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Australian Arsonists: A Typology, Offending and Sentencing Trends, and Theoretical Adjustments for an Indigenous Cultural Context.

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Australian Arsonists: A Typology, Offending and Sentencing Trends, and

Theoretical Adjustments for an Indigenous Cultural Context

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Bond University

Submitted in total fulfilment of the requirements of the degree of

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Abstract

The cost of arson worldwide is estimated to be approximately 1 percent of global gross domestic product per annum (The Geneva Association, 2014). Other estimates have put the annual economic impact of deliberate fire setting in the United Kingdom at B£2.3 (Department for Communities & Local Government, 2011a), and in the United States at B\$1.3 (Evarts, 2012). In Australia, the cost of arson was estimated in 2008 to be B\$1.6 annually (Rollings, 2008), and more recent estimates have increased this considerably to B\$2.3, to account for fire, ambulance and volunteer service costs (Smith, Jorna, Sweeney, & Fuller, 2014).

Research on arsonists, largely based on international samples, suggests that individuals who have been convicted of deliberately setting fires are often single males who have experienced problems in school. They are also prone to have been diagnosed with a mental illness, have a substance abuse history and demonstrate versatility in their offending. Given the estimated cost of arson it is surprising there have not been more Australian studies focused on the characteristics of arsonists.

A review of the international arson literature highlighted several key gaps by comparison with the Australian literature. Specifically, research has not considered illegal firesetting by Indigenous peoples, despite Indigenous people accounting for a large proportion of all Australian offenders. There is an absence of analyses of trends in arson offending over time, such that any changes in the circumstances of arson offences or the characteristics of arsonists, cannot be determined. No clear typology categorizing Australian arsonists has been identified to enable comparisons with international typologies. Lastly, little is known about the sentencing considerations of the Australian judiciary, or whether Judges have similar views on the key aggravating and mitigating factors to be considered.

To address these research gaps, the current thesis commenced with interviews of 33 offenders convicted of arson. Key themes were identified that distinguished the behaviour of Indigenous and non-Indigenous arsonists. Extrinsic motivations for firesetting were found in the former group, and several offence features such as the use of accelerants and use of substances while offending divided the two groups. Theoretical approaches such as the Multi-Trajectory Theory of Adult Firesetting (M-TTAF) developed by Gannon, Ó Ciardha, Doley, and Alleyne (2012) and Indigenous conceptualizations such as social and emotional well-being (Gee, Dudgeon, Schultz, Hart, & Kelly, 2014) and standpoint theory (Moreton-Robinson, 2004; Nakata, 2007b) were reviewed. Theoretical adjustments based on a thematic analysis of interviews, and a synthesis of current theory and Indigenous conceptualizations, are discussed, with recommendations for greater cultural inclusiveness for the Indigenous group.

The aim of the second study was to review sentencing transcripts from all Australian jurisdictions between 1990 and 2015, to identify trends in the features of arson offending, and key characteristics of arsonists, over this period. Trend analyses indicated substance use, mental illness and female gender to be increasingly referred to in sentencing transcripts as significant factors in the commission of arson offences over time. A typology of Australian arsonists was developed using cluster analysis incorporating the expressive-instrumental motivations developed by Canter and Fritzon (1998). Differences in the planning of the offence, the use of accelerants, the motivation for the arson, and the sentence granted were highlighted, between the Indigenous and non-Indigenous groups.

The final study explored judicial sentencing considerations over a 25-year period identifying aggravating and mitigating factors referenced in historical transcripts. These were compared to current judicial considerations obtained from a sample of serving members of the Australian judiciary, to identify potential changes over time. Considerable inconsistencies

were identified in comparisons across jurisdictions and court levels suggesting Australia lacks a unified approach to arson sentencing.

This program of research extended arson theory with specific reference to Indigenous arsonists, provided an analysis of arson offending in Australia over 25 years pointing to a typology, projected future trends in arson, and explored the sentencing considerations of courts in this country. Implications for theory, for clinical practice, and for the court system are discussed.

Keywords: arson, firesetter, Indigenous, arson typology, arson trends, arson theory, arson treatment, judicial sentencing considerations

Declaration

This thesis is submitted to Bond University in fulfilment of the requirements for the degree of Doctor of Philosophy (PhD). This thesis represents my own original work towards this research degree and contains no material that has previously been submitted for a degree or diploma at this University, or any other institution, except where the due acknowledgement is made.

Therese Ellis-Smith

Research outputs during candidature

Peer reviewed Publications	Statement of Contribution
Ellis-Smith, T. & Doley, R. (2016). Suicide by self-immolation. In R. Doley, G.L. Dickens, & T. Gannon (Eds.), <i>The psychology of arson</i> . (pp. 68-81). London: Routledge.	TES 70%, RD 30%
Ellis-Smith, T. (2017). Firesetters: A review of theory, facts and treatment. In W. Petherick, & G. Sinnamon (Eds.), <i>The psychology of criminal and antisocial behaviour</i> . London: Academic Press. doi: https://doi.org/10.1016/B978-0-12-809287-3.00019-5	TES 100%
Ellis-Smith, T., Watt, B., & Doley, R.M. (2019, in press). Australian arsonists: An analysis of trends between 1990 and 2015. <i>Psychiatry, Psychology and Law</i> . Published online: 10 Feb 2019 doi: 10.1080/13218719.2018.1556131	TES 75%, BW 15%, RD 10%
<hr/>	
<hr/>	
Conference Presentations	Statement of Contribution
Ellis-Smith, T., & Doley, R. <i>Understanding arson in Australian Indigenous communities: Treatment targets and responsivity considerations</i> . Joint Conference Australian and New Zealand Association of Psychiatry, Psychology and Law, and the Royal Australian and New Zealand College of Psychiatrists. Canberra, November 2015.	TES 75%, RD 25%
Ellis-Smith, T. <i>Interventions for Indigenous offenders</i> . Closing the Prison Gap: Building Cultural Resilience Conference. Kingscliff, October 2016	TES 100%

Ethics Declaration

The research associated with this thesis received ethics approval from the Bond University Human Research Ethics Committee. Ethics applications: ID RO15022 approved October 2014; RO15085 and RO15084, approved December 2014; and RO15607, approved July 2016.

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I am immensely grateful to Dr Glenda Nalder for her generous assistance and gentle guidance, as I developed my understanding of, and appreciation for, Indigenous culture. I would like to acknowledge the support from the Northern Territory Correctional Services, the Department of Correctional Services, South Australia, and the many Judges and Magistrates who contributed to this research. Lastly, this research would not have been possible without the Australian Postgraduate Award scholarship granted to me by Bond University.

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FOREWORD

The author acknowledges the diversity among Indigenous cultures in Australia and differences in language and cultural practices of Aboriginal and Torres Strait Islander peoples. It is acknowledged that participants in, and those contributing to, the current studies are not representative of the general Australian Indigenous population.

The terminology used throughout this thesis reflects terms in common use to refer to Australia's First Nations peoples, such as Aboriginal, Torres Strait Islander, and Indigenous Australians. It is also recognised that some First Nations people identify as both Aboriginal and Torres Strait Islander, hence the term Aboriginal and/or Torres Strait Islander will also be used. While the term Indigenous may be viewed as collectivising numerous cultures, it is used with respect and an implicit understanding of the multiplicity of cultures within Australia's Aboriginal and Torres Strait Islander communities. The author also wishes to acknowledge that many Indigenous Australians have both Aboriginal and Torres Strait Islander heritage which may not be identified in legal records.

The term "Indigenist" is used in sections of this thesis to denote methodologies or perspectives that recognise Aboriginal and/or Torres Strait Islander worldviews, knowledge and wisdom. The author recognises the ownership of the information provided by Indigenous participants, in that the Indigenous knowledge and experiences shared during this research belong to the participants and are referred to by the author with permission. In paying respect to Elders past, present and emerging, the author acknowledges the traditional custodians of this country and recognises the continuing connections to land, waters and community, and is grateful for the opportunity to meet on country with Elders and community members who contributed to this project. The views expressed in this thesis are not necessarily those of the Department for Correctional Services, South Australia or Northern Territory.

CHAPTER ONE

Introduction to Arson and the Current Research Studies

All Australian jurisdictions legislate against the intentional, malicious or reckless lighting of fires with the intention of destroying property or land (Australian Institute of Criminology, 2004). The term *arson* is the legal term used to define the statutory offence, and *arsonist* refers to an individual who has been convicted of such an offence. The term *firesetter* refers to someone who lights inappropriate or illegal fires, who may not have been convicted of any crime. This research is primarily focussed on the behaviour and characteristics of convicted Australian arsonists and the terms *firesetting* and *firesetter* will be used to describe the behaviour that resulted in their conviction.

The cost of arson worldwide is estimated to be approximately 1 percent of global gross domestic product per annum (The Geneva Association, 2014). Other estimates have put the annual economic impact of deliberate fire setting in the United Kingdom at B£2.3 (Department for Communities & Local Government, 2011a), and in the United States at B\$1.3 (Evarts, 2012). In Australia, the cost of arson was estimated in 2008 to be B\$1.6 annually (Rollings, 2008), and more recent estimates have increased this considerably to B\$2.3, to account for fire, ambulance and volunteer service costs (Smith, Jorna, Sweeney, & Fuller, 2014).

Estimates of costs are likely to be conservative given there are additional expenses associated with police investigations, insurance claims, and post-fire land management (Ducat & Ogloff, 2011). Often deliberate firesetting results in long-term financial impacts associated with the rebuilding of lives and businesses, and in many instances the actual costs of these crimes are likely to be difficult to calculate requiring “heroic assumptions” (Smyth,

2011) or guesses based on assumed financial losses. Specific costs associated with loss of life and personal property cannot always be accurately ascertained, and when added to the tangible or the identifiable costs, the overall estimate is likely to under-represent the full impact borne by a community from deliberately lit fires.

Fires which have been deliberately lit, whether they be to bushland or a physical structure, as opposed to those which ignite accidentally, tend to cause more damage and are therefore costlier. This is because deliberately lit fires are likely to have been set at multiple points of ignition, at vulnerable points in a building and are often assisted by the use of flammable liquids or other accelerants, and therefore spread quickly. Deliberately lit fires may be started at a time when there will be a delay in the fire being discovered, such as when premises are unattended. These fires may also be characterised by the perpetrators compromising any fire protection measures in a building, or by sabotaging automatic fire protection measures, and often these fires present an attempt to destroy evidence of another crime, further contributing to the cost of investigations (Ellis-Smith, 2017; Fire Protection Association, 2010).

Preventative measures such as a South Australian police initiative, whereby known firesetters are actively monitored during peak fire risk periods, also increase the overall cost of arson (personal communication, South Australia Police, 2015). These costs multiply with each undetected arsonist who may commit multiple offences, and when convicted arsonists are released to the community untreated and go on to reoffend. Given this significant financial burden and the risk to the community it is important that research identifies treatment aimed at reducing the risk of recidivism for those who set deliberate fires.

This introduction outlines the various arson theories and concludes with an analysis of the gaps in the arson literature. This thesis will maintain that for arson treatment to be effective it must be culturally nuanced for the populations targeted, and in the case of

Australian arsonists seeking treatment, culturally sensitive and relevant for Indigenous arsonists. The significance of culture will be discussed in further detail subsequent to the following introductory sections, which commence with a review of the prevalence of arson and the complexities associated with detection and clearance by policing agencies, and the characteristics of arsonists.

Estimates of Arson Prevalence and Clearance Rates

In calculating arson prevalence rates, or how many arson offences have occurred, several factors have been identified to interfere with accurate assessments. These factors include variations in the recording of fire incidents, the delay in classifying the nature of the fires, and the time taken to prosecute and convict an arsonist. First, the recording of fire incidents and the eventual identification of the causes of these incidents, be they accidental, deliberate or unknown, is sometimes confounded by the different methods and definitions used by policing and fire service agencies. It is common for only a proportion of suspected deliberate fires attended to by fire service agencies to be later classified as arson offences by policing agencies, as the latter agency must prove intention or recklessness (Office for National Statistics, 2015).

A second interfering factor is that it may be a lengthy period before a fire is concluded to have been deliberate. This delay can interfere with frequency analyses which rely on the identification of a crime within a specific time period. Some arson offences which may take several years to be prosecuted are likely to be counted as “suspicious” until such time as a successful prosecution is achieved, further delaying the accurate identification of its cause (Willis, 2004). Thirdly, it is common for early indications that a fire was set deliberately, or following a reckless act, to not lead to an eventual conviction due to a lack of evidence, or legal challenges to the veracity of any evidence (Hall, 1998).

Arson prevalence rates are often presented in conjunction with arson clearance rates and reported by policing agencies. Clearance is defined as the overall percentage of arson offences where the investigation has concluded due to (a) a person has been charged with the offence and convicted, (b) where no offence was determined to have been committed, and (c) when the charges were withdrawn by police (Muller, 2008). These rates are consistently low in Australian and international research (Dickens & Sugarman, 2012; Kelm, 2016). In Queensland there were 1,124 confirmed arson offences in 2015/16 (Queensland Police Service, 2016), and of these 227 or 25 % were solved by the end of the year. Similar rates are observed in Victoria, where of the 2,818 arson offences recorded in 2013-14, only 549 or 19.5% were cleared by the end of that period (Victoria Police, 2014). In New South Wales the average clearance rate for arson offences is estimated to be considerably lower, at around 7%, and on average 3% of arson offences result in criminal proceedings (Anderson, 2016).

Different types of fires have been identified to have varying prevalence and clearance rates, with the clearance of bushfire arson particularly problematic. For example, it is estimated that Australian fire services attend between 46,000 to 62,000 bushfires each year (Australian Institute of Criminology, 2009), and Bryant (2008) suggests that of these, up to 50% are suspicious or confirmed to have been deliberately lit. Willis (2004) reports the majority of offenders responsible for a setting a bushfire, as opposed to a property or building fire, are neither caught nor convicted. He outlined three of the reasons for the poor bushfire clearance rates, (a) a loss of evidence in the fire, (b) lengthy delays while the cause of the fire is investigated, and (c) the randomness of some deliberately lit bushfires with few links to possible suspects. Such low clearance rates have a number of implications. First, these poor clearance rates are likely to contribute to undetected arsonists remaining in the community unsanctioned, and at risk of further offending. Second, low conviction rates means reduced

opportunities for local research and limited development of accurate profiles or typologies to guide treatment options to reduce recidivism.

It is clear that the costs associated with the investigation and prosecution of arsonists are significant, highlighting the imperative to identify not only those who have, or may, commit arson offences, but to also ensure treatments are responsive and directed towards this group to reduce the likelihood of further offending. Despite this imperative there has been little research focused on Australian arsonists (McEwan & Freckelton, 2011), and the resultant lack of empirical evidence has led to a reliance on the profiles of offence features and offender characteristics identified from international samples. Specifically, and most importantly, there has been no research on arson offences committed by Indigenous Australians, who are over represented as a proportion of all Australian arsonists (Muller & Stebbins, 2008; New South Wales Bureau of Crime Statistics and Research, 2014). Representing approximately 30% of the Northern Territory population (Australian Bureau of Statistics, 2016), Indigenous persons are estimated to constitute 65% of all arsonists convicted in that jurisdiction between 2009 and 2014 (personal communication, M. Okeil, 11 February 2014).

Given the substantial costs associated with arson and the over-representation of Indigenous arsonists in some jurisdictions, the lack of research identifying judicial perspectives on the sentencing of arsonists represents a significant gap in the Australian arson literature. The relevance of cultural factors when sentencing an Indigenous person convicted of arson, has not been investigated, nor has the arson literature considered which of the sentencing considerations are most influential when sentencing an arsonist. Prior to detailing the parameters of the current research, it is necessary to summarize the literature on arson recidivism and the characteristics of arsonists, albeit based largely on international studies.

Recidivism

The identification of characteristics associated with arson recidivism or reoffending is important in that it points to those for whom treatment and efforts to ensure desistance ought to be prioritized (McEwan & Freckelton, 2011). Recidivism rates for arsonists have varied between 4% for a sample of 74 arsonists convicted in the United Kingdom in 1951 and followed up twenty years later (Soothill & Pope, 1973), to 60% for general offending in a sample of 243 Canadian psychiatric patients (Rice & Harris, 1991). These studies reflect differences in the definition of recidivism, with the Soothill and Pope (1973) study defining recidivism as a further conviction for arson during the research period, while the Rice and Harris (1991) study identified subsequent setting of fires based on file documentation, as recidivism. These varying definitions of recidivism may contribute to the identification of differences in offender characteristics and different estimates of reoffending.

In their prospective study of firesetters admitted to a maximum security unit of a psychiatric institution in Ontario, Rice and Harris (1996) developed three definitions of recidivism. These were (a) any charge for firesetting, including arson, setting fire to a substance or mischief in which firesetting was involved; (b) violent offending against a person, excluding firesetting; and (c) non-violent recidivism or any charge not subsumed by the previous two categories. Of the 243 firesetters included in the Rice and Harris (1996) study, 208 had an opportunity to reoffend. Of these fewer participants set another fire when compared to reoffending in other ways, with 16% set another fire, 57% committed a non-violent offence and 31% committed a violent offence. On average participants had 94 months of opportunity to reoffend. This study concluded that the variables predicting further firesetting were different from the variables predictive of violent and non-violent recidivism. The younger the age at which a person sets their first fire and the presence of a history of

previous firesetting were the variables most associated with recidivism for those who set subsequent fires.

In a review of recidivism rates of Australian arsonists in Victoria, Ducat, McEwan and Ogloff (2015) defined recidivism as having a subsequent charge for arson or arson-related offences. They argued that being charged may be a more accurate representation of reoffending given the difficulties obtaining convictions in many arson cases. A sample of 1,052 individuals who were convicted of arson between 2000 and 2009 were reviewed in 2012. As detailed in other studies, general recidivism (55%) was found to be substantially higher than firesetting recidivism (5.3%). Of the group whose subsequent offending involved arson, a majority also committed other offence types. This study confirmed previous research findings (Dickens et al 2009) that recidivists were likely to be young at the time of their first instance of firesetting.

Arsonists considered most likely to commit another arson offence are those who committed their first arson when aged 18 years or less, were convicted of multiple arsons, and had prior convictions for vandalism (Edwards & Grace, 2014). Other studies have considered the characteristics of repeat arsonists and pointed to a prior criminal history as one key factor contributing to the likelihood a firesetter will set further fires (Dickens et al., 2009; Doley, 2009). Brett (2004) highlights the difficulties associated with the identification of recidivism rates of arsonists. He notes arson research samples are often drawn from psychiatric populations and not necessarily reflective of general community populations, arson offences have poor detection rates and those reoffending may not be apprehended, and recidivism is often based on individual disclosures rather than actual evidence of further charges, which may be inaccurate.

The arson literature also suggests that firesetters are more likely to be versatile as opposed to exclusive, in that their offending is not limited to the setting of fires (Brett, 2004;

Doley, 2003a; Doley, 2003b), and that they have much in common with generalist offenders (Pisani, 1989). Arsonists who are not engaging in other types of offending have been identified as exclusive. Given this complexity, it is imperative that research guides the development of theory and treatment efforts by identifying emerging trends in arson offence and offender features. In the absence of this information it is likely that treatment efforts will fail to address evolving risk factors and therefore lack currency and efficacy.

Characteristics of Convicted Arsonists

Studies identifying common arsonist characteristics have, for methodological convenience and access reasons, tended to focus on arsonists accommodated within institutions, such as mental health facilities or prisons (Dalhusien, Koenraadt, & Liem, 2015b; Ducat, McEwan, & Ogloff, 2013; Ó Ciardha et al., 2015). As such, the identified characteristics may not be representative of all persons convicted of arson. Research to date suggests that 80% of individuals who have been convicted of deliberately setting fires are male who have experienced problems in school (Anwar, Långström, Grann, & Fazel, 2011; Ducat et al., 2013; Rice & Harris, 1991), are socially isolated and unassertive (Doley, Fineman, Fritzon, Dolan, & McEwan, 2011; Gannon & Pina, 2010; Rice & Harris, 1991; Richie & Huff, 1999), from an impoverished family (Geller, 1987; Tyler et al., 2013), with low intelligence (Lewis & Yarnell, 1951; Rice & Harris, 1991). A range of psychiatric diagnoses have been identified in convicted firesetters with depressive disorders, schizophrenia and personality disorders prevalent (Dickens et al., 2009; Harris & Rice, 1996; McEwan & Ducat, 2016). Convicted firesetters have also been found to have a substance abuse history (Bell, Doley, & Dawson, 2018; Bennett & Davis, 2016; Jayaraman & Frazer, 2006) and demonstrate versatility in their offending, having committed other offences such as property offences (Dickens et al., 2009; Muller, 2008). The following section outlines key characteristics of arsonists.

Mental health diagnoses. Extensive point-in-time research has investigated the prevalence of mental health diagnoses among firesetters. An elevated prevalence of mental illness including schizophrenia and major depression has been found in multiple studies of convicted arsonists (Anwar et al., 2011; Ducat et al., 2013; Harris & Rice, 1996; MacKay et al., 2006). Psychotic firesetters, for example, have been found to be a particularly dangerous group as they often target people in their use of fire, and are likely to engage in firesetting exclusively (Lindberg et al., 2005). As recent studies have drawn samples from psychiatric or known mentally disordered populations, prevalence estimates have tended to be high (Dalhuisen, Koenraadt, & Liem, 2015b; Dickens et al., 2007; Enayati et al., 2008; Green, Lowry, Pathé, & McVie, 2014; Lindberg, Holi, Tani, & Virkkunen, 2005; Swinton & Ahmed, 2001; Tyler, Gannon, Dickens, & Lockerbie, 2015; Tyler et al., 2013; Tyler & Gannon, 2017; Wyatt, Gannon, McEwan, Lockerbie, & O'Connor, 2018).

Studies incorporating samples of non-psychiatric firesetters have also found comparatively high rates of mental illness diagnoses. Coid et al., (1999) considered a general, non-psychiatric sample of 25 female firesetters who were remanded in custody in the United Kingdom. Coid et al. found a high prevalence of mental illness and personality disorders, with women frequently describing the alleviation of symptoms following firesetting. They also identified a positive relationship between self-harming behaviours, mental illness and firesetting, providing greater support to the view that firesetters as a group exhibit a high prevalence of mental illness.

Personality disorders, particularly antisocial personality disorder, have been consistently identified among groups of firesetters (Blanco et al., 2010; Geller, 1987; Hoertel et al., 2011). Behavioural factors such as a history of antisocial behaviour, aggression and impulsivity regularly characterize those who set deliberate fires (Blanco et al., 2010; Dickens et al., 2009). Personality traits such as poor self-esteem, high levels of impulsivity, and low

tolerance to frustration have also been identified in deliberate firesetters (Gannon & Pina, 2010).

Arsonists are more likely than non-firesetters who offend in a general way, to have been diagnosed with a mental illness (Blanco et al., 2010; Ducat et al., 2013) or to meet the diagnostic criteria for a personality disorder (Ó Ciardha et al., 2015). Rather than argue a causal relationship between mental illness and firesetting, Gannon et al. (2012) suggest that a mental illness diagnosis contributes an increased risk of firesetting by moderating existing psychological vulnerabilities such as communication problems, emotional regulation difficulties, offence supportive cognitions and fire interest scripts or schemas. Given the evidence that firesetters as a group are likely to have been diagnosed with a mental illness, the current study investigated prevalence trends over time in the sample of convicted Australian arsonists.

Female arsonists. In their review of research on female arsonists, Fritzon and Miller (2016) point to the dearth of empirical studies when compared to the breadth of research on male arsonists. They note many of the characteristics found in female firesetters have been identified in general female offenders, including a history of mental illness, substance use, personality disorder, and self-harming (Borrill et al., 2003; Coid, Wilkins, & Coid, 1999; Dickens et al., 2007; Rix, 1994). Of note, Fritzon and Miller (2016) conclude that female firesetters are likely to have experienced chronic maltreatment in childhood, early parental separation, and life crises, contributing to firesetting as a cry for help.

In one of the earliest studies of female firesetters Lewis and Yarnell (1951) reviewed the files of 200 adult women from various institutions, psychiatric clinics and the Arson Department of the National Board of Fire Underwriters. They identified women of all age groups setting fires, with a large proportion diagnosed with a psychotic disorder (32%). These authors reported the frequent occurrence of promiscuity and petty stealing amongst this

group and suggested that female firesetters were more likely to set fires following relationship problems.

Since the Lewis and Yarnell (1951) study, research has focussed on gender differences, and suggests that female firesetters are more likely than their male counterparts to have experienced sexual abuse and a history of relationship problems (Dickens et al., 2007), previous self-harming (Noblett & Nelson, 2001), and have an antisocial or schizoid personality disorder (Hoertel, Le Strat, Schuster, & Limosen, 2011). Enayati, Grann, Lubbe and Fazel (2008), in their study of 214 male and female firesetters referred for inpatient psychiatric examination in Sweden between 1997 and 2001, identified distinct differences between female firesetters and general female offenders, in that female firesetters were more likely to have a history of alcohol abuse and higher rates of learning disability than general female offenders. They also found that female firesetters and general female offenders could not be differentiated on the basis of psychiatric disorder. There were no significant differences between the male and female arsonists on psychiatric diagnosis, although the female arsonists were more likely to be diagnosed with psychosis (37%) when compared to the male arsonists (25%).

Alleyne, Gannon, Mozova, Page and Ó Ciardha (2016) compared 65 female firesetters with comparison groups of 128 male firesetters and 63 female general offenders recruited from prisons in the United Kingdom, to investigate distinguishing characteristics across the three groups. They found a history of previous engagement with mental health services distinguished female firesetters from female general offenders and male firesetters, with the former more likely to meet diagnostic criteria for a personality disorder. The study also found female firesetters were more likely to meet the diagnostic criteria for bipolar disorder and major depression when compared to the two comparison groups.

Versatility of arsonists. The literature on arsonists suggests that they are more likely to be versatile as opposed to exclusive, in that their offending is not limited to the setting of fires (Brett, 2004; Doley, 2003a; Doley, 2003b), and that they have much in common with generalist offenders. Arsonists who are not engaging in other types of offending have been identified as exclusive. In a Finnish study, Lindberg et al., (2005) considered the psychiatric records of 90 arsonists referred for pre-trial assessments between 1973 and 1993. They identified 48% of the sample were exclusive arson recidivists, which is a larger percentage than expected when sampling general populations of arsonists. Given the psychiatric population sampled this suggests those with a diagnosed mental illness may be more likely to engage in firesetting exclusivity than firesetters from general samples.

A smaller proportion of exclusive firesetters were found in a sample of 207 firesetters from Victoria. Ducat et al., (2013) found only 21% of the 207 firesetters had not committed other offences. This group were more likely to have a history of suicidal acts or ideation, when compared to a group of versatile firesetters, and were less likely to have a substance use diagnosis or personality disorder.

Typologies of Arsonists

While the literature has identified common arsonist characteristics, there will always be exceptions to these profiles, with individuals displaying these features who do not set fires. As such, identified characteristics do not imply causality, but serve a useful purpose by representing groupings of characteristics to assist in the identification of treatment needs. Typologies or classifications of behaviour have been described as constructs that enable the practical implementation of a theory (Helfgott, 2008), and for theory to be meaningful it must be able to be applied in the real world. Typologies identify commonalities across individuals and allocate them to groups in order to refine and facilitate the practical implementation of theory. Typologies serve to provide a vehicle to operationalise theory by informing decisions,

policies and practices (Heflgott, 2008), and offender typologies are designed to categorise a diversified set of observed phenomena or individual characteristics in order to inform treatment (Clinard, Quinney, & Wildeman, 1994). For instance, typologies of sexual offenders separate them into meaningful groups (Camilleri & Quinsey, 2008; Hanson & Bussiere, 1998), thereby allowing the identification of treatment needs of each group to be conceptualized separately and developed into treatment modules (Knight & Prentky, 1990). Typologies also inform the development of theory and the next section traces the development of arson theory to the present day.

The essential criteria for a robust offender typology include: (a) it is exhaustive, in that the categories cover all possible configurations of the offender, (b) types are mutually exclusive, so that offenders are only classified in one type and do not overlap, and (c) it is neither too simple nor too complex (Helfgott, 2008; Miethe & McCorkle, 2001). Helfgott (2008) considers typologies that are too simple to be viewed as unsophisticated and therefore susceptible to criticism, while highly complex typologies may not be replicable or have real world utility.

While an individual approach to the identification of motivation is clinically sound, particularly when developing a treatment plan, a typology needs to be based on broad categories and reflect classes of motivations to be useful. Idiosyncratic categories based on a small number of individuals are unlikely to warrant inclusion in a typology and can generally be subsumed into another category. Further classification problems found in typologies include poor sourcing of firesetter subjects. Samples obtained from a single location or recruited through one referral source may not reflect firesetters generally and may exclude the identification of some categories. For example, those who set fires for profit are rarely found in samples from psychiatric institutions (Barker, 1994).

Another key criticism of studies investigating typologies is the concern that the identification of motivation is often inferred or categorized by researchers, as opposed to offenders' accounts, and is therefore open to challenge (Dalhuisen, Koenraadt, & Liem, 2015a; Kocsis, Irwin, & Cooksey, 2002). Many arsonists have more than one motivation for their offending such as a vandal who is also excited by firesetting (Sapp, Huff, Gary, Icove, & Horbert, 1994a). Finally, problems with internal coherence may also reduce the reliability of a typology, that is, can individuals be assigned to categories reliably between two raters and across time.

Arson Theories

In addition to a focus on the development of arsonist typologies, multiple theories have been developed over the last fifty years to explain firesetting and guide interventions for those who set deliberate fires. These theories identify risk factors that distinguish arsonists from other types of offenders and highlight the complex mix of factors considered to contribute to the development and maintenance of firesetting behaviour.

Early theoretical explanations for firesetting focused on single factors, such as motivation for firesetting, and reflected psychoanalytical or biological perspectives for firesetting (Gannon, 2016). These early explanations have been extended in recent years to focus on the interplay of multiple factors contributing to firesetting. The first multi-factor theory developed to explain firesetting was Fineman's (1980) dynamic-behavioural theory. This was followed by a functional analysis theory proposed by Jackson, Glass, and Hope (1987). Neither of these theories specifically addressed how cultural differences might impact on firesetting or contribute to firesetting propensity, nor were these theories derived from firesetters from diverse cultural backgrounds. More recently the multi-trajectory theory of adult firesetting (Gannon, Ó Ciardha, Doley, & Alleyne, 2012) has addressed this gap by specifically referencing culture as a factor influencing firesetting behaviour. These theories

are described below to highlight the different approaches taken to understand and explain firesetting behaviour and to provide a basis for an examination of firesetting theory in the Australian context.

Dynamic behaviour theory. Fineman's (1980) theory suggests that firesetting behaviour results from historical social learning influences, and identifies childhood experiences, environmental factors and cognitions that contribute to the development and maintenance of firesetting behaviour. In particular, socioeconomic disadvantage, poor social skills, lower intellectual functioning and family disharmony are factors associated with the development of antisocial behaviour including firesetting in children (Horley & Bowlby, 2011). These factors, combined with inconsistent parenting, childhood imitation of adult firesetting behaviour, and peer pressure, provide a conceptual framework of the etiology of firesetting behaviour. Fineman not only identified factors that contributed to firesetting such as crisis and trauma, but he also considered how these factors were reinforced through a pre-existing fire interest or childhood experiences with fire. In 1995 he developed his theory further by identifying impulsivity triggers such as rejection and explored crime scene factors to understand the goal of firesetting (Fineman, 1995). He introduced concepts of cognitions prior to the firesetting, at the time of the firesetting, and following the firesetting. Fineman's later work focused on the development of a typology for firesetters. His typology comprises two groups, the first 'the pathological group' included cry for help firesetters, delinquent firesetters, severely disturbed and cognitively impaired firesetters and sociocultural firesetters. The second group, termed the 'non-pathological group' included those who set fires for curiosity, and those who set accidental fires (Lambie, Ioane & Randell, 2016).

Based on the early work of Bandura (1976) and other social learning theorists, Fineman's theory is considered to have sound clinical utility (Gannon & Pina, 2010), though limitations have been identified. Fineman's theory does not explain recidivist firesetting

(Doley, 2009), nor does it account for multiple motivations in the demonstration of this behaviour in children (Lambie & Randall, 2011). The theory does not explain why some children develop firesetting behaviours and others do not, despite both groups being exposed to similarly disadvantaged environments (Horley & Bowlby, 2011). Fineman's theory (1980) sets out key social and environmental correlates of firesetting, but other factors such as the impact of culture or ethnic background on the development of this behaviour are neglected. Advancements in response to these limitations have resulted in functional analysis theory, proposed by Jackson et al. (1987), representing one of the earliest multifactor explanations for firesetting.

Functional analysis theory. Functional analysis theory seeks to explain firesetting by distinguishing factors that reinforce the behaviour. By identifying antecedents and consequences that facilitate and maintain firesetting, Jackson and colleagues (1987) hypothesize reinforcers, such as power, influence, attention, and acceptance from peers, contributing to the development of firesetting behaviour in children who are psychosocially disadvantaged and lack personal effectiveness (Fritzon, Doley, & Clark, 2013). Functional analysis theory identified five main factors contributed to firesetting. These were (1) psychosocial disadvantage such as poor experiences with care givers, (2) life dissatisfaction and self-loathing including experiences of depression and poor self-esteem, (3) social ineffectiveness demonstrated by poor conflict management skills and experiences of rejection by others, (4) individual fire experiences, and (5) affective triggers such as anger and frustration. Jackson et al. (1987) also argued that negative reinforcement principles played a fundamental role in maintaining firesetting behaviours. They noted that punishment and intense supervision, as consequences of being apprehended, served to engrain social ineffectiveness or disadvantage further (Gannon, 2016).

Gannon and Pina argued that functional analysis theory comprises strong unifying power as it is able to account for earlier theoretical perspectives and findings from various studies. This theory is considered to offer sound clinical utility by assisting clinicians to develop appropriate treatment given its multi-factorial basis (Gannon & Pina, 2010). Nevertheless, functional analysis theory has been criticized as lacking explanatory depth when compared to Fineman's model (Fritzon, 2012; Gannon & Pina, 2010) as it neglects proximal cognitions, or those thoughts that immediately precede the firesetting behaviour. By ignoring these cognitive factors, functional analysis theory fails to address the development of specific schemas associated with the decision to set a fire and does not explain why firesetters do not satisfy their need for reinforcers in other ways.

A significant criticism of both Fineman's dynamic behaviour theory and functional analysis theory by Jackson et al. (1987) is the lack of reference to the scripts or schemas likely to be held by firesetters. This concern has been addressed in the most recent multi-factor theory to explain firesetting in adults.

Multi-trajectory theory of adult firesetting. The multi-trajectory theory of adult firesetting (M-TTAF) developed by Gannon, Ó Ciardha, Doley, and Alleyne (2012) suggests multiple factors lead to psychological vulnerabilities and contribute to the development of implicit theories or internal scripts that reflect distorted views about the use of fire (Butler & Gannon, 2015). M-TTAF informs the current research and is discussed in depth here, with a particular focus on the identification of implicit theories, and trajectories or offending pathways, that distinguish this theory from its predecessors.

Designed to address gaps in the earlier theoretical explanations, M-TTAF was developed as an integrated account of both the etiology, and the motivation for adult firesetting behaviour (Gannon et al., 2012). This is achieved by referencing a range of factors that had been neglected in other theories, such as cultural factors. Early childhood influences,

biological features, social learning and contextual factors, including critical life events or precipitating events, are identified as contributing to the development and maintenance of firesetting. Psychological vulnerabilities, such as fire interest, offence supportive attitudes, emotional regulation issues, and communication problems are identified, and contribute to a holistic case formulation designed to inform treatment targets. M-TTAF highlights the importance of cultural factors when assessing firesetters, and specifically highlights the need to consider early experiences, which may be specific to a firesetters cultural group, when identifying psychological vulnerabilities associated with firesetting (Bell, Doley & Dawson, 2018; Gannon, 2016; Tyler & Barnoux, 2015). While M-TTAF considers cultural factors, such as a familiarization with fire, it does not explain how familiarization exacerbates or triggers existing psychological vulnerabilities and contributes to firesetting. By combining etiological factors, cultural factors, and proximal motivation, M-TTAF advances previous theories that have offered a less complex approach to this very complex behaviour (Gannon et al., 2012).

M-TTAF builds on earlier theories by identifying ways in which firesetters view their world (Butler & Gannon, 2015). Contributing to both the development and maintenance of firesetting behaviour these offence-supportive cognitions or implicit theories have been defined previously in reference to other offence types, as beliefs that allow an offender to interpret various events or situations in a manner that allows them to offend (Gannon et al., 2012; Ward, 2000). Plaks, Grant, and Dweck (2005) suggest implicit theories may even guide offenders to situations that reinforce their erroneous beliefs about the world. Implicit theories, or the cognitions facilitating and enabling offending, represent important treatment needs, and M-TTAF identifies five specific implicit theories that serve this purpose for firesetters (Ó Ciardha & Gannon, 2012).

Implicit theories. The first implicit theory identified by M-TTAF can be

summarised as the dangerous world implicit theory or a belief that the world is a hostile place and others cannot be trusted. This implicit theory, first identified by Ward and Keenan (1999), is associated with various offence types where the typical view held by offenders is that it is better to “beat than be beaten”. It is considered a common implicit theory underpinning a range of violent crimes (Polaschek & Ward, 2002) and Ó Ciardha and Gannon (2012) hypothesize this implicit theory is likely to be common to the majority of firesetters.

The second implicit theory is the normalization of violence, which is held by those who believe that violence is normal and acceptable. First identified by Polaschek, Calvert, and Gannon (2009), this implicit theory reflects the view that violence is an acceptable method of conflict resolution. Ó Ciardha and Gannon (2012) suggest firesetters who have witnessed direct or indirect aggression in their past are most likely to adhere to this view. Both the dangerous world and the normalization of violence implicit theories are likely to co-occur with the third implicit theory or the view that fire is a powerful tool. Those holding this view use fire to send a powerful message and have an entrenched sense of entitlement to use fire to achieve their particular goals (Ó Ciardha & Gannon, 2012).

The fourth implicit theory identified by M-TTAF is the belief that fire is fascinating and exciting despite being potentially dangerous. Individuals subscribing to this view are less likely to see fire as dangerous and more likely to regard fire as thrilling or mesmerizing. Whether this perception of fire has developed from socially isolating childhood experiences whereby fire soothed and calmed the individual or resulted from enhanced social connectedness when used with others, this implicit theory is considered common to many firesetters (Ó Ciardha & Gannon, 2012).

The final implicit theory is the belief that fire is controllable, or can be controlled, as others will respond before it gets out of control (Ó Ciardha & Gannon, 2012). This implicit

theory is common to firesetters with limited cognitive ability or extreme naivety. It is also held by those with reduced empathy and poor consequential thinking skills, who tend to blame the victims of their fires for not escaping or avoiding the fire in a timely manner. Of all the implicit theories identified by M-TTAF, fire is controllable is thought to reflect a sense of mastery over their environment which is specific to firesetters. Endeavoring to further refine implicit theories, Butler and Gannon (2015) suggest implicit theories are the motivator for the firesetting, while scripts provide a knowledge structure that firesetters base decisions upon when considering when to use fire. Examples of scripts and the associated knowledge structures include *fire is a powerful messenger* (knowledge structures around the use of fire as an effective form of communication), *fire is the best way to destroy evidence* (knowledge structures around the successful destruction of DNA evidence using fire), and *fire is soothing* (knowledge structures around fire restoring positive affect). Butler and Gannon argue that scripts differ from implicit theories, although they are not mutually exclusive, and that firesetters who hold firesetting scripts are also likely to adhere to the implicit theories frequently held by firesetters.

To further the assessment of fire interest and attitudes towards fire Ó Ciardha et al., (2015) conducted a factor analysis of three questionnaires designed to elicit attitudes or cognitions pertaining to firesetting. They administered the Fire Interest Rating Scale, the Fire Attitude Scale, and the Identification with Fire Questionnaire to 234 male firesetters accommodated in prisons across the United Kingdom. This study identified five factors: *identification with fire* (fire is part of the person or central to their functioning), *serious fire interest* (excitement about potentially destructive fires), *fire safety* (lack of fire safety knowledge and minimization of the importance of fire safety), *everyday fire interest* (interest in watching fire services in action or bonfires in non-threatening circumstances), and *firesetting as normal* (setting fires or being suspected of having set fires is common). While

these derived factors were limited by the items in the questionnaires administered, they do supplement the M-TTAF implicit theories and highlight constructs for assessment and treatment, reflecting a growing body of knowledge on the assessment of arsonists' cognitions. This research was further refined through the development of the Four Factor Fire Scale which examines the fire-specific treatment needs of firesetters by identifying four factors (identification with fire, serious fire interest, poor fire safety, and firesetting as normal) to guide intervention (Ó Ciardha, Tyler & Gannon, 2016).

The veracity of implicit theories and firesetter scripts has not been tested in the Australian context, and in particular with respect to different cultural groups of firesetters. As Fessler (2006) suggests a lack of exposure to fire and consequential learning about fire in childhood, which characterizes many western societies, may contribute to a preoccupation or fascination in adulthood. If this were true it might be expected that given the historical exposure to fire in Indigenous communities, the implicit theories and scripts held by Indigenous firesetters would reflect this familiarity. The current research investigated themes emanating from interviews with Indigenous and non-Indigenous firesetters.

Trajectories. The M-TTAF identifies five pathways or trajectories to the development of firesetting behaviour, which are based on empirical evidence, clinical practice, and accepted typological classifications commonly observed in adult firesetters. These trajectories arose from concerns that earlier theories lacked direction for clinicians as to the vast range of features interacting to facilitate and maintain firesetting (Gannon et al. 2012). The identification of trajectories, therefore, provides an opportunity to ascertain specific treatment targets for firesetters (Gannon et al. 2012). The five trajectories highlight alternative pathways to firesetting and identify specific targets for intervention.

Antisocial cognition trajectory. The antisocial trajectory refers to firesetting behaviour that is predominantly related to antisocial cognitions, scripts and values (Gannon et al. 2012).

These cognitions are thought to be generally criminal in nature and such individuals are unlikely to have intense fire interest or fascination. Fires may be lit to avoid detection, hide evidence or in conjunction with the commission of other crimes. Treatment targets include offence supportive attitudes and associated general criminality.

Grievance trajectory. The second trajectory, the grievance trajectory, relates to firesetters whose predominant risk factors are aggression, anger and hostility (Gannon et al. 2012). These individuals are likely to see fire as a means to send an authoritative message and their motivation is likely to be around revenge or retribution rather than intense fire interest or fascination. They are likely to experience anger and ruminate over perceived slights or hold negative attributions towards others who become the object of their firesetting. Treatment is focused on enhancing self-regulation skills.

Fire interest trajectory. The fire interest trajectory describes firesetters who demonstrate elevated levels of fire interest (Gannon et al. 2012). Individuals in this trajectory may view fire as pleasurable and hold fire supportive attitudes that have developed through social learning, classical conditioning and cultural forces. They are not likely to hold general criminal attitudes. A diagnosis of pyromania is not required, however firesetters following this trajectory are likely to have developed an entrenched coping script related to fire use, particularly in times of stress or anxiety, which is the focus of treatment.

Emotionally expressive trajectory. The emotionally expressive trajectory encapsulates firesetters who have poor communication and social skills, low self-regulation, and problem solving deficits (Gannon et al. 2012). These firesetters are likely to be unassertive and lack intimacy in their relationships. When individuals assessed to be on the emotionally expressive trajectory face proximal triggers that place stress on coping resources, they may act impulsively and use fire to communicate their frustration. Firesetters within this trajectory may also use fire for self-harm or suicide as a means of communication or to release negative

affect and pain. There is a subset of firesetters within this trajectory who possess a high need for recognition, and this group, while included within the emotionally expressive trajectory, is likely to use fire to communicate their need for social relevance. Treatment for firesetters assessed on the emotionally expressive trajectory focusses on communication problems and mood management.

Multifaceted trajectory. The final trajectory is the multifaceted trajectory which refers to firesetters who hold elevated fire interest and offence supportive attitudes (Gannon et al. 2012). The main difference between this trajectory and the fire interest trajectory is the presence of antisocial cognitions and other risk factors (self-regulation issues and communication deficits). This trajectory includes firesetters who have developed complex and serious problems across a variety of risk factors associated with firesetting, such as inappropriate fire scripts or a fixated interest in fire. Treatment for those assessed on this trajectory might target offence supportive attitudes and inappropriate fire scripts.

Research Gaps

As discussed, M-TTAF has advanced earlier theories on arson and bridged the gap between theory and practice by focusing specifically on the identification of treatment targets. As a conceptualization of firesetting behaviour, M-TTAF incorporates etiological factors, a range of motivational elements, and implicit theories and scripts, that maintain the behaviour. Importantly, this theory recognises that culture may influence the establishment and promulgation of illegal firesetting, but it does not explain how cultural origins might contribute to the development of arson offending behaviour. There has been no research to identify the cultural inclusiveness of this theory, either internationally or within Australia, and as will be shown, Indigenous arsonists comprise a significant proportion of all arsonists convicted in Australia. This represents a significant gap in the literature. Given the imperative to provide treatment for Indigenous arsonists as well as non-Indigenous arsonists, Study One

addressed this particular knowledge gap by investigating Indigenous firesetting in Australia, and proposed adjustments to theory.

