncontrollable addiction. Derived from research conducted in the United States in the 1980s, Cromwell et al. (1991) stated that substance abuse became the most crucial reason for burglary. This subject has remained prevalent in the following publications. For instance, Hearnden and Magill (2004) discovered that the significant motivation provided by offenders for conducting thefts was "money for drugs" (see also Bennett, 1999; Bennett and Sibbitt, 2000; Rengert and Wasilchick, 2000; Bernasco, 2009). This is in stark difference to the majority of 1970s research, which focused minimal attention on misuse of substances and, claimed that Intruders were a distinct type of criminal from those who committed substance offences. Nonetheless, Although there is indication that an increasing number of individuals arrested for burglary have a drug problem, as Mawby (2001: 65-68) shows, the connection involving drug abuse and larceny is complicated and not always causative.

CHAPTER 3

METHODOLOGY

3.1 THE STUDY AREA

The study was conducted within the spatial environment of Cleveland under the operational jurisdiction of the Cleveland Police. The Cleveland Police area encompasses councils of Hartlepool, Redcar and Cleveland, Middlesbrough and Stockton on Tees as already stated in section 1.1 in chapter one.

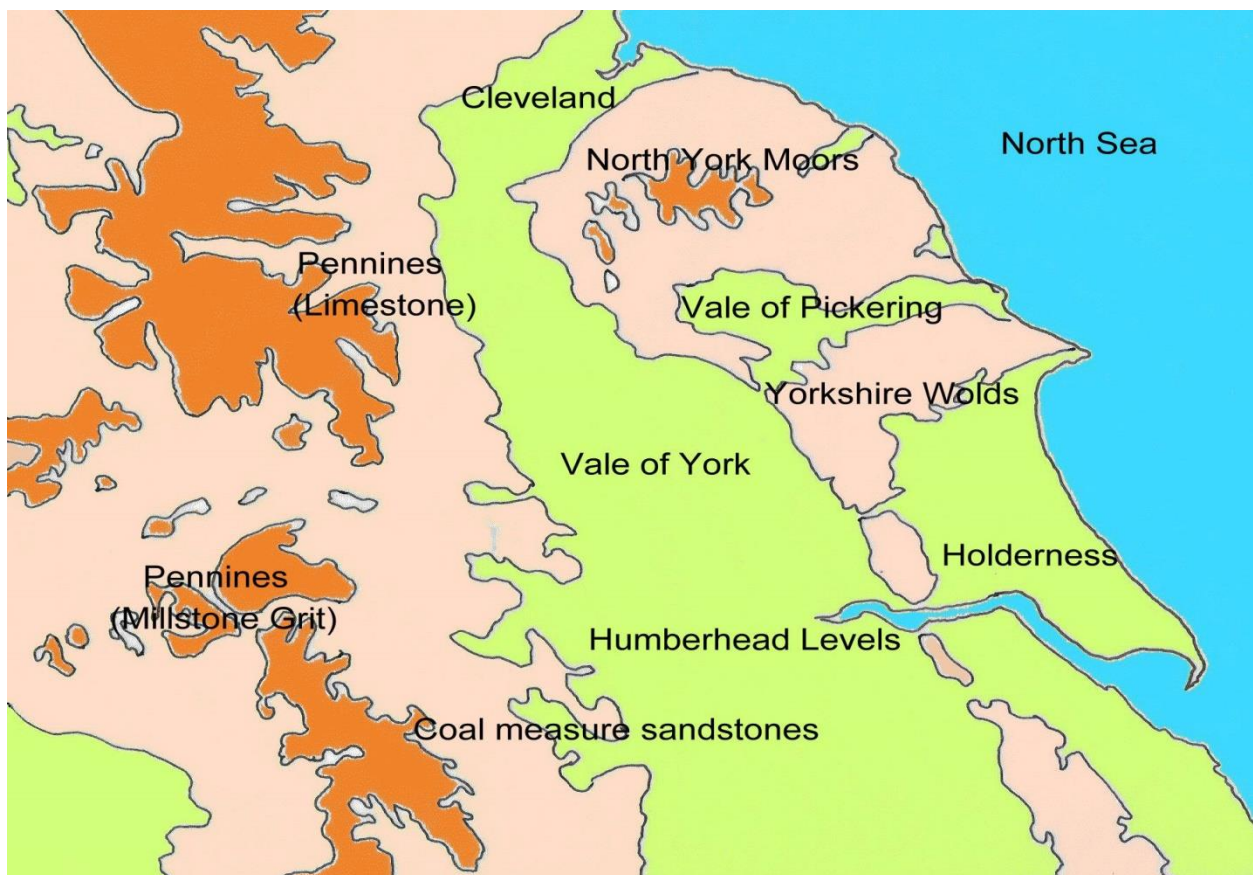


Figure 3.1: The natural sub-regions of Yorkshire available at CC BY-SA 3.0,

<https://commons.wikimedia.org/w/index.php?curid=106318942>



Figure 3.2: Map of the North York Moors area with Cleveland and Cleveland Hills labeled, available at

By Lencer - Own work, used:Generic Mapping Tools and SRTM3 V2-files for reliefOpenStreetMapGoogle Earthhttp://p1.countryside.gov.uk/Images/JCA25_tcm2-21129.pdf<http://www.northyorkmoors.org.uk/content.php?nID=18>Minimap made with United Kingdom location map.svg by User:NNW, GFDL, <https://commons.wikimedia.org/w/index.php?curid=7715360>

3.2 METHOD OF DATA COLLECTION

Data for the study was obtained from crime datasets within January to December 2019 from <https://data.police.uk/data/> in vis-à-vis with the Cleveland Police experience.

The Crime includes; Anti-social behavior, Criminal damage and arson, Shoplifting, Violence and sexual offences, Burglary, Public order, other theft, other crime, Burglary, Bicycle theft, Vehicle crime, theft from the person, Drugs, Robbery, Possession of weapons.

3.3 DATA MINING

The previous section outlined all the crime types within the scope of the year in the study. However, this is not in line with the study's perspective because the research is solely in relation to Burglary.

In order to achieve the Crime type of Burglary for the study, the research work employed the tool "Find and Select" from the Microsoft Excel worksheet. In addition, the researcher used the "Find and Select" tool to expunge other Crime types that are not within the scope of the project.

The mined data was tweaked based on the four seasons in the United Kingdom; these seasons consist of the following (Met Office);

- Winter Season (December – February)
- Spring Season (March – May)
- Summer Season (June – August)
- Autumn Season (September – November)

The deliberate effort made to split these data in correspondence with the aforementioned seasons was to capture the research questions as stated in chapter 1, section 1.2, to achieve the research objective in section 1.3. Also, the 2019 Crime dataset was chosen for the study in order to have a clear interpretation and comprehension of the Crime in the study before the Corona Virus and lockdown.

Furthermore, the rationale why the Cleveland Police were tagged the first force in England and Wales to be rated inadequate across all areas of performance by Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICERS) through the Police effectiveness, efficiency, and legitimacy 2018/2019 (PEEL) report in 2019, informed the decision for the research work to explore the Crime type in question within the given year (British Broadcasting Corporation, 2019).

3.4 DATA AND STATISTICAL ANALYSIS

The pattern for the data analytics for the study was drawn as an afterthought in accordance with the research questions in chapter 1, section 1.2; thus, the research work was based on the tools of Orange, Pandas, and Tableau to address the spatial dimension of Burglary, percentage of Burglary across the four seasons in the UK and response of the public sector towards Burglary respectively for the year 2019.