A further gap concerns limited research on an arsonist typology that thoroughly encapsulates the characteristics of a broad Australian sample. The current research reviewed established national and international arsonist typologies and identified inadequacies, particularly with respect to cultural inclusiveness. Based on a national sample Study Two considered how Australian arsonists might be grouped and identified according to their offence and offender characteristics. As Helfgott (2013) notes typologies contribute to the “expansion and reformation of theory” (p.5) and are a useful tool in guiding research and developing hypotheses. The identification of a comprehensive typology has practical value for treatment providers (Byrne & Roberts, 2007; Helfgott, 2013), risk assessment (Hargreaves-Cormany, Patterson, & Muirhead, 2016), and the judiciary when sentencing (Helfgott, 2013).

An insufficient understanding of judicial sentencing considerations constitutes a third gap in the Australian arson literature. There is negligible research on the views of the Australian judiciary in so far as identifying their considerations when sentencing defendants convicted of arson. In addition, there has not been any research to identify how sentencing considerations may have evolved over time in Australia with respect to arson cases, nor has any research investigated how the judiciary weighs risk factors when sentencing Indigenous and non-Indigenous arsonists. Given the lack of research on the sentencing considerations of Australian Judges and Magistrates when sentencing arsonists, Study Three focused on judiciary views and understanding of arson behaviour. Each of these areas where research has been neglected has informed the suite of studies presented in this thesis, and the following sections provide an outline of the three studies comprising this research.

Understanding Indigenous cultural differences in Australian arson

To date differences between cultural and ethnic groups have been considered for violent and sexual offenders (Fontes, 1995; Purvis & Ward, 2006; Seidler, 2010) identifying that culture influences the criminogenic factors contributing to offending and therefore is a critical consideration when addressing risk and implementing effective treatments. However, there has been no investigation or research on how culture might impact on arson offending, nor any consideration of the value of reflecting upon Australian Indigenous culture in arson treatment. As cultural factors associated with the commission of arson have not been investigated previously it can be argued that this is likely to restrict the breadth of appropriate treatment responses for those from non-mainstream or non-western cultures. Study One is a qualitative study drawing on semi-structured interviews with a sample of convicted Indigenous and non-Indigenous arsonists. Interviews with Indigenous community members and Elders also contributed to an understanding of firesetting by Indigenous arsonists.

Study One has both theoretical and practical implications, in that there is no published research exploring the circumstances of firesetting for illegal or illegitimate purposes in Australian Indigenous communities. Based on the results of this study, adjustments to theory are offered, and observations as to practical strategies for interventions with Indigenous firesetters are considered. A thematic analysis of firesetters cognitions was included to contribute to the development of a culturally appropriate theoretical basis for the identification of treatment targets and intervention strategies, to reduce recidivism (Watt & Ong, 2016).

No Australian criminal justice jurisdiction provides treatment specifically designed for arsonists, let alone Aboriginal and/or Torres Strait Islander arsonists. Given the over-representation of Indigenous persons in custody across jurisdictions, this research was designed to inform the development of such an intervention. The current research

investigated factors contributing to firesetting behaviour within this group, as the first step in the development of an understanding of firesetting behaviour within this subgroup of firesetters. As treatment programs and intervention strategies for Aboriginal and/or Torres Strait Islander offenders in Australia have often been hindered by a range of complicated barriers to effective and sustainable outcomes, such as a lack of cultural relevance and culturally appropriate language and presentation style, (Day, Jones, Nakata, & McDermott, 2012; Homel, Lincoln, & Herd, 1999; Sodhi-Berry, Preen, Alan, Knuiman, & Morgan, 2014; Wynne-Jones et al., 2016), the current research considered how arson treatment might be developed for this group.

Previous arson research in Australia has neglected the complexities associated with a multicultural society and cultural differences in offending. Given the plethora of research on the factors contributing to the over-representation of Indigenous people entering and remaining within the Australian criminal justice system (Day et al., 2012; Jeffries & Stenning, 2014; Lincoln & Wilson, 2005; Weatherburn, 2014), the lack of knowledge about this particular crime type in Indigenous communities is a significant omission. Culturally relevant treatment for this group is necessary as crime statistics continue to report an over-representation of Indigenous arsonists in this country (New South Wales Bureau of Crime Statistics and Research, 2014; Queensland Police Service, personal communication, 2014). Given the historical use of fire in Indigenous culture for legitimate purposes (Gammage, 2011), our lack of understanding of the relationship between legitimate and illegitimate use of fire in Indigenous community's warrants addressing. While recognising the diversity among Indigenous communities in Australia, the following section traces the use of fire for cultural, traditional land management and spiritual purposes, as this provides a cultural context in which to situate this study.

Historical use of fire in Aboriginal and/or Torres Strait Islander communities.

Fire has been used by Aboriginal and/or Torres Strait Islander communities in Australia for thousands of years to effectively manage the land and to hunt (Bowman, 1998; Bird, Bird, & Parker, 2005; Cubit, 1996; Meggitt, 1965; Murphy & Bowman, 2007). These practices continue to reflect the traditional knowledge of land management (Fache & Moizo, 2015; Ockwell, 2008) despite European settlers fearing bushfires and taking actions to reduce the impact of fire on the Australian environment (Lewis, 1989; Preece, 2012; Ward, Lamont, & Burrows, 2001; Whelan, Kanowski, Gill, & Anderson, 2006). The use of fire by Indigenous groups is described as systematic and purposeful by Gammage (2011), who details how Aboriginal and/or Torres Strait Islander peoples across Australia have used fire for hunting, to promote vegetation growth, and for ceremonial reasons. Fire assisted Indigenous peoples to bare the ground so as to increase run-off and facilitate the storage of water in claypans or lakes (Latz, 1995). Developments in social interactions and the learning of social habits and routines, or enculturation (Bigg, Boonstra, Peterson, & Schluter, 2016), and religious ceremonies (Burich, 2014) are also attributed to the domestication of fire.

Country, also termed “land”, can be described as an area to which Aboriginal and Torres Strait Islander people have a traditional or spiritual association (Ganesharajah, 2009). The term country has been explained as the way in which Aboriginal people refer to a place that gives and receives life. In Aboriginal and/or Torres Strait Islander culture, land is considered to be a living entity and the life support system for people and all other creatures (Burgess, Johnston, Bowman, & Whitehead, 2005; Gammage, 2011). The practice of scaping country continues among Indigenous peoples today; in fact, many government land management practices throughout the north of the country are utilizing Indigenous fire knowledge and practice to control fires and carbon emissions (Driscoll et.al., 2010; Heckbert, Russell-Smith, Reeson, & James, 2011). Aboriginal peoples, particularly in the northern

regions of Australia, continue to burn their land to maintain its upkeep, and to encourage food production through a mosaic of vegetation in various stages of growth (Ockwell, 2008; Petty, deKoninck, & Orlove, 2015; Whitehead, Bowman, Preece, Fraser, & Cooke, 2003).

Additional reasons for using fire have emerged, for example, as the use of vehicles becomes more prevalent in remote areas, fire is employed to clear bush tracks for off-road access, which is a deviation from historical practices (Head & Hughes, 1996).

Maintaining country benefits social and emotional wellbeing in Indigenous communities (Burgess, Bailie, & Mileran, 2008; Garnett & Sithole, 2007; Rigby, Rosen, Berry, & Hart, 2011; Yotti'Kingsley, Townsend, Phillips, & Aldous, 2009). Campbell, Burgess, Garnett, and Wakerman (2011) report how landscaping and connecting with their land has health benefits for Aboriginal and/or Torres Strait Islander peoples in the Northern Territory. Having interviewed 298 Indigenous people these authors found the maintenance of a close connection with ones' land was a prerequisite for good health, and that regular involvement in caring for country led to better health outcomes, specifically in terms of a lower risk of diabetes, renal disease and hypertension.

The use of fire and smoke is not limited to landscaping in Indigenous community life; it is also used for ceremonial and spiritual purposes such as cleansing the spirit or place, during birthing rituals, and in death and mourning ceremonies (Bleige-Bird, Bird, Coddling, Parker, & Jones, 2008; McGrath & Phillips, 2008). In far northern Australia, Aboriginal and Torres Strait Islander peoples continue to use fire as a means of maintaining spiritual and cultural links to the country (Vaarzon-Morel & Gabrys, 2009; Fache & Moizo, 2015). For many Aboriginal and Torres Strait Islander people there is a belief that the soul or spirit is tied to their country, and fire continues to be used in spiritual ceremonies such as smoking ceremonies and those designed to dispel spirits (Latz 1995).

Connection to country is described as a deep, rich experience, belief or feeling of belonging to country (Dudgeon, Wright, Paradies, Garvey, & Walker, 2010). Indigenous peoples practice connection to country in the same way that non-Indigenous Australians might maintain a connection to direct family or close friends; they talk to country, visit country, stress over country, and miss or long for country (Ganesharajah, 2009; Harrison, 2009; Yotti'Kingsley et al., 2009).

To care for country, people need to practice the responsibility they hold for the maintenance of both animate and non-animate elements of country. Unlike Western philosophy or ontologies that view nature as something that can be manipulated, mastered and controlled, many Indigenous peoples see themselves as part of nature, therefore what happens to country has implications for their own wellbeing (Harrison, 2009). To practice this responsibility fully, Yotti'Kingsley et al. (2009) argues for a greater alignment between Aboriginal "lore" and westernised law or legislations. If the use of fire in Aboriginal communities is not fully understood in law, then there exists an opportunity for firesetting to attract legal sanctions, despite it being endorsed and considered legitimate in Aboriginal lore.

The historical, legitimate and purposeful use of fire in Aboriginal and Torres Strait Islander communities, which is deeply rooted in cultural traditions developed over thousands of years, represents a backdrop to the current research. Study one explored the relationship between the legitimate use of fire and the illegitimate or malicious use of fire by Indigenous firesetters. This relationship has not been considered previously. Rice and Harris (1991) found that firesetters were more likely to come from families with a history of firesetting than non-firesetters, and the current research considered whether exposure to, and familiarisation with, the use of fire for cultural purposes, bares any relationship to the use of fire for illegitimate purposes in Aboriginal and/or Torres Strait Islander firesetters. Similarly, as Gannon and Pina (2010) note, individuals who may have been exposed to fire in their youth,

may be more likely to use fire as an adult. Whether this applies to Australian Indigenous peoples has not been explored in the arson literature. An absence of research investigating this sensitive juxtaposition has likely undermined understanding of the implicit theories and motivations or offence characteristics of Australian Indigenous arsonists.

To be clear, the current study is not suggesting that the historical and traditional use of fire in Indigenous culture contributes to illegal activity such as arson; rather this research will explore relationships to fire, and the views on the meaning of fire, held by those who have been convicted of arson. By understanding the implicit theories or the schemas associated with fire use, and the impact of culture on the development and maintenance of these, relevant theoretical foundations and effective treatment or rehabilitative strategies can be progressed.

Interventions designed for offenders generally have been criticised for lacking applicability to minority groups, or those who have been marginalised in a dominant culture (Dudgeon & Walker, 2015; Martel, Brassard, & Jaccoud, 2011; Westerman, 2004), hence the need to ensure interventions reflect on, and draw from, the knowledge of those who would benefit from them. Perhaps, as Tuhiwai Smith (2012) notes, “Indigenous peoples offer genuine alternatives to the current dominant form of development. Indigenous people have philosophies which connect humans to the environment and to each other, which generate principles for living a life which is sustainable, respectful, and possible” (p. 109), and therefore criminogenic programs are likely to benefit from greater collaboration with end-users.

In Australia, Indigenous epistemologies are slowly gaining momentum and broad acceptance across both government and community sectors (Australian Institute of Aboriginal and Torres Strait Islander Studies, 2012; Walter, 2005). Within criminal justice agencies however, there remains a reluctance to consider new approaches to the intervention

and treatment of Indigenous people in custody (Blagg, 2008, Tubex, Blagg, & Tulich, 2018). In particular, the practice of psychology in some correctional environments continues to take a generic approach (Shepherd, Ogloff, & Thomas, 2016), despite social work as a discipline (Gray, Coates, Bird, & Hetherington, 2013; Green & Baldry, 2008) and psychiatry (Sheldon, 2010) embracing a range of culturally diverse approaches in community settings for some years.

Calls for the development of postcolonial approaches to psychological or psychiatric interventions with Indigenous peoples that reflect an emic view, or the perspective of the person who belongs to that culture, along with general cultural competencies, have not been widely accommodated within Australian correctional agencies (Rynne & Cassematis, 2015; Walker, Schultz, & Sonn, 2014; Williams, 2015), yet the support among not-for-profit services for such changes is growing (Casey, 2014; Powell, Ross, Kickett, & Donnelly, 2014). It is with this respect for Indigenous culture in Australia that Study One focused on exploring the factors that have contributed to the use of fire for illegitimate purposes so that some insights might be generated to drive the enhancement of arson theory, and the development of relevant and culture-based interventions for Indigenous persons convicted of arson. This study aimed to investigate these factors in accordance with an Indigenist research methodology (Nakata, 2007a; Nakata, 2010; Rigney, 1999; Tuhiwai Smith, 2012).

Incarceration rates for Indigenous arsonists. Aboriginal and/or Torres Strait Islander people comprise a mere 3.3% of the Australian community (Australian Bureau of Statistics, 2016). They are, however, 13 times more likely to be imprisoned than their non-Indigenous counterparts (Australian Bureau of Statistics, 2016b) and more likely to be a victim of crime than non-Indigenous Australians (Bryant & Cussen, 2015). In Queensland adult Indigenous imprisonment rates are increasing faster than the non-Indigenous

imprisonment rate, with an increase of 39% compared to 23% over the last ten years (Queensland Productivity Commission, 2018).

Disproportionate sentencing has been identified in a recent Queensland study, where Douglas and Fitzgerald (2018) report that Indigenous defendants in breach of a domestic violence order (DVO) were more likely than their non-Indigenous counterparts to receive a custodial sentence. These authors report that 43% of Indigenous people (n=2061) who breached a DVO in 2013-14 were imprisoned, compared to 27% of the non-Indigenous group (n=6044). As Ferrente (2012) notes, this over-representation of Indigenous people in the Australian correctional system is “one of the most intractable social issues facing contemporary Australia” (p. 59).

Indigenous people serving sentences for arson are over-represented in Australian prisons when compared to non-Indigenous arsonists (Muller & Stebbins, 2008). This is particularly evident in the Northern Territory where 65% of all persons charged with arson or arson-related offences between 2009 and 2014 identified as an Aboriginal and/or Torres Strait Islander (personal communication, M. Okeil, 11 February 2014). Given that less than 30% of all residents of the Northern Territory are Aboriginal and/or Torres Strait Islander people, this statistic indicates a significant over-representation of Aboriginal and/or Torres Strait Islanders. Similar statistics are found in New South Wales where, in 2011/12, 18% of all persons charged with arson or arson-related offences identified as Indigenous (New South Wales Bureau of Crime Statistics and Research, 2014). Arson is also increasing among juveniles, and in Queensland 23.5% of all juveniles charged with arson offences between 2007 and 2012 identified as Aboriginal and/or Torres Strait Islanders (Queensland Police Service, 2013).

Many factors have been found to contribute to offending in Aboriginal and/or Torres Strait Islander communities, including alcohol and substance use, lack of employment

opportunities, financial stress, overcrowded living conditions or being a member of the stolen generation (Grace, Krom, Maling, Butler, & Midford, 2011; Gray et al., 2018; Homel et al., 1999; Shepherd, Ogloff & Thomas, 2016; Weatherburn, Snowball, & Hunter, 2006). Ferrente (2012) refers to systemic factors such as a history of forced removals, welfare dependence and systemic racism, as contributing to increased offending among Indigenous peoples. Other less obvious cultural factors impacting on Indigenous people coming into contact with police, include, as noted by Allard (2010), the tendency for Indigenous communities to socialize in public spaces, and thereby attract increased attention of law enforcement agencies.

Recognizing how these predisposing and precipitating factors impact on offenders is important when revising theory or identifying treatment needs. As there is no research on which factors might influence the commission of arson offences in Indigenous Australians, the current research considered the relationship between arson and cultural factors.

This gap exists despite North American research identifying a relationship between socioeconomic disadvantage and the incidence of bushfire arson (Prestemon & Butry, 2005), and many studies have linked the effects of colonization to the increase in social marginalization and disadvantage in Australian Indigenous communities (Bartels, 2012; Wundersitz, 2010; Cunneen, 2006). As research on the specific cognitions or the implicit theories held by firesetters assists in the development of tailored programs designed to address arson, the lack of knowledge of the implicit theories and cognitions held by Indigenous firesetters has contributed to a deficit in arson treatment for Indigenous peoples.

According to Dudgeon, Rickwood, Garvey, and Gridley (2014), the psychology profession has a poor history of responding to Indigenous treatment needs commencing with early psychological research that depicted the Australian Aboriginal as “primitive man” (p. 41). Dudgeon and colleagues argue that early psychological research conceptualized Indigenous peoples as being unsophisticated and lacking social and intellectual capacities.

Treatment conceptualisations, where Indigenous people demonstrate symptoms of mental health disorders, have also lacked reference and attention to culture (Kilcullen, Swinbourne, & Cadet-James, 2016). In response, the Australian Psychological Society formally apologised to Indigenous Australians in 2016 and challenged psychologists to listen more and to focus on the development of assessment methods and treatment responses that reflect a heightened cognisance of the cultural context in which problems arise.

The current study aimed to contribute to the advancement of treatment options for Indigenous arsonists by investigating the relationship between fire use and culture, and in doing so, identify how therapeutic responses might be tailored to the needs of Indigenous arsonists. Nakata's (2007b) interpretation of Standpoint theory, which is described in the introduction section of Chapter Two, formed the theoretical basis for this study, and the literature on Indigenous research methodologies provided the framework to pursue this aim.

To summarize, Study One focused on examining an underdeveloped area of research and gap in the literature focused on similarities and differences in the backgrounds, characteristics and behaviour of Aboriginal and/or Torres Strait Islander and non-Indigenous arsonists across several Australian states. The views of Indigenous community members contributed to a qualitative exploration of the factors contributing to firesetting in Indigenous communities. This study also considered strategies to enhance rehabilitative efforts with Indigenous arsonists.

Understanding the Arsonist Typologies and Trends

Much of the available arson research is based on international samples from the United States of America and the United Kingdom, and few studies have focussed specifically on Australian samples of arsonists. Even fewer studies have investigated trends in arson offending or trends in the characteristics of arsonists across time in this country.

Study Two is a quantitative analysis of historical archival cases involving arson, heard across

Australian courts between 1990 and 2015. This study explored characteristics of convicted arsonists and their offences to consider whether a typology of Australian arsonists exists. Analyses of trends across the 25-year period contributed to predictions of key factors that may contribute to arson offending in the future. To extend the brief introduction to typologies presented earlier in this chapter, a detailed review of international and Australian typologies and trends in arson offending, is presented here to inform this study.

Typologies. The identification of empirically derived subgroups or typologies within offender populations is an established methodology for the investigation of correlates of criminal behaviour (Green, Black, Serrano, Budman, & Butler, 2011; Labrie, Kidman, Albanese, Peller, & Howard, 2007; Miller, 2014; Simpson, Grimbos, Chan, & Penney, 2015; Wortley & Smallbone, 2013). Typologies reduce behavioural phenomena and observations to abstract classes or groups, each based on common characteristics. The development of a typology serves the formulation of hypotheses (Helfgott, 2008), the expansion of theory (Clinard, Quinney, & Wildeman, 1994) and the clarification of optimum therapeutic responses or treatment (Knight & Prentky, 1990). Typologies also inform investigative practices (Douglas, Ressler, Burgess, & Hartman, 2004) and policy development (Turvey, 2002).

Historically, typologies of criminal behaviour have grouped individuals according to specific elements associated with either the offence or post-offence behaviour, victim selection, and/or other crime scene environmental factors. These include typologies based on the motivation for criminal behaviour (Groth, 1979; Lombroso, 1876), crime type (Miethe, McCorkle, & Listwan, 2006; Naylor, 2003; Prentky & Burgess, 2000), and typologies that are based on the presence of a mental illness (Lykken, 1995), or the complexity of the criminal act (Farr & Gibbons, 1990) such as the organized/disorganized typology developed by Ressler, Burgess, and Douglas, (1992).

International arson typologies and classifications. Most of the early research on typologies or classifications of arsonists is based on international samples, particularly from the United States (Inciardi, 1970; Lewis & Yarnell, 1951) and the United Kingdom (Prins, Tennant & Trick, 1985; Rix, 1994), classifying individuals according to their motivation for firesetting (Doley, Ferguson, & Surett, 2013). Lewis and Yarnell (1951) considered 1145 insurance reports on male offenders who had set fires across the United States between 1918 and 1950. They identified seven types of firesetters: pyromaniacs (39%), those who set fires for revenge or vengeance (15.2%), a group whose firesetting was associated with psychosis or senility (13.5%), another group who were either firemen or wanted to be firemen (8.5%), those motivated by jealousy (8%), a group who were vagrants who set fires in order to wreak revenge on society (6.5%), those who set fires to then discover and report them, and be identified as heroes (6%), and a final group whose fires were set during a robbery or associated crime (3.3%). The largest group identified in this study, the pyromaniac group, were identified in accordance with diagnostic criteria accepted in the 1950s.

The types identified in the Lewis and Yarnell (1951) study have been refined, and in 1970 Inciardi developed alternative categories. His classification was based on a study of 138 convicted arsonists who had been released to parole in New York State between 1961 and 1966. He identified six categories based on motivation: (a) firesetting for crime concealment (7%), (b) for insurance claims (7%), (c) for excitement (18%), (d) for revenge (58%), (e) in conjunction with vandalism (4%), and (f) a final group living in institutions for the mentally disabled who set fires to attract attention to a cause, such as a transfer from an institution (6%). Those setting fires for either revenge or excitement constituted the majority of the sample (MacDonald, 1977). These categories, while useful at the time, can be criticised as too simplistic to inform assessment and treatment, as they fail to consider complex

behavioural or situational antecedents, and lack predictive utility for the assessment of potential risk for recidivistic firesetting.

Based on an earlier classification of arsonists (Prins, 1980), Prins, Tennent, and Trick (1985) considered the utility of four motivational categories for fire-setting drawn from the parole files of 113 convicted arsonists. They found arson motivated by (a) profit or to cover up another crime (17%), (b) for political purposes (1.8%) and (c) a large group with mixed motives (81.2%). The fourth category considered, arsonists who self-immolated for political purposes, was not supported as no arsonists were found to have such motivation. The large group with mixed motives comprised a variety of offender characteristics and apparent motivations and is likely to have been too diverse to be meaningful. These were later described by Prins (2016) as “rudimentary” as they were dull or subnormal fire raisers, psychotic firesetters, those setting fires for revenge, a heroic or vain group, those using fire setting as a cry for help, those sexually motivated by fire, and those with a history of firesetting as a child.

The categories outlined by Prins et al. have been criticised as they are based on a combination of motivation and individual characteristics, such as mental health diagnosis or substance use, and do not delineate on the basis of motivation alone (Gannon & Pina, 2010). While Prins et al. acknowledge that these categories overlap, they neglect a range of motivation and offender combinations such as the mentally ill firesetter who self-immolates, or an attention-seeking firesetter who is politically motivated. By assuming each firesetter has a single motivation Prins et al. (1985) simplify the often complex relationship between person, place and context. As Gannon and Pina (2010) note, an individual’s motivation for setting a fire is often multifaceted and driven by a range of factors.

In a further study Icové and Estépp (1987) analysed 1,016 records held by the Prince Georges County Fire Department (Maryland) of convicted adult and juvenile arsonists. They

developed six categories based on motivation for the firesetting. These categories were vandalism (49%), excitement (25%), revenge (14%), crime concealment (2%), and for profit (1%). The sixth category was labelled “other” and included cases where motive was not discernible (8%). Despite there being some consistency between these categories and those identified by Inciardi (1970), this study has been criticised for its lack of interrater reliability, and the inclusion of a range of offences where fire was used which may not have involved arson, such as explosives or fireworks violations (Kelm, 2016).

Further categories based on motivation were developed by Rix (1994) who interviewed 153 patients referred for pre-trial assessment in the United Kingdom. Revenge was identified as the most common motivation (27.5%), followed by excitement (10.5%) and vandalism (8.5%) with the remaining patients indicating a range of motivations including attention-seeking, carelessness, and attempted suicide. Having interviewed each individual in his study, Rix found fifteen categories to describe firesetting motivation, many of which were individual-specific and not necessarily relevant to firesetters generally. Each of these typologies is summarized in Table 1 highlighting similarities and differences in the descriptive categories developed and a summary of limitations.

Table 1

Summary of Previous Arsonist Typologies and Limitations

Typology categories			
Authors	Number	Descriptions	Limitations
Lewis & Yarnell 1951	7	Pyromaniacs; for revenge; psychotic; firemen; jealous; vagrants; heroes; criminals.	Categories based on motivation alone.
Inciardi 1970	6	Crime concealment; insurance claims; excitement; revenge; vandalism; attention seeking.	Categories were simplistic and did not inform assessment and treatment; lacked predictive utility.
Prins, Tennent & Trick 1985	4	Profit; political purposes; mixed motivations; self-immolators.	Categories assumed single motivation and overlap; large group identified with mixed motives.
Icove & Estep 1987	6	Vandalism; excitement, revenge; crime concealment; for profit; other.	Lack of interrater reliability, and the inclusion of offences where fire use may not have involved arson.
Rix 1994	15	Revenge; excitement; vandalism; cry for help; rehousing; attempted suicide; carelessness; psychotic; financial reasons; cover up; manipulative; heroism; proxy/acting for another; depressed; political.	Some categories comprised single individuals and were not necessarily able to be generalized.

Dalhuisen et al., 2015a	5	Instrumental subtype; reward subtype; multi-problem subtype; disturbed relationship subtype; disordered subtype.	Based on a purposive sample of firesetters referred for a mental health assessment, rather than a general sample of firesetters.
Kocsis & Cooksey, 2002	4	Thrill pattern type; anger pattern type; wanton pattern type; sexual pattern type.	Number of arsonists in each category were not identified, and unique offender and offence characteristics unrelated to firesetting were employed.
Willis (2004)	5	Boredom type; profit or to conceal a crime; for recognition and attention; no specific motivation; multiple motivations type.	Based on bushfire arsonists only and lacked distinction between target-specific arsonist types.
Green, Lowry, Pathé, and McVie, (2014)	3	Angry/antisocial type; spree firesetters; persecuted/suicidal.	No proportions of the total sample identified in each type, and purposive sample of firesetters admitted to a mental health facility.

The identification of arson types based on motivation alone has been considered too simplistic, and more recent classification typologies have included additional elements such as the target of the arson offence. The action systems model, for example, has included target in order to identify themes and develop meaningful profiles of arsonists (Canter & Fritzon, 1998). Based on cases in the United Kingdom, Canter and Fritzon used multidimensional scaling techniques to classify 175 solved arson offences into four groups based on whether the motivation for the offence was instrumental or expressive, and whether the target was an object or a person.

The actions systems model plots co-occurring variables across two axes identifying the target of the fire, as either an object or a person, and the motivation or purpose of the arson, (Fritzon, 2012). By identifying target and motive, the action systems model classifies firesetting behaviour as follows: (1) instrumental person; firesetting targeting known others for the purpose of revenge or following a dispute, often conducted after the firesetter has made a previous threat, (2) instrumental object; opportunistic firesetting often conducted in groups, and in conjunction with other crimes such as break and enter, (3) expressive person; firesetting aimed at restoring emotional well-being or to alleviate distress by gaining the attention of others, often identified as a cry for help, and (4) expressive object; firesetting that usually targets public buildings, often repeatedly, after an emotionally challenging event, to attract fire service responses (Canter & Fritzon, 1998).

The action systems model has been replicated using a British sample of 65 incarcerated arsonists (Almond, Duggan, Shine, & Canter, 2005), and applied to an Australian sample of 187 arsonists (Fritzon, Doley, & Hollows, 2014) strengthening its utility in assisting the investigative process by profiling firesetters. The action systems model distinguishes expressive and instrumental motivations, which informs an initial exploration of the role of fire in offending, however questions as to whether behavioural variations can be

accommodated by this model arise. For example, the motivation of revenge, which is usually associated with the instrumental person type (Gavin, 2019), could be conceptualized as having either expressive or instrumental elements, depending on other offence features such as the level of planning involved in the firesetting. The action systems model has furthered the identification of arson types considerably by departing from the historical reliance on motivation alone.

The most recent study to investigate firesetter categories identified five subtypes from a Dutch sample of 313 firesetters referred for a mental health assessment between 1950 and 2012 (Dalhuisen et al., 2015a). Using cluster analysis, the five subtypes were based on a broad collection of individual characteristics and apparent motive for firesetting, gleaned from forensic reports. The most common motive across each of the subtypes was revenge or retribution, and the subtypes were identified as: (a) the instrumental subtype, comprising first time firesetters, with behavioural problems, low hostility and inadequate social support (15.6%), (b) the reward subtype, described as likely to have experienced emotional neglect as a child, who planned the fires in search of recognition (15%), (c) the multi-problem subtype, comprised mainly of women with histories of developmental and psychological vulnerabilities, and high rates of general offending (24.4%), (d) the disturbed relationship subtype, who had histories of caregiver abuse and neglect, who set multiple, unplanned fires (29.5%), and (e) the disordered subtype, who were described as having numerous previous incarcerations and were more likely to have a mental illness or personality disorder, with higher levels of hostility and inadequate social support (29.5%).

Each of the subtypes identified by Dalhuisen and colleagues were considered to have some correspondence with M-TTAF trajectories (Gannon et al., 2012), despite being based on a selected sample of firesetters referred for a mental health assessment, rather than a general sample of firesetters. Dalhuisen et al. (2015a) concluded these subtypes partially

validated M-TTAF trajectories, yet clear discrepancies between the M-TTAF trajectories and the subtypes were observed. For instance, those identified in the instrumental subtype tended to have no previous criminal offending, yet this subtype was equated with the antisocial trajectory, which within M-TTAF is described as comprising firesetters with previous offences (Gannon et al., 2012). Further, the five subtypes identified by Dalhuisen and colleagues were not differentiated on the basis of motivation, a key discriminating characteristic of the M-TTAF trajectories. While the claim of partial validation of the M-TTAF trajectories might be challenged because of these discrepancies, this typology provides value utilizing cluster analysis as the data analysis method of choice for the identification of typologies.

Although existing typologies based on international samples are informative, there have been few classification systems or typologies derived from Australian samples of arsonists. The few typologies based on Australian arsonists are reviewed here to identify how well these accommodate the complex cultural and socio-economic demographics characterising this group.

Australian arson typologies. The first attempt to identify a classification of Australian arsonists proposed four groups based on analyses of case studies of serial arsonists. All case studies involved arsonists who had committed at least three arson offences and were drawn from police files in Victoria and New South Wales (Kocsis & Cooksey, 2002). Using multidimensional scaling and cluster analysis techniques these researchers categorized 148 cases of solved arson crimes, which occurred between 1980 and 1998. Seventy-one variables, coded dichotomously as either present or absent, were considered. These reflected relevant offender characteristics including age, drug use, and mental illness, in addition to offending characteristics, such as whether accomplices were involved and whether accelerants were used in the offence. The authors of this study also considered characteristics which have not

been established as relevant to arson, such as eye colour, hair shade and sexual habits, and neglected some variables that may have been relevant, particularly a comparison of offence features from their previous firesetting. While culture was not identified for these cases, the study did specify whether the arsonists spoke with an accent or not, however failed to articulate how this variable impacted on the resultant arson patterns or types (Kocsis & Cooksey, 2002).

Kocsis and Cooksey (2002) identified a cluster of behaviours that were common to all cases studied, and four distinct arson behaviour patterns emerged, based on discriminating characteristics. The four identified arson patterns were: (a) the thrill pattern, where the offending was sporadic, often involving multiple targets, where the offender is older and socially competent and derives some excitement or entertainment from firesetting; (b) the anger pattern which is characterised by animosity or rage, where firesetting is directed towards property in order to inflict harm; (c) the wanton pattern which features a generalised animosity towards vague targets, such as schools or businesses, in the course of generalised antisocial behaviour; and (d) a final group of arsonists described as the sexual pattern, who derived sexual gratification from setting fires to small community targets such as post boxes or public toilet blocks.

Several criticisms of the Kocsis and Cooksey study reduce its utility and the robustness of these behaviour patterns. The study did not detail the number of arsonists grouped into each of category and does not lend itself to replication given the unique suite of offender and offence characteristics employed in the analysis. Kocsis and Cooksey found evidence of offence planning in all cases, thereby challenging the notion that arsonists can be classified as either organized (planned) or disorganized (unplanned). This contradicts other studies which have pointed to evidence that firesetting can occur spontaneously with little planning (Barnoux, Gannon, & Ó Ciardha, 2015; Tyler & Gannon, 2017). The typology

described by Kocsis and Cooksey (2002) has not been replicated, and the model, which is based on serial arsonists, has not been tested with one-time arsonists. Despite these criticisms, the study by Kocsis and Cooksey, does support the approach taken by Canter and Fritzon (1998), in that the inferences in the target x motivation matrix are potentially helpful to investigators.

In a further attempt to classify arsonists in Australia, Willis (2004) drew a distinction between those who set fire to structures and property, and those who light bushfires, by proposing a classification system for bushfire arsonists. This classification, based on motivation for the firesetting, identifies those who set fires: (a) due to boredom, excitement or vandalism; (b) for a specific purpose, whether this is for profit or to conceal a crime; (c) for recognition and attention; (d) without a specific motivation; and (e) where several motivations can be identified. This simple classification, which was based on theoretical groupings rather than an empirical analysis of a sample of arsonists, is focussed more on understanding the reasons for arson after the perpetrators have been identified, and does not assist investigators of bushfire arson offences, nor point to relevant treatment factors. Willis failed to offer evidence of a valid distinction between target-specific arsonist types that would suggest arsonists differ in their motivations as a function of their target. As a hypothetical discourse it provides limited assistance in the identification of a sound typology or classification system of Australian arsonists.

Other Australian studies have considered typologies based on defining features such as the number of arson offences committed and mental health diagnoses. Rather than investigating the target of arson offences, Doley (2009) focussed on the exploration of differences between serial arsonists (n=39) and those who had only set one fire (n=49). These two groups were differentiated on the basis of person characteristics and offence history, with a view to identifying which variables might assist in the prediction of repeat firesetting.

Doley found differences between the two groups in terms of previous offending patterns, in that serial arsonists commenced offending at an earlier age than one-time arsonists and had been convicted of more property offences than the one-time arsonist sample. Personal characteristics differentiated the two groups including a higher level of obsession with fire for the serial arsonists, who also disclosed greater periods of unemployment and social isolation than the one-time arsonist group.

Green, Lowry, Pathé, and McVie, (2014) proposed a trichotomous typology based on a sample of 59 arsonists diagnosed with mental illnesses presenting before the Mental Health Court in Brisbane over a 10-year period. Hierarchical cluster analysis produced three categories labelled (1) angry/antisocial, (2) spree firesetters, and (3) persecuted/suicidal. The angry/antisocial group consisted of arsonists with more than ten previous convictions, including convictions for violence and property offences. Revenge was considered the most common motivation for their offence and proximal triggers were identified, such as having recently been evicted from accommodation or having had an argument. The spree firesetters were described as having no clear motive and having set more than one fire in the index offences. The final group, the persecuted/suicidal firesetters set fire to their own residence in conjunction with persecutory delusions.

Green et al. (2014) did not identify the proportions of the total sample in each cluster which limits the usefulness of this research, nor do they suggest this typology has broad applicability due to the purposive sample of firesetters admitted to a mental health facility. Given the international literature reports a significant proportion of arsonists are diagnosed with a mental illness (Anwar et al., 2011; Ducat, Ogloff, & McEwan, 2013; Harris & Rice, 1996; Lindberg, Holi, Tani, & Virkkuen, 2005), the Green et al. (2014) study provides preliminary evidence for understanding the association between mental health diagnoses and arson in an Australian sample. Ducat, Ogloff, and McEwan, (2013) also found arsonists from

their Australian sample collected over nine years were more likely to have been diagnosed with a mental illness, compared to community samples. Of the sample of 1,328 offenders convicted of arson in Victoria between 2000 and 2009, 37% had had previous contact with mental health services when compared to general offenders (29.3%) or a sample of matched community controls (8.7%). The arsonist group were particularly likely to have psychiatric diagnoses such as affective disorders, substance use disorders and personality disorders. Neither of these studies however, investigated whether a mental illness diagnosis is an increasingly prevalent feature of arsonists, or whether it is decreasing as a contributing factor. This is an important consideration as it is necessary to identify changing trends in arson offending for both investigative purposes and to ensure treatments remain current and responsive to evolving phenomena.

The typologies developed to date based on Australian samples are limited in that some are based on a narrow selection of arsonists, while others fail to reflect a comprehensive suite of characteristics as they only focus on one or two key features. It can be argued that these typologies lack generalisability by being limited to the representation of specific jurisdictions at a point in time, specific offence features, or because they are based on individuals attending a specific court. None of these typologies or classifications draw from a broad base of Australian arsonists, and there has been no consideration of any changes over time, or trends associated with the crime of arson in Australia. The piecemeal approach to date, drawing on the characteristics of small samples, does not provide a sound basis for the development of a robust typology and effective treatment options that are cognisant of changing cultural and social factors (Horley & Bowlby, 2011). There has been no analysis of whether arsonists are presenting increasingly with common correlates of criminal behaviour such as substance use problems or mental illnesses, and as such, treatment is likely to focus on discrete criminogenic factors rather than take a holistic and more comprehensive approach

to offender intervention (Crane & Easton, 2017; Pitts, Givens, & McNeeley, 2009; Ward & Fortune, 2013).

As previous arson typologies have lacked a national, and cross-sectional focus over time, the current thesis addressed these gaps by drawing on a sample of convicted arsonists from all Australian jurisdictions over a 25-year period. Using a cluster analysis methodology study two investigated the existence of a typology of the Australian arsonist. As an exploratory or atheoretical technique, cluster analysis assists in the provision of confirmatory evidence of known relationships between variables or expected subgroups. Cluster analysis enables the classification of observations based on similarities across variables (Pastor, 2010) and is a useful technique to ascertain whether this sample of arsonists, based on the transcript data available, represent the known arsonist profiles obtained in previous studies.

Trends in arson offending. The early literature on crime trends tended to focus on localised general crime rates in specific populations over relatively short periods of time, such as youth aged between 13 and 16 years (Gold & Reimer, 1975), or female offenders (Ageton, 1983). In more recent years, studies have reported national crime trends based on data drawn from either national self-report surveys (Maltz & Zawitz, 1998; O'Malley, Johnston, & Bachman, 1980; Wolfgang, Figlio, Tracy, & Singer, 1985) or official government statistics (Canter & Land, 1985; Farrington, Langan, & Wikstrom, 1994). For example, Frost, Green, and Pranis (2006) accessed national prisons data from the United States and reported that between 1977 and 2004 women offenders were increasingly sentenced to periods of imprisonment at rates nearly twice that of their male counterparts. Also based on national crime data from the United States, Devine, Sheley, and Smith (1988) identified relationships between socio-economic variables and crime. Using dynamic modelling techniques these authors investigated the impact of macroeconomic and social policy influences on crimes of homicide, robbery and burglary between 1948 and 1985. This

study found evidence that supported the relationship between increased crime rates and economic distress.

Reporting on multinational crime trends has emerged in recent years with the United Nations reporting international crime trends, based on data from member countries for a number of crime types, from 2003. The data depicts prevalence estimates by region and by country, which is useful when identifying a global perspective. For example, the United Nations has identified that the global use of cannabis is increasing, with a reported 16% increase in the use of the drug between 2006 and 2016 (United Nations Office on Drugs and Crime, 2018). Other international trends identified across criminal justice systems include the increased prevalence of mental illness diagnoses amongst offenders (Fazel & Seewald, 2012; Peterson, Skeem, Kennealy, Bray, & Zvonkovic, 2014; Rosen & Teasdale, 2015; Vogel, Stephens, & Siebels, 2014).

While the national policing or crime databases of most countries report the incidence and location of specific crimes such as arson, few studies have investigated trends in the characteristics of arsonists such as substance use or mental illness over time. In a review of arson trend analyses, no Australian, and few international studies investigating trends in arsonist characteristics across time were identified (Jayaraman & Frazer, 2006). Study Two utilized a trend analysis methodology to address this key gap in the arson literature and trend analyses were conducted with respect to the use of substances in arson offending, the proportion of female arsonists, and the incidence of mental health diagnoses in arson cases.

A Comparison of Historical and Current Judicial Perspectives

A third area of research neglected in the literature on arson concerns the views of the judiciary. Judicial sentencing considerations have been identified and discussed in the literature for other offence types (Bagaric & Alexander, 2014; Bouhours & Daly, 2016; Deering & Mellor, 2009), but there remains a distinct gap as to which of the common

sentencing principles are weighted most heavily when Judges and Magistrates sentence arsonists. There is no standard approach to the allocation of sentences in arson cases across Australian jurisdictions, nor is there any evidence as to which sentencing considerations are prioritized by the judiciary when sentencing arsonists. Similarly, little is known about whether the sentencing of arsonists has changed over the decades, or whether sentencing has evolved in line with any variations in the types of arson cases being prosecuted in this country. The breadth of empirical research on arson sentencing in Australia compares poorly to other offence types, where sentencing considerations are well known and are therefore able to be integrated into treatment (Mackenzie & Stobbs, 2010).

The final study employed qualitative and quantitative methods to investigate the views of the Australian judiciary with respect to their considerations when sentencing arsonists. Study Three explored judicial discretionary practice by comparing historical sentencing considerations from court transcripts with current judicial deliberations. Sentencing trends for arson offences in Australia were investigated, including differences between the jurisdictions and between groups of Indigenous and non-Indigenous arsonists. Several key judgements drawn from court cases conducted over the last 25 years were presented to highlight how key sentencing considerations are applied in arson cases.

Sentencing considerations. Sentencing considerations are an integral feature of the criminal justice process and reflect the key purposes of sentencing (Bagaric & Edney, 2018; Dobinson, 2005; Findlay, Odgers, & Yea, 2014; Mackenzie, 2005). According to the Judicial Conference of Australia (2008) the main purposes of sentencing are (1) punishment or imposing a sentence that inflicts a penalty or loss on the offender, (2) rehabilitation, which means imposing a sentence that will help to change the offender's behaviour into that of a responsible citizen, (3) specific deterrence, or discouraging the particular offender from committing more crimes, (4) general deterrence, which refers to the general impact on

potential offenders in the community who will be discouraged from committing a particular crime when they see the penalty imposed for that kind of offence, (5) denunciation, which is a formal public expression that the behaviour is unacceptable to the community, (6) community protection, which in the sentencing context means both protecting the community from the offender and from crime generally, and (7) restorative justice, which refers to the promotion of the restoration of relations between the community, the offender and the victim.

In Australia the judiciary are guided by legislation which defines the factors to be considered when sentencing. General sentencing considerations and specific sentencing principles are defined at a federal level in the *Crimes Act 1914*. This Act provides for the sentencing of defendants for commonwealth offences, and each Australian jurisdiction has enacted its own legislation providing similar guidance on sentencing for state offences. These are the *Sentencing Act 1991* (Victoria); *Sentencing Act 1997* (Tasmania); *Sentencing Act 2017* (South Australia); *Crimes (Sentencing Procedure) Act 1999* (New South Wales); *Crimes (Sentencing) Act 2005* (Australian Capital Territory); *Sentencing Act 1995* (Northern Territory); *Penalties and Sentencing Act 1992* (Queensland), and the *Sentencing Act 1995* (Western Australia). These pieces of legislation include provisions for the consideration of mitigating and aggravating factors, or factors relevant to sentencing in a particular case. For example, the New South Wales legislation provides for aggravating factors such as the use of gratuitous cruelty and the impact on victims, the motivation for the offence, and whether the offender was subject to conditional release at the time of the offence. Mitigating factors such as the defendant's prospects for rehabilitation, any mental illness diagnosis, a plea of guilty, and assistance provided to police, are also identified (*Crimes [Sentencing Procedure] Act 1999*). Courts' determination of a particular sentence is therefore the product of careful consideration of the complexities associated with an individual defendants' circumstances, within the context of the identified purposes of sentencing.

Sentencing considerations have evolved over time and have been influenced by community attitudes and parliamentary responses (Roberts & Hough, 2013), as well as research on what works in crime prevention and offender intervention (Andrews, Zinger, Hoge, Bonta, Gendreau, & Cullen, 1990; Craig, Gannon, & Dixon, 2013; Cutler & Zapf, 2015; Heilbrun et al. 2003; Lab, 2014). Other factors contributing to the evolution or development of sentencing considerations include increased media focus on sentencing and the availability of court judgements on-line (Martin 2015), a greater influence of victim advocacy groups and victim impact statements, and an urgency to ensure consistency in sentencing (Mackenzie & Stobbs, 2010).

The need to maximize consistency across courts by ensuring that courts have regard to, and do not depart significantly from, sentences handed down in other courts, has given rise to various legislative provisions such as guideline judgements and legislated mandatory sentences. Guideline Judgements are issued by a higher court to maximize the consistent application of judicial discretion for specific offences by establishing sentence “bands” for various aggravating and mitigating offence circumstances (Mallett, 2016). Similarly, legislated minimum or maximum sentences for specific offences are aimed at limiting discretion and maximizing consistency, much to the annoyance of the judiciary (Mackenzie, 2005).

While not all members of the judiciary support guideline judgements or mandatory sentencing, which represents a degree of encroachment on judicial discretion, the trend to establish these mechanisms continues in Australia and other countries (Fitz-Gibbon, 2012; Griffin & Wooldredge, 2013). In addition to these legislated guardians of consistency, key judgements that establish precedents in terms of guiding principles have impacted sentencing in Australia, and several considerations given particular weight in relation to the crime of arson have been identified. These include Justice Miller’s conclusion in his landmark

judgement in *Western Australia v Bennett (2009)*, that the dominant sentencing consideration in cases of arson was general deterrence, and that the personal circumstances of the offender carries less weight.