Orange is a data visualization, machine learning, and data mining toolkit that is open-source. It has a visual programming front-end that allows for exploratory qualitative data analysis and interactive data visualization (Orange, no date)

Pandas is a Python library containing high-level data structures and tools intended to assist Python programmers in performing complex data analysis, according to Heydt (2017). The ultimate goal of pandas is to assist you in quickly discovering information in data, where information is defined as underlying meaning.

Jupyter Notebook is the ideal software for the project, is an open-source web application used mainly by python programmers. The notebook provides features such as sharing notebooks, Executing shell commands, and so on.

Tableau is a visual analytics software that is changing the way we use data to solve problems by allowing individuals and companies to make the most of their data (Tableau, no date).

CHAPTER 4

RESULTS AND FINDINGS

4.1 INTRODUCTION

The aim of this chapter is to proffer results derived from the data in study, thereby providing corresponding findings. The chapter is concerned with the providing the figures where burglaries are predominant, the spatial dimensions and the season where the crime of burglary is dominant in the given year of study. The results birthed the idea of the findings, whereby the cause of this predominance is investigated.

4.2 RESULTS

When there is a likely match, projected people's periodic action, temporal and spatial convergence of potential offenders and victims, and no competent protectors, crime is somewhat more likely to occur (Bruinsma and Johnson 2018).

Table 4.1 and the corresponding figure 4.1 illustrates the number of burglaries recorded and the Geo Map showing the spatial dimensions respectively, within the Cleveland County for the year 2019.

Table 4.1 illustrating the number of Burglaries within the Cleveland County for the year 2019

City	Burglaries
Middlesbrough	1735
Hartlepool	1052
Redcar and Cleveland	1120
Stockton-On-Tees	1304
Total	5211

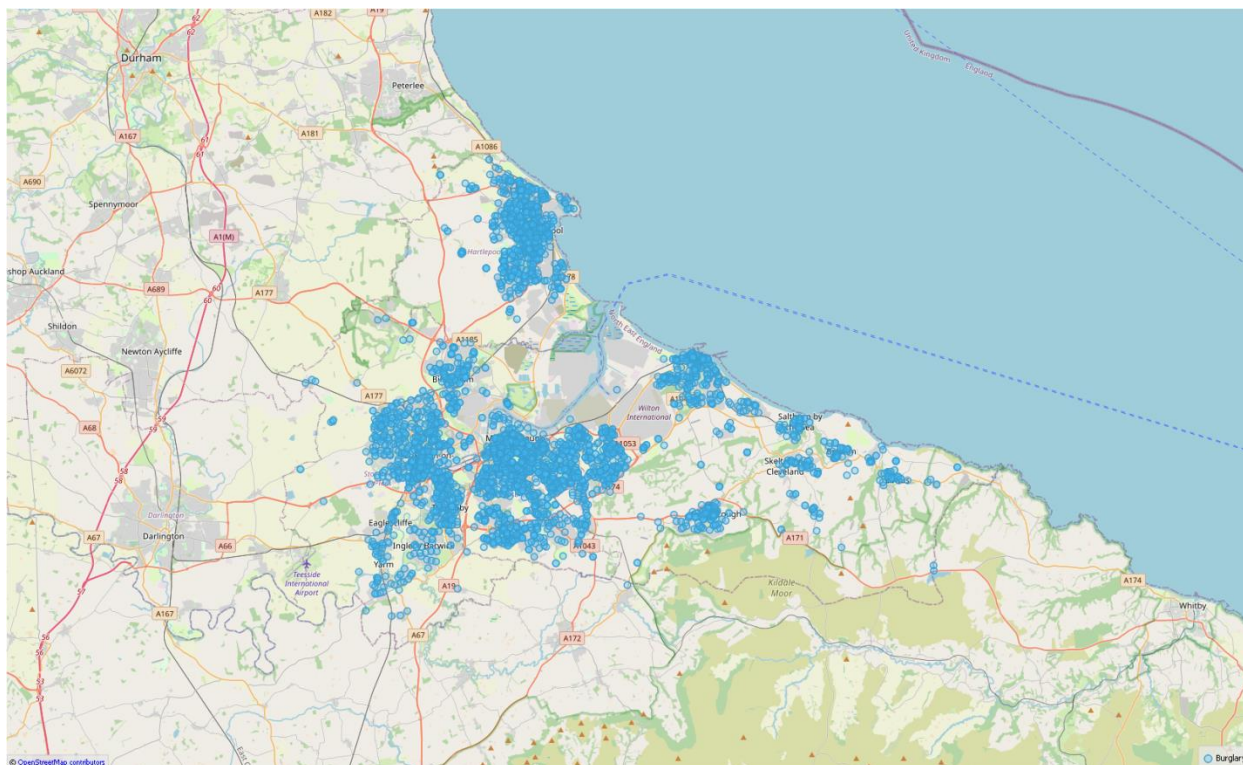


Figure 4.1 **Geo Map** showing the Spatial dimensions of Burglary within the Cleveland County for the year 2019, 5211 cases as recorded by Cleveland Police.

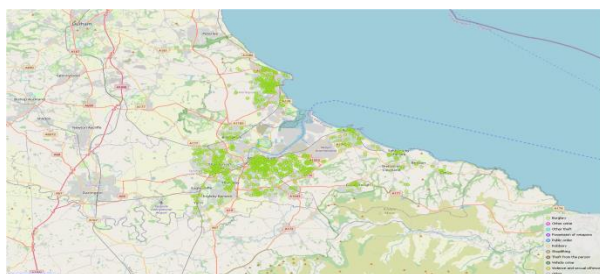


Fig 4.1.1, Summer, 1279 Cases of Burglary



Fig 4.1.2, Autumn, 1274 Cases of Burglary

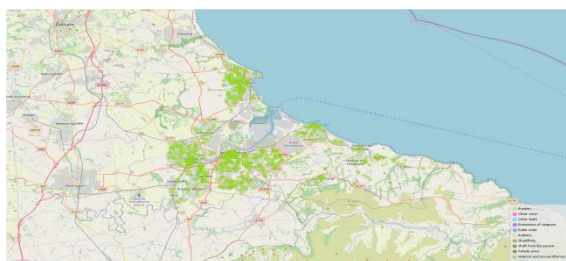


Fig 4.1.3, Winter, 1258 cases of burglary



Fig 4.1.4, Spring, 1400 Cases of Burglary

Table 4.2 Illustrating the Percentage and total figure of Burglaries in Cleveland across the four Seasons in the United Kingdom for the year 2019

	Seasons	Burglary Percentage	Month	Rank	Figure
0	Summer	24.54	Jun-Aug	1	1279
1	Autumn	24.45	Sept-Nov	2	1274
2	Winter	24.14	Dec-Feb	4	1258
3	Spring	26.87	Mar-May	3	1400

Percentage of Burglary in Cleveland Across the four Seasons in the UK for the Year 2019

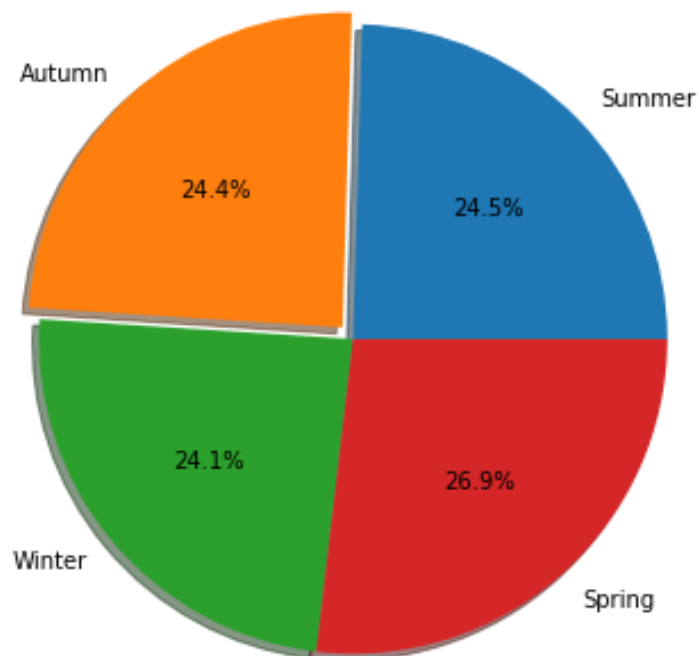


Figure 4.2 Pie chart depicting the percentage of Burglary in Cleveland across the Four seasons in the UK for the Year 2019.

It should be noted that table 4.2 and figure 4.2 was arrived through the creation of appropriate Pandas data frame and working is illustrated in the appendix at section

Furthermore, tools of Tableau were employed in order to obtain the response of the Public Sector in response to Burglary within the Cleveland County.

Table 4.3 Screenshot of table obtained from tableau illustrating the response of the Public sector towards Burglary within the Cleveland County for the year 2019

<input checked="" type="checkbox"/> Show aliases	
Last outcome category	Count of Sheet1
Investigation complete; no suspect identified	3,871
Unable to prosecute suspect	870
Court result unavailable	368
Suspect charged as part of another case	17
Offender sent to prison	16
Formal action is not in the public interest	12
Offender given community sentence	10
Status update unavailable	9
Offender given a caution	7
Awaiting court outcome	7
Further investigation is not in the public interest	5
Defendant found not guilty	4
Offender otherwise dealt with	3
Offender given suspended prison sentence	3
Local resolution	3
Defendant sent to Crown Court	3
Offender given conditional discharge	1
Offender fined	1
Court case unable to proceed	1

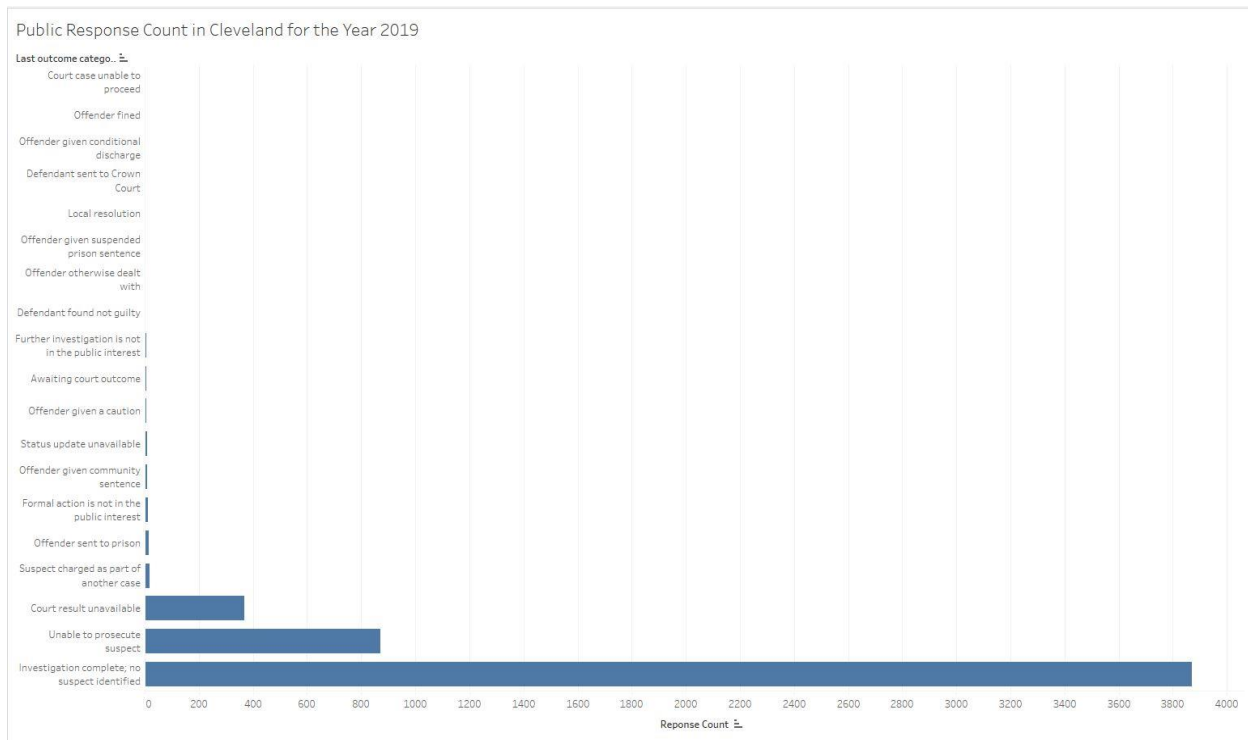


Figure 4.3 Bar chart showing the response of the Public sector towards Burglary within the Cleveland County for the year 2019.

4.3 FINDINGS

What is making it happen/ what is making it Easy to happen?

Environmental criminology discusses the value of places that encourage crime. Retail stores, grade schools, bars, grocery stores, blocks of flats, and highrise apartments are also regular targets for crime. Various amenities either encourage or discourage crime in the near vicinity. Crime rates are influenced by the structured environment's space syntax characteristics, demography, and, to some extent, the transitory environment (Perkins et al. 1993).

A study looked at hot regions, burglary (home breaking) clusters in both location and time (Johnson and Bowers 2004). The prevalence of crimes was most in relatively close business and recreational areas, according to a research on crime mapping of automobile robberies in

Adelaide, South Australia (Henry and Bryan 2000). (Examples include the business district, shopping, and recreational sectors). There is a link between burglary rates and business landmarks such as fast-food restaurants, traditional restaurants, and pubs, according to Brantingham & Brantingham (1982). Burglars are drawn to residential areas in proximity to their residences, close to the city center, rich, physically accessible, and marked by social instability, according to a study (Bernasco 2006).

The characteristics of crime hotspots are unique. When cars are parked in interim parking zones, they are more likely to be stolen (Clarke and Mayhew 1994). According to study (Brown and Altman 1982), burgled households lacked territorial indications such as walls and fences that signal solitude and individuality; another found that dwellings around the city center and residences that had been largely vacant were more probable to be vandalized (Cohen and Cantor 1981). Researchers employed observers, exercise clusters, illumination, and protection (Barricades) metrics to better analyze the characteristics of areas that were frequently targeted for auto thefts. The contributing variables/predictors for recurrent victimization were discovered to be locality and security indices (Levy and Tartaro 2010).

4.3.1 High levels of Refugee and Asylum seekers

In recent years, international migration to Cleveland has increased dramatically. There are many asylum seekers and refugees in the Cleveland area, many of whom have been put under the Vulnerable Persons Resettlement Scheme from places like Syria. It is about three times the national average (0.7) and nearly doubles that of the North East, with a rate of 3.1 per 1,000 persons (1.7). Middlesbrough (4.0) and Stockton (4.0) have a relatively high concentration despite being spread out across the force area (3.6).