The weight attributed to general deterrence was considered in a review of arson sentencing transcripts conducted by Curtis, McVilly and Day (2014), who identified six cases of Australian arson where the defendant was identified to have an intellectual disability. This study found inconsistencies in the application of sentencing principles and concluded that in these six cases judges placed less emphasis on general deterrence and a greater emphasis on the issues to be considered when a defendant is mentally impaired. The protection of the community and the rehabilitation of the offender were noted as predominant sentencing considerations. McEwan and Freckelton (2011) quote Canadian cases where the court has identified the culpability of the defendant with regards to any mitigating psychological or psychiatric diagnoses, and the severity of the firesetting offence, as relevant to sentencing. However, there have been no empirical studies directly canvassing the views of the Australian judiciary on the sentencing of arsonists despite a number of studies collecting judicial views across other offence types (Bumby & Maddox, 1999; McDonald, Erickson, & Allen, 1999; Wheeler, Mann, & Sarat, 1988). As there is currently no evidence as to which of the sentencing principles enshrined in legislation primarily guide the sentencing of arsonists (Woods & King, 2010), the current study investigated whether a consistent approach to the sentencing of arsonists across Australian jurisdictions exists.

In addition to questions of consistency, courts have been widely criticised for not reflecting the views of the community when sentencing (Jones, Weatherburn, & McFarlane, 2008; MacKenzie et al., 2012; Roberts & Indermaur, 2007; Roberts & Indermaur, 2009; Wood, 2009). There is evidence that public attitudes in some Australian jurisdictions are hardening towards offenders in general and seeking harsher penalties from the judiciary

(Barber & Doob, 2004; Brookman & Wiener, 2015, MacKenzie, Stobbs, Ferguson, & Gelb, 2014; McEwan & Freckelton, 2011; Roberts & Indermaur, 2007; Spiranovic, Roberts, & Indermaur, 2011; Stobbs, Kleinau, & Kolstad, 2014).

Little is known however, about whether the courts are, in fact, reflecting the views of the community when sentencing arsonists, as there has been no specific research on public attitudes to arson sentencing in Australia. No research has investigated whether the sentencing considerations in arson matters have changed over recent years, nor sought the views of current members of the Australian judiciary on arson sentencing. The current study investigated both the historical sentencing transcripts and those of current members of the judiciary to compare sentencing considerations and address this gap.

A further area neglected in the arson sentencing literature is research investigating the sentencing of Indigenous arsonists. The literature on the sentencing of Indigenous persons in Australia is extensive (Anthony, 2013; Bagaric & Edney, 2018; Bennett, 2016; Jeffries & Bond, 2012; New South Wales Law Reform Commission, 2000), and a number of key judgements such as *Bugmy v The Queen (1990)*, *R v Fernando (1992)* and *R v Fuller-Cust (2002)* have set out considerations to guide courts sentencing Indigenous defendants. These guiding considerations do not override the universality of Australian criminal law; however, they do recognise “the tragic truth of the litany of disadvantage” which Australian Indigenous people experience (*R v Hickey, 1994*). The New South Wales Law Reform Commission (2000) summarised the factors emanating from case law to be considered when courts sentence Indigenous people. These were categorized as (1) factors relevant to traditional culture and customary law; (2) factors relevant to the communities from which the offender, and frequently the victim, originate; and (3) factors associated with the background and life experiences of the offender. How these factors are interpreted and then applied in arson cases is yet to be identified as no studies have focussed on whether the crime of arson attracts

similar or different considerations to other offence types when Indigenous defendants are sentenced.

Study Three considered these areas that have been neglected to date and explored the sentencing considerations identified by the judiciary when specifically sentencing Indigenous arsonists. This research also investigated judicial views on the sentencing of Indigenous arsonists, and arson treatment or rehabilitation within the broad context of therapeutic jurisprudence.

Therapeutic jurisprudence and sentencing in Australia. There have been many factors contributing to the evolution of sentencing legislation in Australia, with one of the most recent influences on sentencing by courts in Australia being therapeutic jurisprudence (Bagaric & Edney, 2018; King, Freiberg, Batagol, & Hyams, 2014; Stobbs, 2011). A therapeutic approach to sentencing focuses on the role sentencing can play in impacting positively on victims and offenders, particularly in motivating the latter to change (King et al., 2014; McMahon & Wexler, (2002). This approach was developed in the United States of America in the late 1980's by law professors David Wexler and Bruce Winick (Wexler & Winick, 1991) in response to concerns that offenders with mental health needs were disadvantaged when being sentenced.

Therapeutic jurisprudence (TJ) establishes opportunities for courts to maximize the potential for therapeutic outcomes by engaging with psychiatry and psychology in the sentencing process (Winick, 2003). Specialty courts and problem-solving courts, such as drug courts and mental health courts apply the same sentencing considerations as other courts but have a greater focus on sustainable therapeutic outcomes (Richardson, Spencer, & Wexler, 2016). In Australia, several jurisdictions have established alternative sentencing options to maximize the therapeutic impact of sentencing. For example, Victoria has implemented TJ in its sentencing through section 5(a) of the *Courts Legislation (Neighbourhood Justice Centre)*

Act 2006 which provides that “In assigning a magistrate to the Neighbourhood Justice Division, the Chief Magistrate must have regard to the magistrate's knowledge of, or experience in the application of, the principles of therapeutic jurisprudence and restorative justice.” The Neighbourhood Justice Centre in Victoria provides a unique multi-disciplinary approach to sentencing, focussed on the therapeutic needs of offenders, which can be monitored by the court. This model highlights how sentencing and judicial oversight impact positively on treatment outcomes as the judiciary become more informed about individuals’ risks and treatment needs, and treatment providers become more responsive to the expectations of the community through the courts.

Other examples of the application of therapeutic jurisprudence in Australian courts have targeted Indigenous defendants, and include the Nunga Court, which was established in South Australia in 1999, and the Koori Court, introduced in the Victorian court system in 2002 (King et al., 2014). These courts provide Indigenous communities and Elders opportunities to participate in the sentencing of Indigenous defendants, and by doing so, engage both the defendant and their communities in the therapeutic administration of justice through better communication and the inclusion of Indigenous knowledge (Marchetti & Daly, 2007). A further benefit identified by King and Auty (2005) is the encouragement of a greater respect for the law.

A comparison of the types of sentences imposed in these courts with those imposed in mainstream Magistrates Courts, suggests the Indigenous courts impose sentences that are more responsive and appropriate to the specific issues contributing to crime in Indigenous communities. Bond and Jeffries (2012) compared the two approaches and found fewer sentences of imprisonment and fewer fines imposed in Indigenous courts and observed other intangible benefits such as a strengthening of the role of Elders in Indigenous communities. Despite these therapeutic benefits for offenders there is scant evidence that recidivism rates,

or even the over-representation of Indigenous persons in custody, have been reduced (Stobbs & Mackenzie, 2009; Marchetti, 2017), and in Queensland, the Murri Court which was established in 2002, was abolished in 2012, signalling some decline in the support for therapeutic jurisprudence for Indigenous offenders.

Within this environment of apparently equivocal support for therapeutic jurisprudence, the current study investigated the views of serving members of the judiciary, to explore how therapeutic jurisprudence is reflected in the sentencing of arsonists in Australia. The views elicited were further compared with the sentencing considerations identified in historical court transcripts to establish whether judicial views on arson have changed in recent years, and whether trends in the sentencing of this group were discernible. The purpose of this research was to explore judicial thinking on arson in Australia so as to contribute to the knowledge base informing the development of treatment options in this country.

Current Research

These three studies aimed to contribute an original perspective, and thereby extend the empirical evidence on arson in Australia. The specific questions considered in this research have not been investigated previously. These studies compare historical and current characteristics of Australian arsonists, in order to detect emergent trends in arson crimes, and thereby identify contemporary treatment needs. This research approaches questions about treatment from the perspective of the offender, the judiciary, and in the case of Indigenous arsonists, the community. The three studies are each designed to address significant gaps in the arson literature described previously.

These studies each contribute to the central purpose underpinning this research program, which is to add to a theoretical understanding of Indigenous arson offending and inform the development of evidence-based treatment for all Australian arsonists. By

identifying the offence and offender characteristics across jurisdictions and over time, including any specific factors contributing to firesetting by Indigenous arsonists, treatment programs can be designed to maximize responsiveness, and thereby contribute more effectively to reduced recidivism and a reduction in the financial burden on the Australian community. The following specific research questions, where there is a gap in the existing literature, and hypotheses, based on existing literature have been designed to elicit the evidence required to achieve this purpose.

Research Questions and Hypotheses

Study One: Understanding Indigenous cultural differences in Australian arson

Research Question 1: What themes in offender and offence characteristics can be identified for samples of Indigenous and non-Indigenous arsonists?

Research Question 2: How do Indigenous Elders view arson in their communities?

Research Question 3: What are the motivations for, targets of, and methods employed by, arsonists from each group?

Study Two: The Australian Arsonist between 1990 and 2015: Trends and Types

Research Question 4: Are there trends in the percentage of women setting fires, the incidence of substance use, or mental illness diagnoses in convicted arsonists over the 25-year period?

Research Question 5: What similarities and differences between Indigenous and non-Indigenous arsonists were identified over the study period?

Research Question 6: Is there evidence of a typology of arsonists based on the sample of Australian arsonists convicted between 1990 and 2015, and if so, how does such a typology align with the M-TTAF trajectories? Further, what are the key features of each category within the typology ?

Hypothesis 1: In accordance with the literature on the predominance of mental illness diagnoses in arsonists (Anwar et al., 2011; Ducat et al., 2013; Harris & Rice, 1996; MacKay

et al., 2006), and evidence that mental illness in offenders generally has increased in recent years (Peterson et al., 2014; Rosen & Teasdale, 2015; Vogel et al., 2014), it was anticipated that the proportion of Australian arsonists identified as having a mental health diagnosis increased over the period 1990 to 2015.

Hypothesis 2: Based on studies reporting increased use of substances in general offender populations (Bennett, Holloway, & Farrington, 2008; Butken et al., 2011; DeMatteo, Filone, & Davis, 2015; Fazel, Bains, & Doll, 2006; Goldsmid & Willis, 2016; Koetzle, 2014; Lennings, Copeland, & Howard, 2003; Wang et al., 2017) it was expected that the use of illegal substances in the commission of arson offences would be reported to have increased over the period 1990 to 2015.

Hypothesis 3: Commensurate with the international and Australian literature on the proportion of arsonists who are versatile offenders (Brett, 2004; Doley, 2003a; Doley, 2003b; Ducat et al., 2013), it was anticipated that the majority of Australian arsonists convicted between 1990 and 2015 would demonstrate a versatile range of offending behaviours, as opposed to firesetting exclusively.

Study Three: Judicial sentencing considerations

Research Question 7: What sentencing principles and other aggravating or mitigating factors do current members of the Australian judiciary identify when sentencing arsonists, and how do these impact on sentence outcomes?

Research Question 8: Based on historical sentencing transcripts do Australian jurisdictions and court levels differ in their sentencing of arsonists, in terms of the types of sentences imposed and the sentencing considerations identified by the judiciary?

Research Question 9: Do historical transcripts evidence any differences between the judicial sentencing considerations when Indigenous and non-Indigenous arsonists are sentenced?

Hypothesis 4: Given the rise of therapeutic jurisprudence and specialist courts in Australia (Freiberg, 2004; Bagaric, Edney, & Alexander, 2017) it was expected that the sentencing principles identified by the Australian judiciary in historical transcripts when sentencing arsonists would be more focused on rehabilitation in recent years, compared to the 1990s.

CHAPTER TWO

Study One: Understanding Indigenous Cultural Differences in Australian Arson

This study focuses on firesetting within Aboriginal and/or Torres Strait Islander communities, and specifically considers offender and offence characteristics across both non-Indigenous and Indigenous firesetters in several Australian states. The purpose of this study was to extend the research on relevant therapeutic responses for Indigenous arsonists, who are over-represented when compared to non-Indigenous arsonists. This study also investigates the utility of current models and theories for their applicability and relevance to treatment for Indigenous firesetters. A brief review of the theoretical approaches and research strategies recommended for studies involving Indigenous peoples is provided to provide a methodological context for this study. This section commences with a review of the theoretical approaches to research involving Indigenous peoples.

Standpoint Theory

Standpoint theory emerged in the United States in the 1970s when popular feminist literature argued for the acceptance of women's knowledge alongside that developed by men, or the dominant world view (Harding, 2004). Standpoint theory acknowledges the specific position in society of the knower and emphasises the unique perspective and interpretation of knowledge possessed by the knower (Hennessy, 1993). The theory has been utilised by marginalised groups to emphasise the construction of knowledge and the analysis of knowledge from the standpoint of the knower, or those who have lived experience of a particular phenomenon, as opposed to the recipient of the knowledge (Hartsock, 1990; Huncibleby, 2008). More specifically, standpoint theory has provided a basis for the positioning of Indigenous views, such as those espoused by Moreton-Robinson (2004) who

concludes “to recognise that white-ness has shaped knowledge production means that academia would have to accept that the dominant regime of knowledge is culturally and racially biased, socially situated and partial” (p. 88).

Nakata (2007a) utilised standpoint theory to provide a conceptual basis for the investigation of Indigenous knowledge situated within the contested space that is dominated by Western knowledge and European scientific methodologies. He argues there are three defining principles of an Indigenous standpoint theory, (1) recognition that Indigenous knowledge is borne of lived experience and comprises a complex set of social relations, (2) that the conflict inherent in the cultural interface between Indigenous and non-Indigenous knowledge impacts on one’s agency, and (3) that these tensions and ambiguities both inform and limit what is said, and what is left unsaid, as well as potentially adding a richness to the interpretations of knowledge. Nakata utilises this approach to identify how Indigenous knowledge and “ways of knowing” can establish a strong foothold within academia and be recognised in research and inquiry. Indigenous knowledge is neither scientific nor non-scientific, and it includes storytelling, memory-making, music, art, performance, cultural and social practices, ways of relating to kin, child raising practices, language, and ways of communicating.

The current study proceeded on the understanding that the history of Indigenous peoples in Australia differs significantly from that of non-Indigenous Australians, and that these differences would inform each group’s particular standpoint. For Aboriginal and/or Torres Strait Islander people the destructive impact of colonisation and resultant policies of displacement, protection and assimilation, the loss of land, language and culture, and the forced separation of family groups, has had a devastating effect on generations (Evans, Saunders, & Cronin, 1988; Griffiths, Coleman, Lee, & Madden, 2016; Holland, 2015; Prior, 2007; Vickery, Faulkhead, Adams, & Clarke, 2007).

The impact of displacement and loss of culture continues today, as respected Aboriginal leader Charles Perkins noted “we know we cannot live in the past but the past lives with us” (Wanganeen, 2014, p. 267), and is widely considered to be directly responsible for substantially higher rates of mortality, including suicide (Silburn et al., 2014), poorer health outcomes (Healey, 2014), higher rates of mental illness (Australian Indigenous HealthInfoNet, 2017; Parker & Milroy, 2014) lower educational achievement (Danaher, 2011) and higher crime rates within Indigenous communities (Anthony, 2013; Finnane & Richards, 2010; Weatherburn, 2014).

To ignore the social, political and economic impact of colonisation on the wellbeing of Indigenous people for over 200 years, and to minimize the legacy of the resulting inter-generational trauma would render any study seeking insight into Aboriginal or Torres Strait Islander people’s behaviour irrelevant and redundant. To refrain from exploring the history of Indigenous cultural practices when commenting on a present-day phenomenon, such as firesetting by Indigenous people, would be remiss and culturally insensitive. As Mellor (2004) notes, the slow burn of intergenerational trauma, disadvantage and racism cannot be ignored.

Considering fire has been used in Indigenous communities for thousands of years, it may represent an important marker of their standpoint, and a factor not often considered in either the investigative process, the judicial deliberations, or the post-conviction treatment of Indigenous arsonists. In view of Nakata’s (2007b) principles, fire use for cultural or legitimate purposes in Australian Aboriginal and/or Torres Strait Islander communities could easily find its way into that contested space between Western and Indigenous world views. Research in this area warrants consideration of cultural differences in order to ascertain the universality of the current explanations of firesetting.

Indigenist Methodologies and Decolonizing Approaches

A review of Indigenist research considerations centers on the work of Māori researcher Dr Linda Tuhiwai Smith (Tuhiwai Smith, 2012), Canadian Indigenous scholars Shawn Wilson and Margaret Kovach (Kovach, 2009; Wilson, 2008) and Australian Indigenous researcher and academic Lester-Irabinna Rigney (Rigney, 1999). These authors have developed safe research methodologies involving Indigenous peoples and challenge the commonly accepted tenets of Western research methodology. By validating Indigenous research frameworks, paradigms and ways of knowing, they argue Western methods ought to be replaced with decolonizing approaches.

Decolonization, once viewed as the formal process of handing over the instruments of government, is now recognized as a long-term process involving the bureaucratic, cultural, linguistic and psychological divesting of colonial power (Tuhiwai Smith, 2012). When applied to the research environment decolonization suggests significant shifts in both the design of studies and the interpretation of results. Rigney (1999) called for the establishment of Indigenist research methodologies and liberation epistemologies to counter colonizing approaches that saw Australian Indigenous people as subjects to be studied and observed, while non-Indigenous researchers interpreted and gave meaning to their observations, and thereby rewrote Indigenous knowledge through the lens of the dominant white culture. He developed the concept of racialization, or segregation according to race, as responsible for the nullification of Indigenous history, knowledge, intellect and experience, which is then maintained by research ontologies, epistemologies and axiologies that reflect colonialism, or the view that white is right and must therefore dominate. Rigney developed three principles to guide the development of Indigenist research methodologies: (a) resistance as an emancipatory imperative, which refers to the struggle for recognition and self-determination; (b) political integrity, and the need for Indigenous researchers to set the agendas; and (c)

privileging Indigenous voices in research so that the lived experiences of Indigenous people becomes the focus.

Rigney's principles directly counteract "the history of exploitation, suspicion, misunderstanding and prejudice" that he identifies as having held back Indigenous researchers in Australia (Rigney, 1999, p. 117). The third principle, that Indigenous voices are given priority focus in any research involving Indigenous peoples, is demonstrated in the design of the current study through the inclusion of Indigenous community participants. Not only were the views of Indigenous firesetters sought, but the views of community members were canvassed to contribute their perspective of firesetting in their community. Tuhiwai Smith (2012) echoed Rigney's sentiment when noting the sense of mistrust when primarily white Anglo-Saxon researchers conduct studies involving Indigenous people, and reports "research is probably one of the dirtiest words in the Indigenous world's vocabulary. When mentioned in many Indigenous contexts, it stirs up silence, it conjures up bad memories, it raises a smile that is knowing and distrustful" (p. 1).

When considering this sensitive issue, further guidance is provided by Kendall, Sunderland, Barnett, and Nalder (2011), who challenge non-Indigenous researchers to utilize methodologies that lead to sustainable and efficacious solutions for Indigenous communities and encourage the use of participatory approaches so that knowledge remains under the control of those who provide it. They caution against research processes that exploit, either implicitly through insensitive designs that fail to address the needs of Indigenous communities, or explicitly by seeking participants in studies to violate cultural norms by commenting on matters they ought not. These concerns have led to the identification of six principles to focus researchers on the outcomes for Indigenous communities, which are detailed in the Values and ethics: Guidelines for ethical conduct in Aboriginal and Torres Strait Islander health research (National Health and Medical Research Council, 2012). These

are responsibility, reciprocity, respect, equality, survival and protection, and lastly, spirit and integrity.

Tuhiwai Smith (2012), who has pioneered research methodologies that span a cultural divide, wrote *Decolonizing Methodologies* to “disrupt relationships between researchers (mostly non-Indigenous) and researched (Indigenous), between a colonizing institution of knowledge and colonized peoples whose own knowledge was subjugated, between academic theories and academic values, between institutions and communities, and between and within Indigenous communities themselves” (Forward, para.4). She argues that research involving Indigenous peoples has been “profoundly exploitative” and that post-colonial positivism and the development of methods that emphasise reliability and validity, lacks cultural relevance.

The decolonization of research methods, or the undoing of the impact of benevolent imperialism on the study of Indigenous knowledge, calls for change in the way western researchers approach any study involving Indigenous participants. One of the key approaches to be incorporated into the current study is attention to, and learning from, purposeful reflexivity. As a guide for non-Indigenous researchers, Wilson (2008) suggests that researchers need to ensure they engage in “deep listening and hearing with more than just the ears” so as to develop a “reflective, non-judgmental consideration of what is seen and heard” (p. 59).

Reflexivity as a non-Aboriginal researcher. Nichols (2009) urges non-Indigenous writers and researchers to ensure they employ reflexivity in order to reduce power, class and cultural differences that might interfere with research outcomes. She identifies three types of reflexivity: self-reflexivity; interpersonal reflexivity, and system or collective reflexivity. Self-reflexivity requires researchers to be sensitive to their own values and attitudes, as well as how their social development, and historical and environmental origins have contributed to

their views about the research topic. Journaling is often considered a helpful process to guide the researcher towards heightened self-awareness and reflection.

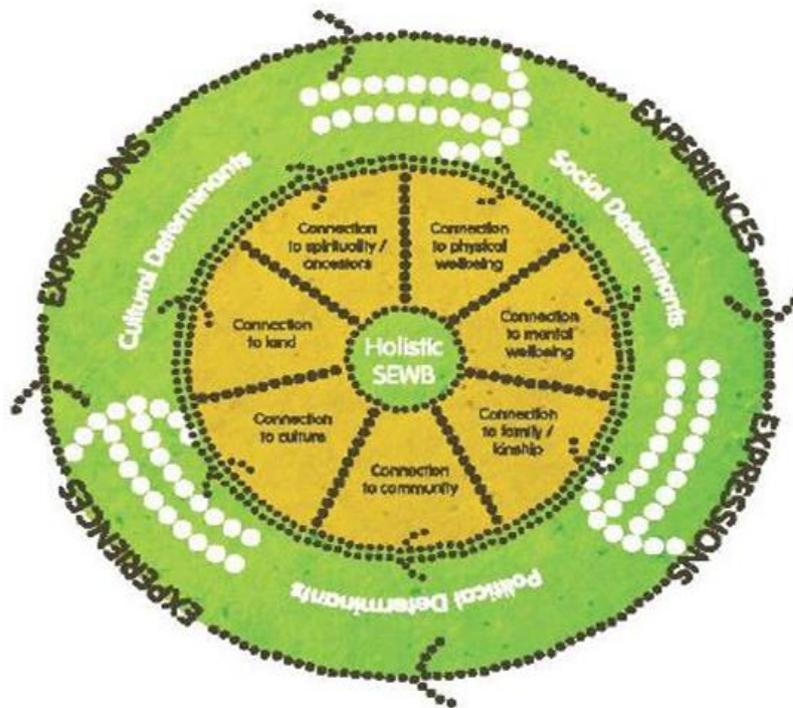
Interpersonal reflexivity refers to the researcher's ability to truly collaborate with others, specifically members of the Indigenous communities, rather than lead, control or delegate. One's level of interpersonal reflexivity can significantly impact on a research project and is often measured by how fully the researcher is accepted into a community, whether the researcher is viewed as an ethical and good person and is able to develop authentic rapport and trust. Finally, collective reflexivity, according to Rix, Barclay, and Wilson (2014), is based on how thoroughly the researcher observes systemic or institutional racism and is able to then reflect on how such an environment might dictate the research design and how it might contribute to prevailing attitudes. This study focussed on exploring each of these areas of reflexivity.

Kovach (2009) encourages non-Indigenous researchers who are working with Indigenous participants or communities to be informed by Indigenist methodologies and approaches to knowledge. She suggests that in employing a mixed method approach to research, non-Indigenous researchers need to ensure the centrality of an Indigenous framework. The framework chosen for this study is the social and emotional wellbeing framework (Gee et al., 2014), given its acceptance across Indigenous literature and relevance to the understanding of offending behaviour.

Social and emotional wellbeing framework. Social and emotional wellbeing (SEWB) is a holistic understanding of life and wellbeing held by Aboriginal and/or Torres Strait Islander peoples. The framework has been developed to guide intervention strategies and treatment modalities for Indigenous peoples (Gee et al., 2014). Described as a “multidimensional concept of health that includes mental health, but which encompasses domains of health and wellbeing such as connections to land or ‘country’, culture,

spirituality, ancestry, family and community” (p.55) Gee and colleagues, (2014) argue this framework represents the complex relationships between domains of Indigenous life. SEWB was defined by the Social Health Reference Group established by the Australian government in 2004 as “The social and emotional wellbeing concept recognizes the importance of connection to land, culture, spirituality, ancestry, family and community, and how these affect the individual” (Social Health Reference Group, 2004, p. 9; Zubrick et al., 2010, p. 76).

Garvey (2008) suggests many Aboriginal and/or Torres Strait Islander people prefer the term social and emotional wellbeing over health, or mental health, as it reflects a more holistic and positive attitude to health and wellbeing; and reflects the Indigenous way of conceptualizing the cyclical process of life-death-life. As shown in Figure 1 the domains of SEWB include connection to culture, country, body, mind and emotions, family and kinship, spirituality and ancestors, and connection to community.



© Gee, Dudgeon, Schultz, Hart & Kelly (2014). Reproduced with permission.

Figure 1. Social and Emotional Well-being Model.

According to this framework SEWB is influenced by a person's connections to each domain and complications occur when there is a weakening of connections to any of the domains. Some domains may be strong and resilient, while others warrant healing or repair. Just like a wheel, if one area is weak or damaged, then the entire mechanism is compromised. The strength of one's relationship to the domains of SEWB is heavily mediated by social, political, historical and cultural determinants, and can change over the lifespan (Gee et. al., 2014; Kelly, Dudgeon, Gee, & Glaskin, 2009). As Heffernan, Andersen, Dev, and Kinner (2012) argue, wellbeing is concerned with the overall holistic status and functioning of individuals as part of a collective. Unlike the non-Indigenous sense of wellbeing, they argue that Aboriginal wellbeing is not an individualized notion of physical or mental wellbeing but incorporates a community perspective beyond the individual (Dudgeon & Walker, 2015). While the relationship between lowered social and emotional wellbeing, other negative emotional states and increased general criminal offending has been explored in the Australian literature (Allard, 2010; Day, 2003; Day et al., 2008; Maxwell, Day, & Casey, 2013), it has been neglected in arson specific theory and treatment considerations. The current study reflects on the value of incorporating social and emotional well-being, as a theoretical construct, into arson theory and arson treatment.

Theoretical perspectives on Indigenous crime. Numerous theories of crime have been offered in recent years, each emphasising various factors to different degrees, or highlighting certain constructs over others. Some of the more established theories include strain theory (Merton, 1938; Agnew, 1992), anomie theory (Durkheim, 1933), conflict theory (Marx, Engels, & Struik, 1971; Vold, 1958), social disorganisation theory (Shaw & McKay, 1969), social control theory (Hirschi, 1969), ecological theory (Cohen & Machalek, 1988), social learning theory (Jeffrey, 1965) and differential association theory (Sutherland, 1939). An analysis of each of these theories is beyond the scope of the current thesis, however in

summary, these theories have been developed to explain the impact of social systems and individual characteristics on offending behaviour. They identify, to varying degrees, social conflict, instability, social dislocation, disorganisation and rapid change, and a breakdown in social control, as factors that contribute to the development and maintenance of criminal behaviour (Akers & Sellers, 2013).

The more generic psychological and sociological theories, such as social learning theory, are being replaced with more specific theoretical explanations for individual crime types, such as crime pattern theory for sexual offenders (Moqavero & Hsu, 2018) and M-TTAF for arson. These offence-specific theories guide the development of interventions by accounting for individualized factors which may contribute to specific behaviours. This increasing specificity of crime theory advances theoretical understanding and increases the clinical utility of theory for particular crimes; however, these offence-specific theories tend to remain culturally neutral. The M-TTAF articulates the importance of recognizing culture in firesetting, however it neglects to integrate cultural imperatives in the identification of such constructs as trajectories, scripts and implicit theories. Theories of crime where reference to culture is not prominent may contribute to the understatement of heritage in treatment groups where culture is a critical characteristic.

In a critique of general psychological theories Dudgeon et al. (2014) identify considerable deficiencies, particularly in how Indigenous peoples are portrayed. Reflecting on the contributions of social psychological theories however, Dudgeon et al. (2014) identified some benefit, in that social psychological theories elucidate how Indigenous peoples internalise prejudice and elements of institutionalized racism.

In contrast to the pursuit of theoretical explanations of Indigenous crime led by sociologists and psychologists, Australian criminologists such as Professor Harry Blagg decry the pursuit of a single theory of crime in Indigenous communities. Blagg (2008)

considers such a pursuit to be both simplistic and reflective of a European empiricism when “we pull with us into the Aboriginal domain a baggage train of theories and perspectives on crime drawn from western research” (p. 4). Blagg maintains that understanding the alienation experienced by Indigenous peoples within the complex landscape of colonialism, is neither amenable to western research methodologies, nor analysis by those external to its impact. He asserts our failure to take into account distal factors renders contemporary non-Indigenous researchers’ conclusions invalid:

We and our own cultural baggage, are rendered unseeable through the deployment of scientific methods focusing attention on the subject (Aboriginal crime, Aboriginal violence) while excluding from scrutiny the cultures, desires and practices of the subjects doing the looking: permitting us to sermonize on Aboriginal crime and violence without having to take account of the fact that, in Aboriginal cultural memory, we arrived uninvited, proceeded to trash the place, desecrated its most sacred places, destroyed its native flora and fauna, appropriated the bodies of the women, humiliated the men, ran off with the children, disrespected the religion, introduced poisonous and illicit substances, and flogged and killed with impunity (Blagg, 2008, pp. 15).

Given the complexities associated with Indigenous crime, the current study, in recognition of this potential for misunderstanding and misinterpretation, reports the views expressed by community participants verbatim, while considering the cultural relevance of firesetting. The current study approaches the understanding of Indigenous arson from the perspective of the individual, and while a thematic methodology was employed in respect of arsonists interviews, it was designed to review how well the key arson theory, the M-TTAF,

aligns with the knowledge and information provided by participants. This emic approach commences with a “blank page” (Punnett, Ford, Galperin, & Lituchy, 2017) enabling participants views, or standpoint, to guide the research outcomes. An emic methodology also encourages the use of case studies to fully explore individual proximal and distal contextual and historical factors (Chapman & Kinloch, 2011, George & Bennett, 2004). Two case studies based on the stories of two Indigenous participants, highlighting the factors contributing to their offending and the context within which their offending occurred, are provided in Appendix A.

Differentiated offending. Within this context of differentiated theoretical underpinnings, it does not seem surprising that there have been differences identified between the offending of Indigenous and non-Indigenous people. The criminal justice literature suggests variations between Indigenous and non-Indigenous offenders, in terms of offence and offender features. For example, in Queensland, Indigenous male offenders have been found to commence offending at an earlier age than non-Indigenous male offenders, and chronic (repeated) offending amongst Indigenous juveniles is higher than non-Indigenous juveniles (Crime and Misconduct Commission, 2009). This pattern has also been observed in a South Australian study (Marshall, 2006) which showed that 17 percent of Indigenous juvenile offenders had been classified as chronic offenders, compared to 2 percent of non-Indigenous juvenile offenders (N=3344).

Rates of violence have also differentiated the two groups with Wundersitz (2010) reporting that Indigenous people are 15 to 20 times more likely to commit a violence offence than non-Indigenous people. Drawing on national crime databases and jurisdictional data, as well as the National Aboriginal and Torres Strait Islander Survey (NATSIS) data from Australian Bureau of Statistics, Wundersitz identified higher rates of violent offending and violent victimization in Indigenous communities.

Chan and Payne (2013) report Indigenous people convicted of homicide are more likely than non-Indigenous people to target known victims, and as Willis (2017) notes this is a likely reason for the under-reporting of intra-familial violence in some Indigenous communities. In addition to increased rates of victimization, Indigenous women are more likely to be charged with a violent offence than non-Indigenous women (Bartels, 2012; Wundersitz, 2010).

Clear differences between Indigenous and non-Indigenous groups were identified by Coghlan and Millsted (2017), in terms of exclusivity and versatility of offending. Sampling over 38,000 cases from police files of suspected perpetrators of family violence in Australia, these authors found that Aboriginal and/or Torres Strait Islander offenders were more likely to be described as generalist offenders. By contrast the non-Indigenous offenders were more likely to be described as specialists, in that their offending comprised only family violence offences. Coghlan and Millsted also identified substance use as a risk factor more common to generalist offenders than specialist family violence offenders.

In a study involving 5,797 male offenders, inclusive of 702 Indigenous offenders, from four Australian states, Putt, Payne and Milner (2005) found self-reported drug use higher in the non-Indigenous group when compared to the Indigenous group. Specifically, there was a significant difference in the use of amphetamines and heroin with Indigenous offenders less likely to have used these substances, and more likely to have used alcohol in the commission of their offences. Use of alcohol prior to offending was reported by 69% of the Indigenous group 27% of the non-Indigenous group. Cannabis consumption was similar across both groups.

The current research considered whether these differences also applied to those convicted of arson. Specifically, this research considered whether Indigenous arsonists were more likely to have set fires at an earlier age than non-Indigenous arsonists, whether they

tended to target known persons, as opposed to strangers, and whether alcohol use was evident in their crimes. This study also identified how firesetter interventions and arson treatment programs might benefit from the information obtained from participants, and the following section provides a summary of the literature on recommendations for Indigenous treatment programs.

Implications for treatment programs. Hovane, Jones, and Smith (2014) argue that effective interventions with Indigenous offenders must adopt a holistic or ecological approach which is cognizant of cultural schemas and is derived from within their culture. An example of this approach would be to recognise that Indigenous people may not value self-disclosure, or an expression of emotion about their offending, which is often expected in non-Indigenous therapeutic settings as a pre-requisite to change. This difference in expressive proficiency might appear that an Indigenous person lacks empathy or denies responsibility for his or her offending.

This difference in expressive proficiency is reflected in results obtained by Day et al. (2008), who found greater experiences of loss, higher levels of tension-reduction behaviours and dissociation among Indigenous men (n=45) when compared to non-Indigenous men (n=49) in their study of South Australian prisoners. The study also found Indigenous prisoners were more likely to have difficulty identifying and describing their feelings, raising implications for the delivery of offender programs. Furthermore, non-Indigenous treatment providers may lack understanding of the complex avoidant relationships between members of Indigenous communities and thereby fail to understand subtle relationship stressors impacting on their clients (Gee et al., 2014), which may affect participation in a group setting.

Recent evidence of the positive impact cultural engagement can have on reducing antisocial behaviours in Indigenous offenders was found by Shepherd, Delgado, Sherwood, and Paradies (2018). Positing cultural engagement as a protective factor in reducing violence

risk or offending propensity, Shepherd et al. (2018) measured levels of cultural engagement and cultural identity in 122 Indigenous prisoners in custody in Victoria. A survival analysis was conducted to investigate post prison violent recidivism after two years. These authors found cultural engagement contributed to desistence and that cultural identity predicted levels of cultural engagement, or participation in cultural events. Cultural engagement in custody was significantly associated with non-recidivism, and these authors argue for enhanced recognition of the therapeutic value of custodial cultural activities.

The debate as to whether offender programs based on platforms such as cognitive behavioural therapy (CBT) and the risk, need, responsivity principles, or the RNR model (Andrews & Bonta, 2010), are as effective with Indigenous or other ethnic groups, has significant implications when individuals are considered for release from custody. Studies arguing for distinct culture-driven platforms for offender programs, as opposed to the mainstream or generic programmatic foundations, highlight the disadvantages faced by Indigenous prisoners who are required to complete generic programs in order to obtain parole. Responsivity issues such as poor literacy or problems with expressive English, a reluctance to share experiences of trauma, loss or grief in Caucasian company, and differences in the identification and treatment of mental illnesses are some of the difficulties identified for Indigenous prisoners (Dingwell & Cairney, 2010; Dingwell, Lindeman, & Cairney, 2014; Macklin & Gilbert, 2011; Mals, Howells, Day, & Hall, 2008).

In contrast Usher and Stewart (2014) argue for the retention of CBT and RNR model in correctional programs for Indigenous prisoners, having found offenders from a wide variety of ethnic backgrounds benefitted from generic programs based on these platforms. They conducted a meta-analysis of eight program evaluations conducted by the Correctional Service of Canada (CSC) and reported that participation in these programs significantly reduced the likelihood of readmission to custody regardless of ethnic background. The study

design is not without limitations. All programs were evaluated by the CSC for the CSC and used a variety of definitions of the outcome variable (re-offence, or re-offence and violation of conditions). Where a further offence was detected the type of offence was not identified, so it is difficult to attribute value to programs targeting specific offending behaviour, if that behaviour has recurred.

Despite pointing out a moderate level of heterogeneity in program evaluations involving Aboriginal offenders, Usher and Stewart (2014) did not conduct post hoc assessments to interrogate the variance across the studies and were unable to identify whether some participants had completed more than one program under review, potentially confounding the results. Nevertheless, it is likely that the solution lies somewhere between these competing arguments and the current study will offer some suggestions as to how arson treatment programs might incorporate Indigenous culture and reference the social and emotional wellbeing domains.

The purpose of this study was to investigate illegal firesetting from the perspective of the arsonist, and in particular review whether there were differences between Indigenous and non-Indigenous arsonists. Arson theory guided this investigation, as did reference to social and emotional wellbeing, as an important construct in Indigenous culture. Comparisons were drawn utilizing thematic analysis, and the sample size enabled in-depth interviews to be undertaken, so as to extract underlying themes. Small sample sizes are common in qualitative studies and interview based research offers participants an opportunity to tell their story (Crouch & McKenzie, 2006), and researchers to generate rich and culturally meaningful findings (Young & Casey, 2018).

Research Questions

As this is exploratory research and little is known of any similarities or differences between Indigenous and non-Indigenous arsonists, specific research questions were developed to guide this study. These non-directional questions are as follows:

Research Question 1: What themes in offender and offence characteristics can be identified for samples of Indigenous and non-Indigenous arsonists?

Research Question 2: How do Indigenous Elders view arson in their communities?

Research Question 3: What are the motivations for, targets of, and methods employed by arsonists from each group?

Method

Participants

Four Australian correctional agencies were contacted seeking access to interview convicted adult arsonists, and permission was provided by two jurisdictions. The researcher sought to interview adults convicted of arson who were either in custody or under community corrections supervision, and who did not have an appeal pending. The Research and Ethics Committees of South Australia and the Northern Territory approved this research, and approval letters are attached in Appendix B. The correctional agencies of these jurisdictions provided details of potential participants for this study. Persons who had not been convicted were excluded. A sampling pool of 48 potential participants were identified by these agencies. The researcher was provided with a list containing basic demographic details of those persons, including their gender, age, offences and location.

Of the sampling pool, fifteen potential participants were not able to be interviewed, as they had either been released from custody prior to the interview dates, were residing in remote communities which were not able to be visited, were unable to be contacted through their community corrections officer, declined to participate, or failed to attend scheduled

interviews. Three potential participants who were invited to participate declined to be interviewed. Two declined to participate advising they did not wish to talk about their offences, and a third advised that he would only speak to the researcher if his parent was present. This request was not approved by the correctional centre.

Thirty three convicted adult arsonists, who were either under community corrections supervision, or in custody were interviewed. Of these, 16 were interviewed in a Northern Territory correctional centre, 14 were interviewed in South Australian correctional facilities, and three were interviewed in South Australian community correctional centres. Interviews with convicted arsonists in the Northern Territory were conducted in 2014 and 2016, and interviews with those in South Australia were conducted in 2015. All participants were aged between 18 years and 45 years with a mean age of 31 years. The majority of participants (n=32) were male. No participants identified a Torres Strait Islander heritage, and Aboriginal participants accounted for 43% of the sample (n=14).

Procedure

This study was approved by the Bond University Human Research and Ethics Committee (Protocol No: RO15022 and RO015085) in October 2014. This committee included Indigenous representation. Prior to granting approval this committee requested the researcher detailed how the study would comply with the Guidelines for Ethical Research in Australian Indigenous Studies, developed by the Australian Institute of Aboriginal and Torres Strait Islander Studies (2012¹). Strategies were developed in accordance with the 14 principles contained within these guidelines, detailing how this study would reflect the requirements of research in this area (Appendix C). These principles include recognising the diversity and uniqueness of Indigenous peoples, recognising and protecting Indigenous

¹ The 2018 edition of the Guidelines for Ethical Research in Australian Indigenous Studies was released after data collection and analysis.

knowledge, ensuring sound consultation and negotiation prior to and during the research, and ensuring that Indigenous people benefit from the research undertaken.

Arrangements were made to travel to the locations, either a correctional centre or a community corrections office, to conduct interviews with potential participants. Individual interviews with potential participants were scheduled by departmental officers.

Interviews with convicted arsonists. The researcher initially identified whether each participant, whose first language was not English, was able to communicate easily in English. This was achieved by asking correctional staff about their communications with the offender and whether an interpreter might be necessary. Each participant was offered the opportunity to have an interpreter present or a third person of their choice available to join them during the interview. Participants were provided with verbal and written details of the research and invited to participate in a semi-structured interview.

Location of interviews. Most interviews were completed within 60 minutes and were conducted in an interview room within the correctional centre or community corrections office which was allocated to the researcher for that purpose. In several centres correctional staff were assigned to maintain a visual observation of the interview room, where it was considered necessary for the safety of the researcher, however these officers were unable to hear the conversation.

Informed consent and information sheet. Each participant was provided with an Information Sheet about the research (Appendix D). This document outlined details of the research topic and introduced the researcher. Participants were also asked to sign an Informed Consent Form, which was either read aloud by the researcher, or silently by the participant, and discussed as needed prior to the interview (Appendix E). All offender participants provided written permission for the researcher to access their sentence management file to locate the sentencing transcripts, and criminal history details. The Informed Consent Form

explained that participants could decline to answer questions or withdraw from the interview at any time. It also outlined the confidentiality provisions, in that information provided would not be shared with correctional staff, and that their status in custody or under correctional supervision would not be impacted by any decision to withdraw from the study. Finally, the Informed Consent Form provided details of how participants could lodge a complaint about this research with either the Bond University Human Research and Ethics Committee, or the Australian Institute of Aboriginal and Torres Strait Islander studies for Indigenous participants.

Recording and information collection. Each participant was asked to give permission for the researcher to record the interview on a hand-held recording device. All consented to this request. These recordings are stored securely by the researcher and not accessed by others on any occasion. All participants agreeing to participate in this study were de-identified using their initials and year of birth for the purpose of recording written information. Hard copies of sentencing transcripts or criminal histories were stored securely in the researcher's locked filing cabinet.

Interview format. A semi-structured interview format was developed for each of the interviews, with prompts to expand responses. The semi-structured interview comprised open-ended questions focusing on a range of issues that have been canvassed in the arson research to date, such as motivation for the offence; actions taken prior to, during and following the offence; expected outcomes of the offence; and whether the offence was committed alone or in company. Given the research on substance use and firesetting, participants were asked questions about their history of substance use and the use of substances in commission of their current offences. Aboriginal and/or Torres Strait Islander participants were also asked supplementary questions about their use of fire for cultural reasons, their connectedness to community, and participation in cultural events. Interview

questions served to guide the interviews, which were conducted using an informal conversational approach to provide opportunities for participants to direct the conversation towards topics relevant or pertinent to their experience. The two versions of the semi-structured interview, one for non-Indigenous participants and the other for Indigenous participants, can be found in Appendix F.

Coding and thematic analysis. In order to address Research Questions 1 and 3, all interviews with convicted arsonists were initially coded quantitatively across 46 variables in accordance with the Coding Sheet in Appendix G. These codes reflected demographic information (7), charges and sentences (6), criminal history offence types (6), offending background (8), mental health history (4), and firesetting variables (15).

Research Question 1 also required an analysis of themes arising from interviews, and common themes raised by participants' accounts of their actions. Identified themes reflected the motivations for firesetting and participants reflections in interview on their behaviour. These were collated and reviewed for presentation in a qualitative format. In line with Indigenist research methodology that encourages the coding, or interpretation, of participants disclosures be kept to a minimum, and the six phase Braun and Clarke methodology applied, the use of an independent researcher and the calculation of inter-rater reliability agreement statistics were not included in this analysis.

Inductive thematic analysis, using the methodology developed by Braun and Clarke (2006), was utilized. This six-phase approach focuses on describing salient patterns in the qualitative data collected and does not presuppose codes or themes or predefine these prior to interview, resulting in the identification of themes that are data driven (Braun & Clarke, 2006). The six phases involve the familiarization with data, generation of initial codes, theme development, theme review, theme definition and naming, and the presentation of themes. The use of a grounded theory (Strauss & Corbin, 1997) method was considered, but

discounted, as the available number of potential participants was unlikely to allow for the saturation of categories as required by this approach. Rather than generate a new theory, which is the purpose of the grounded theory methodology, thematic analysis was utilized to extend current theory.

Coding motivation. The reasons or motivations for firesetting were identified for each participant in accordance with Research Question 3. Similar motivations were able to be grouped, such as the elimination of fingerprints and to conceal identity; while others such as firesetting for profit, were standalone. All motivations were coded as either an instrumental or an expressive motivation for firesetting, based on the Canter and Fritzon (1998) definitions. The category labelled instrumental included those offences where the motivation was clearly profit-oriented or directed towards the elimination, or concealment of evidence of another crime. Participants for whom the offence involved elements of self-pity, sexual excitement, delusional thinking, or an expression of emotion were grouped as expressive.

Cases where the primary motivation did not align easily with either of these categories, such as “anger prompting revenge or payback”, were divided between the Instrumental and Expressive categories on the basis of whether the offence was planned or unplanned. Cases of unplanned anger prompting revenge or payback were assigned to the Expressive category, and those where planned anger prompting revenge or payback was evident were coded as Instrumental. Similar decisions were made for those cases where the primary motivation was ‘due to intoxication can’t recall or explain’ such that planned offences by firesetters who were intoxicated and could not explain their actions were considered to be more instrumental, and unplanned offences involving intoxicated firesetters were more likely to be expressive. The use of the variable planned or unplanned was chosen as it was considered to be intuitively relevant to motivation (Canter & Fritzon, 1998).

The action systems model was not tested in the current research as this was considered outside the scope of the study. Accordingly, the second action systems model dichotomy, the target (object-person) dichotomy, was not coded. The targets of all offences were coded across five categories to provide greater description, and these categories were: (a) own place of residence, (b) bushland/scrub, (c) random or community property (including stolen vehicle), (d) relatives/friends dwelling, and (e) relatives/friends vehicle.

Case studies. The inclusion of case studies was considered a valuable addition to this investigation by the Cultural Adviser, as they provided descriptive context and a ‘story’ to firesetting offences. The case studies provided the offenders perspective and thereby contributed to the development of theoretical explanations of their offending. Two Indigenous participants were chosen for the preparation of individualized case studies. The two participants were selected given they had each provided rich information about their past, their community and their offence behaviours. The case studies were developed to highlight the proximal and distal factors contributing to firesetting, in accordance with standpoint theory and an emic approach to a preliminary consideration of M-TTAFs’ utility to explain Indigenous firesetting.

Interviews with community members. In addition to interviews with convicted arsonists, the views of a small group of Indigenous community members and Elders were sought to assist the understanding of firesetting behaviour in the Aboriginal and/or Torres Strait Islander communities. Research Question 2 sought the views of community members and Elders as an important and valuable contextual element. Contact with members of several Indigenous communities was made through word of mouth networks and by directly contacting Indigenous people working in and around the criminal justice systems of the jurisdictions included in this study. A total of 14 Aboriginal community members and Elders provided comments on arson in Indigenous communities for this study. Interviewees

comprised males and females of varying age groups from the Northern Territory, South Australia, Queensland and New South Wales.

A semi-structured interview schedule (Appendix H) was developed to guide interviews with community members, which were held in both remote communities and urban areas. Several community members preferred to write and email their comments rather than meet personally. Two participants were unable to meet personally due to distance, resulting in telephone interviews. The questions in this interview were developed to guide a conversation about firesetting, and were based on the literature, detailed previously, concerning the cultural use of fire in Indigenous communities. In several instances the community member or Elder preferred to yarn about their experience of firesetting rather than respond to specific questions, and as such the questionnaire was abandoned.

Cultural adviser

This research project benefited from the assistance of an Aboriginal cultural adviser (CA) who guided the researcher's understanding of Indigenous culture. The researcher was referred to the CA through a local Aboriginal Elder, and a formal process of remunerated engagement was undertaken through Bond University. No identifying information about participants in this study was provided to the CA, who had completed a Doctor of Philosophy program herself some years earlier. The researcher and CA met over a three-year period to discuss general historical issues surrounding the impact of colonization, cultural practices in some Aboriginal communities, existing research and theories of research, specific methodological issues, and the interpretation of language used by some participants.

Results

Initial frequency analyses were conducted to describe the data and identify variables across the groups of (a) Aboriginal and/or Torres Strait Islander arsonists, and (b) non-

Indigenous arsonists, based on the research questions. Given the small sample size no inferential statistical analyses were undertaken.

A thematic analysis of interviews with offender participants was conducted to elicit themes associated with the motivations for illegitimate firesetting. Two case studies, based on the tenets of Standpoint Theory, were developed to conceptualize firesetting by Indigenous people from their own perspective and to guide treatment responses. These case studies, presented in Appendix A, provide a descriptive analysis of the historical context within which the offending occurred, and point to proximal and distal factors that each participant may have faced. The domains of the social and emotional wellbeing framework were considered with a view to identifying treatment targets that recognise the unique factors contributing to offending by Indigenous people in these instances.

The interviews with Elders and community members were reviewed qualitatively and are presented verbatim to highlight key views and emerging insights on arson in their communities, supplementing the information provided by the offender participants. The interviews with Elders and community members were not subjected to thematic analysis as the content of these interviews did not reflect accounts of their own behaviour, rather, these interviews focussed on general insights of firesetting in their community. In recognition of the principles underlying indigenist methodology it was not considered appropriate to distil this Indigenous knowledge into deductive categories.

Reflexive notes were completed documenting the author's experience conducting this research, highlighting some of the complexities encountered, and learnings gained during this study. These notes are presented according to the principles of the Australian Institute of Aboriginal and Torres Strait Islander Studies – Guidelines for Ethical Research in Australian Indigenous Studies (2012) and can be found in Appendix I.

General Description and Demographic Information for Offender Participants

Based on the information obtained in these interviews, the following tables identify broad demographic details provided by participants. The majority of these participants were male (97%) and the average age at interview was 31 years. Table 2 identifies participants by Indigenous status and gender across jurisdictions.

Table 2

Current Jurisdiction, Gender and Indigenous status of Convicted Arsonists

	Northern Territory		South Australia		Total
	Male	Female	Male	Female	
Aboriginal	11	0	3	0	14
Non-Indigenous	5	0	13	1	19

Education and relationship status. The majority of offender participants had completed part secondary education, $n=17$. All non-Indigenous participants ($n=19$) indicated that they were single at the time of their interview, whereas 35.7% ($n=5$) of the Aboriginal participants indicated that they were in a relationship at the time of the interview.

Number of charges and criminal history. The majority of participants were charged with just the one arson offence. All participants had previous convictions and the majority of participants ($n=19$) had more than 15 previous convictions. All participants described a history of general offending involving a variety of offence types, therefore firesetting exclusivity was not observed in this sample. Both groups disclosed a similar number of previous convictions, however some difference in the types of previous offences were noted. For example, the two groups appeared to differ on whether they had been convicted of

substance use offences in the past. Table 3 compares the two groups on these offending variables.

Table 3

Comparisons across Groups for Offending Variables (N=33)

	Aboriginal <i>n</i> (%)	Non-Indigenous <i>n</i> (%)
Average age at time of offence	26 (sd 8.5)	29 (sd 9.2)
History of juvenile convictions	10 (71.4%)	14 (73.7%)
History of adult convictions	14 (100%)	19 (100%)
Previous substance use offences	3 (21.4%)	14 (73.7%)

Previous firesetting. All participants were asked whether they had previously set fires, and if they had, they were asked about the nature of those fires, so that legitimate fire use could be distinguished from illegitimate fire use. As the following table shows, half the participants disclosed previous firesetting ($n=16$). Of this subsample, a majority disclosed having previously set fires for illegitimate purposes ($n=11$), while five participants disclosed having set fires for legitimate purposes in the past, such as land management.

Table 4 identifies the Indigenous status of those participants disclosing previous illegitimate firesetting. Aboriginal participants were more likely to have engaged in legitimate firesetting in the past when compared to non-Indigenous participants, and non-

Indigenous participants were significantly more likely to have engaged in illegitimate firesetting in the past, when compared to Aboriginal participants.

Table 4

Previous Legitimate and Illegitimate Firesetting by Indigenous status (n=16)

	Legitimate firesetting (land management, cooking, back-burning) n (%)	Illegitimate firesetting n (%)
Aboriginal	4 (28.6%)	1 (7.1%)
Non-Indigenous	1 (5.3%)	10 (52.6%)
Total	5 (15.2%)	11 (33.3%)

Offender and Offence Characteristics

Characteristics of the offenders and their offences were identified. These were the use of substances, mental health diagnoses, age at commencement of firesetting, motivation for the offence, offence targets, use of accelerants, planning, and whether co-offenders were involved in the offences. A brief description of these variables across the Aboriginal and Non-Indigenous samples is provided.

Type of substance used during offence. The most common substance associated with firesetting, identified by participants, was alcohol. A majority of Aboriginal participants acknowledged they were more likely to have consumed alcohol alone, prior to setting the fire ($n=8$), while a majority of the non-Indigenous participants disclosed they were more likely to have taken both alcohol and other drugs at the time ($n=11$), as indicated in the following table.

Table 5

Use of Substances at time of Firesetting (N=33)

	Aboriginal <i>n</i> (%)	Non-Indigenous <i>n</i> (%)
Alcohol only	8 (57.1%)	4 (21.1%)
Drugs only	1 (7.1%)	3 (15.8%)
Both alcohol and drugs	3 (21.4%)	11 (57.9%)
Inhalants	1 (7%)	0 (0%)
No substances	1 (7.1%)	1 (5.3%)
Total	14	19

Previous substance use. Participants were asked about their history of substance use and Table 6 depicts the spread of responses. Common drugs indicated by participants included amphetamines and marijuana. Of the non-Indigenous participants 89.5% reported having a substance abuse history with both drugs and alcohol, compared to 64.3% of Aboriginal participants. Also, 28.6% of Aboriginal participants disclosed a history of alcohol abuse only compared to only 5.3% of non-Indigenous participants.

Table 6

Disclosures of Previous Substance Abuse (n=26)

	Aboriginal participants <i>n</i> (%)	Non-Indigenous participants <i>n</i> (%)
Alcohol only	4 (28.6%)	1 (5.3%)
Drugs only	1 (7.1%)	1 (5.3%)
Both alcohol and drugs	9 (64.3%)	17 (89.4%)

Mental health diagnosis and treatment. Each participant was asked about any adult or childhood mental health diagnoses and if they disclosed a historical or a current diagnosis, they were asked about any previous or current treatment. Of the non-Indigenous participants 73.7% (*n*=14), reported an adult mental health diagnosis, compared to 42.9% of the Aboriginal group (*n*=6). Of the twenty participants disclosing a previous diagnosis, the most common diagnosis was depression (*n*=9), followed by antisocial personality disorder (*n*=5). The percentages of mental health diagnoses were consistent with the percentages of previous mental health treatment identified for each group. Fifty percent of Indigenous participants and 79% of non-Indigenous participants reported previous treatment for a mental health diagnosis.

Age firesetting commenced. Participants were asked if they had lit illegal or illegitimate fires previously, and if so, when this commenced. Responses were coded as either Child (less than 10 years of age), Adolescent (between 11 and 17 years of age), and Adult (over 18 years). Results are shown in Table 7 for both the Aboriginal and non-Indigenous

groups. The majority of non-Indigenous and Aboriginal participants reported the onset of illegitimate firesetting in adulthood.

Table 7

Age Illegal/illegitimate Firesetting Commenced (N=33)

Age illegitimate firesetting commenced	Aboriginal participants <i>n</i> (%)	Non-Indigenous participants <i>n</i> (%)
Child	0 (0%)	5 (26%)
Adolescent	2 (4%)	3 (16%)
Adult	12 (86%)	11 (58%)
Total	13	19

Motivation. Ten different motivations for firesetting were identified across this sample, as detailed in Table 8. Several participants identified more than one motivation for firesetting. The most common reason for setting a fire was to eliminate evidence of another crime, which was identified in one third of cases in this study ($n=11$). This was followed by the “other/mixed” category which included seven arsonists whose motivation for firesetting did not fit easily into the defined categories. Revenge or payback prompting firesetting was the third most common motivation, which accounted for 18.2% percent of all participants’ motivation for setting the fire ($n=6$). Two examples of those included in the ‘Other/Mixed’ category are provided to highlight the variations in circumstances described by participants. In the first case an Aboriginal man lit a fire in a public place to keep warm. The fire subsequently got out of control and threatened property and government land. The second case involved a non-Indigenous participant who lit a fire in the home occupied by his father-in-law whom he had just murdered. He reported the fire started accidentally when he lit a

cigarette from the stovetop, but that he then let it get out of control and indeed placed additional items on the fire, as he had decided that he then wanted to suffocate himself. Gang-related violence was distinct from payback, in that in this instance fires were set randomly to various community and personal property in a general rampage throughout the town, and not directed towards a specific business or individual. Some thematic differences were identified between the two groups and are reported in the section on qualitative results.

Table 8

Motivation for Firesetting

Motivation for firesetting	Aboriginal participants <i>n</i>	Non-Indigenous participants <i>n</i>
Anger prompting revenge or payback	3	3
Profit	0	1
To attract services or attention	0	1
To eliminate evidence	3	8
For excitement or sexual pleasure	1	1
Self-pity or emotional upset	1	0
Due to intoxication cannot recall or explain	0	1
Gang-related violence	1	0
Delusional or influence of demons	1	1
Other/Mixed	4	3

When these motivations were assigned to either expressive or instrumental groups, based on the motivation categories of the action systems model (ASM) (Canter & Fritzon, 1998), and the coding rules described previously, there was some indication of a directional difference identified between the two groups, although this was not verified statistically. The most common motivation for the Aboriginal group was an expressive one, while instrumental motivation was the most common category for the non-Indigenous group, as shown in Table 9.

Table 9

ASM Categorized Motivation for Firesetting (N=33)

Motivation for firesetting	Aboriginal participants <i>n</i> (%)	Non-Indigenous participants <i>n</i> (%)
Expressive	8 (57%)	6 (32%)
Instrumental	6 (43%)	13 (68%)

Target and use of accelerants in arson offences. An analysis of the target of each of the arson offences revealed the most frequent target for firesetting in this sample was community property, including stolen vehicles (51.5%), followed by the property of relatives or friends (39.4%). Participants were also asked about their use of accelerants when setting the fires for which they were convicted. Table 10 summarises this data.

Table 10

Target and Use of Accelerants in Arson offending for all Participants (N=33)

Arson target	Aboriginal participants <i>n</i> (%)	Non-Indigenous participants <i>n</i> (%)
Own place of residence	1 (7.1%)	1 (5.3%)
Bushland/Scrub	0 (0%)	1 (5.3%)
Random or community property (including stolen vehicle)	7 (50.0%)	10 (52.6%)
Relatives/friends dwelling	3 (21.4%)	4 (21.1%)
Relatives/friends vehicle	3 (21.4%)	3 (15.8%)
Accelerants used in arson	3 (22%)	11 (58%)

Co-offenders and planning. The majority of participants in this sample acted alone, and of all fires set, 72.7% were unplanned ($n=24$). There did not appear to be any difference in the frequency of premeditation or planning.

Summary of variations between Aboriginal and Non-Indigenous samples. In summary, despite the small numbers in each sample, some divergencies were found between the two groups. While inferential analyses were not conducted, there did appear to be preliminary variations between the two groups observed, on variables measuring the relationship status of participants at the time of their interview, the extent of previous illegitimate firesetting, expressive or instrumental motivation and whether or not they used accelerants in the commission of their offence.

Qualitative Results

The following section presents the results of the thematic analyses conducted in relation to the interviews with convicted arsonists, and the verbatim views of community members and Elders. Interviews with convicted arsonists were coded, while interviews with community members and Elders were not, as they were reported verbatim. Care was taken to ensure that the interpretation of Indigenous firesetters behaviour and comments in interview was conducted sensitively, by reflecting on the social and emotional well-being domains and considering the particular standpoint of each participant. The approach developed by Braun and Clarke (2006) involving six phases was utilized.

The first phase, familiarization with data, was conducted after each interview and subsequently after all interviews had been completed. Summaries of each interview were prepared, and the statements provided by participants as to why they committed the arson offence were extracted. Statements by participants as to why they committed their offences were coded, reflecting their self-talk or cognitions at the time of the offending. Multiple cognitions were identified for several arsonists and some of the cognitions were repeated across interviews/participants. These are listed in Table 11.

Table 11

Coded Cognitions identified for Arsonists

I'll set fire to your car/house because I am angry with you x4	I'll set fire to this bike/stolen car/truck to eliminate DNA/fingerprint evidence x7
I'll set fire to the house to get back at you	I'll use this flare to set fire to the boat because you are not listening to my demands or doing what I want you to do
I'll set this house/building on fire so you know how upset I am x2	I'll set fire to the car with the man inside the boot because I am angry with him
Bad spirits influenced me and made me set the fire	I'll set fire to this car to eliminate DNA/fingerprint evidence linking me to another crime x3
Fires are nice – if I have a lighter I want to set fire to something	I'll set this fire to draw your attention to my pain
I'll set fire to your car in revenge for what you did to me	I'll set fire to my house to get rid of demons
I'll light a fire to keep warm	I'll set fire to this car so it looks like it has been stolen and set alight by others so the insurance can be claimed
I'll set fire to this shed for amusement	I'll set fire to this house so you will help me
I'll set this shack on fire because I get a thrill from lighting fires	
I'll light this fire now because I have nothing to lose and want to die	

Themes from offender interviews. Following the identification of the various cognitions, initial themes were developed, reviewed and further defined. As the identification of cognitions and then themes was inductive, in that they were developed from the data, the resultant themes were not a priori, or based on current theoretical models such as M-TTAF. Seven initial themes were identified to depict the cognitions firesetters described that contributed to their motivation for firesetting. These were: (a) firesetting to communicate a

negative emotion to others (anger, revenge, and frustration), (b) firesetting in response to beliefs of spiritual/demonic influences, (c) firesetting to generate a positive emotion (thrill, excitement), (d) firesetting for comfort, (e) firesetting to commit suicide, (f) firesetting to secure help from others, and (g) firesetting to avoid detection or association with another crime. Each theme is described and supported by examples from participant interviews below.

Firesetting to communicate a negative emotion to others (anger, revenge, and frustration). The primary motivation for setting these fires was to communicate a negative emotion or send a message to others to express feelings of anger, revenge or frustration. Cognitions incorporated into this theme include “I’ll set fire to your car/house because I am angry with you” “I’ll set fire to your car in revenge for what you did to me” “I’ll set fire to the house to get back at you” and “I’ll set this house/building on fire so you know how upset I am.” One participant *DB1994* (an Indigenous man who was aged 18 at the time of the arson offence) explained that he set a blanket on fire, which was placed on top of his Uncles’ car, because he was being excluded from entering the house due to his inebriation “they locked the door, I kept calling out, I was drunk, I was angry”.

A similar example of the use of fire to express anger or rage was identified by another participant *MA1977* (a non-Indigenous man aged 35 at the time of the offence). He set fire to the back of his house after he and his partner were involved in an argument, involving violence. They had both been drinking and he had left the house after police were called. When he returned he was not permitted re-entry.

I came back about an hour later, I realized I didn’t have any papers for smokes, had no money on me...she wouldn’t let me back in, I pretty much got angry with her, seeing as though as far as I was concerned it wasn’t my fault...I saw the jerry can for

the lawn mower, so I thought I'd scare her out of the house, so I set fire to the door step at the back.

Firesetting in response to beliefs of spiritual/demonic influences. This theme represents those firesetters who lit fires in response to either delusional or religious beliefs. Cognitions associated with this theme include "I'll set fire to my house to get rid of demons" and "Bad spirits influenced me and made me set the fire." Several participants spoke of spiritual or demonic influences that led to their firesetting, as explained by one participant *AS1978* (an Indigenous man aged 35 years at the time of the offence) "Sometimes the devil, he forces you to do something, yeah when you go to church, and he gets jealous."

A similar theme was disclosed by another participant *KR1970* (a non-Indigenous woman who was 43 years at the time of the offence) who outlined being in a state of emotional distress, consuming alcohol and then setting fire to her rented house using petrol. This participant had a history of mental illness and explained that she set the fire to eliminate demons from the property:

I had been evicted from my home, and on that particular day I had had my dog put down, cause I couldn't take him with me and he'd been with me for nine years, he was my best mate, and I found out my Nana died – and they couldn't get in touch with me cause I'd smashed my phone, and she died two weeks before I found out and I missed the funeral, so I was totally grief stricken. So, I started drinking and I had a lot of problems in that house...so I set the first fire to try and get the demons out of the house. Demons - there were demons in that house – it was possessed...There was

weird stuff happening, I'd get stuff stolen...things got trashed or would go missing and then turn up again...yeah, so I was burning the demons out.

Firesetting to generate a positive emotion (thrill, excitement). This theme incorporated those cognitions identifying a positive emotional response to firesetting. Fires were set by those who enjoyed watching the fire. These firesetters spoke of becoming excited or being thrilled by fire. Cognitions include "I'll set this shack on fire because I get a thrill from lighting fires" and "I'll set fire to this shed for amusement." One participant *RE1993* (a non-Indigenous man, aged 20 at the time of offence) detailed a lengthy history of firesetting, commencing as a juvenile. He always offended alone, and when asked how many fires he had lit he responded:

Oh, I've lost count - I've done bins, I've done paddocks, I've done trees, you know like I've lit gasoline bottles up just because I like the sight of fire. I'd say I get off on it you know. I was feeling good when I saw fire...it gives me a thrill. Ever since a young age I've liked fire.

A further participant *TB1978* (an Aboriginal man, aged 28 at the time of the offence), who set fire to a rural property, offended with a group of friends while drinking and using drugs. He spoke of how his firesetting was impulsive and occurred in the context of group amusement and enjoyment.

It was something stupid that I did on the spur of the moment...I'm not an arsonist, you know what I mean, I'm not, I don't see the destruction of property by fire as healing

in any way, don't get me wrong, I like the look of a fire, it looks nice, that's, you know a little bonfire, not creating mass destruction.

Firesetting for comfort. Several participants (Aboriginal and non-Indigenous) referred to feeling comforted by fire and reflected a sense of calmness brought about by watching the fire grow. Cognitions associated with this theme included "Fires are nice – if I have a lighter I want to set fire to something" and "I'll light a fire to keep warm." One participant *RDI968* (an Indigenous man aged 44 at the time of the offence) spoke of lighting a fire in the bush "It was cold...I just trying to warm up...I just walked away (when it started to spread) I always do that you know, 'specially in the night. Police say I light bushfires (laughter)."

Firesetting to commit suicide. This theme emerged from one non-Indigenous participant, who was intoxicated, emotionally upset and having suicidal thoughts at the time he set the fire, as indicated by his cognition of "I'll light this fire now because I have nothing to lose and want to die." Participant *SCI971* (a non-Indigenous male aged 40 at the time of the offence) was also charged with murder as he had stabbed a man prior to lighting the fire. He explained that the fire was not set to eliminate evidence of this crime, but rather to ensure he died also. After he had stabbed the victim *SCI971* lit a gas burner on a stove to light a cigarette and other items caught fire. He then put wooden legs from a chair on the fire to increase its ferocity and lay down on a nearby couch. He advised was still suicidal when admitted to prison.

My other half left me five days before...At the time I walked out of rehab, went to the casino, gone for 10 or 11 hours, it was pay day and I thought I'm only doing rehab for

her...you know every alcoholic, you don't think of other people you just think of yourself...that day I thought what have I got to lose because the night before I said I thought of killing myself or someone else...the fire took off because the back door was open...eventually the smoke got too much so I went outside and waited for the police. I'd lost everything, my job, my relationship, my house – I was pretty much rock bottom. It's like it was another person – it disgusts me (what he did), I was suicidal when I come in here, and they put me in a padded cell.

Firesetting to secure help from others. This theme was observed in Aboriginal and non-Indigenous firesetters who set fires to generate specific assistance from others. It is distinguished from the *Firesetting to communicate a negative emotion to others (anger, revenge, and frustration)* as the cognitions associated with the latter theme held no expectation or desire that other people would actually take any action. The *Firesetting to secure help from others* theme was indicated by the following cognitions “I’ll set this fire to draw your attention to my pain”, “I’ll set fire to this house so you will help me” and “I’ll use this flare to set fire to the boat because you are not listening to my demands or doing what I want you to do.”

Participant *GC1984* (a non-Indigenous man who was 30 years at the time of the offence) set fire to a hotel foyer in order to draw attention to the chronic pain he was experiencing following an assault. He set a fire in a public place with a view to entering the fire himself in order to let people know he needed medical assistance. In sentencing him, the District Court Judge noted that his actions were a “cry for help rather than an act of vengeance” and that he was attempting to obtain medical assistance to treat pain. *GC1984* recalled:

Basically I went completely crazy from chronic pain injury...four days awake, I tried to set myself on fire...sometimes the pain is really bad...I just woke up one morning and decided that I needed to do something to let people know how much pain I was in...I thought if I sat down in the pub full of people I knew and they watched me just sitting there burning and were bothered by it, that I would get better medical attention...I threw some petrol on the ground and I lit it and went to stand in it. Some people upstairs started screaming 'cause the staircase caught on fire, so I got a fire extinguisher and put it out.

Firesetting to avoid detection or association with another crime. This theme was the most common theme extracted from the interviews, representing ten participants' motivations for firesetting. Both Aboriginal and non-Indigenous participants held cognitions included within this theme. Cognitions included "I'll set fire to this car to eliminate DNA/fingerprint evidence linking me to another crime" "I'll set fire to this car so it looks like it has been stolen and set alight by others so the insurance can be claimed" and "I'll set fire to this bike/stolen car/truck to eliminate DNA/fingerprint evidence." This theme describes those whose firesetting was designed to eliminate evidence that might link them to another crime. One participant *AW1990* (a Non-Indigenous Male, aged 21 years at the time of the offence) outlined events leading to his arson charge:

Cars were getting stolen, people were running amok one night and I was homeless at the time – I stayed with them all night, we stole a quad bike, and they tried to jump start it but it wouldn't...They set the quad bike on fire – I got charged for pouring the fuel, because I thought I would leave fingerprints. I poured the fuel 'cause I thought it would get rid of fingerprints.

Another participant *MM1992*, (a Non-Indigenous Male, aged 19 years at the time of the arson offence) stole a motor vehicle and took it for a joy-ride with a co-offender. He explained that the car was set alight to destroy any fingerprint evidence “so we didn’t wear any gloves or anything, and the only way to get rid of fingerprints was to set it alight.”

A further participant *AW1982* (an Aboriginal man, aged 26 at the time of the offence) spoke of having set a number of fires, commencing as a juvenile, in order to eliminate evidence. He had been sentenced to life imprisonment at the time of interview having set fire to a car in order to eliminate evidence of a murder, and observed “we burnt the car to get rid of any evidence – just burnt the material on the seats... cause I’d been in the car...DNA, body hair...Arson, I’ve had since I was a juvenile, same thing happened...stole 10 cars and to get rid of any evidence we’d torch the car.”

Thematic categories. Various assemblages of the seven initial themes were considered and it was determined that the simplest conceptualisation, and the one that reflected participants cognitions of motivation for the offences, resulted in two higher order themes. The two higher order themes, emerging from the cognitions identified, reflected the essence of firesetters thoughts and cognitions about their firesetting, using a dichotomous classification based on the function the firesetting served. The first higher order theme reflected cognitions centred on firesetting in order to obtain a desired action by others. Examples include fires set to obtain attention or support from others, fires set for an insurance claim, and fires that were set to avoid detection or to disguise involvement in an earlier crime and thereby circumvent police investigation. These fires were named extrinsic fires, as they were based on cognitions that served a functional purpose extrinsic to the firesetter.

The second higher order theme reflected cognitions depicting the amelioration of negative internal states within the firesetter. Examples included firesetting for excitement, firesetting to communicate anger or revenge, and firesetting for self-soothing or comfort. The fires represented by these cognitions were named intrinsic fires as they served a functional purpose that was intrinsic to the firesetter and held no objective external to the offender. The following table depicts the seven initial themes drawn from the data, and their allocation to the revised higher order themes (intrinsic and extrinsic).

Table 12

Themes identified from Arsonists' Cognitions

Intrinsic	Extrinsic
Firesetting to communicate a negative emotion to others (anger, revenge, frustration)	Firesetting to secure help or a specific action from others
Firesetting in response to beliefs of spiritual/demonic influences	Firesetting to eliminate evidence and avoid detection or association with another crime
Firesetting to generate a positive emotion (thrill, excitement)	
Firesetting for comfort	
Firesetting to commit suicide	

Where both extrinsic and intrinsic cognitions were identified for a participant, their firesetting was coded as Mixed, and if the participant was unable to identify his or her cognitions their firesetting was coded as unknown. An example of unknown cognitions was AS1978, (an Indigenous man aged 35 at the time of the offence) who set fire to an empty house, while intoxicated. He was not able to explain why he broke into the house and set the

curtains on fire. He did not steal anything and left the property once the fire took hold. He was apprehended a week later through the use of CCTV.

Excluding those participants with mixed or unknown cognitions ($n=2$), the two themes of extrinsic fires and intrinsic fires were equally represented in this sample. Differences in the frequencies across the Aboriginal and non-Indigenous sub-samples were noted, with 76.9% of the Aboriginal group having intrinsic primary cognitions, while the non-Indigenous group were more likely to hold extrinsic cognitions (72.2%), as detailed in Table 13.

Table 13

Mapping of Themes across Aboriginal and Non-Indigenous Arsonists (N=31)

	Primary cognitions were intrinsic n (%)	Primary cognitions were extrinsic n (%)
Aboriginal	10 (76.9%)	3 (23.1%)
Non-indigenous	5 (27.8%)	13 (72.2%)

The cognitions identified in the thematic analysis were compared with the earlier identification of either an expressive or instrumental motivation, according to the action system model, for each participant. There was some alignment between expected relationships: an expressive motivation and intrinsic cognitions, and an instrumental motivation and extrinsic cognitions; however full correspondence was not found. The extrinsic/intrinsic dichotomy may prove useful when assessing motivations for firesetting and identifying treatment targets.

Grief. Grief was a notable theme amongst Aboriginal arsonists, identified in 21.4% (n=3) of this group, compared to just 5.5% (n=1) of the non-Indigenous participants. *AS1978* was a 35-year old Aboriginal man who spoke of grief and isolation from community “sometimes we do bad things when we lose family.” A further participant, *AW1982*, a 26-year old Indigenous man, expressed similar emotions:

My mum’s sister, she grew me up, she raised me – she passed and that sorted of started everything off for me... it seemed like anyone I get close to they were passing, and I just didn’t know how to deal with it, and me dealing with it was me going out and doing crime and smoking drugs... I sent this email to my partner saying if I’m going back to jail it will be for something serious – it won’t be for minor things – the way I’m feeling, all my anger and that.. I haven’t expressed nothing to no-one, I haven’t sat down and explained my feelings or how to deal with any of it. In here I’m doing some grief counselling.

The grief theme was interesting, in that some Aboriginal communities burn the clothing of those who have passed, and as such, fire is inextricably linked to the grieving process. Also, as fire is used for cultural purposes as a comforting and soothing mechanism (to protect a newborn baby, to communicate across distance, to make a meal, to keep warm, and in bush ceremonies), its use in times of grief may be associated with a desire to alleviate or ease stress and sadness. Further investigation of the relationship between the use of fire in response to, or during the grieving process, is indicated for Indigenous firesetters.

In summary, seven initial themes reflecting arson motivation cognitions were identified from the interviews. These were assembled into two higher order categories, intrinsic and extrinsic motivations. Indigenous arsonists were more likely to hold intrinsic

motivations while non-Indigenous arsonists were more likely to hold extrinsic motivations for their firesetting.

Indigenous Elders and Community Members' Comments

The views of Indigenous Elders and community members were sought to provide descriptive context and add richness to the themes identified in the offender interviews. A total of 14 Aboriginal Elders and community members agreed to yarn about arson for this study. Appendix J lists the location or method for each interview. Individuals are de-identified; however, their town or regional location is identified in accordance with principle 4 of the Australian Institute of Aboriginal and Torres Strait Islander Studies – Guidelines for Ethical Research in Australian Indigenous Studies, (2012). The following section includes direct quotes and summaries of views associated with common uses of firesetting within Indigenous communities. In some instances, Elders and community members also suggested reasons for illegal firesetting within their communities. Written statements, or extractions from interviews, are presented as they were provided, and in accordance with the principle that Indigenous knowledge is not interpreted, no attempt has been made to classify them into thematic or reductionist categories. The first quote reflects an Elders' history of firesetting for land management:

When you are born into a cane cutters family, and each year you are part of the group that light fires in cane fields, I can assure you it becomes quite hypnotic, quite mesmerising, quite anticipatory and it does not leave you as you grow older. Every year you wait for the season to come around, and you make sure you are out there to 'help'. It was so bizarre, and this was the addictive part of it all. It is also reinforced for you, when you light fires that are allowable like burning rubbish, lighting bar-b-q's, campfires, which was part of my own case.

Fire setting in my cultural understanding – from my clan/family perspective – was a yearly ritual in which all the clan was involved, from little children who were being taught, to young adults who were showing their skill to fire an area in a slow burn procedure, to adults who were either teaching little ones, watching younger ones, or joining adults to ensure that the fire was set the right way. Fire setting was like a cleansing of the land ceremony where we lit a slow burn fire to an area to clean it up before the rains or the heavy winds set in. It was part of our land management protocols. It kept hot fast fires in control in the dry times. Slow burn fires kept to a minimum loss in fauna because bird life and animals in the area could smell, look, and go for shelter away from the coming fire. A hot fast fire is like the terrible fires that we have seen in SA and NSW in the recent past. When you do a slow burn fire you always walk behind it, so that you can watch it, control it and aid fauna who are running to avoid it.

Another community member spoke of how fire is still used to free spirits and cleanse, especially houses. He smokes himself and babies are smoked when they are born. Smoking houses helps to release bad spirits. He talked of the gap between Aboriginal and non-Aboriginal values - he says the gap is still vast and cross-cultural courses are needed to explain each groups values to the other group.

A further community member discussed fire as a means of security for Aboriginal people. He talked of how fire is also used for communication, for example if a person is travelling to another community, they will light a fire so that the community know they are nearby; enabling members of the community to meet them and escort them in to the community. Another use for fire was to communicate trouble. Fire is used to communicate that there is a problem in the area, such as a vehicle broken down, or that someone is in

trouble. In contrast, this community member felt that Aboriginal folk who set cars on fire do so to eliminate evidence that might lead police to them. He also thought that setting illegal fires to property was for excitement:

When land is fired, there is this amazing feeling that in the area that is burned, Mother Earth sighs her thanks for the cleansing and speaks of re-generation to Father Sky through the smoke that ascends, speaks to Uncle Wind to bring Sister Rain into the area to complete the cleansing cycle. Mother Earth then talks to her Daughter Flora and tells her to awaken her interconnected procreation productive cycles so that seeds buried deep within Mother Earth are awakened and they bring new flora back into the area that was burnt. Anyway, this is how I was taught to respect fire lighting, even though for a period of time in my young adult time in my own life I did have difficulty with it.

A female Elder spoke of how only men are allowed to burn the bush. She advised that women use fire to smoke newborn babies. They take the baby and mother out into the bush and make a small hole and burn grasses and herbs, resulting in a beautiful smell. She spoke of men's business, where nine-year-old boys are told that they are now men after going through men's business and allowed to copy their uncles/other adult men in smoking and drinking, which she thought was too young. She did not think men would talk to me about this. This female Elder also mentioned how many of the young ones have foetal alcohol syndrome disorder and acquired brain damage, and that this may contribute to offending behaviour.

The need for Aboriginal firesetters to develop a healthy respect for fire was considered by another female Elder, who referred to fire as having a significant historical place in Aboriginal culture. Her view was that people who have disconnected from their

culture need to reconnect and learn about the positive uses of fire. She was aware of young people who had set fires to schools. She felt that they lacked respect for the education system and that this may be due to the education system not respecting them. A male Elder gave several examples of how fire is currently used by Aboriginal people, (1) for signalling, if someone needs to convey a message such as the fact that they are in the area or they are in trouble; (2) when someone dies it is common to burn a person's property including their car when they die; (3) for land clearance purposes; and (4) hunting animals.

Treatment for those setting illegitimate fires was discussed by one female Elder who suggested that treatment should target learning respect for the law and for police; tracing family and regaining Aboriginal identity; and having a mentor assist firesetters to reconnect with their culture. This Elder referred to a local fire that had attracted significant media attention where young Aboriginal boys set fires to a number of businesses. She described them as spoilt brats and wondered if their actions were drug related.

This issue was also addressed by another community member who spoke of interventions and approaches that might help young Aboriginal men to desist from crimes. She emphasised establishing connections to their culture; encouraging forgiveness; replacing shame with pride; and healing rejection. Another participant felt that illegal firesetting in Aboriginal communities was rare,

It is not culture or history that makes us do burn-offs, it is the reality of living in the bush - so we do not commit arson or illegal fire-setting... this may be happening in big cities but, not in the bush because there are cycles to all living and breathing things and Aboriginal people have learnt to co-exist with the land and to treat it with respect, by not destroying it. To consider a concept that Aboriginal people commit arson or

illegal fire-setting on their own lands, is both disrespectful and presumptuous by nature.

Several community members offered explanations for illegal firesetting amongst their community with one male Elder suggesting several reasons for Aboriginal people deliberately setting fire to personal property. He spoke of how man-made possessions were not particularly valued in some Aboriginal communities, and also, that when government agencies built houses for Aboriginal communities, they didn't show them how things worked. This resulted in less value applied to the houses than might have been expected. A female Elder provided the following personal exploration of her own firesetting,

It was after I had children that I found the 'urgency' to light fires begin to lose its credibility for me. I was fortunate to have a husband who understood this aspect of my psyche and with much prayer and with much support I can say that me and 'lighting' fires now remain within the 'norm'. However, there are times when I think on the 'urgency' that was there, and the longing to satiate the 'urgency'. I am thankful for being taught about the gifts of understanding the 'triggers' and the 'aftermath' emotions' that arise and now they occur less and less now. They are still there, but they seem irrelevant (because of the 'norm') and I do not 'mind attend' or emotionally attach to 'mind attending' so the electricity buzz I still experience when I see fires (even on television) is easy to dissipate quickly because I do not mind attend to the emotions I feel. For me it was never about, power, control, anger, indifference. Growing up it was about helping, belonging to a group, wanting to please, wanting accolade (that I did a great job), mesmerised concentration, hypnotic satiation, excitement, heat control, self-glory, ownership.

Insights emerging from community member interviews. Indigenous Elders and community members provided valuable insights into the contemporary and legitimate uses of fire in their communities. It is clear from these interviews that fire continues to be used for spiritual, practical and cultural purposes. It is used to free spirits and cleanse, in smoking ceremonies, as a means of security, for communication and signalling, for land clearance, and hunting food. These interviews identified distinct uses of fire by gender, and across one's lifetime.

Insights into the use of fire for illegitimate purposes by Aboriginal and/or Torres Strait Islander people were also gained during these interviews. Of interest was the view expressed by one participant that possessions were not particularly valued in some Aboriginal communities. This insight was offered in response to a question about why fire, with all its cultural and spiritual legitimacy, would be used for destructive or illegitimate purposes.

Several community members/Elders offered valuable recommendations for interventions or programs involving Indigenous arsonists, particularly those offenders who may have disconnected from their culture. By reconnecting and learning about the positive uses of fire, it was suggested that those who have offended with fire in the past, would learn to value and revere fire. The view that the potential for deliberate arson might be reduced through interventions or firesetter treatment that assists Indigenous arsonists to establish stronger connections to their culture, is significant, and will be considered further in the discussion section.

Discussion

The current study comprised interviews with convicted arsonists in the Northern Territory and South Australia. Elders and Indigenous community members from several Indigenous communities and regions across four states were also consulted. Three research questions were developed to guide this study. The research questions focussed on the

similarities and differences in offender and offence characteristics between samples of Australian Aboriginal and/or Torres Strait Islander arsonists and non-Indigenous arsonists. This study considered whether differences in terms of the motivations for arson, targets and methods employed, were similar across the two groups. The study also explored themes in offending and identified the views of Indigenous Elders and community members to provide a contextual reference to firesetting by Indigenous arsonists

Similarities and Differences in Offender and Offence characteristics

Several areas of difference between the Indigenous and non-Indigenous arsonists were identified in this study. Aboriginal participants were more likely to have used alcohol only in the commission of their arson offence, while the non-Indigenous group were more likely to have used both alcohol and drugs during the commission of their offence. These findings were consistent with previous research on substance use and offending by Indigenous offenders (Putt et al., 2005).

In terms of previous firesetting, the two groups differed in that the non-Indigenous arsonists were more likely to have a history of setting fires for illegal or illegitimate purposes when compared to the Aboriginal group, whose previous firesetting was more likely associated with legitimate purposes, such as land management and cooking outside. This was expected given the historical use of fire in Aboriginal communities and the importance of fire in Indigenous culture today (Gammage, 2011). It is likely that as the Aboriginal participants had more personal experience of fire for these legitimate purposes, fire for them represented more than simply a destructive force. It takes on multiple representations such as comfort, and connection to spirituality, family, and land. Elders' comments reinforced this by confirming fire continues to be used in many ways, including land management, communication, ceremony and cleansing.

The two groups presented similarly on the majority of offence characteristics, such as the use of co-offenders and the level of planning involved. There was also no variation in frequency of target of the offence, a finding which is inconsistent with other studies that have shown differences based on Indigenous status for other offence categories (Chan & Payne, 2013; Memmott et al., 2001). These studies found Indigenous perpetrators of violence were more likely to target known victims, as opposed to strangers, while non-Indigenous violent offenders targeted strangers more frequently. There are several possible explanations for this lack of concordance with previous studies. The current study included Indigenous participants who had set fires within their communities, and also, some whose fires occurred in larger cities away from their home community and family / friends. It is therefore conceivable that the location contributed to the target, or choice of victim, of the fire for this group. Alternatively, the use of fire by Indigenous arsonists may not reflect the same cognitions, motivations or precipitating factors present in the use of general violence by this group, thereby differentiating arsonists from those offenders who act violently or aggressively towards others. As the current study is based on a small sample, further research with a larger sample may identify other factors contributing to this discrepancy.

The use of accelerants, however, did appear to differentiate the two groups, in that the non-Indigenous arsonists were more likely to use accelerants when compared to the Aboriginal group. The use of accelerants in firesetting has not been considered within a cultural context in previous research. It may reflect easier access to accelerants by the non-Indigenous group, or simply a greater capacity to utilize existing materials to set the fire by the Indigenous group, so that accelerants are not required. An alternative hypothesis is that Indigenous firesetters might be more likely to act spontaneously in the heat of a dispute, and are therefore less prepared, having not planned the offence by collecting accelerants or other sources of ignition. This is consistent with Cussen and Bryant's (2015) findings

following an analysis of 6,744 homicide offences between 1989 and 2012 in Australia. Key differences between Indigenous and non-Indigenous groups were that Indigenous perpetrators were less likely to use weapons than non-Indigenous homicide perpetrators, and more likely to be under the influence of alcohol at the time, suggesting a lack of planning.

While a larger percentage of non-Indigenous arsonists had been diagnosed with a mental health condition, the frequency of mental health diagnosis between groups did not appear to be significant, with depression being the most common diagnosis across both groups. Whether this finding accurately reflects the presence of mental illness in the Indigenous group is debatable, given the research on the misdiagnosis of mental illness in Indigenous communities and the lack of culturally sensitive assessments (Dudgeon et al., 2014; Heffernan, Anderson, Davidson, & Kinner, 2015; Westerman, 2004).

A greater percentage of non-Indigenous arsonists commenced firesetting earlier than the Indigenous group. Although this finding is preliminary, it is surprising as it might have been expected that greater familiarization with the use of fire for a range of functions in Indigenous communities may have contributed to increased use at an earlier age. This study appears to challenge the view presented by Gannon and Pina (2010), who suggested there may be a relationship between early familiarization to fire, and the use of fire for illegitimate purposes from an earlier age.

Offence versatility and exclusivity. The majority of arsonists in this study had previous juvenile convictions and multiple earlier convictions as an adult. As they had a range of previous offences they were all considered to be versatile, as opposed to exclusive firesetters. This is consistent with prior studies concluding firesetting exclusively is rare (Britt, 1994; McGloin, Sullivan, & Piquero, 2009; Parkinson, Shrimpton, Oates, Swanston, & O'Toole, 2004), irrespective of cultural status.

The results of this study were not consistent with the findings from the Coghlan and Millstedt (2017) study, which found a difference between the two groups in that Indigenous offenders were more likely to be generalists, or versatile offenders, when compared to a similar non-Indigenous cohort of family violence offenders. The lack of concordance found in this study may be due to the small sample size of arsonists, or alternatively, as previously indicated, it may reflect inherent differences between family violence offenders and arsonists. Further research is required to clarify this issue.

Motivation for arson. The most common motivation for arson was the elimination of evidence of another crime. This contrasts with other studies which found revenge to be the most common motivation (Doley, 2003a; Doley et al., 2011; Green et al., 2014). Despite revenge or payback being common in some Indigenous communities, firesetting was not used to exact revenge by the majority of Indigenous arsonists. There were no clear distinctions between the two groups in their motivations for firesetting, nor did the groups vary considerably when these motivations were assigned to either the instrumental or expressive dichotomous categories. However, Indigenous arsonists were more likely than their non-Indigenous counterparts to express intrinsic cognitions associated with their firesetting. This difference, based on membership of a cultural group has not been previously explored in the literature, and suggests that fire might serve to ameliorate negative internal states for Indigenous offenders and provide for self-soothing or comfort; more so than for the non-Indigenous group, whose use of fire was associated with more extrinsic cognitions. This suggests there may be a relationship between motivation for illegal firesetting and disturbed social and emotional wellbeing for Indigenous arsonists. Given the importance of SEWB for Indigenous people, such a relationship would offer treatment pathways and warrant the extension of current arson theory to accommodate the specific cultural background of this

group. A specific trajectory or pathway for Australian Indigenous firesetters is discussed in the next section.

Non-Indigenous arsonists were more likely to set fires for instrumental purposes and the most common purpose identified in this sample was to eliminate fingerprint or DNA evidence of another crime, such as stealing a vehicle or a murder. By contrast, fire was commonly used by the Indigenous firesetters in response to relatively minor issues and may signal the use of fire as a function of the “slow burn” of inter-generational trauma, disadvantage and racism experienced in Indigenous communities for many years (Mellor, 2004). Examples of minor frustrations resulting in firesetting in the Indigenous group included being irritated by others lack of concern or being frustrated following a domestic argument.