4.3.2 An Aging Population

With a resident population of around 566,000, the area has a population density of more than double the national average and three times that of the North East Region. The most significant population density is in Middlesbrough, equivalent to city center districts like Newcastle and Salford. While the population is expected to grow by only 1.4 percent over the next ten years, the age profile will shift, with an additional 5800 persons turning 80 or older. The police and other local agencies are expected to be put under additional strain as a result of the increased levels of vulnerability.

4.3.3 Proximity to Urban and Residential houses

Table 4.1 clearly shows that these burglaries happened at the center of the cities involved. Middlesbrough is the largest town in the Teesside metropolitan area with the most urban and residential houses. (Britannica, no date).

4.3.4 Seasonal Changes

From the Percentages obtained from figure 4.2, it was observed that the highest burglary rate occurred in the autumn. Recent statistics from UKCrimeStats, covering England and Wales, show that burglaries rise noticeably during the autumn months – up to 10% in some places (AAI Security Systems, no date).

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Burglary is a complex social phenomenon with numerous aspects that influence it; however, due to data access limitations, these factors cannot be incorporated in a one day research. “High-quality evaluations of the effectiveness of big changes are challenging because of the great number of variables that can impact outcomes and the enormous time and cost needed in putting up controlled experiments,” writes Goldstein (1990: 49).

5.2 Recommendation

This final section concludes with some suggestions for the crime in study to be curbed. PANDA, SPATIAL, SARA are all crime models that are all recommended, although they're similar crime models but overlapping themes. The main focus of the models is the need to reduce crime in urban and suburban communities.

SARA is divided into four stages:

Scanning — utilizing primary data to discover issues or trouble areas.

Analysis include identifying the root of the conflict, as well as discovering patterns and sequences of offenses and disorders, and also troublesome locations, and speculating on possible causes.

Response - working with partners and the community to identify a solution to the problem.

Assessment – reviewing the solution's success and identifying areas for improvement.

PANDA Crime Reduction Approach considers the followings;

Problem scan – clearly scan, describe, and frame the problems in a given area—select priorities for attention.

Analyse Problem – Determine what is known and what is unknown about the issues that have been prioritized and what needs to be learned. Missions are established.

stage – the goal that will be achieved

Nominate a VIPER plan to deal with victim assistance, intelligence gaps, prevention, enforcement, and reassurance.

Deploy strategy - Deploy a plan that includes objectives, geography, a time range, and the people in charge of leading, implementing, and analyzing it.

Assess outcomes – Assess the deployment's success and project's outcomes, and determine the next stages.

The depiction of geographic data for additional statistical analysis through mapping is known as spatial crime analysis. It can be used for exploratory and confirmatory purposes to determine how specific community or ecological elements (such as demographic characteristics of the built environment) influence spatial crime patterns.

They'll share a common advantage of Crime reductions through the stipulated themes. However, it should be noted that PANDA is more unique in terms of problem-solving because it is command driven for solving harm and disorder concerns which applies to a wide range of issues, not just crime and disorder issues

REFERENCES

AAI Security Systems (no date), Available at: <https://www.aaisecurity.co.uk/news/burglary-uk-peak-autumn-period/> (Accessed 18 July 2021)

Andresen, M. A. (2014). Available at: *Environmental criminology: Evolution, theory, and practice*: Routledge. (Assessed 12 December 2021)

Ariely, G. (2014). Available at: Does diversity erode social cohesion? Conceptual and methodological issues. *Political Studies*, 62(3), 573-595. (Assessed 19 December 2021)

Bandyopadhyay, S., Bhattacharya, S., & Han, L. (2010). Available at: Determinants of Violent and Property Crimes in England and Wales: A Panel Data Analysis. *Available at SSRN 1691801*. (Assessed 15th November 2021)

Barclay, E. and Donnermeyer, J.F. (2011). Crime and Security on Agricultural Operations. *Security Journal*, 24(1), 1–18. (Accessed 29 January 2021)

Bennett, T.H. and Wright, R. (1984). Available at: *Burglars on Burglary*. Aldershot: Gower.(Assessed 14th December 2021)

Bennett, T.H. (1999) Available at: *Drugs and Crime: The Results of Drug Testing and Interviewing Arrestees*. Home Office Research Study 183. London: Home Office (Assessed 14th December 2021)

Bennett, T.H. and Sibbitt, R. (2000) Available at: *Drug Use Among Arrestees*. Research Findings No. 119. Home Office Research and Statistics Directorate. London: Home Office. (Assessed 13th December 2021)

Bernasco, Wim. 2006. "Co-Offending and the Choice of Target Areas in Burglary." *Journal of Investigative Psychology and Offender Profiling* 3:139–55. (Assessed 26 July 2021)

Bernasco, W. (2009) 'Burglary' in Tonry, M. (ed) Available at: *The Oxford Handbook of Crime and Public Policy*. Oxford: Oxford University Press. (Assessed 15th December 2021)

Beck, A. and Willis, A. (1991). *Burglary in Currys and Comet: A Comparative Analysis*. Leicester: Centre for the Study of Public Order, University of Leicester. (Accessed 29 January 2021)

Bichler-Robertson, G. and Potchak, M.C. (2002). Testing the Importance of Target Selection Factors Associated with Commercial Burglary Using the Blended Approach. *Security Journal*, 15(4), 41–61. (Accessed 29 January 2021)

Bourdieu, P. (1989). Available at: Social space and symbolic power. *Sociological theory*, 7(1), 14–25. (Assessed 12th December 2021)

Blumstein, A., Cohen, J., Roth, J. and Visher, C. (1986) Available at: *Criminal Careers and Career Criminals*. Volume 1. Washington, D.C: National Academic Press. (Assessed 12th November 2021)

Brantingham, Patricia L. and Paul J. Brantingham (1982) "Mobility, Notoriety and Crime: A Study of Crime Patterns in Urban Nodal Points." *Journal of Environmental Systems* 11(1):89–99. (Assessed 26 July 2021)

Britannica (no date) Available at: <https://www.britannica.com/place/Stockton-on-Tees> (Accessed 24 July 2021)

Brown, B. B. and I. Altman (1982) "Territoriality and Residential Crime: A Conceptual Framework." Pp. 55–76 in *Environmental Criminology*, edited by P. J. Brantingham and P. L. Brantingham. Beverly Hills, CA: Sage. (Assessed 15 July 2021)

Bowers, K. J., Johnson, S. D., & Pease, K. (2004). Prospective hot-spotting: the future of crime mapping?. *British Journal of Criminology*, 44(5), 641-658.

British Broadcasting Corporation (2019) *Cleveland Police: Five key failings at crisis-hit force*
Available at: <https://www.bbc.co.uk/news/uk-england-tees-49851019> (Accessed: 15 July 2021)

British Retail Consortium (2013). *Retail Crime Survey 2012*. Available at:
http://www.brc.org.uk/ePublications/BRC_Retail_Crime_Survey_2012/index.html#/6/.
(Accessed 29 January 2021)

Bruce, C., & Santos, R. B. (2011). Crime Pattern Definitions for Tactical Analysis: White paper international association of crime analysts. Available at:
http://www.iaca.net/Publications/Whitepapers/iacawp_2011_01_crime_patterns.pdf.
(Accessed 11th December 2021).