While the literature on the relationship between these contextual factors and arson is silent, Day, Jones, Nakata, and McDermott (2012) reviewed the literature on the role of intergenerational trauma, loss and grief, and generalized anger on family violence by Indigenous men. The authors identified four contextual triggers associated with proximal triggers for violence. These were having a disrupted early environment characterized by removal, institutionalization, loss of family role models and intermittent parenting, witnessing anger and violence from an early age, drug and alcohol abuse, and experiencing discrimination and racism and resultant powerlessness. Collectively, these contextual factors inherent in the personal histories of Indigenous peoples, align with disturbed social and emotional well-being across several domains, and represent underlying treatment needs. In this sense the similarities between Indigenous arson offenders and Indigenous offenders committing other types of offences may be significant.

Implications for Theory

Current arson theory does not account for specific cultural influences such as community grieving, socio-economic disadvantage, or higher rates of mental and physical illness amongst Indigenous peoples (Jorm et al., 2012; Parker & Milroy, 2014; Schwartz, 2010; Vos, Barker, Begg, Stanley, & Lopez, 2009). Features such as a context of community sadness and heightened stress, and the consequential opportunistic acting out behaviours using readily available implements; or heightened levels of frustration and diminished tolerance to stress due to repeated experiences of loss, are not able to be factored in when identifying the most appropriate trajectory. Given M-TTAF, and the trajectories identified within the theory, are based on the cultural context in which they were developed, accounting for different cultures may require some adjustments. As they currently stand, the trajectories neglect spirituality and social and emotional wellbeing as distinct elements, and as these elements are fundamental to Australian Indigenous life, there is an argument to be made for an alternative trajectory for this group. The M-TTAF is also silent on how the pathways to firesetting differ across individualistic and collectivist cultures, an important distinction given the trajectories appear to be based on an individualistic approach. Those offending within an individualist cultural context, such as Western societies, are more likely to be motivated by what makes them feel good, and to meet their individual needs, as opposed to those offending within a collectivist culture, such as Indigenous societies, who are often motivated by emotions such as sympathy, shame and communion reflected in their environment (Seidler, 2010).

An alternative trajectory such as grief and loss saturation would reflect these cultural differences and consider a broader range of etiological factors contributing to firesetting, as opposed to in-situ motivations. In this instance, an offending trajectory for Aboriginal people would emphasize the impact of the environment, within an historical context. In

dysfunctional communities, where grief, trauma, and loss are commonplace, resistance to stress or to frustration is likely to be diminished, and while it appears offending serves a superficial purpose, such as crime concealment; it is likely this is a simplistic reflection of deeper emotional dysregulation accumulated over generations. The M-TTAF trajectories lack reference to an Indigenous standpoint or perspective, and opportunities for the M-TAFFs capacity to explain firesetting in this group have been identified. To extend this theory, it is submitted here that an alternative trajectory would be based on the emotionally expressive trajectory with additional emphasis on overarching community/family grief, frustration and trauma, or low social and emotional wellbeing (SEWB). The focus on grief and trauma encompasses broader factors than are represented in the emotionally expressive trajectory. The emotionally expressive trajectory emphasises proximal antecedents immediately associated with firesetting, while the proposed new trajectory recognises the historical community and inter-generational factors contributing to firesetting in the Indigenous group.

Viewing the behaviour of Indigenous people through a social and emotional wellbeing lens enables consideration of how negative experiences that have led to disturbed SEWB might contribute to antisocial behaviour, including illegitimate firesetting. Perhaps, using the M-TTAF vernacular, the most appropriate trajectory for Indigenous firesetters is disturbed social and emotional wellbeing brought about by disconnections across some or all of the seven domains of SEWB. It could be argued, that in some circumstances, individuals who are offending, including intentionally setting fires, may be doing so as a way of coping with negative experiences, broken or damaged connections and consequently disturbed SEWB. This reflects current research in the area of maladaptive coping in minority cultures as argued by Heppner, Wei, Neville and Kanagui-Munoz, (2014), who noted:

Without taking into account coping strategies from a person's cultural context, critically important information about how and why that person has learned to cope is excluded (e.g., culturally influenced perceptions, beliefs, and goals; cultural influences in the environment, such as family members, that may influence viable coping strategies (pp. 86).

Arguing for the broad acceptance of culturally congruent coping strategies, further research could investigate how enculturation (the degree to which a person is embedded in their cultural traditions) and acculturation, impact on coping in different racial and ethnic minority groups and applying the same respect for diverse phenomenology's in offender treatment. As the interpretation of one's environment and the perception of stress are heavily influenced by one's culture laden values, which develop well before offending commences, ignoring the profound impact of culture on behaviour is impudent, and this is amplified if neglected in psychological treatment programs, given the impact and cost of crime. Further research is warranted to fully investigate the utility of current arson theory for Indigenous people.

Finally, the intrinsic-extrinsic dichotomy identified through the thematic analysis of participant cognitions appeared to reflect differences between the two groups. This dichotomy appears to reflect attributes associated with cultural differences between Indigenous and non-Indigenous arsonists. As theory develops to accommodate cultural diversity, this dichotomy may be of use.

Implications for Firesetter Interventions

Firesetting by a number of Indigenous arsonists appeared to be in response to minor issues and it is suggested this is indicative of the slow burn of inter-generational trauma and disadvantage contributing to reduced coping capacities in some of these participants. Given

the evidence that a person's resistance to stress or to frustration is likely to be diminished in communities where sadness, trauma, and loss are commonplace (Sinclair, Wallston, & Strachan, 2016; Spinazzola et al., 2017), the results of this study suggests significant implications for firesetter assessment and treatment. The two case studies provided highlight how these contextual factors contribute to the use of fire for illegitimate purposes. While this study was explorative, it does raise implications for desistence planning if disturbed SEWB is contributing to illegitimate or illegal firesetting among Indigenous peoples.

Interventions for Aboriginal and/or Torres Strait Islander firesetters would, therefore, need to be founded on the assessment and understanding of holistic SEWB, and cognizant of the cultural, historical, societal and political factors that may have impeded SEWB. It is postulated that disturbed SEWB is contributing to the formation of implicit theories and cognitions associated with firesetting behaviour, and addressing this disturbance is likely to be a significant desistence strategy. If this is true, then effective interventions for Aboriginal and/or Torres Strait Islander firesetters would be more focused on improving and maintaining the overall social and emotional well-being of the individuals and their families and communities, rather than the current positivist and culture-light approach to intervention that tends to focus only on the individual or the specific function served by the behaviour.

Critics of conventional approaches to psychological interventions argue that programs designed to reduce illegal behaviour in Indigenous communities ought not focus solely on the risk-need-responsivity principles, or cognitive behavioural therapy (CBT) models addressing the thoughts, feelings and behaviours associated with the target behaviour (Andrews et al., 1990; Cunneen, 2011; Day, 2003). As Dudgeon and Kelly (2014) point out, CBT can only ever be part of the toolkit for interventions with Indigenous peoples, as it lacks cultural responsivity and "miserable thoughts may be entirely realistic for those caught in the poverty trap" (Bennett-Levy, Richards, & Farrand, 2010). Instead, psychological treatment programs

must incorporate content relevant to Indigenous people (meaning, values and beliefs) within a multi-contextual environment, that includes reference to family, social, cultural and ecological responsibilities and obligations (Kilcullen, Swinbourne, & Cadet-James, 2016; Kim, Yang, & Hwang, 2006) to maximize the therapeutic alliance and reduce program attrition (DeSorcy, Olver, & Wormith, 2016).

Acceptance-commitment therapy (ACT) is considered by Kilcullen et al. (2017) to be a more appropriate therapeutic framework when psychologists are working with Indigenous peoples as this therapeutic approach emphasizes acceptance of past and current circumstances, and the development of mindfulness strategies to enhance social and emotional wellbeing. ACT also provides opportunities to incorporate culturally relevant strategies, such as *punya*, and *dadirri*. *Punya* refers to a multidisciplinary and interdisciplinary approach to health and wellbeing from the Indigenous Ngarinman language and encompasses both person and country. It refers to being “strong, happy, knowledgeable, socially responsible, beautiful, clean and safe” (Atkinson, 2002, p. 44). *Dadirri* comes from the Ngankurungkurr people of the Northern Territory, and means “inner, deep listening and quiet, still awareness” (West, Stewart, Foster & Usher, 2012, p. 1584). Elders and community members interviewed in this study also called for interventions that reunited Indigenous people with their culture, by incorporating cultural concepts.

The adoption of an Indigenous approach to psychological offender behaviour programs legitimizes cultural knowledge so that new culturally grounded perspectives, concepts, theories and interventions can develop to maximize engagement and behavioural change (Marchetti, 2017; Hodgetts, et al., 2010). By shifting the emphasis in treatment from a non-Indigenous therapist-centered or manual-driven approach, to a client-centered approach, treatment responses will evolve. Redirecting psychological responses to those areas identified by the individual offender will reduce the focus on problematic behaviours and individual

deficits, and emphasize a strength-based approach, enhanced agency and self-control, and connection to family and community, all of which are consistent with the aims of treatment in contemporary rehabilitation literature (Kilcullen & Day, 2018; Trotter, Baidawi, & Evans, 2015; Willis, Yates, Gannon, & Ward, 2012).

Interventions that synthesize Indigenous schemas with relevant content are likely to be effective and sustain behavioural change in Indigenous offenders (Hovane et al., 2014). For firesetter treatment programs this may mean that the schemas identified by Gannon et al. (2012) would not apply equally to Indigenous and non-Indigenous arsonists. Instead, programs developed to incorporate beliefs valued by Indigenous peoples, such as the importance of family and kinship structures, relationship obligations, reputation preservation, respect and reciprocity, and the centrality of Elders and children (Hovane et al., 2014), are likely to better address needs and reduce risk by maximizing protective factors (Ferrante, 2012).

Despite calls for new therapeutic approaches to address Indigenous crime over recent years (Atkinson & Jones, 2005; Calma, 2008; Homel et al., 1999; Macklin & Gilbert, 2011; Mals et al., 2008) the evidence base supporting the efficacy of interventions purposively designed for culturally diverse groups is only just emerging (Dolan, Rodas, & Bode, 2015; Murrup-Stewart, Searle, Jobson, & Adams, 2018). Using self-report questionnaires and psychometric scales, including one specifically designed to assess emotional empowerment in Indigenous people (the Growth and Empowerment Measure), Berry, Crowe, Deane, Billingham and Bhagerutty (2012) found evidence that cultural components incorporated into a New South Wales substance abuse program enhanced participant sense of wellbeing and self-efficacy.

Leske et al., (2016) also found support for culture-based interventions in their multi-nation review of interventions for Indigenous adults with mental health and substance abuse

problems. These authors evaluated outcomes for participants engaged in 16 interventions across Australia, New Zealand and the United States that had been adapted to incorporate culturally appropriate materials and processes and found reduced problem severity and enhanced self-efficacy for Indigenous participants (Leske et al., 2016). While these studies point towards a developing evidence base for culturally driven interventions, arson research is hampered by a lack of culturally appropriate assessment tools to identify criminogenic treatment needs, and this represents an important area for future research. The accurate assessment of risk factors for Indigenous firesetters is under-researched, and the current study provides an initial opportunity for further investigation of these.

By taking a collectivist approach, paralleling the Indigenous worldview, arson treatment providers in this country can move forward in partnership with Indigenous Australians. To highlight these points, the two case studies prepared are offered as examples of how cultural context and historical community experiences might be incorporated into the identification of holistic treatment targets.

Lastly, as long as fire use by Indigenous Australians is viewed as separate to the cultural or socio-political context, and solely through a non-Indigenous legal or social lens, colonial discourse is likely to continue. This may lead to inappropriate labelling and perhaps misunderstanding the use and purpose of fire in Indigenous communities giving rise to criminal charges, and poor treatment outcomes.

Strengths and Limitations of this Study

The current study was exploratory and investigated an area of forensic psychology that had not been researched previously. As such, a qualitative design was employed, comprising interviews with convicted arsonists and Indigenous community members and Elders. Frequency data provided an initial exploration of the spread of variables across the two groups, and two case studies explored the offending context for two Indigenous

firesetters. Each of these methodologies added value by maximizing the triangulation of information obtained however this study would have benefitted from arsonist participants from all Australian jurisdictions, and the inclusion of a broader, more representative group of Indigenous community and Elders. Further, interviews with Elders could have focused more on the questions to ask firesetters or sought to elicit culturally meaningful lines of enquiry with the sample of convicted arsonists, thereby informing the next stage of this study.

A further limitation of this study was the fact that the researcher is not Indigenous and therefore, unable to fully interpret or analyze the information provided by Indigenous participants. As the knowledge provided belonged to those providing it, the researcher was cautious about extending the thematic analysis beyond an appropriate level. This issue was the focus of thorough consultation with the Aboriginal cultural adviser, specifically key matters of study design and data interpretation. While this may have presented as a barrier, it is interesting to note that the opposite dilemma has been identified. Aboriginal researcher, Doyle (2018), opines that qualitative research with non-Indigenous participants can be hampered when the researcher is Indigenous, as participants may modify their responses to be less critical of Aboriginal communities.

As interviews were conducted in multiple correctional locations where arsonists were accommodated, regular return visits could not be facilitated. Follow-up discussions with participants was not logistically possible, given some participants were released from custody shortly after the initial interview, and all interviews were conducted interstate. To share the results of this study with Indigenous communities and scholars, the researcher will seek to publish in Indigenous journals.

It is also recognized that gender may have been a barrier to the sharing of sensitive information between male Indigenous participants and the female researcher. It is likely that a mixed gender interview team, including an Indigenous researcher, would have assisted in

reducing any hesitation or reluctance amongst participants to disclose personal details. A final limitation in this study was the lack of participants from the Torres Strait. Inclusion of firesetters from these regions may have provided greater variation and depth in relation to cultural factors impacting of firesetting. Due to the limited number of Torres Strait Islander participants, the results of this study cannot be considered to generalize to this group.

Future Research

Future research in this area might consider taking a participatory action research approach to add depth to the interpretation of results. In participatory action research designs, participants are treated as co-researchers and contribute to the interpretation of results (Baum, MacDougall, & Smith, 2006; Kemmis, McTaggart, & Nixon, 2014; Reason & Bradbury, 2001). Future research might also consider utilizing a grounded theory methodology to develop theory by further investigating the M-TTAF trajectories in Indigenous and non-Indigenous groups.

Further research is needed to confirm the cognitions identified in this study and develop an approach to treatment that incorporates cultural frameworks for Indigenous firesetters that value Indigenous knowledge. It cannot be assumed that the current treatment strategies or targets used in mainstream programs are equally relevant to Indigenous firesetters, hence there is a need to identify whether addressing disturbed social and emotional well-being may contribute to desistence in Indigenous firesetters.

Given the paucity of treatment programs for firesetters in Australia, it is essential that this void be filled in a culturally safe manner, with an appropriate appreciation of cultural factors that are demonstrated in the design and content of programs for Indigenous firesetters. This can only be achieved through sensitive and sincere collaboration with Indigenous people to ensure an Indigenous standpoint. As Kingsley et al. (2013) note, trust is critical to successful outcomes and ethical research in Aboriginal communities.

To test the veracity of some of the findings from this study, Study Two further considers similarities and differences between Indigenous and non-Indigenous arsonists, based on a larger national sample of court transcripts. Study Two investigates trends across a 25-year period and considers a typology of Australian arsonists.

CHAPTER THREE

Study Two: Australian Arson between 1990 and 2015: Trends and Types²

The purpose of this study was to investigate trends in arson offending in Australia and identify whether a typology of arsonists exists. This was achieved by ascertaining the characteristics of Australian arsonists, based on a sample of sentencing transcripts, from all jurisdictions, over a 25-year period. The current study focussed on advancing knowledge of Australian arsonists, testing current arson theory and extending research in this area to inform an emerging treatment community. As relatively little is known about arson in Australia, and in particular, whether certain offender characteristics are increasing, few effective treatment programs for this group have been developed.

Two key objectives of this research were identified. The first objective was to explore the presence of a typology of Australian arsonists, for comparison with internationally derived typologies. The second objective was to investigate trends in key characteristics of Australian arsonists over 25 years. The choice of characteristics was based on the extensive international research indicating an increasing proportion over time of female arsonists and those with a diagnosed mental illness, and heightened use of illegal substances in arson offending. As the available literature on arson typologies, derived from international samples and Australian samples, has been discussed in detail in Chapter One, a brief summary only is provided in this chapter. This introductory section focuses on the trend literature.

² Sections of this chapter have been published. Ellis-Smith, T., Watt, B., & Doley, R.M. (2019). Australian arsonists: An analysis of trends between 1990 and 2015. *Psychiatry, Psychology and Law*. 26,4. 593-613. doi: 10.1080/13218719.2018.1556131.

Trends in Arson Offending

Previous research has identified trends across several offence types, highlighting changes in criminogenic offender and offence features, however the literature has neglected longitudinal trend analysis of arsonists' characteristics. For example, Australian research on driving offences shows steady increases in the use of illicit substances by offenders (Davey, Armstrong, & Martin, 2014), and trends observed in sexual offences in Australia show increased levels of online offending by perpetrators in recent years (Krone & Smith, 2017). These analyses of trends in criminal behaviour across different groups of offenders, and across time, foster a robust understanding of the changing complexities associated with the behaviour. This enables a contemporary review of theoretical frameworks and ensures the currency of treatment responses (Hanslmaier, Kemme, Stoll, & Baier, 2015; Hayward & Honegger, 2014; Pepper, 2008; Stafford & Burns, 2013). It is important when analyzing trends, to be cognizant that changes in key offender characteristics may reflect changes in investigation techniques, applications of the law in sentencing and, also changes in the definition and application of diagnostic labels of mental disorder.

The literature on arson has largely focussed on the characteristics of point-in-time samples of arsonists by extracting common offender and offence features, rather than comparing samples over a number of years. A review of the literature guided the choice of arsonist features considered in the current study of trends over 25 years.

Female arsonists. In view of the research on female arsonists indicating high levels of psychiatric diagnoses, the current study explored differences across males and females convicted of arson, and in particular, reviewed the reported histories of psychiatric diagnosis and intervention. In addition, utilising a trend analysis methodology, this study reviewed the incidence of females convicted of arson over the 25-year period to identify any changes in the prevalence of female firesetters in Australia.

Mental health diagnoses. The prevalence of defendants presenting to an Australian court with a mental health diagnosis is difficult to ascertain. Australian courts do not uniformly collect information on defendants' mental illness diagnoses, and most of the available literature on this subject is drawn from studies collecting such diagnostic information once individuals have been received into custody or are in police detention (Forsythe & Gaffney, 2012; Kennedy-Hendricks, Huskamp, Rutkow, & Barry, 2016; Moore, Sunjic, Kaye, Archer, & Indig, 2016). Estimates have suggested that up to 80 % of new receptions to custody in Australia have been diagnosed with a mental illness (Australian Institute of Health and Welfare, 2015; Butler, Andrews, Allnut, Sakashita, & Basson, 2006).

The evidence that the percentage of offenders diagnosed with a mental illness is increasing is not disputed (Peterson et al., 2014; Rosen & Teasdale, 2015; Vogel et al., 2014; Wrenn, McGregor, & Munetz, 2018). This trend has been identified across a range of offence types including firearm offences (Rozel & Mulvey, 2017), terrorism (Bhui, Warfa, & Jones, 2014), and general violence (Link, Andrews, & Cullen, 1992; Walsh, Buchanan, & Fahy, 2018; Woodward, Williams, Nursten, & Badger, 1999). This trend is also cross national with reports identifying up to 64% of American prisoners having an identified mental illness (James & Glaze, 2006). In a Swedish study, Fazel and Grann (2015) found 90% of a sample of 1,625 prisoners convicted of homicide had a psychiatric diagnosis, and an Iranian study investigating psychiatric diagnoses in 351 prisoners finding 57% met DSM4 criteria for an Axis 1 disorder (Assadi et al., 2006).

Substance use. The relationship between substance use and criminal activity is well established with many studies providing evidence of substance use as significant criminogenic factor, associated with the maintenance of offending or recidivism (Bennett et al., 2008; Fazel, Bains, & Doll, 2006; Koetzle, 2014; Lennings, Copeland, & Howard, 2003). Increases in worldwide substance use related crime have been noted across a range of

offending behaviours (Butken et al., 2011; DeMatteo, Filone, & Davis, 2015; Goldsmid & Willis, 2016; Wang et al., 2017), pointing to heightened volatility and dangerousness in the offending, as well as the need for treatment initiatives to consider this increased complexity in the offending behaviours. If, as expected, a similar trend is observed among arsonists over time in Australia, then treatment for firesetting must recognise and prioritise this relationship. The current study investigated the relationship between substance use and firesetting across the review period in order to clarify the significance of this treatment need and the implications for arson theory.

Exclusivity or Versatility of Offending

Much of the general literature on criminal behaviour indicates the versatility of offending by perpetrators. A majority of offenders engage in a range of offence types, such that exclusivity or specialisation is relatively rare, and may only occur in short periods over the lifespan (Britt, 1994; McGloin, Sullivan, & Piquero, 2009; Parkinson, Shrimpton, Oates, Swanston, & O'Toole, 2004). By describing the paradox of "short-term specialisation and life-course versatility", McGloin et al. (2009, p. 244) suggest that offenders specialise in certain offences for short periods of time and then transition to other types of offences over the longer term. According to Sullivan, McGloin, Pratt, and Piquero (2006), as the window of focus extends to years, the degree of specialisation reduces, thereby rendering the findings of studies that investigated offence behaviours within a narrow period of time redundant. They argue that situational factors shape offending behaviours and mould the offending profile of individuals over time leading to a range of opportunistic offence behaviours.

Understanding whether individuals offend exclusively by committing one specific type of offence, or whether their offending is generalised or versatile is relevant to both the theoretical understanding of crime, and treatment and interventions designed to reduce offending behaviour. The view taken by Sullivan et al., (2006) challenges the relevance of

specialised offence type treatment programs, such as sex offender programs or violent offender programs. They suggest replacing these specialised programs with treatments that target underlying causes of crime such as unemployment, general criminal attitudes, and broader risk factors such as substance abuse (Andrews & Bonta, 2010).

To identify the proportion of exclusive/versatile firesetters across a broader national sample, the current study investigated this dichotomy across the 25-year period.

Arsonist Typologies

As discussed in Chapter One Helfgott (2008) describes typologies or classifications of behaviour as constructs that enable the practical implementation of a theory and argues that for theory to be meaningful it must be able to be applied in the real world. By operationalizing theory through the decisions, policies and practices that emerge, offender typologies can categorise a diversified set of observed phenomena or individual characteristics to inform treatment (Clinard, Quinney, & Wildeman, 1994). The essential features of an offender typology include: (a) it is exhaustive, in that the categories cover all possible configurations of the offender, (b) types are mutually exclusive, so that offenders are only classified in one type and do not overlap, and (c) it is neither too simple nor too complex (Helfgott, 2008; Miethe & McCorkle, 2001). Typologies reduce behavioural phenomena and observations to abstract classes or groups, each based on common characteristics and serve the formulation of hypotheses (Helfgott, 2008), the expansion of theory (Clinard, Quinney, & Wildeman, 1994) and the clarification of optimum therapeutic responses or treatment (Knight & Prentky, 1990).

Historical arsonist typologies, based on the work of Lewis and Yarnell (1951), and Inciardi (1971), have been discussed in Chapter One, and these early typologies classified firesetters according to their motivation. Early typologies have been criticized for being simplistic. More recent typologies have included additional elements such as offender

characteristics and situational factors (Icove & Estepp, 1987; Prins et al 1985), but further criticisms have challenged these studies for assuming an offender's motivation, and for focussing solely on firesetters accommodated in psychiatric facilities (Barker, 1994; Dalhuisen, Koenraad, & Liem, 2015a; Kocsis, Irwin, & Cooksey, 2002).

More recently Dalhuisen et al. (2015a) explored arsonist typologies in a study of 313 firesetters referred for mental health assessment. Types emerging from cluster analysis were the (a) the instrumental subtype, (b) the reward subtype, (c) the multi-problem subtype, (d) the disturbed relationship subtype, and (e) the disordered subtype. Dalhuisen and colleagues investigated how these types aligned with M-TTAF trajectories and found partial concordance, however they can be criticized for only sampling firesetters with likely mental health problems, and thereby reducing the generalizability of their findings. To avoid such narrow sampling, the current study investigated the relationship between M-TTAF trajectories and an empirically derived typology of arsonists - drawn from a broad national sample.

The previous arsonist typologies are limited in that some are based on a narrow selection of arsonists, while others fail to reflect a comprehensive suite of characteristics as they only focus on one or two key features (Doley, 2009; Green et al., 2014; Kocsis & Cooksey, 2002; Willis, 2004). It is argued that these typologies lack generalizability by being limited to the representation of particular jurisdictions at a point in time, specific offence features, or because they are based on individuals attending a certain court. Due to a lack of research in Australia none of these typologies or classifications draws from a broad base of Australian arsonists, and there has been no consideration of whether Indigenous arsonists represent a distinct type of firesetter.

The action systems model (Canter & Fritzon, 1998) extended the conceptualization of arsonist typologies by deriving arsonist classifications using a smallest space analysis

methodology across two axes based on motivation and the target of the offence, as either a person or an object. Four types were derived: (a) instrumental person, (b) instrumental object; (c) expressive person; and (d) expressive object (Canter & Fritzon, 1998). The current study utilizes the motivation dichotomy from the action systems model to explore types of arsonists within an Australian context. As the target dichotomy has been criticised for its simplification to person or object (Kelm, 2016; Sapp et al., 1994b) the current study extends the range of possible targets by classifying property targets according to ownership and separating community property from the offenders own property or that belonging to a known person.

Differences between Indigenous and non-Indigenous offending

The current study reviewed differences between Indigenous and non-Indigenous arsonists across key offence variables: gender, use of substances, mental illness diagnoses, and the versatility-exclusivity of offending. As indicated in Chapter One, Indigenous persons are increasingly over-represented in the Australian justice system. This trend is observed across a range of offence types (Wundersitz, 2010), and is discerned when reviewing the percentage of Indigenous arsonists as a proportion of all Australian arsonists (Muller & Stebbins, 2008; New South Wales Bureau of Crime Statistics and Research, 2014). Offence rates indicate an increase in the percentage of Aboriginal and/or Torres Strait Islander women compared to their non-Indigenous counterparts (MacGillivray & Baldry, 2015), and research suggests the use of alcohol and other substances in the commission of offences by Indigenous people is also rising (Intergovernmental Committee on Drugs, 2014; Putt, Payne, & Milner, 2005). The proportion of Indigenous offenders with a mental illness is similarly identified as having increased over recent years (Shepherd, Ogloff, Paradies, & Pfeifer, 2017).

These alarming national patterns point to the need for urgent attention, commencing with the identification of offence-specific and offender-specific factors contributing to Indigenous offending, and concluding with culturally specific systemic responses and

interventions. The current study therefore explored whether these trends applied to the crime of arson in Australia, so as to inform theory and rehabilitative treatment programs for Indigenous offenders.

Research Questions and Hypotheses

This study investigated key offender and offence characteristics to establish whether, given the uniqueness of Australia's multi-cultural mix of Indigenous and non-Indigenous firesetters, a distinct Australian arson typology exists. This research considered whether Australian arsonists were more likely to be versatile offenders, as indicated by the study conducted by Ducat, McEwan, and Ogloff, (2013), and whether trends in substance use, mental illness, or gender were apparent. This study also investigated similarities and differences between sub-groups of arsonists, based on their Indigenous status, to identify specific correlates of illegal firesetting associated with each group, to inform theory and rehabilitative efforts.

Theoretical constructs outlined in Chapter One, such as the M-TTAF trajectories and implicit theories and the action systems model Expressive/Instrumental dichotomy, were examined in this study to investigate the relevance of these concepts for Australian arsonists. The following exploratory research questions were developed, and where there was evidence in the literature of an anticipated direction, hypotheses were formulated as follows:

Research Question 4: Are there trends in the percentage of women setting fires, the incidence of substance use, or mental illness diagnoses apparent over the 25-year period?

Research Question 5: What similarities and differences between Indigenous and non-Indigenous arsonists were identified nationally over the study period?

Research Question 6: Is there evidence of a typology of arsonists based on the sample of Australian arsonists convicted between 1990 and 2015, and if so, how does such a

typology align with the M-TTAF trajectories? Further, what are the key features of each category within the typology ?

Hypothesis 1: In accordance with the literature on the predominance of mental illness diagnoses in arsonists (Anwar et al., 2011; Ducat et al., 2013; Harris & Rice, 1996; MacKay et al., 2006), and evidence that mental illness in offenders generally has increased in recent years (Peterson et al., 2014; Rosen & Teasdale, 2015; Vogel et al., 2014), it was anticipated that the proportion of Australian arsonists identified as having a mental health diagnosis increased over the period 1990 to 2015.

Hypothesis 2: Based on studies reporting increased use of substances in general offender populations (Bennett, Holloway, & Farrington, 2008; Butken et al., 2011; DeMatteo, Filone, & Davis, 2015; Fazel, Bains, & Doll, 2006; Goldsmid & Willis, 2016; Koetzle, 2014; Lennings, Copeland, & Howard, 2003; Wang et al., 2017) it was expected that the use of illegal substances in the commission of arson offences would be reported to have increased over the period 1990 to 2015.

Hypothesis 3: Commensurate with the international and Australian literature on the proportion of arsonists who are versatile offenders (Brett, 2004; Doley, 2003a; Doley, 2003b; Ducat et al., 2013), it was anticipated that the majority of Australian arsonists convicted between 1990 and 2015 would demonstrate a versatile range of offending behaviours, as opposed to firesetting exclusively.

Method

Procedure

A sample of 305 sentencing transcripts of arson cases heard between 1990 and 2015 in the Magistrates, District, Supreme and Court of Appeal courts of all Australian jurisdictions were collected. Sentencing transcripts of adult male and female arsonists were

sourced through the www.austlii.edu.au website, and through each jurisdiction's own database where court transcripts are freely available to the public. Some courts, such as the Australian Capital Territory Magistrates Court, did not make their sentencing transcripts available on-line until 2012, while other courts have provided on-line access to their sentencing comments for over 30 years.

Appendix K lists the year each court commenced on-line reporting of transcripts. Search criteria included the terms *arson* and '*attempted arson*', as well as general search terms such as *fire* and *firesetting*. Only transcripts associated with adults convicted of arson or arson-related offences during this period were collected. Throughout this research period, all Australian jurisdictions sentenced persons over 18 years in an adult court, except Queensland, where until recently a 17-year-old was sentenced as an adult³.

Court transcripts that were not primarily sentencing transcripts, such as those considering bail applications or other points of law, were excluded from this study. Transcripts that did not include sufficient information about either the defendant or the offence were also excluded, as were duplicate transcripts from both a lower court and a Court of Appeal involving the same matter. Twenty-four transcripts were rejected for these reasons, resulting in a total of 305 transcripts meeting inclusion criteria. Approval was granted by the Bond University Human Research Ethics Committee for this study (RO015084).

Coding of transcripts. Each transcript was reviewed, and following a process of content analysis, 30 variables were coded. Variables included general demographic information for each defendant including any history of mental health diagnoses, their offence variables, and the sentence received. Where Indigenous status was not specifically

³ The *Youth Justice Act 1992* amendments, effective February 2018, provided for the sentencing of 17-year olds in the Children's Court, which is consistent with other Australian jurisdictions.

identified in the sentencing comments it was coded as non-Indigenous. Some variables were coded dichotomously, such as gender and offending versatility-exclusivity, while others were coded into categories, for example mental health diagnosis and type of substances involved in the offending.

All transcripts were reviewed for information identifying whether the defendant had previous convictions, and if so, these were coded to identify the type of previous offending, the number of previous convictions, the presence of previous convictions for arson, and whether the defendant had juvenile convictions. The offence variables extracted included the arson target, motivation for the arson, whether the offence occurred with co-offenders, whether the offence was planned or unplanned, and whether accelerants were used. A sixth, new variable depicting three arsonist types was included following the cluster analyses. A code book describing each of the variables and coding rules is attached as Appendix L.

Coding expressive or instrumental motivation. Initially all transcripts were coded across thirteen categories of motivation for firesetting. This number of categories was considered too cumbersome for statistical analysis of the relationship between the various motivations and other variables. All cases were therefore recoded to identify either instrumental or expressive motivations, based on the Canter and Fritzon (1998) definitions. The category labelled instrumental included those offences where the motivation was clearly profit-oriented or directed towards the elimination, or concealment of evidence of another crime. Cases where the offence involved elements of self-pity, sexual excitement, delusional thinking, or an expression of emotion were grouped as expressive. Cases where the primary motivation did not align easily with either of these categories, such as “anger prompting revenge or payback”, were divided between the instrumental and expressive categories on the basis of whether the offence was planned or unplanned.

Cases of unplanned anger prompting revenge or payback were assigned to the expressive category, and those where planned anger prompting revenge or payback was evident were coded as instrumental. Similar decisions were made for those cases where the primary motivation was *due to intoxication can't recall or explain* such that planned offences by firesetters who were intoxicated and could not explain their actions were considered to be more instrumental, and unplanned offences involving intoxicated firesetters were more likely to be expressive.

The use of the variable planned or unplanned was chosen as it was considered to be intuitively relevant to motivation (Canter & Fritzon, 1998). Twelve transcripts where the motivation for the arson offence could not easily be identified, or where the transcript reported mixed motivations for the firesetting involving both instrumental actions and emotional expression, were deleted from the analyses.

Coding M-TTAF trajectories. Transcripts were coded for one of the five M-TTAF trajectories, based on the risk factors identified for each (Gannon et al., 2012). Factors considered included the motivation for the arson, prominent historical and proximal risk elements associated with the offences, such as a background of general criminality or offence supportive cognitions, and any information descriptive of the defendant's psychological well-being. Thirty-seven cases where the M-TTAF trajectory could not be assessed due to a lack of relevant information in the transcript were removed from the chi square analyses, leaving an amended sample of 279 cases available for comparisons between M-TTAF trajectory and other variables.

Inter-rater reliability for the identification of M-TTAF trajectories. The researcher was trained to identify each of the M-TTAF trajectories by two of the authors of the theory, Dr Doley and Dr Gannon, in 2013. As the identification of the M-TTAF trajectory is subjective and open to interpretation, a sample of 20 transcripts were also coded for this

variable by another M-TTAF trained assessor to establish inter-rater reliability coefficients. This second rater was trained to identify the trajectories and was conducting research on firesetters.

A measure of inter-rater reliability was calculated using Cohen's kappa coefficient (Cohen, 1960). Cohen's kappa coefficient is a statistical measure of inter-rater agreement for qualitative (categorical) items when there are two raters (MacPhail, Khoza, Abler, & Ranganathan 2015). The following table depicts the ranges for kappa co-efficient and relationship to strength of agreement.

Table 14

Kappa Co-efficient Score and Strength of Agreement

Kappa co-efficient	Strength of agreement
< 0	Poor agreement
0.0 – 0.20	Slight agreement
0.21 – 0.40	Fair agreement
0.41 – 0.60	Moderate agreement
0.61 – 0.80	Substantial agreement
0.81 – 1.00	Almost perfect agreement

An initial set of ten transcripts was selected by the researcher and provided to the second rater to code independently. These transcripts were selected from all paper copies of transcripts arbitrarily. Agreement on 7 of the 10 transcripts was obtained or a moderate level of agreement, indicating a kappa value of .531. The outstanding three transcripts were

discussed by the two raters and agreement on the most appropriate M-TTAF trajectory was reached.

A further ten transcripts were provided to the second rater to code. Transcripts were purposively selected to ensure each of the M-TTAF trajectories was represented in the two batches of transcripts provided to the second rater. Agreement on the most appropriate M-TTAF trajectory for all of these 10 transcripts was obtained, and overall there was a high level of agreement based on a kappa value of .80 for 20 cases.

Data analysis. As the data obtained was largely categorical, non-parametric tests and multivariate cluster analysis methods were utilized to investigate hypotheses and research questions. Initial frequency distributions were identified for key variables across the sample.

In order to answer Research Question 4, linear trend analyses were conducted to identify patterns over time for three key variables (use of substances, presence of mental illness diagnosis and proportion of females) in arson cases, and to make assessments about future scenarios based on extrapolations of past occurrences (Chandler & Scott, 2011). Projections were calculated where significant trends over the 25-year period were identified. The choice of variables for trend analysis was based on the research questions noted above. These were the frequency of mental health diagnosis, gender and substance use in the sample.

Research Question 5 sought to identify differences between groups of defendants based on their Indigenous status, and to identify relationships between offender and offending variables. Chi square analyses were employed to address these issues. The Fishers Exact Test was utilized where expected cell counts were less than five, and phi coefficients were calculated to determine the strength of relationship between variables. Where cross tabulations exceeded a 2x2 table, Cramer's V statistic was calculated using Cohens criteria for effect size. Analysis of standardized residuals was undertaken to explore statistically significant differences between cells.

To identify meaningful subsets within this sample of arson transcripts, and to address Research Question 6, cluster analysis was employed. This technique provides a set of tools to identify natural groupings from the data (Hardle & Simar, 2012) with the aim of separating cases into homogenous types or clusters, that can be interpreted in a meaningful manner, while maximizing the differences between clusters (Hair, Black, Babin, Anderson & Tatham, 2006; Kaufman & Rousseeuw, 1990). Cluster analysis has proved to be a useful method for the identification of subsets of general offenders (Liem & Reichelmann, 2014), and firesetters (Harris & Rice, 1996; Del Bove & Mackay, 2011).

An exploratory two-step clustering procedure, that did not specify the number of clusters, was chosen for these analyses. This procedure is able to accommodate different levels of data measurement or types of variables, thereby extending the utility of this clustering method. Two-step cluster analysis is also equipped to compute large datasets that would challenge hierarchical clustering. To verify the cluster solution, all transcripts were randomly assigned to one of two datasets for cross-validation. This process of replication enables assessment of the reliability of the cluster solution (Gore, 2000). Finally, All analyses were conducted using the Statistical Package for the Social Sciences (SPSS Version 24).

An exploration of the distribution of transcripts obtained across jurisdictions and time is presented, followed by a description of defendant demographic data and a brief analysis of key arsonist characteristics. The next section focuses on features of the arson offences and a series of sub-group comparisons across key variables such as male and female defendants, and Indigenous and non-Indigenous defendants. Chi square analyses of independence were conducted to compare groups based on their assessed motivation (expressive or instrumental) on key variables. This section concludes with results of the cluster analyses and trend analyses associated with the investigation of arsonist types and trends in the data.

Results

Description of Transcripts

The majority of the arson transcripts identified in this study were from the higher courts in each state, as arson matters are more often heard in higher courts. Of the 305 transcripts, .7% were obtained from a Magistrates Court ($n=2$), while 14.8% were obtained from a District or County Court ($n=45$), 28.2% from a Supreme Court ($n=86$), and 56.4% transcripts were obtained from the various Courts of Appeal in each jurisdiction ($n=172$). Two jurisdictions, Queensland and Western Australia, did not publish sentencing transcripts from the Supreme Court, and only Court of Appeal transcripts were available from those states. The distribution of cases in this study was dependent upon the transcript being publicly available, and it is more likely that higher courts will publish their sentencing comments.

The availability of published transcripts increased over time, such that most of the transcripts were obtained in the decade between 2006 and 2015. Only one transcript was available from 1991, in comparison to 34 transcripts being obtained from 2014, and results are interpreted within this temporal context. In general, later transcripts provided more information across the variables identified, than earlier transcripts and this was ascertained statistically in post hoc analyses $r(304) = .365, p < .001$.

Charges and Sentencing Outcomes

The majority of transcripts identified that defendants were charged with one count of arson ($n=251$, 82.3% of sample), with the balance indicating between two and 21 charges. A range of sentences were identified; twenty-eight transcripts (9.2%) identified the court ordered a community-based disposition, such as a fine or a community correctional order, and a further 26 cases, or 8.5% of defendants, were granted a combination sentence

comprising a period of imprisonment followed by a period of community-based supervision.

Imprisonment was ordered in the majority of cases, ($n=225$, 73.8%).

Of all 305 cases, 42% of defendants were sentenced to less than five years imprisonment, and 31.8% received sentences of more than 5 years imprisonment. In 17.7% of cases the defendant was sentenced to a community-based option or combination sentence of community sanction and imprisonment. The sentence imposed in 4.9% of cases ($n=15$) was not identified. Eight of these matters were heard in a Court of Appeal and the sentencing comments focussed on legal issues. In 3.6% of cases ($n=11$) the defendant was detained under the relevant mental health legislation. Table 15 shows the number of transcripts obtained from each jurisdiction, and the number and percentage of arsonists sentenced to various periods of imprisonment.

Table 15

Arsonists sentenced to Imprisonment by Jurisdiction (N=305)

Jurisdiction	<i>n</i>	Imprisonment < 5 years <i>n</i> (%)	Imprisonment > 5 years <i>n</i> (%)	Total Imprisonment <i>n</i> (%)
Queensland	61	30 (49.2%)	17 (27.9%)	47 (77.1%)
New South Wales	50	23 (46%)	23 (46%)	46 (92%)
Victoria	87	31 (35.6%)	33 (37.9%)	64 (73.5%)
South Australia	27	1 (3.7%)	8 (29.6%)	9 (33.3%)
Western Australia	30	21 (70%)	9 (30%)	30 (100%)
Northern Territory	20	10 (50%)	1 (5%)	11 (55%)
Tasmania	16	9 (56.3%)	5 (31.3%)	14 (87.6%)
Australian Capital Territory	14	3 (21.4%)	1 (7.1%)	4 (28.5%)
Total	305	128 (42%)	97 (31.8%)	225 (73.8%)

Some differences in the sentences handed to defendants were observed across jurisdictions. In particular it was found that 100% of all arsonists sentenced in Western Australia were imprisoned, compared to just one third in South Australia. This is a likely artefact of Western Australian law which provides for all arson cases to be heard in the Supreme Court.

Arsonist Characteristics

Indigenous status. No defendants were identified in transcripts as a Torres Strait Islander. Aboriginal defendants comprised 10% of the total sample obtained ($n=31$). This group were sentenced in all jurisdictions, except Tasmania and the Australian Capital Territory, with the largest number of Aboriginal defendants being sentenced in the Northern Territory ($n=17$). In the cases coded as Indigenous, it was clearly stated by the Magistrate or Judge that the defendant was Aboriginal. This subsample comprised five females and 26 males. The percentage of Indigenous defendants to non-Indigenous defendants was calculated and grouped into five-year periods. Indigenous arsonists comprised 16.1% of all arsonists whose transcripts were obtained between 2011 and 2015, almost double the percentage obtained in the preceding five-year period for this group, as depicted in the Table 16. The difference was statistically significant, $\chi^2(4, N = 305) = 8.88, p = .05$, with a strong association (Cramer's $V=0.17$).

Table 16

Indigenous and non-Indigenous Arsonist transcripts by five-year group (N=305)

Year sentenced	<i>N</i>	Indigenous % (<i>n</i>)	non-Indigenous % (<i>n</i>)
1990 - 1995	15	6.7% (1)	93.3% (14)
1996 - 2000	35	8.6% (3)	91.4% (32)
2001 - 2005	53	1.9% (1)	98.1% (52)
2006 – 2010	84	8.3% (7)	91.7% (77)
2011 - 2015	118	16.1% (19)	83.9% (99)
Total	305	10.2% (31)	89.8% (274)

Age and gender of defendants at time of offence. Of the 305 sentencing transcripts obtained, 258 or 85% identified the age of the defendant at the time he or she committed the arson offence. These defendants were aged between 17 years and 75 years ($M= 34$ years, $SD =12.6$ years). A positive skew value (.845) indicated scores were clustered to the left at the lower age values, which suggests the use of median as measure of central tendency (age of 32 years) may be more reflective of this sample. This sample comprised 271 male arson defendants (89%) and 34 female defendants (11%).

Defendant's mental health. A range of diagnoses were identified for the sample including personality disorders, major mental illnesses, intellectual disabilities and childhood diagnoses, however in some instances individual diagnoses were not specifically detailed, hence the analysis referred to these higher order categories. This does not allow for analyses of individual diagnoses. More than one third of defendants were identified to have had a

mental health diagnosis either as a child or an adult ($n=139$, 45.5%) and adult only diagnoses were found in 118 (38.7%) cases.

There were a total of 25 transcripts, or 8.2 % of all cases, where the Judge or Magistrate referred to the defendant having been diagnosed with a personality disorder, either alone or in conjunction with a mental illness. The most common personality disorders identified were antisocial personality disorder ($n=4$) and borderline personality disorder ($n=4$). Seven transcripts referred to mixed diagnoses, with two referring to schizoid personality disorder and another eight indicating the diagnosis of a personality disorder but did not specify which type. Of the 305 transcripts reviewed, a childhood diagnosis was specifically identified in 15 defendants. The most common diagnosis being attention deficit disorder / attention deficit hyperactivity disorder ($n=11$).

There were 115 transcripts (37.7%) where the sentencing Judge or Magistrate noted a current mental illness, indicating the prevalence of depression ($n=31$) or schizophrenia ($n=24$). Other diagnoses were psychosis ($n=14$), post-traumatic stress disorder/panic disorder ($n=10$), bipolar disorder ($n=5$), anxiety alone ($n=3$) and mixed (such as depression and anxiety) or not specified ($n=28$).

Of the 34 female defendants in the total sample, 47 % were noted to have been diagnosed with a mental illness ($n=16$), with the most common diagnosis being depression and mixed depression and anxiety. In the male sample of arson defendants, 36.5 % were identified as having been diagnosed with a mental illness at the time of sentence ($n=99$). The most common diagnoses were depression ($n=27$) and schizophrenia ($n=21$). No significant differences between the genders were identified. Table 17 reflects the number of transcripts referring to previous or current (or both) mental health diagnoses.

Table 17

Reference to Previous or Current Mental Health Diagnosis (N=305)

Mental health diagnoses referred to at sentencing	Frequency	Percent of sample
No mental health diagnoses	44	14.4
Childhood disorder or diagnosis only	6	2.0
Both childhood and adult diagnoses ^a	6	2.0
Adult mental illness alone	96	31.5
Adult personality disorder alone	9	3.0
Both adult mental illness and personality disorder	13	4.3
Intellectual disability ^b	9	3.0
No reference to mental illness diagnoses	122	40.0

Notes. ^a Where the court indicated both a childhood and adult diagnosis, two adult diagnoses were for personality disorders alone, three were associated with an adult mental illness alone, and one was diagnosed with both an adult mental illness and a personality disorder. ^b Of the nine defendants identified with an intellectual disability, two defendants were also diagnosed with a mental illness (schizophrenia and psychosis), and three defendants were diagnosed with an additional childhood disorder of attention deficit hyperactivity disorder ($n=2$) or autism ($n=1$).

A linear trend analysis was conducted to reduce the potential confound of co-morbidity with substance use, using only those cases where a mental illness was identified in the transcript and no reference to substance use ($n= 175$). A significant linear trend was identified predicting that in 2020, 15% of all arsonists will be identified to have a mental illness, without co-morbid substance use. The sentencing transcripts were analysed for any reference by the Judge or Magistrate to the defendant having engaged in psychological or psychiatric treatment. In 25.6 % of transcripts the court referred to the defendant having

engaged in previous psychiatric/medical treatment either in the community or in a residential facility ($n= 78$) and a further 6.2 % ($n=19$) who had previously received unspecified community-based treatment.

M-TTAF trajectory. Each transcript was coded for the most appropriate M-TTAF trajectory. The most common trajectory was the antisocial cognition trajectory followed by the grievance trajectory. In 26 transcripts the M-TTAF trajectory could not be clearly identified due to insufficient information and these were excluded from the chi square analysis. The difference between male and female defendants for identified trajectory approached significance $\chi^2(4, n = 279) = 8.367, p = .079$, with a greater percentage of males identified on the antisocial trajectory (50.4%) as opposed to females (31%), and a larger proportion of females identified on the grievance trajectory (48.3%) when compared to males (36.4%). Table 18 depicts the assessed trajectories by gender.

Table 18

Identified M-TTAF Trajectories for Male and Female Defendants (N=305)

M-TTAF Trajectory	Male	Female	Total (n, %)
Antisocial	126	9	135 (44.3%)
Grievance	91	14	105 (34.4%)
Fire Interest	6	0	6 (2.0%)
Emotionally Expressive	15	5	20 (6.6%)
Multifaceted	12	1	13 (4.3%)
Cannot identify trajectory	21	5	26 (8.5%)

Exclusivity-versatility dichotomy. Not all transcripts identified the specific nature of previous convictions hence the identification of exclusivity of offending over versatility in offending could only be extracted for 264 cases. Where exclusivity and versatility could be ascertained, defendants who had committed only arson offences and therefore could be described as exclusive comprised 19.3% of the total sample ($n= 51$). Of this group nine were female defendants (17.6%). Differences based on gender approached significance as 17.8% of males were exclusive while 32% of females were exclusive $\chi^2 (n=264, 2) = 3.30, p = .06$. The majority of both males (82.2%) and females (68%) in this sample identified as versatile offenders

The majority of defendants ($n= 213, 80.7%$) were 'versatile' whereby their previous convictions comprised a variety of offence types. An analysis of the relationship between exclusivity/versatility status and other key variables was conducted to identify significant relationships between variables. Chi square statistics, based on varying sample sizes due to incomplete data for some variables, are summarised in Table 19. Analyses revealed significant differences between the versatile and exclusive groups on five variables: juvenile offending, first-time sentence, substance use in the commission of the arson, the M-TTAF trajectory identified, and the target of the arson. All of the transcripts involving exclusive arsonists specifically indicated that the defendant did not have a record of juvenile offending. In addition, 98% of this group were being sentenced for the first time. This was significantly different to the versatile cohort, where only 22.9% were being sentenced for the first time, or conversely, where 77.1% had previous convictions.

A significant difference emerged in terms of the choice of target or focus of firesetting for the exclusive group and the versatile group. Based on the standardised residuals the largest difference between the two groups was observed when considering those who set fire to their own property. A greater proportion of exclusive firesetters set fire to their own

property than the versatile group, who were more likely to set fire to the property of friends or relatives. Groups also differed in their use of substances in the commission of the arson, with substances used by 47.4% of versatile offenders but only 23.5% of the exclusive offenders.

The two groups differed in the M-TTAF trajectories, with more exclusive arsonists assessed on the emotionally expressive trajectory (12.5%) and the multifaceted trajectory (10.4%) than expected. Within the exclusive group, 35.4% were identified on the grievance trajectory and 4.2% on the fire interest trajectory. Fewer versatile arsonists were assessed on the emotionally expressive and multifaceted trajectories than was expected (4% and 3% respectively). There were 37.6% of versatile offenders identified on the grievance trajectory and 2% on the fire interest trajectory. The most common trajectory was the antisocial trajectory with 37.5% of exclusive arsonists and 53.5% of versatile arsonists.

Table 19

Chi square statistics for Key Variables across Exclusive and Versatile groups (n=264)

Variable	χ^2	<i>df</i>	<i>n</i>	Cramer's V or Phi	<i>p</i>
Gender	3.30	1	264	.112	.069
Juvenile offending known	33.91	1	130	.511	<.001
First-time sentence	71.74	2	264	.743	<.001
Substance use mentioned	9.59	1	264	.191	.002
Co-offenders/solo offending	.03	1	264	.012	.849
Previous arson convictions	3.82	1	127	.174	.051
Expressive/Instrumental	1.56	1	259	.025	.682
Mental health diagnosis ^a	.57	1	264	.047	.447
M-TTAF trajectory	12.72	4	250	.226	.013
Target of arson	14.29	3	264	.233	.003
Use of accelerants	3.42	1	191	.134	.064
Planned/unplanned offence	2.10	1	256	.091	.147

Note.^a A lack of reference to a previous or current mental health diagnosis was coded as none present.

Characteristics of the Arson offences

Each transcript was coded for key characteristics associated with the arson offence/s. These characteristics included the target of the arson. Property belonging to a relative or friend was identified most frequently, followed by firesetters own residence or property such as a vehicle, random community or government property, a person, a friend or relatives' property, a targeted business, and lastly bushland.

In 48.2 % of transcripts there was no mention of the presence or absence of substance use in the commission of the arson offences (*n*=147). Only those transcripts specifically indicating that the defendant was not under the influence of substances were coded as such. In 42.6 % of all cases the defendant was identified to have been under the influence of substances at the time of the arson offence/s (*n*= 130). There were no significant differences

between male and female offenders in the use of substances $\chi^2 (1, n = 305) = .033, p = .856$, or in the substances used $\chi^2 (5, n = 305) = 4.01, p = .547$. Table 20 highlights the types of substances most commonly used.

Table 20

Use of Substances in Commission of Arson Offences (N=305)

Substance Used	Male (n, %)	Female (n, %)
Alcohol only	68 (25.1%)	8 (23.5%)
Drugs only	27 (10.0%)	4 (11.8%)
Both drugs and alcohol	17 (6.3%)	2 (5.9%)
Alcohol and inhalants	4 (1.5%)	0
Transcript identified no substances involved	22 (8.1%)	6 (17.6%)
Transcript silent on the use of substances	133 (49.1%)	14 (41.2%)

Comparisons between Indigenous and non-Indigenous Arsonists

Chi square comparisons between Indigenous and non-Indigenous arsonists were conducted to identify differences on offender and offending variables. Table 25 reports chi-square statistics for key offender and offending variables for both the Indigenous and non-Indigenous groups. Sample sizes are based on the availability of unambiguous information on each variable, such that where a transcript was silent on a variable the case was removed from the analysis. Significant differences between the two groups were obtained for type of sentence granted, reference to a juvenile history of offending, reference to substance use, type of motivation, use of accelerants, degree of planning, and mental health diagnoses.

Significant differences were observed between the two groups in terms of the sentences granted upon conviction. Indigenous defendants were more likely to receive a combination of sentences comprising imprisonment and community supervision, than non-Indigenous defendants. They were also more likely to receive a custodial sentence of less than five years (54.8%) when compared to the non-Indigenous group (40.5%). A larger proportion of non-Indigenous defendants were sentenced to more than five years imprisonment (33.9%) when compared to their Indigenous counterparts (12.9%). This is interesting given the Indigenous defendants were more likely to have a history of offending as a juvenile identified.

A significant difference between the two groups for substance use emerged when all 305 cases are included $\chi^2 (5, n = 305) = 19.09, p = .006$ with a strong association (Cramer's $V = 0.25$). Substance use was identified in 61.3% of cases where the defendant was Aboriginal, as opposed to 40.5% of cases where the defendant was non-Indigenous. One of the salient differences between the two groups was the proportion of cases where a court was silent on the use of substances. Of the non-Indigenous cases, courts were silent on the use of substances in 51.8%, compared to 16.1% of Indigenous cases (standardized residuals = -2.6 and .9). In other words, where the defendant was Aboriginal, courts were statistically significantly more likely to refer to the presence of substances in connection with the arson offence, than in those cases where the defendant was non-Indigenous. When cases where a court was silent on the use of substances are removed and only cases where the presence or absence of substance use is explicitly referred to are considered ($n=158$), there is little difference in the references to substance use between the Aboriginal and the non-Indigenous groups $\chi^2 (4, n = 158) = 3.24, p = .409$ using FET. This suggests evidence of differential reporting by courts on the use of substances across the two groups.

Sixty-one percent of Indigenous defendants were identified as having an expressive motivation for their offences, compared to just 21% of the non-Indigenous group, and this difference was significant for males $\chi^2(1, n = 260) = 12.75, p < .001$, with a strong association (Cramer's $V = 0.22$) and females $\chi^2(1, n = 33) = 5.93, p = .015$ with strong association (Cramer's $V = 0.42$). The offences committed by non-Indigenous defendants were significantly more likely to have been planned and involved the use of accelerants, when compared to the offences committed by the Indigenous defendants.

Lastly, the presence of a current or previous mental health diagnosis was identified in 47.4% of the non-Indigenous group, compared to 29% of the Aboriginal group, which represented an emerging, albeit not statistically significant, difference between the two groups $\chi^2(1, n = 350) = 3.80, p = .051$. Despite the increased number of diagnoses indicated in the transcripts there was no evidence of an increased uptake of mental health treatment for the non-Indigenous group. There was no significant difference in the references made by courts to mental health treatment between the non-Indigenous defendants and the Indigenous defendants in terms of their history of previous mental health treatment. The majority in each group were identified to have had no experience of mental health treatment (68.6% and 64.5% respectively).

Other variables such as, gender, relationship status at the time of offending, the target of the arson offence, previous convictions for arson, whether the arson involved murder or manslaughter, and the identification of either exclusivity versus versatility in previous offending, failed to distinguish Indigenous and non-Indigenous firesetters. Table 21 summarises these results.

As was found in Study One, there was no statistically significant difference between the identified M-TTAF trajectory for Indigenous firesetters and non-Indigenous firesetters, however the most prevalent trajectory for the non-Indigenous group was the antisocial

trajectory, while the Indigenous group were more likely to be assessed on the grievance trajectory. Variations in the percentages for each trajectory were noted, as detailed in Table 22.

Table 21

Chi square statistics for Key Variables by Indigenous and non-Indigenous groups (N=305)

Variable	χ^2	<i>df</i>	<i>n</i>	Cramer's V or Phi	<i>p</i>
Age	42.21	52	305	.372	.832
Gender	2.34	1	305	-.088	.126
Sentences granted	20.37	5	305	.258***	.001
Juvenile offending	4.18	1	130	-.179**	.041
Exclusivity/Versatility	.93	1	264	-.059	.336
Substance use mentioned ^a	3.24	4	158	.143	.518
Co-offenders/solo	2.46	1	305	.090	.116
Expressive/Instrumental	19.62	1	293	.259***	.000
Target of arson	5.33	3	305	.132	.149
Use of accelerants	13.59	1	224	.246***	.000
Previous arson convictions	.37	1	127	.054	.542
MSO Murder/manslaughter	.43	1	305	.038	.511
Planned/unplanned offence	24.14	2	305	.281***	.000
Mental health diagnosis ^b	3.73	1	183	.143	.054
M-TTAF trajectory	3.56	4	279	.113	.468
Relationship status	2.39	1	222	-.104	.122

Notes. ^aOnly transcripts where specific reference to the presence or absence of substance use is made are included. ^bOnly transcripts where specific reference to the presence or absence of a mental health diagnosis are included.

Table 22

Identified M-TTAF Trajectories by Indigenous status (N=279)

M-TTAF Trajectory	Indigenous (n, %)	Non-Indigenous (n, %)
Antisocial cognition	11 (35.5%)	124 (50%)
Grievance	15 (48.5%)	90 (36.3%)
Fire Interest	0 (0%)	6 (2.4%)
Emotionally expressive	3 (9.7%)	17 (6.9%)
Multifaceted	2 (6.5%)	11 (4.4%)

Analyses based on Expressive/Instrumental Motivation

Chi-square tests of independence were conducted to identify relationships between assessed motivation for firesetting (instrumental or expressive) and other key variables. Cases where the type of motivation could not be accurately ascertained from the transcript were deleted ($n=12$). A statistically significant relationship was found between defendants' motivation and their assessed M-TTAF trajectory $\chi^2(5, n = 293) = 63.33, p < .001$, with very strong association (Cramer's $V = 0.46$). One key difference found was that 54.7% ($n=116$) of firesetters identified as having an instrumental motivation were assessed on the antisocial trajectory, compared to 21% ($n=17$) identified with an expressive motivation. Those identified with an expressive motivation were spread more evenly across all M-TTAF trajectories, with the largest proportion ($n=27$, or 33.3%) being assessed on the grievance trajectory. Based on expected frequencies of 50% in each of the two motivation categories, a chi-square test for goodness of fit indicated significant differences in the proportion of

defendants on the antisocial, grievance and emotionally expressive trajectories with an instrumental and expressive motivation (see Table 23).

Table 23

Allocation of Defendants across Type of Motivation and M-TTAF Trajectory (n=293)

M-TTAF trajectory	Instrumental	Expressive	Total
Antisocial**	116 (54.7%)	17 (21%)	133
Grievance**	78 (36.8%)	27 (33.3%)	105
Fire Interest	1 (.5%)	5 (6.2%)	6
Emotionally Expressive*	4 (1.9%)	16 (19.8%)	20
Multifaceted	5 (2.4%)	4 (4.9%)	9
Cannot identify	8 (3.8%)	12 (14.8%)	20
Total	212 (100%)	81 (100%)	293

** $p < .05$, *** $p = / < .001$

The relationship between instrumental or expressive motivation for firesetting and the presence or absence of a history of mental illness was examined. Chi-square analyses found a significant difference between those identified as instrumentally motivated to set the fire and those who were assessed as having an expressive motivation for their firesetting. The latter group ($n=81$) was more likely to have been diagnosed with a mental disorder, ($n=53$, 65.4%) than those whose firesetting served an instrumental purpose ($n=79$, 37.3%), $\chi^2(1, n = 293) = 18.78, p < .001$, with very strong association (Cramer's $V = .000$).

The instrumental group and the expressive group also differed as to whether their offences involved co-offenders. Those assessed as setting fires for instrumental purposes were significantly more likely to have offended in company, $n=81$ (38.2%), when compared

to their expressive counterparts $\chi^2(2, n = 293) = 13.20, p < .001$, with a very strong association (Cramer's $V = .000$). Of those assessed as setting fires for expressive purposes, 84% ($n=68$) acted alone.

All targets of the firesetting were collapsed into four categories (own property; friend's or relative's property; community property; and a specific person) in order to identify whether there were differences across the instrumental and expressive groups in their choice of targets. The difference between the two groups (Instrumental or Expressive firesetters) and their firesetting target was not statistically significant $\chi^2(3, n = 293) = 4.81, p = .186$.

Arsonist Typology

Cluster analysis was utilised to explore the existence of a typology of Australian arsonists, based on the sample of transcripts obtained. The analysis assumes representativeness of the sample, and the sample obtained across all Australian jurisdictions, is considered representative of all arson cases between 1990 and 2015. Sound clusters were derived from one primary analysis that included the following variables describing offence features: "Co-offenders" – a dichotomous variable indicating whether the arson offence was committed alone or in company, irrespective of relatedness; "Substances" – a variable identifying whether any substance use occurred at the time of the offending and the type of substance involved if present; "Planning" – a trichotomous variable depicting whether the transcript identified the offence/s were planned, impulsive/unplanned, or that there was no information on planning available; "Target" – a variable with 11 options categorising the focus of the arson offence; and lastly "Motivation" – a dichotomous variable identifying whether the firesetting was expressive or instrumental. These variables were chosen as they were considered to be conceptually independent, thereby reducing collinearity.

The results of the two-step cluster analyses generated a model comprising three clusters that reflected a sound silhouette measure of cohesion and separation at 0.5, indicative

of strong evidence of cluster structure, based on the work of Kaufman and Rousseeuw (1990). The ratio of cluster sizes attests to the soundness of the model at 1.31. The three clusters were labelled (a) solo, planned and instrumental ($n=117$ or 38.4% of total sample), (b) solo, impulsive and expressive ($n=99$ or 32.5%), and (c) group, planned and instrumental ($n=89$ or 29.2%). Variables contributed to the clusters in the order of co-offenders (predictor importance =1), motivation (predictor importance =.77), planning (predictor importance =.61), target (predictor importance = .13) and substance use (predictor importance = .03).

The first group *solo, planned, instrumental* comprised arsonists who acted alone, planned their offence and targeted specific property, most commonly a relative or friend's dwelling. Of this group there was no mention of any substance use in 51.3% of the sentencing transcripts, with the remaining transcripts indicating alcohol only, drugs only or a combination of drugs and alcohol used. The second group *solo, impulsive, expressive* also acted alone and targeted specific property, but their target was most likely their own place of residence or the residence of a friend or relative. They were likely to have acted impulsively and 38.4 % were under the influence of alcohol. The final type of arsonist *group, planned, instrumental* offended in company for instrumental purposes, most commonly planning and deliberately targeting random community property. Of this group, the majority (58.4%) were not identified as having been under the influence of substances. Table 24 depicts each of these groups, or arsonist types, based on the variables used in this analysis.

Table 24

Arsonist Types (N=305)

Arsonist type	Acted	Motivation	Target	Substances	Planning
Solo, planned, instrumental	Solo	Instrumental	Others dwelling	Various	Planned
Solo, impulsive, expressive	Solo	Expressive	Own dwelling	Mainly Alcohol	Impulsive
Group, planned, instrumental	In company	Instrumental	Random community property	Various	Planned

To ascertain the reliability of these clusters or arsonist types further verification was conducted. All 305 cases were randomly allocated a nine-digit number generated from Excel. Cases were then ordered from lowest to highest based on this random number, and then assigned to two datasets. Dataset A contained the first 152 cases and dataset B contained the remaining 153 cases. A two-step cluster analysis using the same five variables as previously ‘Co-offenders’, ‘Substances’, ‘Planning’, ‘Target’ and ‘Motivation – Expressive or Instrumental’ was then conducted for each dataset independently. Both datasets generated three clusters which reflected the three cluster/arsonist types found in the main analysis, indicating the reliability and stability of these clusters. Table 25 compares the cluster sizes from the total sample and dataset A and dataset B.

Table 25

Cluster Sizes from Main Analysis and Verification Analyses for the Arsonist Types

Arsonist type	Total sample (N=305)	Dataset A (n=152)	Dataset B (n=153)
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Solo, planned, instrumental	(117) 38.3%	(65) 42.8%	(84) 54.9%
Solo, impulsive, expressive	(99) 32.5%	(47) 30.9%	(35) 22.9%
Group, planned, instrumental	(89) 29.2%	(40) 26.3%	(34) 22.2%

Chi Square Analyses based on Arsonist Type

Chi square analyses were conducted using this new variable ‘Arsonist type’, comprising the three clusters identified, to investigate relationships between each of the three types of arsonist and other variables. The first analysis considered whether there was a relationship between arsonist type and the identified trajectory based on the multi-trajectory theory of adult firesetting.

Arsonist type and M-TTAF trajectory. Cases where an identified trajectory was not able to be determined, due to a lack of information in the sentencing transcript, were removed from this analysis leaving an amended sample of 279 cases. A significant relationship was identified between arsonist type and M-TTAF trajectory $\chi^2(8, n = 279) = 86.51, p < .001$, using the Fishers Exact test to account for several small cell counts, with a medium effect size of .394 (Cohen, 1988). Those in the *solo, planned, instrumental* group were more likely to be identified on the grievance trajectory than other arsonist types, and those in the *group,*

planned, instrumental type were significantly more likely to be identified on the antisocial cognition trajectory than any of the other trajectories. The relationship between the *solo, impulsive, expressive* arsonist type and M-TTAF trajectories was not as clear as shown in Figure 2.

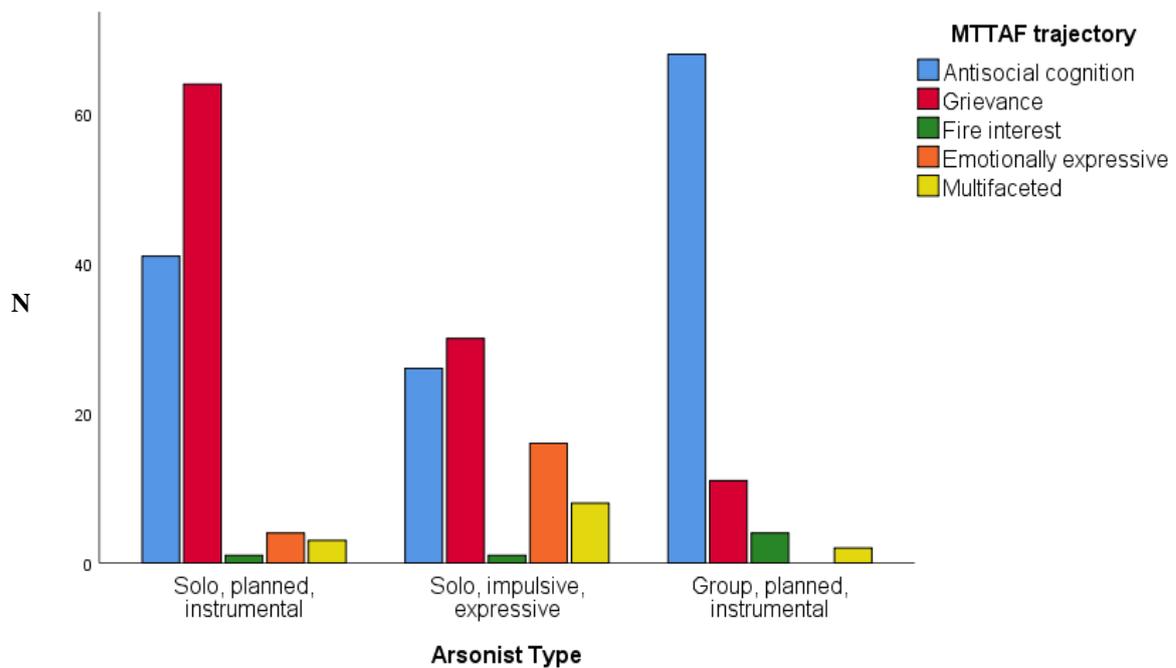


Figure 2. Distribution of M-TTAF Trajectories across each of the Arsonist Types.

Arsonist type and mental health diagnosis. The second analysis considered whether there was a relationship between arsonist type and a history of mental health diagnosis. Where a transcript did not refer to any previous or current diagnosis of mental health illness or problem it was coded as absent, hence all 305 cases were able to be considered. A significant relationship between arsonist type and mental health diagnosis was identified $\chi^2(2, N = 305) = 14.71, p < .001$, with a moderate association (Cramer's $V = 0.22$) (Rea & Parker, 1992). Of the three arsonist types, firesetters identified as *solo, impulsive, expressive* were more likely to have been diagnosed with mental health problems, as depicted below.

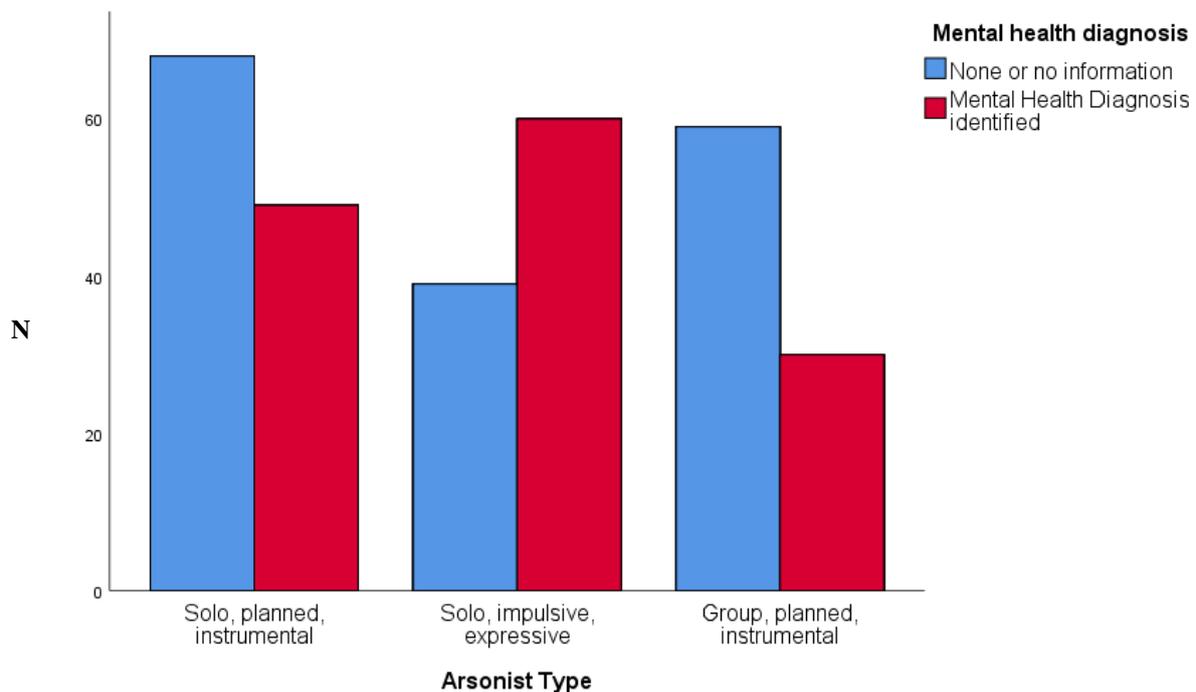


Figure 3. Presence of Mental Health Diagnoses across each of the Arsonist Types.

Arsonist type and previous offences. A third analysis considered whether there was a relationship between arsonist type and the presence of previous offences. A chi-square analysis was conducted using all 305 transcripts and indicated no significant relationship in this instance as each of the three arsonist types comprised a majority of firesetters with previous convictions $\chi^2(4, N = 305) = 5.80, p = .215$.

Arsonist type and Indigenous status. A chi square analysis was conducted to identify whether there was a relationship between Indigenous status and arsonist type. A significant relationship between these two variables was found $\chi^2(2, N = 305) = 16.51, p < .001$, with a very strong association (Cramer's $V = .000$). This analysis yielded evidence of a significant relationship between arsonist type and Indigenous status with a medium effect size of .233 (Cohen, 1988). Of the 31 Aboriginal firesetters, 64.5% were identified in the *solo, impulsive, expressive* offender type, with the remaining 11 split between the other two

offender type groups. Non-Indigenous firesetters were more evenly split across the three arsonist types, as indicated in Table 26.

Table 26

Indigenous Status across each of the Arsonist Types (N=305)

Arsonist Type	Indigenous <i>n</i> (%)	Non-Indigenous <i>n</i> (%)
Solo, impulsive, expressive	20 (64.5%)	79 (28.8%)
Group, planned, instrumental	6 (19.4%)	83 (30.3%)
Solo, planned, instrumental	5 (16.1%)	112 (40.9%)
Total	31 (100%)	274 (100%)

Arsonist type and gender. The difference between arsonist type by gender was not statistically significant $\chi^2(2, N = 305) = 3.92, p = .140$. Female arsonists were allocated to each of the three arsonist types as follows (1) *solo, planned, instrumental* ($n=8$, 23.5% of female group), (2) *solo, impulsive, expressive* ($n=15$, 44.1% of female group), and (3) *group, planned, instrumental* ($n=11$, 32.4% of female group), which is a similar distribution to male arsonists.

Table 27 summarises these results, showing the number and percent of variables within each of the arsonist types. This table shows for instance, that 60% of defendants in the *Solo, impulsive, expressive* arsonist type were identified to have a mental health diagnosis, while just 34 % of those in the *group, planned, instrumental* arsonist type had a mental health diagnosis. Arsonist type was significantly associated with both the mental health status of defendants and their Indigenous status.

Table 27

Summary of Pearson's chi-square analyses for Arsonist Types on key Dichotomous Variables

Variable present	Solo, impulsive, expressive (<i>n</i> = 99 32.5%) % (<i>n</i>)	Group, planned, instrumental (<i>n</i> =89, 29.2%) % (<i>n</i>)	Solo, planned, instrumental (<i>n</i> = 117 38.3%) % (<i>n</i>)	χ^2	Cramer's V
Mental health diagnosis present (<i>n</i> =139)	60% (60)	34% (30)	42% (49)	14.715	.220*
Criminal history identified (<i>n</i> =189)	61 % (61)	66% (59)	59% (69)	5.800	.098
Indigenous status identified (<i>n</i> =31)	20% (20)	7% (6)	4% (5)	16.513	.233***
Male gender (<i>n</i> =271)	85% (84)	88% (78)	93% (109)	3.929	.113

* $p < .05$ ** $p < .01$, *** $p < .001$

Analyses Based on M-TTAF Trajectory

Chi-square analyses were conducted to investigate relationships between a defendant's assessed M-TTAF trajectory, the target of arson and mental health diagnosis. The Fishers exact test was computed as two trajectories, (Fire Interest and Emotionally Expressive) were expected to contain small cell counts. A total of 279 transcripts, where the trajectory was able to be determined, were included in chi-square analysis for arson target, which produced a significant result $\chi^2 (12, N = 279) = 75.93, p < .001$ using FET, with very strong association (Cramer's $V = 0.30$). Table 28 depicts significant differences between

trajectory and choice of target, whereby those on the antisocial cognition trajectory were more likely to choose community property as the target of their firesetting (41.5%); while those on the grievance trajectory were more likely to choose a friend's or relative's property as the target (59%), and those assessed as emotionally expressive were more likely to set fire to their own property (65%).

Table 28

Relationships between M-TTAF Trajectory and Firesetting Target (n=279)

Trajectory	Own property n (%)	Friend or relative's property n (%)	Community property n (%)	Specific person n (%)	Total n (%)
Antisocial	25 (18.5%)	39 (28.9%)	56 (41.5%) ^b	15 (11.1%)	135 (100%)
Grievance	14 (13.3%)	62 (59%) ^b	12 (11.4%) ^a	17 (16.2%)	105 (100%)
Fire Interest	0 (0%)	1 (16.7%)	5 (83.3%) ^b	0 (0%)	6 (100%)
Emotionally Expressive	13 (65%) ^b	1 (5%) ^a	6 (30%)	0 (0%)	20 (100%)
Multifaceted	4 (30.8%)	3 (23.1%)	5 (38.5%)	(7.7%)	13 (100%)
Total	56	106	84	33	279

Note: ^aThe value of the standardised residual was less than -1.96.

^bThe value of the standardised residual was greater than 1.96.

Chi-square analysis revealed a statistically significant relationship between a previous or current mental health diagnosis and M-TTAF trajectory $\chi^2(4, N = 279) = 36.72, p < .001$. Using Cohen's criteria for the calculation of effect size, the Cramer's V statistic of .363 indicates a large effect (Cohen, 1988). The main differences between the trajectories can be observed in the percent of defendants with a history of mental health diagnoses assessed on

the Emotionally Expressive (90%) and Fire Interest (100%) trajectories when compared to the Antisocial and Grievance trajectories (see Table 29).

Table 29

Relationship between Mental Health Diagnosis and M-TTAF Trajectory (n=279)

M-TTAF trajectory	No mental health diagnosis	Mental health diagnosis	Total
Antisocial	90 (66.7%)	45 (33.3%)	135
Grievance	60 (57.1%)	45 (42.9%)	105
Fire Interest	0 (0%)	6 (100%)	6
Emotionally Expressive	2 (10%)	18 (90%)	20
Multifaceted	3 (23.1%)	10 (76.9%)	13

Trends in Arson Offences between 1990 and 2015

The final section explores trends in the sample of arsonist sentencing transcripts across time, seeking to identify changes in either the offence features or offender characteristics over the 25 years. Linear trend analysis controls for a negatively skewed distribution of cases across time. To identify meaningful trends, the steady increase in the number of transcripts obtained in recent years as opposed to earlier years, or a negatively skewed distribution, necessitated the conversion of raw numbers to percentages.

Trend analyses were conducted for mental illness, substance use and gender based on the research hypotheses detailed previously. Significant linear trends were found for the presence of a mental health diagnosis and the use of substances in connection with the arson offence over the 25-year period. The linear trend for percentage of arsonists with a mental health diagnosis accounted for 69% of variation within the sample. This is significant ($t =$

7.23, $p < .001$) and suggests a linear relationship between the percent of arsonists with a mental health diagnosis and the year sentenced. The linear trend for the use of illegal substances during the commission of an arson offence was also significant ($t = 3.28$, $p < .05$) but accounted for less variance, (32%). Both mental health diagnosis and use of substances were identified as having increased over the 25-year period.

An unexpected linear trend was identified, indicative of increasing numbers of females being sentenced for arson over the 25-year period ($t = 3.19$, $p < .001$), accounting for 31% of variance. There was no evidence of a trend in the number of Indigenous arsonists appearing before the courts over the period. Table 30 depicts the linear trend statistics for these variables.

Table 30

Linear Trend statistics and Model Summaries based on simple regression analyses

Variable	R ²	B	SEB	β	t
Mental health diagnosis	.69	2.78	0.38	0.83	7.23***
Substance use	.32	1.44	0.44	0.56	3.28*
Indigenous status	.05	.34	0.31	0.22	1.096
Female Gender	.31	.64	0.20	0.55	3.19**

* $p < .05$ ** $p < .01$, *** $p < .001$

Where a statistically significant linear trend was identified, projections for the next five years were calculated. Table 31 identifies the projected fit for percentage of year for each of the three significant variables to 2020. These projections suggest that 80% of arsonists being sentenced in 2020 will present with a mental health diagnosis, 60% will have used substances in connection with their offence, and 19% will be female.

Table 31

Linear Trend Fit for Percentage Statistic (1991 – 2015) and Projections to 2020 for Mental Health Diagnosis, Substance Use and Female arsonists (N=305)

Year	Mental Health Diagnosis	Substance Use	Female arsonists
1991	.37354	18.66154	.26523
1992	3.15208	20.10308	.90746
1993	5.93062	21.54462	1.54969
1994	8.70915	22.98615	2.19192
1995	11.48769	24.42769	2.83415
1996	14.26623	25.86923	3.47638
1997	17.04477	27.31077	4.11862
1998	19.82331	28.75231	4.76085
1999	22.60185	30.19385	5.40308
2000	25.38038	31.63538	6.04531
2001	28.15892	33.07692	6.68754
2002	30.93746	34.51846	7.32977
2003	33.71600	35.96000	7.97200
2004	36.49454	37.40154	8.61423
2005	39.27308	38.84308	9.25646
2006	42.05162	40.28462	9.89869
2007	44.83015	41.72615	10.54092
2008	47.60869	43.16769	11.18315
2009	50.38723	44.60923	11.82538
2010	53.16577	46.05077	12.46762
2011	55.94431	47.49231	13.10985
2012	58.72285	48.93385	13.75208
2013	61.50138	50.37538	14.39431
2014	64.27992	51.81692	15.03654
2015	67.05846	53.25846	15.67877
2016	69.83700	54.70000	16.32100
2017	72.61554	56.14154	16.96323
2018	75.39408	57.58308	17.60546
2019	78.17262	59.02462	18.24769
2020	80.95115	60.46615	18.88992

Note. No transcripts were obtained from 1990.

Discussion

Utilising a quantitative methodology this study was designed to generate a typology of arsonists based on 25 years of Australian court transcript data obtained from each jurisdiction. In addition, this study considered trends in arson offending over this period, to identify whether mental health diagnoses, the proportion of females convicted of arson, and if the use of illegal substances in the commission of arson offences were escalating. This study also focussed on identifying whether the Australian arsonist was more likely to be a versatile offender, similar to international cohorts, and if differences between Indigenous and non-Indigenous arsonists could be detected.

The results of this study support the three hypotheses: (a) that the proportion of Australian arsonists identified as having a mental health diagnosis has increased over the period 1990 to 2015; (b) that the identification of use of illegal substances in the commission of arson offences has increased over this period; and (c) that Australian arsonists demonstrate a versatile range of offending behaviours. This study identified significant differences between Indigenous and non-Indigenous arsonists. It also established three profiles or typologies, based on offender and offending characteristics identified over the 25-year period.

Increased Diagnosed Mental Illness and Personality Disorder

This study supports established findings on the high prevalence of diagnosed mental illness among arson offenders (Anwar et al., 2011; Ducat et al., 2013; Harris & Rice, 1996; MacKay et al., 2006). Over the 25-year period, Australian courts referred to a mental health diagnosis at the time of sentence in 37.7% of the arson cases. The trend analysis showed the projected proportion of arsonists presenting to Australian courts with a diagnosed mental illness would increase significantly to reach 80% by 2020, which may reflect prevalence more accurately. Considering this trend in combination with future predictions indicating a significant increase in the number of women appearing before the courts charged with arson,

it is likely that female arsonists with mental health diagnoses will feature prominently as a challenging group. This study found fewer references to a diagnosis of schizophrenia in sentencing transcripts than has been previously identified in international samples. In a Swedish sample Anwar et al., (2011) found 50.4% of convicted arsonists have been diagnosed with schizophrenia. The current study identified 8% of transcripts referred to such a diagnosis, which is consistent with an earlier Australian study identifying 6.9% of convicted arsonists diagnosed with a psychotic illness (Ducal et al., 2013). This discrepancy may be due to courts failing to specify existing diagnoses at the time of sentencing, or the difference may reflect limited psychiatric assessments being conducted prior to sentencing.

High rates of mental illness point to implications for arson theory and treatment. The M-TTAF postulates an increase in risk of firesetting among the mentally ill, in that the presence of a mental illness moderates psychological vulnerabilities such as emotional regulation and communication problems, offence supportive cognitions, and fire scripts. However, given the projected rates of mental illness diagnoses among arsonists, it is likely that this variable more than simply moderates risk, and is likely to have a significant impact on firesetting propensity.

Given the propensity for mental illness among arsonists, arson treatment providers in the future will likely need to assume a history of mental illness when establishing programs for firesetters. The substantial number of firesetters diagnosed with a mental illness may impact on expected treatment outcomes, in terms of interfering with the development of participants' insight and self-awareness. A high proportion of firesetters with a mental illness is also likely to impact on treatment program considerations such as the timing, frequency, and length of sessions, and warrant careful attention to content that might retrigger symptoms.

This study also examined whether personality disorders were diagnosed at rates observed in previous studies. A relationship between the diagnosis of antisocial personality disorder and firesetting in adults, and its precursor conduct disorder in adolescents, has been established (Kosky & Silburn, 1984; Lindberg et al., 2005; Martin, Bergen, Richardson, Roeger, & Allison, 2004), however similar rates were not observed in this sample. It is interesting to note that only eight defendants were identified as having been diagnosed with an antisocial personality disorder (APD) at the time of sentencing; four of whom were diagnosed with APD in conjunction with another personality disorder. A low percentage of identified antisocial personality disorder diagnoses may not reflect the actual rates of diagnosis and may simply reveal the courts attention to this diagnosis in reviewing the case. An alternative view is that this result may reflect a preference by defence counsel to only tender a diagnosis of mental illness (formerly Axis 1 disorder) in court, as opposed to a personality disorder which may be viewed as an aggravating factor at the time of sentencing. Further analysis of judicial sentencing considerations in arson cases would clarify this issue.

Substance Use and Arson

Based on research identifying increases in substance use related crime across a range of offending behaviours (Butken et al., 2011; DeMatteo, Filone, & Davis, 2015; Goldsmid & Willis, 2016; Wang et al., 2017), the current study investigated whether this trend also applied to offences of arson. A linear trend analysis projected the use of substances in connection with arson offences would increase over the five years from 2015, and it was estimated that by the year 2020, 60% of arsonists appearing before the courts for sentencing will have used an illegal substance in the commission of their offence. This complicates the sentencing process in terms of understanding defendants' prospects of rehabilitation and culpability, if the defendant is found to have acted out of character (Bagaric et al., 2017). It also increases the risk of future offending if this criminogenic need is not addressed (Kellen,

Powers, & Birnbaum, 2017; Vaughn, Salas-Wright, & Reingle-Gonzalez, 2016). This trend is consistent with an increasing use of substances within the general criminal population and calls for greater attention to the use of alcohol and illegal drugs in both general criminogenic theories and offence-specific treatments.

In terms of implications, it could be expected that increased substance use would reduce arsonists' consideration of the impact of fire, specifically the damage it might cause or the danger it may present to others. This study found no significant difference between male and female arsonists and their use of substances, unlike findings from a recent study in the United Kingdom. Wyatt et al., 2018 found female firesetters ($n=40$) were less likely to have been intoxicated at the time of their offending, than male firesetters ($n=26$). Variations in sample construction may account for this difference in that the UK sample was drawn from psychiatric institutions where most of the firesetting had taken place, and as such, may not fully reflect characteristics of the general community-based arsonist.

Further research in this area may consider whether an increased use of substances impacts on the percentage of unplanned or impulsive arson offending, given the relationship between substance use and dysregulated and antisocial behaviour (Brennan, Hyde, & Baskin-Sommers, 2017; Krueger, Markon, Patrick, Benning, & Kramer, 2007).

Arsonists are Versatile and have Previous Convictions

As demonstrated in previous studies (Doley et al. 2011; Doley, 2009; Ducat et al. 2013), the current sample comprised a majority of versatile offenders who had committed a diverse range of offence types. This group of arsonists were found to be significantly different from those who had only committed arson offences - the exclusive group, in terms of previous convictions, substance use, and the target of their offending. The versatile group had previous convictions for a variety of offences, and they were more likely to have been convicted of criminal offences as a juvenile. Their firesetting was also more likely to target

the property of others, whereas the exclusive group were found to have targeted their own property. Neither group differed on whether their firesetting was motivated by instrumental or expressive purposes, suggesting that this motivational dichotomy did not discriminate this dimension.

The majority of the exclusive group were male, and all had no history of juvenile offences. They were significantly more likely to be attending court for the first time compared to the versatile cohort. The exclusive group were less likely to use substances in the commission of their offence when compared to the versatile group. These findings support the conclusions of Ducat et al. (2013) who found exclusive firesetters in their sample were less likely than their versatile counterparts to have used substances in their offending, or to have previous convictions. These results, in addition to the finding that even the small group of repeat arsonists in this sample were largely versatile in their offending, suggest exclusive arsonists are a small subgroup of all arsonists, and as such arson treatment ought to focus on generic criminogenic factors in the main. Other than for the exclusive group, arsonists in general might be better accommodated in generic offender behaviour programs that target a broad spectrum of criminogenic needs, prior to participating in arson-specific programs that address arson-related scripts and implicit theories.

Offender and Offence Characteristics of Arsonists

This study supports previous research on the gender breakdown of arsonists (Enayati et al., 2008; Hoertel et al., 2011) in that the clear majority of arson transcripts obtained over the 25-year period referred to male defendants (89%). The average age at the time of offending was 34 years (median age 32 years), which is higher than the average age identified in previous studies of Australian and New Zealand arsonists (Doley, 2009; Edwards & Grace, 2013) but similar to a Swedish sample (Enayati et al., 2008).

Results obtained in this study also reflect earlier research findings on the motivations for arson. The most frequent motivation for the offences was revenge (36%), which aligns with the conclusions of Barnoux and Gannon (2014) who identified revenge accounted for 13 to 58% of all arson offences, with an estimated average of 30% drawn from empirical studies dating from 1970. This finding contrasts with that found in Study One (N=33), where the elimination of evidence was the most common motivation for the arson offence. This variation may be due to differences in sample sizes, and the proportions for each of the motivations might be expected to shift as sample sizes increase.

The most common target for the arson was the arsonist's home or the home of known friends/relatives, followed by random community property or public buildings. This is consistent with findings by Gannon and Pina (2010) and Green et al. (2014) who found that the most common target of arson offences was residential properties. Accelerants were used in the majority of offences, however a large proportion of transcripts lacked information about the use of accelerants. The transcripts also revealed that it was more likely the arson offence was perpetrated by one person acting alone, rather than in company with others.

Offences were more likely to be planned than unplanned, but both types were found in this sample. This is inconsistent with the findings of Kocsis and Cooksey (2002) who only found planned arson offences in their Australian sample, and this may be explained by the fact that Kocsis and Cooksey examined police files, which may not have provided as detailed a description of the offending as the court transcripts. The degree of planning involved in an arson offence was found to be a useful discriminating variable given the most common motivation for the crime of arson over the research period was anger prompting revenge or payback. This motivation was considered both expressive and instrumental depending on the level of planning identified. Therefore, the assessment of arson offenders should not neglect

this pivotal element of premeditation, often described as an aggravating factor in sentencing, when formulating a treatment plan.