Brunsdon, C., Corcoran, J., & Higgs, G. (2007). Available at: Visualising space and time in crime patterns: A comparison of methods. *Computers Environment and Urban Systems*, 31(1), 52-75.
doi: 10.1016/j.compenvurbsys.2005.07.009 (Assessed 12th December 2021)

Browning, C. R., Burrington, L. A., Leventhal, T., & Brooks-Gunn, J. (2008). Available at:
Neighborhood structural inequality, collective efficacy, and sexual risk behavior among urban youth. *Journal of Health and Social Behavior*, 49(3), 269-285.(Assessed 15th November 2021)

Burrows, J., Anderson, S., Bamfield, J., Hopkins, M. and Ingram, D. (1999). *Counting the Cost: Crime Against Business in Scotland*. Edinburgh: Scottish Executive Central Research Unit. Crime

and Criminal Justice Research Findings no.35 Available at:

<http://www.scotland.gov.uk/cru/resfinds/crffinds/crf35-00.html>. (Accessed 27 January 2021)

Bursik Jr, R. J., & Grasmick, H. G. (1993). Available at: Economic deprivation and neighborhood crime rates, 1960-1980. *Law & Society Review*, 27, 263. (Assessed 13th December 2021)

Chappell, D. (1965). *The Development and Administration of the English Criminal Law Relating to Offences of Breaking and Entering*. Doctoral dissertation. Cambridge: University of Cambridge. (Assessed 29 January 2021)

Clarke, R.V. (2003). *Burglary of Retail Establishments*. US Department of Justice, Community Oriented Policing Series, no.15. Available at: www.cops.usdoj.gov (Accessed 27 January 2021)

Clarke, Ronald V. and Pat Mayhew (1994) "Parking Patterns and Car Theft Risks: Policy-Relevant Findings from the British Crime Survey." Pp. 91–108 in *Crime Prevention Studies* Vol. 3, edited by Ronald VClarke. Monsey, NY: Criminal Justice Press . (Assessed 15 July 2021)

Cohen and Felson (1979) Social Change in Crime Rates Trends: A Routine Activity Approach, in *American Sociological Review*, 44, in Maguire, M., (Ed.) *Street Crime*, Dartmouth (Accessed 18 January 2021)

Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach.

American sociological review, 588-608. (Assessed 12th December 2021)

Cohen, Lawrence E. and David Cantor (1981). "Residential Burglary in the United States: Life-Style and Demographic Factors Associated With the Probability of Victimization." *Journal of Research in Crime and Delinquency* 18(1):113–27. (Assessed 26 July 2021)

Cooper, H., & Innes, M. (2009). Available at: The Causes and Consequences of Community Cohesion in Wales: A Secondary Analysis. *Cardiff: UPSI, Cardiff University*, 36, 64-65. (Assessed 19th November 2021)

Cromwell, P., Olson, J. and Avarly, D. (1991). Available at: *Breaking and Entering: An Ethnographic Analysis of Burglary*. Newbury Park: Sage (Assessed 14th November 2021)

Cromwell, P. and Olson, J. (2004) Available at: *Breaking and Entering: Burglars on Burglary*. Kentucky: Wadsworth.(Assessed 30th November 2021)

Cromwell, P., Olson, J. and Avarly, D. (1991). Available at: *Breaking and Entering: An Ethnographic Analysis of Burglary*. Newbury Park: Sage (Assessed 19th December 2021)

Distraction Burglary Task Force (2002). *Tackling Distraction Burglary*. Available at: www.crimereduction.gov.uk/boguscaller8.htm. (Accessed 27 January 2021)

Dijk, J.J.M. van and Terlouw, G.J. (1996). An International Perspective of the Business Community as Victims of Fraud and Crime. *Security Journal*, 7, 157–167. (Accessed 27 January 2021)

Donald, I. and Wilson, A. (2000) Ram Raiding: Criminals Working in Groups, in Canter, D. and Alison, L. (eds.) *The Social Psychology of Crime: Groups, Teams and Networks*. Dartmouth: Ashgate. pp 191–246. (Accessed 22 January 2021)

Dunaway, R. G., Cullen, F. T., Burton, V. S., & Evans, T. D. (2000). Available at: The myth of social class and crime revisited: An examination of class and adult criminality. *Criminology*, 38(2), 589-632.(Assessed 13th November 2021)

Eck, J. E., & Weisburd, D. (1995). Available at: Crime places in crime theory. *Crime and place, crime prevention studies*, 4, 1-33. (Assessed 9th August 2021)

Farrell, G., & Pease, K. (2017). Preventing repeat and near repeat crime concentrations. *Handbook of Crime Prevention and Community Safety*, 143

Farrington, D. P., & Lambert, S. (1997). Predicting offender profiles from victim and witness descriptions. In J. L. Jackson & D. A. Bekerian (Eds.), *Wiley series in the psychology of*

crime, policing and law. Offender profiling: Theory, research and practice (pp. 133-158).
Hoboken, NJ: John Wiley

Fox, B. H., & Farrington, D. P. (2012). Creating burglary profiles using latent class analysis: A new approach to offender profiling. *Criminal Justice and Behavior*, 39(12), 1582-1611.
DOI: <https://doi.org/10.1177/0093854812457921> (Accessed: 15 February 2021)

Goldstein, H. 1990. *Problem-oriented policing*. New York: McGraw-Hill
Hakim, S. and Gaffney, M.A. (1994). Substantiating Effective Security. *Security Dealer*, August, 148–157. (Accessed 19 January 2021)

Goodin, R. E. (2014). Available at: *Just the facts 101: The Oxford handbook of political science (1st edition)*: Cram 101 publishing. (Assessed 17th December 2021)

Gruner, S. (2010). Available at: 'The others don't want...'. small-scale segregation: Hegemonic public discourses and racial boundaries in German neighbourhoods. *Journal of Ethnic and Migration Studies*, 36(2), 275-292 (Assessed 14th December 2021)

Hearnden, I. and Magill, C. (2004) Available at: *Decision-making by Burglars: Offenders' Perspectives*. Findings 249. London: Home Office. (Assessed 20th December 2021)

Henry, L. M. and B. A. Bryan (2000) "Visualising the Spatio-Temporal Patterns of Motor vehicle Theft in Adelaide, South Australia." Paper presented at the Australian Institute of Criminology Conference on Crime Mapping: Adding Value to Crime Prevention and Control, Adelaide, Australia, September 2000. (Assessed 26 July 2021)

Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICFRS) 2019, *Promoting improvements in policing and fire & rescue services to make everyone safer* Available

at: <https://www.justiceinspectors.gov.uk/hmicfrs/peel-assessments/peel-2018/cleveland/>
(Accessed 26 July 2021)

Her Majesty's Inspectorate of Constabulary and Fire & Rescue Services (HMICFRS) *PEEL; Police effectiveness, efficiency and legitimacy 2018/2019 An inspection of Cleveland Police* Available at: <https://www.justiceinspectors.gov.uk/hmicfrs/wp-content/uploads/peel-assessment-2018-19-cleveland.pdf> (Accessed 25 July 2021)

Heydt, M (2017), Learning Pandas: High-performance data manipulation and analysis in Python-Second Edition, Packt Publishing, Limited, 2017. ProQuest Ebook Central, <http://ebookcentral.proquest.com/lib/tees/detail.action?docID=4898666>. (Accessed: 25 July 2021)