Where transcripts provided sufficient information about the defendant to identify the most appropriate M-TTAF trajectory, the largest proportion of defendants were assessed on the antisocial trajectory (44.3%). This trajectory aligns with the constellation of characteristics identified by Andrews and Bonta (2010) that contribute to criminal offending, such as antisocial personality, substance abuse, low social involvement, attitudes supportive of crime, social support for crime, low work engagement, family dysfunction, and criminal history.

To date there has been limited research classifying arsonists according to the M-TTAF trajectories. Hagenauw, Karsten, Akkerman-Bouwsema, Jager and Lancel (2014) identified 14 arsonists from a large sample of Dutch psychiatric patients who were accommodated in a mental health facility and found support for three of the M-TTAF trajectories. They allocated three patients to the antisocial trajectory, three patients to the emotionally expressive trajectory, and four patients to the grievance trajectory. The remaining four arsonists could not be allocated to a specific trajectory as they were actively psychotic at the time of their firesetting. Empirical research on M-TTAF classifications is emerging with Dalhuisen et al. (2015a) partially validating the trajectories in a study of 389 mental health patients, yet explorations of the utility of the trajectories with general community samples of arsonists has been limited. The current study suggests that some M-TTAF trajectories appear to have greater utility in the identification of clinical needs than others, however further research on non-adjudicated firesetters would provide evidence with which to generalize these results.

For example, a very small number of defendants from the current research ($n=6$), were identified on the fire interest trajectory. Despite an interest in fire or explosives being

identified by Tyler et al. (2015) as being predictive of multiple firesetting, the current study found the fire interest trajectory had limited classification utility and may not contribute significantly to the selection of treatment pathways. One explanation for these different findings may be attributable to differences in the methodologies of each study. The Tyler et al. (2015) sample comprised mentally disordered patients accommodated in psychiatric institutions, half of whom were identified as firesetters, while the current study drew on a broad community sample comprising only firesetters. It is possible therefore, that the identification of a fire interest is more likely in a sample of patients with mental illness, and less relevant to a general sample. It is important to ensure theory reflects all firesetters proportionately, and given the evidence from this study, a review of the salience of the fire interest trajectory in the M-TTAF is recommended to determine if the fire interest group might be subsumed by another trajectory.

Aboriginal and/or Torres Strait Islander Arsonists and non-Indigenous Arsonists

Ten percent of the defendants from this sample were identified by the sentencing court as Aboriginal, which is higher than the percentage of adult Aboriginal people in the Australian community (2%), but less than the percentage of adult Aboriginal people who are either in custody or under community corrections supervision in this country (27%). This percentage is consistent with the general over-representation of Aboriginal people in the Australian criminal justice system (Australian Bureau of Statistics, 2016b). It is likely that the reduced percentage of Indigenous arsonists reflects the lack of published sentencing transcripts in Magistrates courts, as fires set by Indigenous people are often smaller and less significant and are therefore dealt with as a summary charge.

The results of this study identified key differences in offence features between the Aboriginal group and the non-Indigenous group. In terms of the offender background features, reference to a juvenile history of offending was significantly more likely to be noted

by the court when sentencing an Aboriginal defendant, yet there was no difference between the two groups in reference to previous convictions, suggesting that the Aboriginal offenders may have commenced offending at an earlier age. This is consistent with the historical, and current, increased proportion of Indigenous juveniles in detention in Australia when compared to their non-Indigenous peers (Heffernan, Anderson, McEntyre, & Kinner, 2014; Morgan & Sweeney, 2015; Richards, 2011; Stewart, Allard, Gray, & Ogilvie, 2007).

A significant difference between the Indigenous and non-Indigenous groups was found in their motivation for offending. When compared with non-Indigenous arsonists, the Aboriginal group was significantly more likely to be assessed with an expressive motivation for their offence. Interestingly, all Aboriginal arsonists who were identified with an expressive motivation for firesetting acted alone. This points to a possible relationship between emotional distress and a need to impact on their environment in a manner that has personal significance for this group. As was found in Study One, a history of unresolved grief and trauma appear to play a pivotal role in the emotionally expressive use of fire. This group of Aboriginal arsonists was more likely to have set fire to their own property or the property of friends or relatives, suggesting their actions were personally directed rather than directed outward, or broadly, towards their community. The offences committed by Aboriginal arsonists were more likely to have been unplanned acts without the use of accelerants and committed under the influence of substances. Similar to Gellers' (1992) thesis that firesetting is often used to communicate distress, this study points to the use of fire by Aboriginal arsonists to impulsively express themselves.

This study found that the expressive-instrumental dichotomy clearly separated the motivations of Indigenous arsonists and non-Indigenous arsonists, in contrast to the results of Study One, where this dichotomy failed to distinguish the two groups. In Study One an alternative dichotomy was considered, based on explicit and implicit motivations. This

difference may reflect methodological differences, in that the depth of detail available on firesetters across the two studies varied. Study One was based on interviews with participants and included detailed background information compared to Study Two, which relied on third party comments to describe and detail offender characteristics. Alternatively, this difference between the two studies may reflect differences in the samples from each study. Specifically, this difference may be attributed to the sample from Study One being drawn from only two jurisdictions and the sample from the current study being drawn from all Australian jurisdictions, reflecting variations across the Indigenous samples based on a narrow (Study One), and a broad (Study Two), range of locations of origin. This hypothesised explanation is consistent with standpoint theory which emphasises Indigenous knowledge, borne of lived experience and a complex set of social relations, is place-based.

Mental health diagnoses were more likely to be raised in transcripts involving non-Indigenous defendants. This result is not dissimilar to the findings from Study One where a difference between the groups on mental health diagnosis was identified. While the difference did not reach statistical significance, a greater proportion of non-Indigenous participants (73.7%) identified a mental health diagnosis than those from the Indigenous group (42.9%).

In the current study fewer Indigenous women were identified with a mental illness than was expected, based on other studies which found significantly larger percentages of mental illness in Indigenous women in custody (Heffernan et al., 2015). Only one of the six Indigenous women in the current study was identified in the sentencing transcripts as having a mental illness, though the small sample is unlikely to be representative of the rate of mental illness in this group. In contrast, reference to a mental health diagnosis was significantly higher in cases of non-Indigenous women, where half were identified as having either a historical or current mental health diagnosis.

The unexpected finding that few Indigenous women were identified to have a mental health diagnosis may not necessarily reflect differences in the presence of mental health problems, but instead methodological differences, as the Heffernan et al. (2015) study included a questionnaire, a diagnostic instrument and clinical interviews to identify the presence of mental illness. A further explanation, indicative of under-reporting biases, is provided by Westerman (2004), who argues that Indigenous people do not access mental health services to the extent that non-Indigenous people do, as they are more likely to pursue support within their community prior to seeking external assistance (Westerman 2004).

Differences in treatment service utilization was found by Sodhi-Berry et al. (2014) who identified differences between a large sample of Indigenous and non-Indigenous recipients of government-based mental health services in Western Australia, in terms of the type of treatment sought. These authors found Indigenous offenders were more likely to have received mental health treatment for substance use disorders, but less likely for other disorders such as personality disorders, adjustment disorders and affective psychoses compared to non-Indigenous offenders. Reduced service utilisation has also been identified in other minority cultures, with studies of African American offenders with a mental illness less likely to engage in treatment than White American counterparts (Jin et al., 2011; Simning, van Wijngaarden, & Conwell, 2012).

Further reasons for the under-reporting of mental illness among Indigenous women have been postulated, including the intimidating environment of the criminal justice system, the domination of male legal representatives, and the lack of available mental health services in some regional communities in Australia (McCausland & Vivian, 2010). Lastly, if a lack of mental health treatment does not reliably indicate an absence of symptoms or history of symptoms of mental illness, and a proportion of Indigenous people remain undiagnosed, then

it is no wonder that courts are not presented with reliable information on mental health status in all cases.

The proportion of Indigenous female arsonists were identified to be increasing at higher rates in recent years, accounting for the increased number of all transcripts obtained in 2014-15 involving Indigenous persons sentenced for arson. The percentage of Indigenous arsonists increased from an average of 7.9% of the total sample in the years preceding 2014, to 26.5% in 2014 and 24% in 2015. This marked increase reflects a surge in the number of Aboriginal women sentenced for arson in 2014 and 2015. Non-Indigenous female arsonists were presented before the Australian courts across a range of years between 1998 and 2015, however, the pattern for Aboriginal female arsonists was quite different, in that they were all sentenced in 2014/2015. Whether this reflects the actual offending pattern, or it is an anomaly based on the availability of sentencing transcripts is unclear, however, according to a recent New South Wales report on women in that state, the rate of imprisonment for Aboriginal women is higher than the rate of non-Indigenous women sentenced to custody (New South Wales Ministry of Health, 2016).

An increase in the proportion of Indigenous women offending, compared to their non-Indigenous counterparts, was previously identified in New South Wales. In 2011-12 Aboriginal women accounted for 27% of all Aboriginal offenders, while non-Indigenous women accounted for 18% of all non-Indigenous offenders (Department of Family and Community Services, New South Wales Government, 2013). Similarly, Allard et al. (2010) found Indigenous young people were significantly more likely to have contact with the Queensland juvenile justice system than non-Indigenous young people, and the rates were higher for both males and females. Drawing from a large sample of 8,236 young people all born in Queensland in 1990, they found two in three Indigenous males had contact with the criminal justice system by the time they were 17 years, compared to just one in ten of the

non-Indigenous males. One of every four Indigenous females had contact with the system compared to one in twenty non-Indigenous females of the same age. While Cunneen (2006) postulates police bias is one of the main factors contributing to this over-representation, there is some evidence of a higher incidence of Indigenous offending (Bartels, 2012; Marshall, 2006; Wundersitz, 2010), and a discussion of the theoretical explanations and key factors contributing to this was provided in Chapter Two.

Indigenous and non-indigenous defendants did not differ on the M-TTAF trajectories identified. The results from this study and Study One are consistent, in that the largest proportion of all arsonists were assessed on the antisocial trajectory. However, there were significant differences between the Indigenous and non-Indigenous groups across the three arsonist types. Almost two-thirds of the Aboriginal arsonists in this sample were allocated to the solo, impulsive expressive arsonist type cluster as opposed to the non-Indigenous defendants who were spread more evenly across the three Arsonist types. Further exploration of the offence characteristics of female firesetters is indicated by an emerging difference between Indigenous and non-Indigenous firesetters. It is acknowledged that the small sample sizes contraindicate conclusive statements, and as such this is a preliminary indication only. Five of the six female Aboriginal arsonists in this sample (85%) were allocated to the solo, impulsive expressive arsonist type, compared to 33% of the non-Indigenous women, suggesting further research is warranted to investigate differences in the choice of target, level of planning and use of alcohol between the two groups of female arsonists.

Typology of Australian Arsonists

This study is the first to examine an Australian sample of arson (offender and offence) characteristics across a 25-year period. By drawing on a generic group of arson cases, rather than a purposive sample from a point in time, or a specific location such as a psychiatric institution, this study is well placed to propose a typology of Australian arsonists. Using an

exploratory cluster analysis technique this study identified three robust clusters, or arsonist types, based on the 305 sentencing transcripts obtained from Australian courts between 1990 and 2015. A range of offender characteristics (motivation, use of substances, and planning) and offence features (target, and offending in company or alone) contributed to the development of the three cluster/arsonist types generated.

The three clusters were labelled (1) solo, planned, instrumental, (2) solo, impulsive, expressive, and (3) group, planned, instrumental, to highlight those factors which accounted for significant variance between the groups. This cluster model expands on existing theory and typologies, such as the dichotomous dimension of expressive/instrumental motivation from the action systems model (Canter & Fritzon, 1998), and the pathways approach which is central to the multi-trajectory theory of adult firesetting, by considering both offender characteristics and offence features. The instrumental firesetters were allocated across two clusters, which were distinguished in terms of whether the offending occurred alone or in a group, while those identified as having an expressive motivation were more likely to have acted alone. This further elucidation of the expressive-instrumental dichotomy provides a useful contextual element when considering the factors contributing to the offending.

In terms of alignment with the M-TTAF trajectories, those in the solo, impulsive, expressive group were spread across all trajectories, while the remaining two clusters were strongly aligned with one of the trajectories. Arsonists who were assigned to the solo, planned, instrumental cluster were more likely to be classified on the grievance trajectory, indicative of planned revenge motivation; as opposed to those on the group, planned, instrumental cluster whose behaviour was more likely to be antisocial in nature (antisocial trajectory).

This typology extends previous research as it draws on motivation x target variables, and adds elements of substance use, degree of planning and group/solo offending, providing a

greater level of discrimination between the distinct groups. Each of these additional elements represents a treatment target and offers clinicians a more comprehensive basis upon which to commence the assessment of arsonists' priority treatment needs. The arsonist types also appear to reflect cultural differences, providing potential value when describing the behaviour of Indigenous arsonists. In light of these results it is increasingly likely that the clinical utility of arson theories would be enhanced through the recognition of these behavioural variables in addition to offender characteristics and psychological vulnerabilities.

Strengths and Limitations of this Study

This study is the first piece of research to investigate the characteristics of arsonists over a 25-year period and provides a comprehensive review of the features associated with arson in all Australian jurisdictions. The typology developed, based on 305 sentencing transcripts is robust and was validated using a split sample methodology. The three arsonist types identified provide a meaningful description of the offender and offence features of arson crimes over this period so as to inform the development of treatment responses. This study also identified trends emerging in those committing arson, highlighting implications for treatment. Increasing substance use and the presence of mental illness represent key co-occurring treatment needs that ought to be assessed and addressed prior to the delivery of arson-specific treatment. Given the predominance of versatile offenders committing arson, this research supports the view that offender treatment ought to address general criminogenic needs as core outcomes, in addition to individually identified arson-specific treatment needs.

There are several methodological limitations identified and these results must be interpreted in this context. First, it is possible that some of the defendants in this study amended their reasons for offending between committing the arson offence and appearing in court. The reported motivation for firesetting may have changed by the time it was discussed by the sentencing Judge, as some defendants may have altered their statements when

interviewed by police and then lawyers. This may lead to the information presented to the court during the pre-sentencing discourse having evolved over a period of time, perhaps to reduce the degree of planning or the level of emotion depicted in the crime, in an effort to attract a lesser sentence.

The courts did not identify any of the defendants included in this study as Torres Strait Islanders. It is recognised that there may have been defendants referred to by the sentencing court as Aboriginal, who in fact also identify as a Torres Strait Islander due to their family lineage. The distinction is important because it would have allowed analyses between Aboriginal and Islander groups, further clarifying the role of culture and place of origin in arson behaviour. Further there may have been defendants who identified as Aboriginal but whose Indigeneity was not referenced in the sentencing transcript. Perusal of police and court documents would clarify these issues.

A further limitation observed pertains to the identification of the M-TTAF trajectories (Gannon et al., 2012). Despite the measure of inter-rater concordance being high, there were instances where the two raters differed in their reasoning when allocating the multifaceted trajectory. While the two raters agreed on the allocation of the multifaceted trajectory, it appeared that this trajectory was quite poorly defined such that one rater utilised this trajectory when there were a number of factors contributing to likely motivations for the offence; while the other rater considered this trajectory appropriate when the primary motivation for the offence could not be clearly ascertained. Further clarification as to the decision-making process when allocating this trajectory is therefore indicated.

The results of this study are limited by the disproportionality of available transcripts across jurisdictions, courts and years. Not all jurisdictions made their sentencing comments accessible in a similar fashion. For instance, in Queensland and Western Australia there were no arson sentencing transcripts publicly available from the Magistrates, District or Supreme

Courts. In these states, only Court of Appeal transcripts were able to be retrieved. Court of Appeal transcripts contained less information about the offender and the offence than the sentencing courts, as these transcripts focused on points of law rather than the offences, resulting in some of the cases from a Court of Appeal have missing details. Similarly, a majority of transcripts were drawn from recent years as each jurisdiction did not provide online access to sentencing transcripts at the same time. A reconciliation of the arson arrest data from policing agencies and the number of publicly available sentencing transcripts across each jurisdiction was beyond the scope of this study. Such an analysis would identify the number of arson cases being presented to courts, details of which were publicly unavailable for inclusion in this study. Therefore, it must be assumed multiple arson cases heard between 1990 and 2015 were not publicly reported, and these cases may have lent additional substance and insight into the behaviour of Australian arsonists.

A further limitation was the reliance on sentencing remarks to fully articulate all offender and offence characteristics reviewed. A proportion of transcripts neglected to identify all characteristics studied, and therefore results obtained may underestimate the presence of some offender and offence features. Where transcripts lacked detail as to some of the offence and offender factors, it is unclear as to how significant these factors were in sentencing, and any deficits in transcripts would impact on the conclusions drawn in this study.

Finally, the literature on the efficacy of trend analysis to predict increases or decreases in target variables identifies some limitations. No model can control for all variables that may impact on a trend, nor can the salience of variables be unequivocally predicted into the future (Field, 2013).

Future Research

This study is the first known analysis of arson in Australia of its type, and as such is exploratory in design, and cautious in the conclusions drawn. Future research is needed to support the validity and reliability of the arson typology developed, by using different samples of arsonists, including non-adjudicated firesetters. Also, court transcripts available since 2015 could be added to this sample to extend the findings obtained and examine any changes in the direction of the trends observed.

The issue of whether judicial comments in sentencing transcripts fully reflected all factors considered important when sentencing an arsonist, suggests a need for alternative sources of information. For example, further analysis of dual diagnoses would clarify the relationship between co-morbid mental illness and substance use and firesetting.

In order to overcome limitations associated with defendants changing their story between the time of the offending and their appearance in court, future research might consider interviewing offenders at the time they are charged with arson and then compare their personal and offence characteristics with those identified by the court at the point of sentencing. This methodology would enable an analysis of the impact of the judicial process including any plea bargaining, on references to aggravating and mitigating circumstances in court transcripts. Despite such utility, ethical considerations may limit the efficacy of such methodology as defendants may be tempted to disclose details of offences for which they have not been charged, jeopardising their legal rights.

Further analysis of the factors contributing to firesetting in Aboriginal communities is indicated by this study, which highlighted differences between Indigenous and non-Indigenous firesetters. In particular, the identification of factors contributing to firesetting in Torres Strait Islander communities is needed to ensure arson theory and treatment reflect influences associated with this group. The differences identified between Indigenous and

non-Indigenous arsonists calls for a review of arson theory and the identification of alternative approaches to treatment, to maximize cultural relevance and therapeutic efficacy.

Finally, as the courts reflect community views when sentencing arsonists, an appreciation of how Indigeneity and other offender characteristics impact on, or influence, sentencing, merits an analysis of judicial considerations across Australian courts. In order to investigate these issues, Study Three reviewed historical sentencing considerations and compared them to contemporary judicial considerations.

CHAPTER FOUR

Study Three: Sentencing Arsonists: A Comparison of Historical and Current Judicial Perspectives

The preservation of a broad sentencing discretion is central to the ability of the criminal courts to ensure justice is done in all the extraordinary variety of circumstances of individual offences and individual offenders. However, public confidence in the administration of criminal justice requires consistency in sentencing decisions. As I have said, inconsistency is a form of injustice⁴.

The conundrum epitomised by the above quote formed the basis for the present study, which investigated the factors considered when Judges and Magistrates pass sentence on those convicted of arson. This study sought to identify the degree of consistency with which mitigating and aggravating factors and sentencing principles are referenced over time and across jurisdictions. This study comprise two investigations. The first examined the most common factors and sentencing principles considered by the Australian judiciary over the period 1990 to 2015, while the second investigation sought to identify the factors and principles that current members of the Australian judiciary reference when sentencing arsonists. This methodology enables a comparison between historical sentencing considerations and contemporary views on factors relevant to the sentencing of arsonists and represents what Dobinson and Johns (2017) describe as “socio-legal research.” To establish a

⁴ Spigelman, CJ. *R v Jurisic* (1998) 45 NSWLR 209; 101 A Crim R 259.

context for the exploration of sentencing considerations, a brief outline of the theories of sentencing is provided.

Sentencing Theories

The Australian High Court in *Veen v The Queen* (1998) explained the objectives of sentencing as:

The purposes of criminal punishment are various: protection of society, deterrence of the offender and of others who might be tempted to offend, retribution and reform.

The purposes overlap and none of them can be considered in isolation from the others when determining what is an appropriate sentence in a particular case. They are guideposts to the appropriate sentence but sometimes they point in different directions. And so mental abnormality which makes an offender a danger to society when he is at large but which diminishes his moral culpability for a particular crime is a factor which has two countervailing effects: one which tends towards a longer custodial sentence, the other towards a shorter (para 13).

Commencing with the Australian Law Reform Commission Interim Report into Sentencing Federal Offenders in 1980, (ALRC, 1980) sentencing reform in Australia has considered several theories or philosophical positions on the purpose and role of sentencing. While the literature has debated a number of hybrid theories of sentencing (Frase, 2012; Kaufman, 2008; Morris, 1977; Robinson, 2008) the most influential theories include the retrospective just deserts approach, the future-oriented utilitarian approach, and most recently, the restorative justice and therapeutic jurisprudence schools of thought (Mackenzie & Stobbs, 2010). Each is described briefly to highlight the changing focus on sentencing considerations.

The utilitarian approach. Based on the principle of the greatest good for the greatest number, the utilitarian approach to sentencing emphasises rehabilitation and deterrent strategies to reduce recidivism (Cullen, Pealer, Fisher, Applegate, & Santana, 2013). This approach emphasises the view that punishment, while it poses an inherently negative outcome for the individual offender, is justified based on positive longer-term consequences for the community (Bagaric et al., 2017). This approach to sentencing dominated through to the end of the 1970's (Mackenzie & Stobbs, 2010), and supporters of the classical utilitarian view on sentencing argued that the sole purpose of punishment was efficient crime control by means of deterrence, incapacitation, and rehabilitation (Posner, 1985; Slobogin, 2011; Wootten, 1963). Deterrence is described as one of the key principles in a utilitarian approach, as it takes a forward-looking or consequentialist approach to sentencing by engendering a fear of consequences by persons generally and the specific offender involved (Mackenzie & Stobbs, 2010). Utilitarian theories of punishment take a prospective view, in that they are concerned with the possible future consequences of punishment, in contrast to the retrospective perspective of a just deserts approach.

The just deserts approach. The just deserts theoretical position on sentencing emerged in the late 1970s (Mackenzie & Stobbs, 2010) and takes a retributive stance by promoting sentences based on proportionality, to ensure sentences reflect the circumstances of the offending (Von Hirsch, 1976). Duff (2003) summarises this view by noting: “the primary state response to crime should be to punish offenders in accordance with their deserts” (p. 43). Bagaric et al. (2017) describe retributive theories as asserting that offenders deserve to be punished or suffer for deliberate wrong-doing, and that such punishment is just, irrespective of whether the punishment effects a positive change in the offender. On the other hand, restorative justice promotes the beneficial impact of sentencing on offenders.

Restorative justice. A restorative justice approach to sentencing emerged in the 1990s (Hudson, 1998; Mackenzie & Stobbs, 2010), and promotes the opportunity of sentencing to impact positively on offenders by facilitating their restoration or redress to the community. Restorative processes were defined by the United Nations (2006) to be:

Any process in which the victim and the offender, and where appropriate, any other individual or community members affected by a crime, participate together actively in the resolution of matters arising from the crime, generally with the help of a facilitator (pp.7).

The central notion of restorative justice is to give particular currency to those impacted by the offending, the victims; and facilitate the offenders' attention to those so affected (Foley, Findlay, & Henham, 2014; Galaway & Hudson, 1996; Zehr, 2014). Restorative justice programs have developed internationally, for example, as circle sentencing in Canada (Stuart, 1996), family group conferencing in New Zealand (Connolly, 2005), Ubuntu in South Africa (Elechi, Morris, & Schauer, 2010), and as restorative justice mediation in the United Kingdom (Ministry of Justice, 2016). A 2005 meta-analysis investigated the effect sizes of 35 international studies examining restorative justice programs and found support for strengthened community confidence and victim satisfaction, increased offender compliance with order conditions, and reduced recidivism (Latimer, Dowden, & Muse, 2005).

In Australia, the Australian Law Reform Commission has described restorative justice as “an approach to crime that focuses on repairing the harm caused by criminal activity and addressing the underlying causes of criminal behaviour” (ALRC, 2010). Restorative justice initiatives developed across Australia, commencing in the juvenile justice sector in the early

1990s (Strang, 2001), and have been embedded in sentencing legislation in several Australian jurisdictions. The *Crimes (Restorative Justice) Act 2004* provides for the use of restorative justice initiatives in the Australian Capital Territory by establishing procedures to maximize victims' rights at all stages of criminal prosecutions. In New South Wales, forum sentencing, a form of restorative justice, was piloted in 2005, and later adopted broadly in 2010 in the *Criminal Procedure Regulation 2010, NSW*. This approach to sentencing is designed to increase victims' participation in the justice process and promote offender's reintegration into the community (New South Wales Bureau of Crime Statistics and Research, 2013).

Restorative approaches are likely to be reflected in sentencing through references to the impact the offence has had on the victim of the crime, and any efforts the offender has made towards restitution.

Therapeutic jurisprudence. A therapeutic jurisprudence approach to sentencing focuses on the role the court can play in impacting positively on offenders, particularly in motivating them to change and rehabilitate (Bagaric et al., 2017). Therapeutic jurisprudence (TJ) was developed in the United States in the late 1980s by law professors David Wexler and Bruce Winick in response to concerns that offenders with mental health needs were disadvantaged when being sentenced. TJ as a 'field of enquiry' establishes opportunities for courts to maximize the potential for therapeutic outcomes by engaging with psychiatrists and psychologists in the sentencing process and considering the impact of the crime on any victims (Wexler & Winick, 1991; Wexler & Winick, 1996; Winick, 2003).

Therapeutic jurisprudence is described as the extent to which substantive rules, legal procedures, and the roles of lawyers and judges produce therapeutic or antitherapeutic consequences in the courtroom (Wexler & Winick, 1991). Therapeutic jurisprudence emphasizes the impact the law can have on emotional and psychological wellbeing and explored insights from other fields such as psychiatry, psychology, criminology and social

work (Perlin, 2019). Wexler (1993) suggests that the courts themselves could assume the role of therapist, in the sense that they can produce therapeutic or anti-therapeutic outcomes when sentencing an offender, and that the goal of a therapeutic outcome should be emphasised during the sentencing process. Specialist courts and problem-solving courts, such as drug courts or mental health courts, are examples of the implementation of therapeutic jurisprudence in the courtroom. Specialist courts such as these take a therapeutic approach by looking for ways to enhance the well-being of offenders and ensure sustainable therapeutic outcomes are the focus of the sentence (Richardson, Spencer, & Wexler, 2016; Winick, 2003). As Australian Federal Court Justice, Moore, J noted:

... the formation of a specialist court appears to be generally linked to a perception that the resolution of disputes in a particular area of the law or concerning a particular human activity requires either a particular type of judicial expertise or a particular process of judicial adjudication, or both. Specialist courts might, as a result, be established in areas that have not traditionally been dealt with by the general courts, with a high public policy or technical content, or in areas where it may have been perceived that existing procedures were not sufficiently flexible or were inappropriate (Moore, 2000 pp. 141).

In Australia, one example of a specialist court can be identified in Victoria (Judicial Conference of Australia, 2008), where TJ is specifically referred to in section 5(a) of the *Courts Legislation (Neighbourhood Justice Centre) Act 2006*. This section provides that “In assigning a magistrate to the Neighbourhood Justice Division, the Chief Magistrate must have regard to the magistrate's knowledge of, or experience in the application of, the principles of therapeutic jurisprudence and restorative justice.” The Neighbourhood Justice

Centre in Victoria provides a unique multi-disciplinary approach to sentencing, focussed on the therapeutic needs of offenders, which can be monitored by the court.

Drug courts, mental health courts and courts dedicated to hearing matters involving Indigenous defendants, have been established across most Australian jurisdictions (Freiberg, 2004; Bagaric et al., 2017), all designed to focus judicial attention on the specific factors contributing to criminal behaviour in the target group. While therapeutic jurisprudence has infiltrated the state and territory courts in Australia, it has had little impact on the Federal court system (Bagaric et al., 2017). A lack of implementation at a federal level likely reflects concerns as to the efficacy of such an approach (Morgan & Louis, 2010), and limited political support for the utility of TJ to reduce recidivism has seen the abandonment of some specialist courts, such as the Murri Court in Queensland in 2012⁵. Given the adversarial ethos underpinning the legal system it is not surprising that the legal fraternity holds mixed views on the value of various rehabilitative efforts or therapeutic processes associated with TJ. The current study seeks to garner views from current members of the Australian judiciary as to their support for the principles of therapeutic jurisprudence, by inquiring about the value of rehabilitation programs for arsonists and the need for a specialist court to hear arson matters.

Sentencing Principles and Purpose

As the theoretical foundations of judicial sentencing continue to be debated, so too have the sentencing principles identified to guide members of the judiciary been subject to much deliberation. In Australia the factors to be considered when sentencing are defined in key legislation and serve to provide the community with a greater understanding of the reasoning behind judicial decisions. Specific sentencing principles and general sentencing considerations are defined at a federal level in the *Crimes Act 1914*, which has been amended over the last 100 years to reflect changes in the theories influencing sentencing. This Act

⁵ Murri Courts were re-established in Queensland in 2016.

provides for the sentencing of defendants for commonwealth offences, and each Australian jurisdiction has enacted its own legislation providing similar guidance on sentencing for state offences. When passing sentence on federal offences the *Crimes Act 1914* directs the judiciary to impose a sentence that “is of a severity appropriate in all the circumstances of the offence” (s16A (1)), reflecting the *just deserts* approach to sentencing. This is followed by a detailed list of sentencing considerations that reflect characteristics of the defendant and the purposes of sentencing. State sentencing legislation is prefaced with references to the purpose of sentencing and the following section reviews the sentencing principles identified in Australian legislation, and other offender/offence considerations pertinent to the sentencing process.

According to the Judicial Conference of Australia (nd) the main purposes of sentencing are: (a) punishment, (b) rehabilitation, (c) specific deterrence, (d) general deterrence, (e) denunciation, (f) community protection, and (g) restorative justice. Some authorities conflate sentencing with punishment (Potas, 2001) while others are at pains to separate the two conceptually (Bagaric et al., 2017). In legislative terms the consensus is that deterrence (specific and general), protection of the community, retribution/ denunciation, and rehabilitation are the main sentencing principles enshrined in legislation (Australian Capital Territory - *Crimes (Sentencing) Act 2005*; New South Wales - *Crimes (Sentencing Procedure) Act 1999*; Northern Territory - *Sentencing Act 1995*; Queensland - *Penalties And Sentences Act 1992*; South Australia - *Criminal Law (Sentencing) Act 1988*; Tasmania - *Sentencing Act 1997*; Victoria - *Sentencing Act 1991*; Western Australia - *Sentencing Act 1995*).

Deterrence, which originated from the utilitarian approach, comprises a general component and a specific component. General deterrence refers to sentencing for the purpose of deterring others from committing crimes, while specific deterrence is designed to deter the

offender before the court from further offending (Bagaric et al., 2017). Rehabilitation, as a sentencing principle, also focuses on the individual by attempting to change the offender or provide opportunities for attitudinal and behavioural change. By sentencing with a view to eliminating or addressing the underlying causes of criminal offending, the courts aim to grant sentences that facilitate such change (Potas, 2001; Ruback, 2015).

Protection of the community as a sentencing principle is often discussed in terms of incapacitation, in that the community is better protected when the offender is in custody (Bagaric et al., 2017). This principle has given rise to various pieces of state and commonwealth legislation enacted to prevent those assessed as high risk of further offending from being released from custody after they have served their sentence. Known as preventative detention legislation, Acts such as the *Dangerous Prisoners (Sexual Offenders) Act 2003* (Queensland) provide for the continued incarceration of individuals, despite the completion of sentence, in order to protect the community. Similarly, all Australian jurisdictions have legislated to detain those suspected of terrorism for up to 14 days, irrespective of whether a conviction has been achieved (*Criminal Code Act 1995*). The principle of community protection is therefore increasingly relevant beyond the realm of the sentencing court.

The final sentencing principle, retribution, emerged from the just deserts theories of sentencing, and is described as reflecting the community's expectation that particular offences merit punishment (Potas, 2001). Coupled with denunciation, which is largely symbolic (Mackenzie & Stobbs, 2010), it emphasises that justice, through sentencing, must be seen to be done, and thereby reflective of community views on crime. Of the sentencing principles, general and specific deterrence, retribution/denunciation and the protection of the community tend to increase sentences, while recognition of a defendant's prospects, or

motivation for, and potential for rehabilitation is more likely to reduce a penalty (Bagaric et al., 2017).

Other sentencing considerations in Australia. In addition to sentencing principles, other considerations relevant to a determination of an appropriate sentence are identified in the Crimes Act 1914 (Cth) and include:

- the nature and circumstances of the offence;
- other offences (if any) that are required or permitted to be taken into account;
- if the offence forms part of a course of conduct consisting of a series of criminal acts of the same or a similar character—that course of conduct;
- the personal circumstances of any victim of the offence;
- any injury, loss or damage resulting from the offence;
- if an individual who is a victim of the offence has suffered harm as a result of the offence—any victim impact statement for the victim;
- the degree to which the person has shown contrition for the offence by taking action to make reparation for any injury, loss or damage resulting from the offence; or in any other manner;
- the extent to which the person has failed to comply with any order under subsection 23CD(1) of the Federal Court of Australia Act 1976; or any obligation under a law of the Commonwealth; or any obligation under a law of the State or Territory applying under subsection 68(1) of the Judiciary Act 1903; about pre-trial disclosure, or ongoing disclosure, in proceedings relating to the offence;
- if the person has pleaded guilty to the charge in respect of the offence—that fact;

- the degree to which the person has co-operated with law enforcement agencies in the investigation of the offence or of other offences;
- the character, antecedents, age, means and physical or mental condition of the person; and
- the probable effect that any sentence or order under consideration would have on any of the person's family or dependants.

As discussed in Chapter One, sentencing considerations have evolved over time and have been influenced by a number of factors, including community attitudes and legislative responses (Roberts & Hough, 2013), as well as research on what works in crime prevention and offender intervention (Andrews et al., 1990; Craig et al., 2013; Cutler & Zapf, 2015; Heilbrun et al., 2003; Lab, 2014). Other factors such as increased community and media focus on sentencing, the availability of court judgements on-line (Martin, 2015), a greater influence of victim advocacy groups and victim impact statements, and an urgency to ensure consistency in sentencing have also contributed to the evolution of sentencing considerations (MacKenzie & Stobbs, 2010). Given these changes over time, and the rise and fall of various influences on judicial considerations and sentences, the judiciary has been mindful of the need to maintain a consistent approach to sentencing to ensure public and parliamentary confidence (White & Perrone, 2015). In *Wong v The Queen* (2001) Chief Justice Gleeson noted:

All discretionary decision-making carries with it the probability of some degree of inconsistency. But there are limits beyond which such inconsistency itself constitutes a form of injustice. The outcome of discretionary decision-making can never be uniform, but it ought to depend as little as possible upon the identity of the judge who happens to hear the case. Like cases should be treated in like manner. The

administration of criminal justice works as a system; not merely as a multiplicity of unconnected single instances. It should be systematically fair, and that involves, amongst other things, reasonable consistency.

Consistency in Sentencing

Public confidence in judicial decisions has fluctuated and has often been determined by the degree of consistency with which courts deal with offenders. Courts have been criticised for not reflecting the views of the community when sentencing (Jones et al., 2008; Mackenzie, 2002; Mackenzie et al., 2012; Roberts & Indermaur, 2007; Roberts & Indermaur, 2009; Wood, 2009), and there is some research to indicate that Australian attitudes are hardening towards offenders in general, and increasingly seeking harsher penalties from the judiciary (Barber & Doob, 2004; Brookman & Wiener, 2015; MacKenzie et al., 2014; McEwan & Freckelton, 2011; Roberts & Indermaur, 2007; Spiranovic, Roberts, & Indermaur, 2011; Stobbs, Kleinau, & Kolstad, 2014).

Justice Spigelman describes inconsistency in sentencing as a form of injustice, and his views are reflected in legislation such as the Victorian *Sentencing Act 1991*, which states its first purpose is to promote a consistency of approach in the sentencing of offenders. The sentencing process is usually described as an inductive process whereby Judges consider all the factors relevant to a particular case and then allocate weight to each, arriving at an “instinctive synthesis” of the aggravating and mitigating aspects, to determine an appropriate sentence (Bagaric et al., 2017; Brown, 2017). Claiming there are over 100 aggravating and mitigating factors defined by common law, Bagaric (2015) challenges the instinctive synthesis approach arguing that this approach facilitates sloppy reasoning based on subconscious judicial biases and preferences, effectively undermining consistency. Bagaric contends there is no accepted or prescribed weight to be given to these factors and therefore

Judges assign their own individual weightings as they see fit. Citing studies that have identified judicial bias towards attractive defendants (Englich, 2009), more lenient sentences for females (Steffensmier & Demuth, 2001) and racial preferences (Abrams, Bertrand, & Mullainathan, 2012; Everett & Wojtkiewicz, 2002; Rachlinski, Johnson, Wistrich, & Guthrie, 2009), Bagaric et al. (2017) assert that evidence supporting the prevalence of inconsistent sentencing decisions is considerable.

In *Hili v The Queen* (2010) Judges of the High Court of Australia commented on the components of consistency. They noted “When it is said that the search is for reasonable consistency, what is sought is the treatment of like cases alike, and different cases differently” indicating that previous cases should serve to guide subsequent cases when the circumstances were similar. The aim of maximizing consistency across courts by ensuring that courts do not depart markedly from the sentences handed down in other courts for similar offences, has been described by Bagaric and Pathinayake (2013) as aspirational, yet it has contributed to the establishment of such instruments as legislated mandatory sentences, legislated minimum and maximum sentences, and Guideline Judgements which are designed to achieve such consistency (Pina-Sanchez & Linacre, 2016, Sundt, Schwaeble, & Merritt, 2017). These are discussed briefly.

Guideline judgements. Guideline judgements originated in the United States in the 1970s, and have since been adopted in the United Kingdom, Canada and New Zealand (Pina-Sanchez & Linacre, 2014). They are issued by a higher court to maximize the consistent application of judicial discretion for specific offences, by establishing sentence “bands” for various aggravating and mitigating offence circumstances (Mallett, 2016; Roberts, 2011). The New South Wales Court of Appeal formulated the first Australian guideline judgement in *R v Jurisic* (1998) in relation to the offence of dangerous driving causing grievous bodily harm or death. The court noted:

The formal step of issuing guideline judgments is a logical development of what the Court has long done. Such judgments may reinforce public confidence in the integrity of the process of sentencing. Guideline judgments should now be recognised in New South Wales as having a useful role to play in ensuring that an appropriate balance exists between the broad discretion that must be retained to ensure that justice is done in each individual case, on the one hand, and the desirability of consistency in sentencing and the maintenance of public confidence in sentences actually imposed, and in the judiciary as a whole, on the other. Such guidelines are intended to be indicative only. They are not intended to be applied in every case as if they were rules binding on sentencing Judges. Guideline judgments are a mechanism for structuring discretion not restricting discretion.

In response, the New South Wales *Crimes (Sentencing Procedure) Act 1999* was amended to authorise the Court of Appeal to issue a guideline judgement, in relation to a specific offence type (Judicial Commission of New South Wales, nd). A guideline judgment is defined in section 36 of this legislation as:

A judgment that is expressed to contain guidelines to be taken into account by courts sentencing offenders, being (a) guidelines that apply generally, or (b) guidelines that apply to particular courts or classes of courts, to particular offences or classes of offences, to particular penalties or classes of penalties or to particular classes of offenders (but not to particular offenders).

The establishment of such mechanisms as guideline judgements continues in Australia and other countries and are considered to have particular utility when a specific offence is a common one. As certain offences increase in prevalence, so too does the imperative to ensure the judiciary respond consistently when passing sentence (Griffin & Wooldredge, 2013; Nowaki, 2013; Fitz-Gibbon, 2012). There have been no guideline judgements issued for the crime of arson in Australia.

Mandatory sentences. When a sentence is prescribed in legislation it removes judicial discretion by setting a fixed penalty for a specific offence (Mallett, 2016; Roberts, 2003). A common example is the mandatory sentence of life imprisonment for murder in Queensland (*Queensland Criminal Code s 305*) and in New South Wales where the victim is a police officer (*The Crimes Amendment (Murder of Police Officers) Bill 2011*). Mandatory sentencing is often criticised by the judiciary for reducing the court's capacity to tailor a sentence to specific individuals removing consideration of individualised aggravating and mitigating factors (Spigelman, 2008). Mandatory sentences are also considered to lead to adverse impacts on vulnerable or marginalised offender groups such as the mentally ill, juvenile offenders, Indigenous offenders and those assessed with an intellectual disability (Mackenzie & Stobbs, 2010). While sentences have increased there are no mandatory sentences for the offence of arson in Australia.

Minimum and maximum sentences. Similar to guideline judgements, legislated minimum or maximum sentences for specific offences are aimed at limiting discretion and maximizing consistency (Mackenzie, 2005). The crime of arson and associated offences carry a range of maximum penalties across Australian jurisdictions. There are multiple crimes associated with illegal firesetting in Australia, such as causing a bushfire, damage property by fire, and arson causing death (Landsell, Anderson & King, 2011) attracting a range of penalties. Conceptualized as levels of seriousness, the more serious crimes carry higher

maximum penalties. In Victoria the maximum penalty for setting a bushfire is 15 years imprisonment yet the maximum penalty for arson causing death is 25 years. The following table identifies the governing legislation and maximum sentences for arson in each Australian jurisdiction⁶.

Table 32

Legislation and Maximum Sentences for Arson across Australian Jurisdictions

Jurisdiction	Legislation	Maximum penalty
Queensland	Criminal Code (1899)	Life imprisonment
New South Wales	Crimes Act 1900(NSW)	25 years
Australian Capital Territory	Crimes Act 1900 (ACT)	25 years
Victoria	Crimes Act 1857 (VIC)	25 years
South Australia	Criminal Law Consolidation Act 1935	Life imprisonment
Western Australia	Criminal Code Compilation Act 1913	Life imprisonment
Northern Territory	Criminal Code Act 2018	Life imprisonment

Variation can be found in the level of courts hearing arson cases across Australian jurisdictions, and there are various reasons why this occurs. For example, minor matters are likely to be heard in a lower court, and more serious crimes, where property damage or the impact on victims is significant, are likely to be dealt with in the Supreme Court. However, this distinction is not always found, and some states provide for a specific court to hear arson matters in legislation. In Western Australia, only the Supreme Court will hear an arson case (Criminal Code Compilation Act 1913), as opposed to Queensland, where arson cases will, in

⁶ Where an arson offence results in a death, the defendant may be charged with murder instead of arson.

general, only be heard in the Magistrates or the District courts Criminal Code (1899). Despite these variations a number of precedents established in arson cases have identified the sentencing principles and other considerations to be given particular weight when a court sentences an arsonist. These sentencing considerations are designed to maximize consistency across jurisdictions and court levels and are discussed here to provide context to the review of judicial considerations across jurisdictions and time.

Evidence of the hardening of community views, as reflected in sentencing, is noted by the Sentencing Advisory Council of Victoria (2007) which identified that 40% of all arsonists convicted in the County or Supreme Courts of Victoria between 2001 and 2006 were imprisoned. This percentage has almost doubled in recent years, in that 74% of all cases of arson heard in these courts between 2011 and 2016 resulted in imprisonment (Sentencing Advisory Council, State of Victoria, 2017). This trend is reflected in the sentiments of Victorian Judge, Kellam, in *DPP v Derby* (2007) where his Honour noted “it is clear that this Court has stated consistently that arson is a serious crime indeed, and that circumstances which justify other than an immediate custodial sentence will be rare” (para 34).

Australian Sentencing Principles and Considerations for Arson

There is no empirical research on which sentencing principles and considerations apply to the sentencing of arsonists in Australia. As Justice Kirby noted “there is little research on judicial reasoning and decision making that goes beyond the analysis of the formal reasons once published” (Kirby, 1999 p. 206). Given this void, a review of key court judgements in arson matters provides the context and starting point for the identification of current judicial practice. In a landmark Northern Territory arson case, *Mildren, J.* identified aggravating and mitigating factors to be considered when passing sentence on a person convicted of arson:

Arson is potentially an extremely serious offence as it carries a maximum penalty of imprisonment for life. The current level of sentences are, in my view, too lenient and need to be increased significantly. The offence of arson, of course, is an offence which can be committed in a variety of circumstances. The extent to which a sentencing court needs to impose a deterrent sentence will often be determined by factors, such as the value of the property destroyed, whether the property was occupied at the time particularly at night by persons who are asleep, the level of risk to other persons in neighbouring properties as well as to police and fire fighters involved in checking the premises for occupants and in fighting the fire, whether the offender was intoxicated at the time, whether the owner of the property will suffer any consequential loss over and above the destruction of the property itself (for example in the case of business premises by the loss of profits due to disruption to the business), whether or not anyone was in fact injured or killed as a result of the fire and if so, the number of victims and the extent of those injuries. Matters going to mitigation will often include cooperation with the authorities, pleas of guilty, lack of prior convictions and in the case of Aboriginal persons in particular, may include the fact that the defendant has been brought up in an impoverished section of society which has become dysfunctional through the effects of alcohol or other drug misuse. These of course are not intended to be a complete list of all of the aggravating or mitigating factors which the sentence will be required to consider. (*Ajax v The Queen*, 2006).