Ho, T., Zhao, J. and Brown, M.P. (2009). Examining Hotel Crimes from Police Crime Reports. *Crime Prevention and Community Safety: An International Journal*, 11(1), 21–33. (Accessed 20 January 2021)

Home Office (2002). *Distraction Burglary Good Practice Guide*. Available at: www.crimereduction.gov.uk/burglary48.htm. (Accessed 20 January 2021)

Home Office (2013). *Crime Against Businesses: Headline Findings from The 2012 Commercial Victimisation Survey*. London: Home Office. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/147935/crime-businessprem-2012-pdf.pdf (Accessed 18 January 2021)

Huang, W.S.W., Kwag, M. and Streib, G. (1998). Exploring the Relationship Between Hotel Characteristics and Crime. *FIU Hospitality Review*, 16(1), 81–93. (Accessed 20 January 2021)

Irwin, J. (1970) Available at: *The Felon*. New Jersey: Prentice-Hall. (Assessed 12th December 2021)

Jacobs, J. (1961) *the Death and Life of Great American Cities*, Jonathan Cape, London (Accessed 20 January 2021)

Jeffery, C. (1971) *Crime Prevention through Environmental Design*, Sage (Accessed 29 January 2021)

Johnson, Shane D. and Kate J. Bowers (2004) "The Burglary as Clue to the Future: The Beginnings of Prospective Hot-Spotting." *European Journal of Criminology* 1(2):237–55. (Assessed 26 July 2021)

Johnston, V., Leitner, M., Shapland, J. and Wiles, P. (1994). *Crime, Business and Policing on Industrial Estates*, in Gill (ed.) *Crime at Work*. Leicester: Perpetuity Press. pp. 102–124. (Accessed 18 January 2021)

Jones, C. and Mawby, R.I. (2005). Hotel Crime: Who Cares? *Crime Prevention and Community Safety: An International Journal*, 7(2), 19–35. (Accessed 28 January 2021)

Katz, J. (1988). Available at: *Seductions of Crime: Moral and Sensual Attractions in Doing Evil*. New York: Basic Books. (Assessed 12th December 2021)

Kent, A. (2007). Available at: *Key Domestic Burglary Crime Statistics (at January 2007)*. Crime Reduction Effectiveness Group. London: Home Office. (Assessed 19 November 2021)

Kleemans, E. R. (2001). Repeat Burglary Victimization. Results of Empirical Research in the Netherlands. In Farrell, G., & Pease, K. (Eds.), *Repeat victimization* (Vol. 12). Criminal Justice Press (Assessed 13th December 2021)

Kristjánsson, Á. L. (2007). Available at: On social equality and perceptions of insecurity: A comparison study between

two European countries. *European Journal of Criminology*, 4(1), 59-86.(Assessed 12 October 2021)

Kruissink, M. (1995). *Inbraak in Bedrijven: Daders, Aangiften en Slachtoffers Onderzocht*. The Hague: Ministry of Justice. (Accessed 17 January 2021)

Kruissink, M. (1996). Commercial Burglary: The Offender's Perspective. *Security Journal*, 7(3), 197–203. (Accessed 18 January 2021)

Ladikos, A. and Kruger, J.F.E. (2006). Experiences of Crime in a Commercial Production Area: Utilising the Empirical-Phenomenological Method. *Acta Criminologica*, 19(3), 156–179. (Accessed 28 January 2021)

Laurence, J. (2011). Available at: The effect of ethnic diversity and community disadvantage on social cohesion: A multi-level analysis of social capital and interethnic relations in UK communities. *European Sociological Review*, 27(1), 70-89.(Assessed 11th December 2021)

Laycock, G. (1985). *Reducing Burglary: A Study of Chemists' Shops*. London: Home Office. Crime Prevention Unit, paper no.1. (Accessed 28 January 2021)

Lemert (1953). Available at: 'An isolation and closure theory of naïve check forgery', *Journal of Criminal Law, Criminology, and Police Science*, 44: 296-307. (Assessed 17th December 2021)

Letskemann, P.. (1973) *Crime as Work*. Available at: New Jersey: Prentice-Hall. (Assessed 19th December 2021)

Letki, N. (2008). Available at: Does diversity erode social cohesion? Social capital and race in British neighbourhoods. *Political Studies*, 56(1), 99-126.(Assessed 18th December 2021)

Levy, Marissa P. and Christine Tartaro (2010) "Repeat Victimization: A Study of Auto Theft in Atlantic City Using the WALLS Variables to Measure Environmental Indicators." *Criminal Justice Policy Review* 21(3):296–318. (Assessed 15 July 2021)

Lisa Tagliaferri, Michelle Morales, Ellie Birbeck, Alvin Wan (no date). *Python Machine Learning Projects* (Accessed: 14 February 2021)

Louderback, E. R., & Sen Roy, S. (2018). Available at: Integrating Social Disorganization and Routine Activity Theories and Testing the Effectiveness of Neighbourhood Crime Watch Programs: Case Study of Miami-Dade County, 2007–15. *The British Journal of Criminology*, 58(4), 968-992. (Assessed 15th November 2021)

Ludwig, A., & Marshall, M. (2015). Available at: Using crime data in academic research: Issues of comparability and integrity. *Records Management Journal*, 25(3), 228-247. (Assessed 15th December 2021)

Maguire, M. with T. Bennett (1982) Available at: *Burglary in a Dwelling: the Offence, the Offender and the Victim*. London: Heinemann. 204pp. (Assessed 12th November 2021)

Mawby, R.I. (2001). *Burglary*. Collumpton: Willan Press. (Accessed 20 January 2021)

Mawby, R.I. (2003). Crime and the Business Community: Experiences of Businesses in Cornwall, England. *Security Journal*, 16(4), 45–61 (Accessed 20 January 2021)

Mayhew, et al. (1976) Crime as Opportunity, Home Office Research Unit, Home Office, London (Accessed 20 January 2021)

Met Office (2020) Available at: <https://www.metoffice.gov.uk/weather/learn-about/met-office-for-schools/other-content/other-resources/our-seasons> (Assessed 5th January 2021)

Meer, T. v. d., & Tolsma, J. (2014). Available at: Ethnic diversity and its effects on social cohesion. *Annual review of sociology*, 40, 459-478. (Assessed 11th November 2021)

Mellgren, C. (2011). Available at: What's neighbourhood got to do with it?: the influence of neighbourhood context on crime and reactions to crime. Malmö University, Sweden. (Assessed 9th December 2021)

Ministry of Justice (2008) Available at: *Sentencing Statistics 2007, England and Wales*.
<http://www.justice.gov.uk/publications/docs/sentencing-statistics-2007-revised.pdf>
(Assessed 13th December 2021)

Mirrlees-Black, C. and Ross, A. (1995). *Crime Against Retail and Manufacturing Premises: Findings from the 1994 Commercial Victimization Survey*. London: Home Office. Home Office Research Study, no. 146. (Accessed 20 January 2021)

Moore, M. H., & Trojanowicz, R. C. (1988). Available at: *Policing and the Fear of Crime*: US Department of Justice, National Institute of Justice Washington, DC. (Assessed 8th December 2021)

Murray, A. T., McGuffog, I., Western, J. S., & Mullins, P. (2001). Available at: Exploratory spatial data analysis techniques for examining urban crime implications for evaluating treatment. *British Journal of Criminology*, 41(2), 309-329. (Assessed November 18 2021)

Nee, C. and Taylor, M. (1988) Available at: 'Residential Burglary in the Republic of Ireland: A Situational Perspective' *Howard Journal of Criminal Justice*, Vol. 27, 2, pp. 105 – 116 (Assessed 20th December 2021)

O'Connor, A. (2004). Available at: The sociology of youth subcultures. *Peace Review*, 16(4), 409-414. (Assessed 29th November 2021)

Orange (no date) *Data Mining Fruitful and Fun* Available at: <https://orangedatamining.com/>
(Accessed: 25 July 2021)

Perrone, S. (2000). *Crimes Against Small Business in Australia: A Preliminary Analysis*. Canberra: Australian Institute of Criminology. Trends and Issues, no.184. Available on: www.aic.gov.au (Accessed 20 January 2021)

Perkins, Douglas D., Abraham Wandersman, Richard C. Rich, and Ralph B. Taylor (1993) "The Physical Environment of Street Crime: Defensible Space, Territoriality and Incivilities." *Journal of Environmental Psychology* 13(1):29–49 (Assessed 26 July 2021)

Poyner, B. (1983) *Design against Crime, beyond defensible space*, Butterworths (Accessed 21 January 2021)

Prime Alert 24 Hour Locksmith & Security (2021) Available at: <https://www.thelondonlocksmiths.co.uk/burglary-repairs/5-most-common-types-of-burglary/> (Accessed 19 January 2021)

Redshaw, J. and Mawby, R.I. (1996). Commercial Burglary: Victims' Views of the Crime and the Police Response. *International Journal of Risk, Security and Crime Prevention*, 1(3), 185–193(Accessed 19 January 2021)

Rengert, G. and Wasilchick, J. (2000) Available at: *Suburban Burglary*. Springfield, Illinois: Charles C. Thomas. (Assessed 18th December 2021)

Reppetto, T. (1974) Available at: *Residential Crime*. Cambridge, Mass.: Ballinger.(Assessed 12th December 2021)

Sampson, R. J., & Groves, W. B. (1989). Available at: Community structure and crime: Testing social-disorganizationtheory. *American journal of sociology*, 774-802. (Assessed 11th November 2021)

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Available at: Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277(5328), 918-924.(Assessed 12th December 2021)

Shaw, C. R., & McKay, H. D. (1942). Available at: *Juvenile delinquency and urban areas*: University of Chicago Press, IL, US. (Assessed 17th November 2021)

Shammas, V. L., & Sandberg, S. (2015). Available at: Habitus, capital, and conflict: Bringing Bourdieusian field theory to criminology. *Criminology and Criminal Justice*, 1748895815603774. (28th December 2021)

Shover, N. (1971) Available at: *Burglary as an Occupation*. Unpublished PhD thesis, University of Illinois.(Assessed 13th November 2021)

Shover, N. (1972) Available at: 'Structures and Careers in Burglary', *Journal of Criminal Law, Criminology and Police Science*, Vol. 63, 540-49. (Assessed 19th December 2021)

Shover, N. (1991). Available at: 'Burglary'. In M. Tonry (Ed.), *Crime and Justice: A Review of Research*, Vol. 14. Chicago: University of Chicago Press.(Assessed 19th December 2021)

Smith, P. and Harvey, P. (2010). *Business Crime Scoping Exercise: Methodological Work to Consider the Scope and Feasibility of a New Survey to Measure Commercial Victimisation*. Available at: <http://webarchive.nationalarchives.gov.uk/20110314171826/http://rds.homeoffice.gov.uk/rds/pdfs10/horr33c.pdf>. (Accessed 21 January 2021)

Steele, R.D. (2002), *The New Craft of Intelligence: Personal, Public & Political*, OSS International Press, Oakton, VA.

Sturgis, P., Brunton-Smith, I., Kuha, J., & Jackson, J. (2014). Available at: Ethnic diversity, segregation and the social cohesion of neighbourhoods in London. *Ethnic and Racial Studies*, 37(8), 1286-1309. (Assessed 18th December 2021)

Tableau (no date) *why Tableau/ what is Tableau* Available at: <https://www.tableau.com/en-gb/why-tableau/what-is-tableau> (Accessed: 25 July 2021)

Takagi, D., & Kawachi, I. (2014). Available at: Neighborhood social heterogeneity and crime victimization in Japan: Moderating effects of social networks. *Asian Journal of Criminology*, 9, 4, 271-284.(Assessed 12th November 2021)

Taylor, G. (1999). Using Repeat Victimization to Counter Commercial Burglary: The Leicester Experience. *Security Journal*, 12(1), 41–52. (Accessed 21 January 2021)

Taylor, J. (2004). Crime Against Retail and Manufacturing Premises: Findings from the 2002 Commercial Victimisation Survey, *Home Office Findings*, 259. (Accessed 25 January 2021)

The Changing nature and complexity of demand in Cleveland (no date) Available at: <http://www.egenda.stockton.gov.uk/aksstockton/images/att35010.pdf> (Accessed: 14 February 2021)

Theft Act (1968) Available

at:https://www.legislation.gov.uk/ukpga/1968/60/pdfs/ukpga_19680060_en.pdf (Accessed 21 January 2021)

Tilley, N. (1993) *The Prevention of Crime Against Small Business: The Safer Cities Experience*. London: Home Office. CPU paper no. 45. (Accessed 21 January 2021)

Tricia, J. (2016). Available at: Synthesizing Structure and Agency: A Developmental Framework of Bourdieu's Constructivist Structuralism Theory. *Journal of Theoretical & Philosophical Criminology*, 8(1), 1. (Assessed 15th December 2021)

Waller, I. and Okihiro, N (1978) Available at: *Burglary: The Victim and the Public*. Toronto: University of Toronto Press. (Assessed 15th December 2021)

Walker, J. (1996). Crime Prevention by Businesses in Australia. *International Journal of Risk, Security and Crime Prevention*, 1(4), 279–291. (Accessed 21 January 2021)

Walsh, D. (1980) Available at: *Break-Ins: Burglary from Private Houses*. London: Constable (Assessed 12th December 2021)

Weisburd, D., & Piquero, A. R. (2008). Available at: How well do criminologists explain crime? Statistical modeling in published studies. *Crime and Justice*, 37(1), 453-502. (Assessed 11th November 2021)

Wright, R. and Decker. S.H. (1994). Available at: *Burglars on the Job*. Boston: Northeastern University Press (Assessed 9th December 2021)

Wiersma, E. (1996). Commercial Burglars in the Netherlands: Reasoning Decision-Makers? *International Journal of Risk, Security and Crime Prevention*, 1(3), 217–225. (Accessed 22 January 2021)

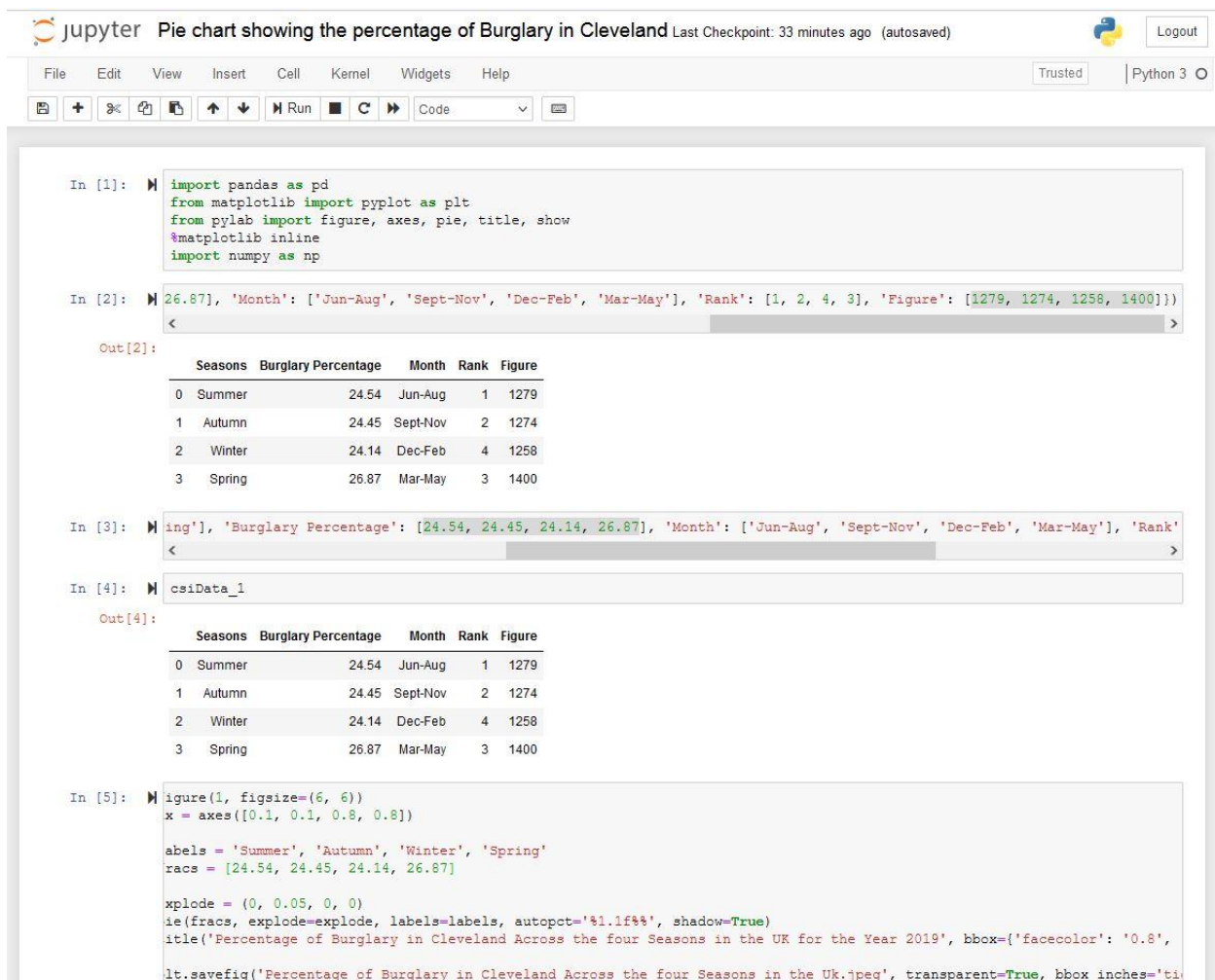
Wolfgang, M., Thornberry, T.P. and Figlio, R. (1987) Available at: *From Boy to Man, From Delinquency to Crime*. Chicago: University of Chicago Press. (Assessed 29th December 2021)

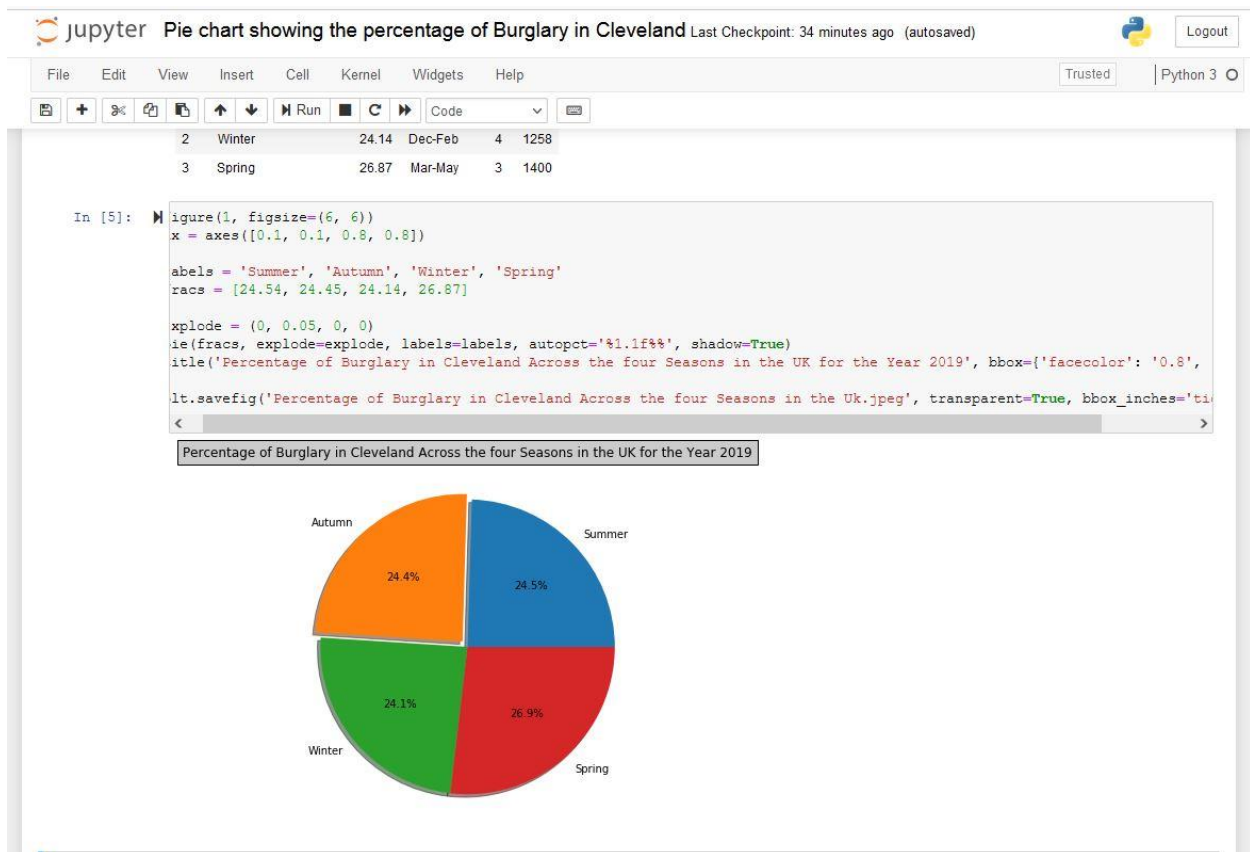
Wood, J., Wheelwright, G. and Burrows, J. (1997). *Crime Against Small Businesses: Facing the Challenge*. Swindon: Crime Concern. (Accessed 21 January 2021)

Wright, R. and Logie, R. (1988) Available at: 'How Young House Burglars Choose Targets' *Howard Journal of Criminal Justice*, Vol. 27, 2, pp.92 – 104 (Assessed 19th November 2021)

Appendix 1

Workings showing the percentage of Burglary in Cleveland across the Four seasons in the UK for the Year 2019.





Appendix 2

Screenshot Tableau dashboard illustrating the Public Response count towards Burglary in Cleveland for the Year 2019