Several years later Miller, J. of the Western Australian Court of Appeal identified general deterrence as the dominant sentencing consideration in cases of arson. He noted:

The following conclusions can, in my opinion be drawn:

- (1) the dominant sentencing consideration in cases of arson is general deterrence;
- (2) the personal circumstances of an offender carry less weight in cases of arson than they might otherwise do;
- (3) there is no tariff for the offence of arson, but in ‘pre-transitional’ terms the offence commonly attracts sentences from within a range of 4 to 7 years in very serious cases and 3 to 5 years in less serious cases. (*Western Australia v Bennett*, 2009).

In a South Australian Court of Appeal judgement Kourakis, J commented on the mitigating factor of mental impairment:

Sadly, persons convicted of arson are frequently found to suffer from psychological or psychiatric conditions and for that reason it is difficult to give mental impairment as much weight in mitigation in the case of arson as one might in other cases (*R v McLaren*, 2009).

The notion of culpability in arson cases was considered by Ashley, J. in *McDonough v The Queen* (2011). He developed the notion of greater culpability to assist in discriminating between arson cases for the purpose of sentencing, and identified elements of pre-planned arson, arson for revenge, arson for reward and arson involving multiple attacks upon a single victim as crimes of greater culpability (para. 26). These deliberations reflect judicial views on the aggravating and mitigating factors that impact on the sentencing of an arsonist and highlight relevant individual circumstances of the defendant. General deterrence as a sentencing principle and the degree of culpability were identified as key considerations.

Despite studies canvassing judicial views across other offence types (Bumby & Maddox, 1999; Butrus, 2018; McDonald, Erickson, & Allen, 1999; Wheeler, Mann & Sarat, 1988), there have been no empirical studies seeking judicial views on arson sentencing in Australia (Woods & King, 2010). Given the nexus between public confidence and consistency of sentencing, the current study investigated which of the various sentencing considerations were weighted when sentencing arsonists, and whether a consistent approach to the sentencing of arsonists across Australian jurisdictions exists. Another critical component of this thesis is the exploration of sentencing considerations in cases of Indigenous arsonists, with Australian courts and sentencing advisory bodies having provided guidance on a number of issues associated with this group.

Sentencing of Indigenous Offenders

Early Canadian and American research suggested that Aboriginal defendants are likely to receive harsher sentences than their non-Indigenous counterparts, while more recent studies have shown no such difference between the two groups (Welsh & Ogloff, 2008). In a Canadian study exploring differential sentencing across Aboriginal defendants (n=271) and non-Aboriginal defendants (n=260), Welsh and Ogloff (2008) matched sentencing transcripts by court and year of sentence. Utilising a logistic regression methodology Welsh and Ogloff identified aggravating and mitigating factors that significantly predicted sentencing dispositions. Aboriginal status did not distinguish those who received a custodial or non-custodial sentence. These authors found that the defendants' criminal history and the seriousness of the offence accounted for substantial proportions of variance of the overall model. In addition, when the sentencing principle of specific deterrence was cited by Judges, the defendant was significantly more likely to be sentenced to imprisonment.

Within Australia, the issue of differential sentencing has resulted in several law reform commissions and a number of committees have considered the sentencing of

Indigenous defendants (Australian Law Reform Commission, 1986; Australian Law Reform Commission, 2017; Law Reform Commission of Western Australia, 2006; New South Wales Law Reform Commission, 2000; Northern Territory Law Reform Committee, 2003; Royal Commission into Aboriginal Deaths in Custody, 1991). These reviews have identified communication difficulties, specifically the taking of instructions and communicating through interpreters, the special needs of Aboriginal women, and the unique socio-economic factors contributing to offending as important sentencing considerations.

The role of customary law has been explored in Australia, with some support for its recognition by courts when sentencing an Indigenous person (Northern Territory Law Reform Committee, 2003); but there has been legislative objection to its role in formal courts of law. For example, the *Crimes Act 2014* specifically prohibits the judiciary from taking into account any form of Indigenous customary law or cultural practice, when sentencing federal offenders, as a reason for (a) excusing, justifying, authorising, requiring or lessening the seriousness of the criminal behaviour to which the offence relates; or (b) aggravating the seriousness of the criminal behaviour to which the offence relates (*s 16A*).

In addition to legislative guidance, several key court judgements have been instructive in identifying considerations when sentencing Aboriginal defendants. One of the most cited judgements is *R v Fernando* (1992), wherein Wood, J identified eight sentencing principles to be applied when sentencing an Aboriginal defendant. Known as the Fernando principles, Anthony (2013) provides the following summary:

1. Facts relevant to the offender's membership of a group should be accounted for, but 'the same sentencing principles are to be applied in every case',
2. Aboriginality does not necessarily 'mitigate punishment' but may 'throw light on the particular offence and the circumstances of the offender',

3. Alcohol abuse and violence ‘go hand in hand within Aboriginal communities’, feeding into ‘grave social difficulties’ of unemployment, low education, stress, and so on,
4. Mitigation should be provided where alcohol abuse reflects the offender’s ‘socio-economic circumstances and environment’,
5. Courts should provide punishment to protect Indigenous victims and reflect the seriousness of ‘violence by drunken persons’, particularly domestic violence,
6. A long prison term is particularly alienating and ‘unduly harsh’ for Indigenous people who come from a ‘deprived background’ or have ‘little experience of European ways’,
7. The relationship between violence and alcohol abuse in Indigenous communities requires ‘more subtle remedies’ than imprisonment,
8. The public interest in ‘rehabilitation of the offender and the avoidance of recidivism on his part’ should be given full weight (p. 456).

Since this decision, the High Court of Australia has clarified how these principles are to be interpreted in sentencing Aboriginal offenders. It rejected an appeal by an Aboriginal man from New South Wales, in *Bugmy v The Queen* (2013), who argued that courts should take into account known systemic and background factors that apply to Indigenous persons, as articulated in the Canadian Criminal Code; specifically, a high incarceration rate and a history of dispossession associated with economic and social disadvantage. The court noted:

There is no warrant, in sentencing an Aboriginal offender in New South Wales, to apply a method of analysis different from that which applies in sentencing a non-

Aboriginal offender. Nor is there a warrant to take into account the high rate of incarceration of Aboriginal people when sentencing an Aboriginal offender. Were this a consideration, the sentencing of Aboriginal offenders would cease to involve individualised justice (*Bugmy v The Queen*, 2013).

The High Court reinforced this view in its dismissal of an appeal from the Western Australian Court of Appeal in *Munda v Western Australia* (2013):

To accept that Aboriginal offenders are in general less responsible for their actions than other persons would be to deny Aboriginal people their full measure of human dignity. It would be quite inconsistent with the statement in *Neal* to act upon a kind of racial stereotyping which diminishes the dignity of individual offenders by consigning them, by reason of their race and place of residence, to a category of persons who are less capable than others of decent behaviour. Further, it would be wrong to accept that a victim of violence by an Aboriginal offender is somehow less in need, or deserving, of such protection and vindication as the criminal law can provide (para 53, *Munda v Western Australia*, HCA 38).

The relationship between these views on the sentencing of Indigenous offenders in general, and the specific considerations relevant to the sentencing of Indigenous arsonists has not been explored in the literature. It is not known whether current members of the Australian judiciary reflect the sentencing principles espoused in *R v Fernando* (1992), for example by recognising the endemic presence of alcohol within Aboriginal communities as a mitigating factor, or referencing the particular subjective circumstances of the offender, when sentencing an Indigenous person for arson. Nor is it known whether the Australian judiciary

recognise the relationship between arson and a mental illness diagnosis, and sentence accordingly. There has been no examination of the knowledge base that current members of the judiciary rely on when sentencing an arsonist, nor is there evidence that specialist treatment options for arsonists are supported by magistrates and judges. One of the key legacies of this research void is that there is no knowledge of a shared understanding across the judicial community of the sentencing of arsonists and the salience of aggravating and mitigating factors in arson matters. Accordingly, the current study reviewed the degree of consistency in the sentencing of arsonists across Australian jurisdictions and court levels.

Similarly, given Study Two identified that Indigenous arsonists were more likely to receive a combination sentence when compared to non-Indigenous arsonists, the present study investigated whether courts noted comparable aggravating and mitigating factors and other sentencing considerations, for the two groups. In answering these questions, historical considerations obtained from arson sentencing transcripts over the 1990 to 2015 period were compared to the arson sentencing considerations disclosed by current members of the Australian judiciary. Three research questions and one hypothesis were developed to guide this study.

Research Questions and Hypothesis

Research Question 7: What sentencing principles and other aggravating, or mitigating factors do current members of the Australian judiciary identify when sentencing arsonists, and how do these impact on sentence outcomes?

Research Question 8: Based on historical sentencing transcripts do Australian jurisdictions and court levels differ in their sentencing of arsonists, in terms of the types of sentences imposed and the sentencing considerations identified by the judiciary?

Research Question 9: Do historical transcripts evidence any differences between the judicial sentencing considerations when Indigenous and non-Indigenous arsonists are sentenced?

Hypothesis 4: Given the rise of therapeutic jurisprudence and specialist courts in Australia (Freiberg, 2004; Bagaric, Edney, & Alexander, 2017) it was expected that the sentencing principles identified by the Australian judiciary in historical transcripts when sentencing arsonists would be more focused on rehabilitation in recent years, compared to the 1990s.

Method

The current study comprises two parts. The first part involved a review of historical sentencing considerations referenced in Australian court transcripts of arson cases across all jurisdictions. These transcripts were obtained from 1990 to 2015. The second part of this study focused on eliciting the views of current members of the Australian judiciary, utilising an on-line survey method. The method for each part of the study is detailed below.

Study Three – Part One: Historical Sentencing Considerations

The sample of 305 sentencing transcripts from arson cases heard between 1990 and 2015 in the Australian courts, were reviewed for reference to sentencing considerations. The method of extraction from on-line depositories and the distribution of transcripts across court levels and jurisdictions is provided in Chapter Three. Table 14 from Study Two identifies the number and percentage of total transcripts obtained from each jurisdiction.

Coding of historical sentencing considerations. Each historical transcript was reviewed for the presence or absence of fifteen sentencing considerations. The first group of sentencing considerations were drawn from the sentencing principles and reflected the purposes of sentencing as enshrined in legislation. The second set of sentencing considerations reflected factors describing either offender or offence attributes identified in

the literature and in Australian case law, as relevant to the sentencing of arsonists (n=8). The final sentencing consideration was a reference to precedents or previous cases considered by the court as guiding the formulation of an appropriate sentence. Each of the sentencing considerations were coded in accordance with the codebook in Appendix N. The 15 sentencing considerations are identified in Table 33.

Table 33

Sentencing Considerations extracted from Historical Transcripts

Sentencing Principles	Offender / Offence Factors	Other Consideration
General deterrence	Impoverished background	Case precedents
Specific deterrence	Defendants plea	
Defendants rehabilitation prospects	Mental Illness	
Need for punishment	Intellectual disability	
Retribution	Previous criminal history	
Community protection	Defendants age	
	Value of property destroyed	
	Impact on victim	

Inter-rater reliability for sentencing considerations. Coding of the 15 sentencing considerations in historical transcripts was assisted by a co-researcher who coded a sample of transcripts. As it is common practice to code approximately 20% of cases only (Seto & Eke, 2015; Terry, Hayfield, Clarke & Braun, 2017) inter-rater reliability coefficients were established using Cohen's kappa for each of the sentencing considerations based on an initial group of 40 transcripts. Cohen's kappa is considered a robust measure and considers the

agreement between raters occurring by chance (MacPhail et al., 2016). According to Landis and Koch (1977) kappa scores can be interpreted as outlined in Table 14 in Chapter Three.

Results between the two raters (n= 40 cases), indicate moderate to almost perfect agreement with measures of agreement ranging between .543 and 1.000, as detailed in the Table 34. The majority of scores fell within the substantial agreement range. Both raters evaluated the presence of *Defendants Plea*, resulting in high agreement for transcript references to a plea (90%). However, only two cases were appraised by each rater as defendants plea absent, which resulted in the low Kappa coefficient of -.053.

Table 34

Sentencing Considerations and Associated Kappa Scores (N=40)

Sentencing consideration	Cohen's K (p<.001)
Impoverished background	.667
Mental Illness	.697
Victim Impact	.634
Value of property	.850
Intellectual disability	.543
General deterrence	.694
Specific deterrence	.650
Rehabilitation prospects	.630
Previous criminal history	.734
Punishment	.683
Retribution	1.000
Community protection	.688
Offenders age	.793
Precedent cases	.596

Data analysis. Logistic regression was conducted to identify the judicial considerations (independent variables) contributing to a sentence of imprisonment (dependent variable). The dependent variable was defined dichotomously in this study as the presence or absence of a sentence of immediate imprisonment. All sentences were extracted from historical transcripts and were coded as either 1, where the only sentence imposed was

immediate imprisonment, or 0 where another type of sentence, such as a fine or community-based sanction, or a combination sentence of imprisonment and a community-based sanction, was imposed. Fifteen cases where the sentence was unknown were deleted from this analysis.

The independent variables were the fifteen sentencing considerations identified in each of the 305 transcripts. Each of the references to sentencing considerations were coded as present or absent. Using the enter method, the -2 log likelihood ratios, odds ratios and chi square statistics were calculated, in addition to Pearson correlation coefficients.

In order to investigate Hypothesis 4, linear trend analyses were conducted to determine whether any change in the referencing of sentencing principles could be identified over the 25-year period. Sentences granted were categorized to enable comparisons across jurisdictions and court level (Research Question 8). These categories were (1) Fine, bond or community corrections order, (2) a combined sentence of a community corrections order and a sentence of imprisonment, (3) a sentence of less than five years imprisonment, and (4) a sentence of more than five years imprisonment. Finally, chi square analyses were conducted to answer Research Question 9, which sought to identify whether there were differences evident between the judicial sentencing considerations when Indigenous and non-Indigenous arsonists are sentenced.

Study Three - Part Two: Current Judicial Sentencing Considerations

Participants. Members of the Australian judiciary were asked to complete the survey on arson sentencing considerations (N=677). Ten percent of those approached (N=62) agreed to participate in this study. All jurisdictions were represented by those participating, as was each of the levels of courts (Magistrates/Local, District/County and Supreme courts). Participants were not asked to provide personal information, other than an identification of their jurisdiction and court.

Procedure. An on-line survey methodology was developed to elicit the views of current members of the Australian judiciary. To commence recruitment of current judiciary a letter was sent to each jurisdiction's Chief Magistrate, Chief Judge and Chief Justice outlining the purpose of the study and seeking permission to survey members of their court (Appendix M). As Dobbin et al. (2001) note, letters of introduction can assist the process of engagement with potential respondents by establishing trust and eliminating any implication of subordination as a research subject. After approval was granted, an email containing the link to the on-line survey was sent to each individual Judge or Magistrate. Several jurisdictions preferred direct contact with Judges or Magistrates and in others, the email was sent to Judges Associates to forward to their Judge, or a contact person within the court who then forwarded the email to members of the judiciary.

In Queensland and Victoria, each Chief Magistrate, Chief Judge and Chief Justice approved this research. In New South Wales, the Chief Justice declined to approve this research and indicated that Judges from that court fully articulate their considerations when sentencing arsonists in their judgements, which are published. In Western Australia, the Chief Magistrate advised that all arson cases in that state are dealt with by the Supreme Court; hence Magistrates have no opportunity to consider arson and were not forwarded the survey. In view of this advice the District Court of Western Australia was not approached, however the Chief Justice of the Supreme Court of Western Australia approved this research. In South Australia and in the Northern Territory the respective Chief Justices approved this research. In the Australian Capital Territory this research was approved by the Chief Magistrate of the Magistrates Court.

In the case of the Local Court of New South Wales, the Chief Magistrate requested two questions be deleted from the survey sent to Magistrates in that state. He advised he considered Question 14 (*In your opinion does arson warrant a specialist court? Please*

explain your view.) and Question 16 (*In some Australian jurisdictions the maximum sentence for arson has been increased in recent years. What factors do you think have contributed to this?*) to be better addressed to government, rather than members of the judiciary, therefore the survey completed by these Magistrates contained only 14 questions.

Survey methodology. To access the opinions on sentencing of arsonists a short psychdata survey was developed to seek the views of current Judges and Magistrates. This survey comprised 16 questions, presented either as open-ended questions or questions with multiple choice responses, which targeted participant's knowledge of the typical arsonist; their understanding of the reasons people set illegal fires, and their identification of common aggravating and mitigating factors that they considered when sentencing an arsonist. An initial group of eight aggravating and seven mitigating factors were identified from the historical transcripts, case law and the arson literature. Respondents were not constrained by these and were able to add other aggravating or mitigating factors using a free text option. The survey, which is available in Appendix O, also asked members of the judiciary to identify any additional factors they might consider when sentencing an Indigenous arsonist, and whether they would refer an arsonist for specialist treatment. The survey asked participants to identify which principles guided their sentencing of arsonists and whether they had observed any changes in either the frequency or seriousness of arson cases.

Given the establishment of specialist courts nationally and internationally, the survey also asked the judiciary whether a specialist court was warranted for arsonists in their jurisdiction. Lastly, the survey invited members of the judiciary to comment on why they believed the maximum sentences for arson had increased in recent years in some jurisdictions. Potential judicial respondents who had not completed the survey were not approached a second time or prompted further to respond, in accordance with ethics approval

granted by the Bond University Human Research Ethics Committee for this study, (Application ID 15607).

Data analysis. Analysis of the survey responses provided by current members of the judiciary included frequency distributions and chi square analyses to identify differences across court levels and jurisdictions. Responses identifying mitigating and aggravating factors, and other sentencing considerations were collated and are supported by the presentation of direct quotations provided by participants. All analyses were conducted using the Statistical Package for the Social Sciences (SPSS Version 24).

Results

Study Three – Part One: Historical Sentencing Considerations

Sentencing principles. The sentencing principle referenced most frequently in the historical transcripts was the defendant's prospects for rehabilitation. Deterrence was also indicated by a high proportion of the judiciary, however reference to retribution was low. Table 35 depicts the frequencies with which each of the six sentencing principles was referenced across the historical sample of 305 transcripts.

Table 35

*Sentencing Principles and other Considerations referenced in Historical Transcripts**(N=305)*

Sentencing consideration	<i>n</i>	(%)
Rehabilitation prospects	158	51.8
General deterrence	137	44.9
Specific deterrence	101	33.1
Community protection	59	19.3
Need for punishment	58	19.0
Retribution	13	4.3

Trends over time. To test Hypothesis 4, which expected a distinct shift in the referencing of sentencing principles over time from a punitive approach to a more rehabilitative focus, linear trend analyses were conducted for each of the six sentencing principles. Given the increased availability of sentencing transcripts for arson cases in more recent years when compared to the 1990's the conversion of raw numbers to percentages was necessary to accommodate this negative skew and identify changes in the percentage of transcripts referencing each of the sentencing principles over the 25-year period. Table 36 provides the linear trend statistics for each sentencing principle.

Table 36

Linear Trend statistics and Model Summaries for six Sentencing Principles (N=305)

Sentencing principle	R ²	B	SEB	β	t
General deterrence	.13	1.35	0.71	0.36	1.884
Specific deterrence	.77	2.22	0.25	0.88	8.92***
Rehabilitation prospects	.28	1.99	0.66	0.53	3.01*
Community protection	.00	.174	0.61	0.06	.283
Need for punishment	.02	.436	0.59	0.15	.732
Retribution	.02	.123	0.19	0.13	.628

* $p < .05$, ** $p < .01$, *** $p \leq .001$

Significant linear trends were found for two of the six sentencing principles. The linear trend for percentage of transcripts referring to specific deterrence accounted for 77% of variation within the sample, indicating a significant increase in the percentage of arson transcripts referring to the need for specific deterrence between 1990 and 2015. Reference to specific deterrence doubled ($B = 2.2$) over the 25-year period and reference to rehabilitation almost doubled ($B=1.99$). The linear trend for the percentage of transcripts referring to the defendant's rehabilitation prospects accounted for 28% of variation, and indicated a lesser, but nevertheless significant, increase in the proportion of transcripts referring to this sentencing principle. References to the remaining four sentencing principles (general deterrence, community protection, retribution, and the need for punishment) did not increase significantly over the research period.

Offender / offence factors. The 305 historical transcripts were reviewed for judicial reference to the eight offender/offence factors identified as effecting sentence outcome. References to the defendant's plea, previous criminal history and age were most common, with fewer transcripts identifying whether the defendant had been diagnosed with a mental illness or an intellectual disability. These are detailed in Table 37.

Table 37

Offender and Offence Factors referenced in Historical Transcripts (N=305)

Offender / Offence factor	<i>n</i>	(%)
Defendant's Plea	282	92.5
Previous criminal history	249	81.6
Defendants age	245	80.3
Victim impact	166	54.4
Value of property destroyed	158	51.8
Mental illness at time of offence	135	44.3
Defendants impoverished background	48	15.7
Intellectual disability	14	4.6

Research Question 7 sought an analysis of the relationship between various sentencing principles and other factors (grouped as sentencing considerations), and sentence outcome. To investigate this question a logistic regression analysis was conducted to identify which of the sentencing considerations referenced contributed to the outcome of immediate imprisonment in historical transcripts. Of the 305 transcripts obtained, a sentence of immediate imprisonment was ordered in 225 cases and a community-based, deferred or combination sentence was ordered in 65 cases. Fifteen cases where the sentence was

unknown were deleted from this analysis. Table 38 contains the beta values, standard errors, the Wald statistic, the degrees of freedom, the significance value, the odds ratio and the 95% confidence interval for each of the fifteen sentencing considerations. These are ordered as offender/offence characteristics (n=8), sentencing principles (n=6) and whether there was reference to sentencing precedent or previous cases.

Omnibus tests of model coefficients indicated by $\chi^2 (15, n=290) = 43.917, p < .001$, suggest a good fit for the data. The chi-square value for the Hosmer and Lemeshow test of fit was 6.855 with a significance level of .178. This value is greater than .05 and indicates support for the model. Between 14% (Cox and Snell R square) and 22% (Nagelkerke R square) of the variability is explained by this set of variables, and the model correctly classified 80% of cases (96% of those sentenced to imprisonment and 26% of those granted an alternative order).

Table 38

Sentencing Considerations/Principles and Impact on Immediate Imprisonment (n=290)

Sentencing Consideration/Principle	B	SE	Wald	<i>p</i>	Odds Ratio (Exp(B))	95% CI Lower	95% CI Upper
<u>Sentencing considerations</u>							
Impoverished background	-.016	.440	.001	.971	.984	.416	2.330
Defendants plea	.419	.629	.44	.426	1.521	.443	5.219
Mental illness diagnosis	-.714	.327	4.77	.029	.490	.254	.929
Victim impact	.967	.334	8.350	.004	2.629	1.365	5.064
Property value	-.531	.319	2.77	.096	.588	.315	1.098
Intellectual disability	-.700	.662	1.12	.290	.496	.136	1.816
Previous Criminal history	.660	.495	1.77	.182	1.935	.733	5.107
Defendants age	.376	.454	.68	.408	1.456	.598	3.549
<u>Sentencing principles</u>							
General Deterrence	.250	.418	.35	.551	1.284	.565	2.915
Specific deterrence	.059	.435	.02	.892	1.061	.452	2.489
Rehabilitation	-.753	.369	4.16	.041	.471	.229	.971
Punishment	.653	.508	1.65	.198	1.921	.710	5.194
Retribution	.642	1.174	.29	.585	1.899	.190	18.982
Community protection	-.243	.437	.31	.578	.784	.333	1.846
Precedents	1.002	.324	9.56	.002	2.724	1.444	5.141

Note. df = 1 for all sentencing considerations/principles.

Sentencing considerations accounting for the greatest variance in the outcome, or predictive of being granted a sentence of imprisonment, were references to the impact of the offence on the victim of the arson ($p < .01$). The presence of an intellectual disability or a mental illness at the time of the offence was inversely predictive of a sentence of imprisonment, suggesting that Judges sentencing arsonists were less likely to sentence a

defendant to immediate imprisonment when a mental illness or an intellectual disability is identified. Reference to sentencing precedents or case law was also significantly associated with a term of imprisonment (OR= 2.724). Reference to a defendant's prospects for rehabilitation was inversely associated with a prison sentence (OR= -.753), suggesting that a defendant is less likely to be sentenced to imprisonment when the judge refers to their prospects for rehabilitation.

Comparisons across jurisdictions. Twenty-six historical transcripts were removed from this analysis where the defendant was detained under mental health legislation (n=11), and where the sentence granted was not able to be identified from the transcript (n=15). Of the remaining 279 transcripts 10% were sentenced to a community-based sanction, while the remaining 90% were sentenced to either immediate imprisonment or a combination sentence comprising imprisonment to be followed by a community-based sanction.

Sentences granted. Differences in the sentences handed to defendants were observed across jurisdictions. It was found that all arsonists sentenced in Western Australia and New South Wales were imprisoned, compared to two-thirds of those sentenced in South Australia. A combined sentence, such as a period of imprisonment followed by a period of community supervision, was identified most commonly in the two smallest jurisdictions; the Northern Territory (40%) and the Australian Capital Territory (45.5%). Table 39 depicts sentences granted for each jurisdiction.

Table 39

Sentence Outcomes across Jurisdictions (n=279)

Jurisdiction	Fine, Bond or CCS <i>n</i> (%)	Combined sentence <i>n</i> (%)	Imprisonment < 5 years <i>n</i> (%)	Imprisonment > 5 years <i>n</i> (%)
Queensland	4 (7.3%)	4 (7.3%)	30 (54.5%)	17 (30.99%)
New South Wales	0	0	23 (50%)	23 (50%)
Victoria	13 (15.7%)	6 (7.2%)	31 (37.3%)	33 (39.8%)
South Australia	6 (33.1%)	3 (16.7%)	1 (5.6%)	8 (44.4%)
Western Australia	0	0	21 (70%)	9 (30%)
Northern Territory	1 (5%)	8 (40%)	10 (50%)	1 (5%)
Tasmania	2 (12.5%)	0	9 (56.3%)	5 (31.3%)
Australian Capital Territory	2 (18.2%)	5 (45.5%)	3 (27.3%)	1 (9.1%)
Total	28 (10%)	26 (9.3%)	128 (45.9%)	97 (34.8%)

Note. CCS refers to orders supervised in community correctional services such as probation or community work orders.

Sentencing considerations. Comparisons were conducted in relation to the fifteen sentencing principles and sentencing considerations to identify the level of consistency across jurisdictions. Significant differences between the states and territories were observed for all 15 of the sentencing considerations. For example, 27.6% of Victorian transcripts referenced the need to sentence arsonists to protect the community, in contrast to only 4.9% of the Queensland transcripts indicating this sentencing purpose. Reference to a defendant's prospects for rehabilitation ranged from 9.8% in Queensland to 75% in the Northern Territory, and comment on the need for punishment varied between 3.4% in the Australian Capital Territory and 34% in Victoria. General deterrence was mentioned by courts in 69% of Victorian arson transcripts and 56.7% of Western Australian cases, compared to 25% of the matters heard in Tasmania. Specific deterrence was mentioned in 40% of cases heard in New

South Wales and the Northern Territory, but only in 6.6% of Queensland arson cases. Only 4.3% of all transcripts (n=13) referred to sentencing for retribution, with 46.2% (n=6) of these transcripts coming from New South Wales.

Reference to a defendant having a mental illness was noted in 44.4% of transcripts (n=135) across jurisdictions, with the largest percentage from the Australian Capital Territory (71.4%), and South Australia (70.4%). Judicial comment on the impact of the arson offence on the victim was identified in 54.4% of cases nationwide (n=166). Jurisdictional percentages ranged from 75% in Tasmania, 66.7% in Victoria, 60% in New South Wales, 56.7% in Western Australia, 51.9% in South Australia, 50% in the Northern Territory, 36.1% in Queensland and 21.4% in the Australian Capital Territory. Table 40 depicts the chi square statistics for each sentencing consideration for the historical transcripts. All sentencing considerations returned significant differences across jurisdictions.

Table 40

Chi square Statistics for 15 Sentencing Considerations across Jurisdictions (N=305)

Sentencing considerations and sentencing principles	$\chi^2(df)$	Cramer's V or Phi	<i>p</i>
Defendants impoverished background	14.65 (7)	.219	.041
Defendant's Plea	20.09 (7)	.257	.005
Previous criminal history	18.20 (7)	.244	.011
Defendants age	31.57 (7)	.322	<.001
Mental illness at time of offence	24.69 (7)	.285	.001
Intellectual disability	21.60 (7)	.266	.003
Victim impact	23.33 (7)	.277	.001
Value of property destroyed	25.21 (7)	.288	.001
General deterrence	48.73 (7)	.400	<.001
Specific deterrence	48.09 (7)	.397	<.001
Defendants rehabilitation prospects	63.52 (7)	.456	<.001
Community protection	19.99 (7)	.256	.006
Need for punishment	31.36 (7)	.321	<.001
Retribution	14.45 (7)	.218	.044
Sentencing precedents	41.78 (7)	.370	<.001

Comparisons across court levels. Chi square analyses were conducted to identify whether there were differences across court levels in the referencing of sentencing principles when sentencing arsonists. Table 41 depicts the significant differences in the referencing of

sentencing principles observed when historical Court of Appeal matters were compared to historical District and Supreme Court matters⁷.

Table 41

Chi square Statistics for Historical reference to Sentencing Principles by Court (n=303)

Sentencing Principle	Court of Appeal (n, %)	District and Supreme (n, %)	χ^2 (df)	Cramer's V or Phi
General deterrence	56 (32.6)	80 (61.1)	24.43 (1) ***	.284
Specific deterrence	33 (19.2)	66 (50.4)	32.89 (1) ***	.330
Rehabilitation prospects	56 (32.6)	101 (77.1)	59.09 (1) ***	.443
Community protection	17 (9.9)	41 (31.3)	22.03 (1) ***	.270
Need for punishment	15 (8.7)	42 (32.1)	26.52 (1) ***	.296
Retribution	4 (2.3)	9 (6.9)	3.74 (1) *	.111
Sentencing precedents	138 (80.2)	69 (52.7)	26.09 (1) ***	.293

Note. * $p < .05$, ** $p < .01$, *** $p = / < .001$

Specific variations were observed across court levels. All sentencing principles, other than reference to precedents were significantly more likely to be referenced in a District or Supreme Court matter. Not surprisingly given its role in adjudicating on pints of law a Court of Appeal was more likely to refer to sentencing precedents with 80.2% of these transcripts referring to the sentences handed down in earlier arson cases when commenting on the reasons for the courts' decision.

⁷ Magistrates court transcripts (n=2) were excluded for this analysis as cell counts were less than 5.

Sentences granted. Sentencing transcripts were reviewed to identify the sentences ordered across court levels. Court of Appeal transcripts, which may or may not have dealt with sentence on appeal, were excluded from this analysis (n=172). These included transcripts where specific points of law such as the admissibility of evidence, or the setting of a non-parole period were the focus of the appeal. Table 42 indicates the increased likelihood of a longer period of imprisonment from the Supreme Court, with District Courts more likely to grant a fine or bond when sentencing an arsonist. Excluding the two transcripts from the Magistrates Court a chi-square analysis indicated a significant difference between the two remaining court levels (District and Supreme courts) $\chi^2(5, n = 131) = 35.544, p = .001$ FET. This expected trend likely reflects the seriousness of matters heard by the Supreme Court as opposed to those heard in a District Court.

Table 42

Sentence outcomes across District and Supreme Courts (n=133)

Court level	Fine, Bond or CCS n (%)	Combined sentence n (%)	Imprisonment < 5 years n (%)	Imprisonment > 5 years n (%)	Other
Magistrate n=2	0	0	2 (100%)	0	0
District n=45	14 (31.1%)	3 (6.7%)	18 (40%)	3 (6.7%)	7 (15.5%)
Supreme n=86	5 (5.8%)	14 (16.3%)	17 (19.8%)	41 (47.7%)	9 (10.55%)

Note: The “Other” category includes deferred or unknown sentences or outcomes where the defendant was detained under mental health legislation.

Sentencing Indigenous arsonists. Research Question 9 focussed on whether, over the 25-year period, the judiciary referenced similar sentencing considerations when determining sentences for Indigenous and non-Indigenous arsonists. An analysis of differences in the sentencing considerations for the two groups revealed no particular differences for the majority of sentencing considerations; however, three areas of significant difference were found. These are identified in Table 43 which highlights transcript references to a defendant's mental illness and their rehabilitation prospects, varied considerably between the groups. Judges were more likely to refer to mental illness as a sentencing consideration in cases involving non-Indigenous defendants, and more likely to discuss a defendant's prospects for rehabilitation when that person was Indigenous. References to sentencing precedents also discriminated the two groups, in that prior cases or case law was more likely to be discussed when sentencing a non-Indigenous arsonist.

Table 43

Sentencing Considerations 1990 to 2015 by Indigenous status (N=305)

Sentencing consideration	% referenced for Indigenous Arsonists n=31	% referenced for non- Indigenous Arsonists n=274	$\chi^2(df)$	Cramer's V or Phi
Impoverished background	19.4%	15.3%	.340(1)	.033
Defendant's Plea	100%	91.6%	3.265(1)	.096
Previous criminal history	93.3%	84.3%	1.728(1)	.103
Defendants age	90.3%	79.2%	2.181(1)	.085
Mental illness	25.8%	46.4%	4.764(1)	.125*
Intellectual disability	3.2%	4.7%	.147(1)	.022
Victim impact	48.4%	55.1%	.507(1)	.041
Value of property destroyed	67.7%	50%	3.511(1)	.107
General deterrence	45.2%	44.9%	.001(1)	.002
Specific deterrence	38.7%	32.5%	.488(1)	.040
Rehabilitation prospects	74.2%	49.3%	6.929(1)	.151*
Community protection	25.8%	18.6%	.924(1)	.055
Need for punishment	29%	17.9%	2.248(1)	.086
Retribution	0%	4.7%	1.536(1)	.071
Sentencing precedents	41.9%	71.5%	11.311(1)	.193***

* $p < .05$, ** $p < .01$, *** $p = / < .001$

Study Three - Part Two: Current Judicial Sentencing Considerations

Sentencing principles. Between 1991 and 1995 0.7% of transcripts referred to a defendant's prospects for rehabilitation. This increased to 3.5% in the following five-year period between 1996 and 2000, and 6.5% for the period 2001 to 2005. Between 2006 and 2010, 14% of transcripts referenced rehabilitation and during the period 2011 to 2015 27% of transcripts mentioned this sentencing consideration. Of the current members of the Australian judiciary surveyed, 82.3% ($n=51$) identified rehabilitation as the principle they would be most guided by when sentencing an arsonist. This steady increase in reference to the rehabilitative prospects of defendants over time lends support for Hypothesis 4, which predicted that the sentencing principles identified by the contemporary Australian judiciary when sentencing arsonists would be focused more on rehabilitation, when compared to the historical considerations.

Other differences between the historical results ($N=305$) and the current judicial responses ($N=62$) include references to the principle of community protection, with 19.3% of historical transcripts referencing this principle and 85.5% of current judiciary indicating they would consider this principle. Table 44 summarises the responses from current judicial members.

Table 44

Judicial Considerations of Sentencing Principles in Arson Offences (N=62)

Sentencing consideration	<i>n</i>	%
Community protection	53	85.5
Rehabilitation prospects	51	82.3
General deterrence	50	80.6
Specific deterrence	44	71.0
Need for punishment	28	45.2
Retribution	13	21.0

Survey respondents identified community protection, deterrence, threats to person or property, the value of the property damaged, and the defendant's personal circumstances as mitigating factors when sentencing an arsonist. The following are quotations selected from all judicial comments that highlight these elements.

The need to protect the community and deter other potential offenders. The stated intentions of parliament, in setting a maximum penalty of life imprisonment, that the punishment should reflect the fact that lighting a fire wilfully and unlawfully is one of the most dangerous acts a person can commit because of the unpredictability of fires and the risk to life and property. The extent of any damage done. Whether actual risk was created to life and/or property. Personal factors that might mitigate the offending or the punishment that should be imposed, such as youth or mental illness (Supreme Court Judge).

Sentencing principles from cases require me to consider motive, extent of damage, value and nature of property, any risk to life, risk of wider damage (e.g. from escape of fire). Deterrence is a strong sentencing consideration. Personal factors must be considered. The prevalence of mental disease or impairment among offenders who have come before me has made this a major consideration. Youth has often been a factor (Supreme Court Judge).

All purposes of punishment are relevant, and which predominate depends on the particular circumstances. It is generally likely that punishment and general deterrence will predominate because it is an offence difficult to detect and the harm it might cause is great. Nevertheless, prior convictions may warrant an emphasis on specific deterrence and rehabilitation is important - the surest protection for the community (Supreme Court Judge).

Offender / offence factors. Based on the results of Study Two which identified common factors likely to aggravate and mitigate the crime of arson, and judicial sentencing comments such as *Ajax v The Queen 2006*, eight aggravating factors and seven mitigating factors that might impact on the sentencing of arsonists were identified in the survey. Respondents were asked to endorse those they considered relevant to the sentencing of arsonists. Aggravating factors that reflected outcomes of the offence, such as “degree of harm to any victims”, “risk to others safety or property”, and “the value of property destroyed” were considered most commonly by the judiciary. Only 40% of judicial respondents considered the aggravating factor of substance use when sentencing arsonists. Table 45 depicts frequencies for aggravating factors and Table 46 identifies the percentage of the judiciary endorsing factors that might mitigate their sentencing of an arsonist. Ninety-three

percent of current judiciary identified mental illness as a key mitigating factor in arson sentencing.

Table 45

Judicial Consideration of Aggravating Factors in Arson Offences (N=62)

Aggravating factor	Frequency	Percent
Degree of harm to any victims	58	93.5
Risk to others safety or property	56	90.3
Value of property destroyed	54	87.1
Degree of planning in offence	50	80.6
Motivation for the arson	49	79.0
Defendants previous criminal history	45	72.6
Use of accelerants	39	62.9
Use of substances	25	40.3

Table 46

Judicial Considerations of Mitigating Factors in Arson Offences (N=62)

Mitigating factor	Frequency	Percent
Defendants' mental illness	58	93.5
Youthful age of defendant	57	91.9
Defendants' guilty plea	55	88.7
Defendants' lack of criminal history	54	87.1
Defendants' expression of remorse	50	80.6
Defendants' impoverished background	45	72.6
Influences impacting on defendant	43	69.4

Comparisons across Court Levels

There were no differences between court levels with members from each court level indicating they would consider all six sentencing principles (community protection, rehabilitation prospects, general deterrence, specific deterrence, need for punishment, and retribution) when sentencing arsonists. Retribution was the least likely sentencing consideration to be endorsed in the historical transcripts and by the current judiciary.

Aggravating and mitigating factors. Chi square analyses for mitigating and aggravating factors are presented in Table 47 and Table 48 reflecting comparisons across court level. Significant differences between the three levels of courts were found for two aggravating factors. These were motivation for the arson offence where this factor was considered more frequently in the higher courts compared to lower courts and previous

criminal history which was more likely to be referenced in lower courts. Explanations for this variation were provided by two Supreme Court Judges who noted:

Prior criminal history is not aggravating unless there are prior arson offences on that history, though prior offending may reduce the capacity to extend leniency (Supreme Court Judge).

As a matter of law, the criminal history of a defendant cannot be an aggravating factor, although the presence of criminal history does prevent an offender receiving the benefit of having been of previously good behaviour. However, if the offender has prior convictions for arson, specific deterrence may be an important sentencing consideration (Supreme Court Judge).

There were no significant differences between the three court levels for mitigating factors, with the most endorsed factors being a defendant's mental illness diagnosis and youthful age. Interestingly, one in five members of the current judiciary responded that they would not consider a defendant's expression of remorse as a mitigating factor.

Table 47

Chi-square Analyses for Aggravating Factors by Court Level – Current Judiciary (N=62)

Factor considered	Magistrates or Local Court (<i>n</i> = 31) % (<i>n</i>)	County or District Court (<i>n</i> = 19) % (<i>n</i>)	Supreme or Appeal Court (<i>n</i> = 12) % (<i>n</i>)	χ^2 or Fishers Exact Test	Cramer's V
Degree of harm to victims	90.3% (28)	94.7% (18)	100% (12)	1.407	.151
Risk to others safety or property	87.1% (27)	94.7% (18)	91.7% (11)	.759	.115
Value of property destroyed	80.6% (25)	89.5% (17)	100% (12)	2.541	.221
Degree of planning	71% (22)	89.5% (17)	91.7% (11)	3.214	.246
Motivation for arson	61.3% (19)	94.7% (18)	100% (12)	11.260	.438*
Previous Criminal history	80.6% (25)	89.5% (17)	25% (3)	17.389	.530***
Use of accelerants	48.4% (15)	78.9% (15)	75% (9)	5.399	.302
Use of substances	41.9% (13)	47.4% (9)	25% (3)	1.557	.160

* $p < .05$, ** $p < .01$, *** $p \leq .001$

Table 48

Chi-square Analyses for Mitigating Factors by Court Level – Current Judiciary (N=62)

Factor considered	Magistrates or Local Court (n = 31) % (n)	County or District Court (n =19) % (n)	Supreme or Appeal Court (n = 12) % (n)	χ^2 or Fishers Exact Test	Cramer's V
Youthful age	90.3% (28)	89.5% (17)	100% (12)	1.053	.146
Guilty plea	87.1% (27)	94.7% (18)	83.3% (10)	1.116	.134
Lack of criminal history	87.1% (27)	84.2% (16)	91.7% (11)	.364	.077
Expressed remorse	80.6% (25)	84.2% (16)	75% (9)	.400	.080
Impoverished background	64.5% (20)	78.9% (15)	83.3% (10)	2.097	.184
Mental illness	90.3% (28)	94.7% (18)	100% (12)	1.407	.151
Other influences	64.5% (20)	73.7% (14)	75% (9)	.689	.105

* $p < .05$, ** $p < .01$, *** $p \leq .001$

Sentencing Indigenous arsonists. The survey sought the views of current members of the Australian judiciary as to whether there were any additional considerations when sentencing an Indigenous person for arson. The following comments from survey respondents are instructive, in that they highlight the value of consulting Elders, and the importance of reflecting of the features of the defendant's community.

I would like to know about his very particular personal story. This is frequently very difficult to obtain because indigenous people do not open up to strangers (their

lawyers or psychologists) like the white fella does and hence courts never get a full picture of the offender's life. The best way to find this information out is to get an Elder involved before the sentencing process and you get a better handle on the offender (County Court Judge).

Seek out a report from the defendant's community Elders and ascertain to what the Communities expectations might be in regard to a culturally appropriate sentence (Magistrate).

Their family and cultural background, whether they are a member of the stolen generation, their understanding of what they have done, whether they have cognitive/mental health issues as a result of possible undiagnosed FASD and other mental impairments (Magistrate).

It will depend on the offender's specific background. An offender from a traditional community may have issues of the type discussed in Munda for consideration. An indigenous offender from an urban background might have had disadvantages in their background, but they may not be any different to disadvantages suffered by non-indigenous offenders, so that their treatment in sentencing will not be different (Supreme Court Judge).

It is important not to sentence with a racial bias, but many indigenous offenders have a deprived background, especially being exposed to alcohol and other drugs at an age before they can really consent to such use or understand the consequences, which will likely mitigate the sentence (Supreme Court Judge).

Survey Responses to General Questions on Sentencing of Arsonists

General knowledge of arsonists. Respondents were asked whether there was a typical arsonist in terms of personal characteristics. A majority of respondents agreed there was no typical profile of arsonists, and offered characteristics commonly associated with the crime, from their experience. The following comments are highlighted to show the variety of characteristics identified, which centred around the various motivations for the crime and defendants' cognitive or mental impairments.

There are broadly two types of arsonists - those with obvious motive and those without. The former type may be motivated by commercial gain, harming a rival business or their own intending to lodge a fraudulent insurance claim. The motivation can be more wicked, motivated by vengeance and the desire to harm the property or person of another. The latter type burns for no apparent reason. This type is often juvenile, where it is unclear whether simple idleness and peer group pressure has prompted the conduct, but some continue into adulthood - they are much more troubling and more likely to be mentally disturbed or pure psychopaths (Supreme Court Judge).

No. The crime of arson is committed by all types of people. Some offenders do it out of revenge or some wrong perceived to be against them...relationship break up (burn the house), landlord evictions (burn the property). Some do it to cover up evidence from another crime, torch a stolen car, burn a house where a burglary has taken place etc. The most serious connection is that some serial/serious sexual offenders can also have arson in their criminal history (County Court Judge).

I could not identify a typical arsonist but have experienced some common characteristics. In my experience offenders are usually male, in age ranging from youths to early middle age. Offenders are often troubled by mental illness, low intellect or cognitive impairment and are sometimes motivated by a real or perceived grievance or emotional turmoil (Supreme Court Judge).

No. The motives and degree of cognitive functioning of the arsonists I have dealt with have varied. There have been calculated acts to conceal crimes; emotionally charged acts of revenge; and at least one offender who had a fascination with fire. However, in most cases the offender has been intoxicated or under the influence of a substance or has had some degree of cognitive impairment (Supreme Court Judge).

Frequency of arson. Respondents were asked whether they had noted any changes in either the frequency of arson cases in their courts. Overall responses suggested that the frequency of arson cases was stable (61%), however several respondents indicated that arson was becoming more frequent in their jurisdiction. These respondents suggested that the increase might be due to defendants' growing knowledge of forensic science, and therefore a greater propensity to commit arson to eliminate evidence. Firesetting to commit insurance fraud within an increasingly strained fiscal environment was also identified as having an impact on the number of arson crimes before the courts. Other factors associated with an increase in arson included the influence of illegal substances and extreme behaviour in the context of a relationship breakdown.

There may be a slight increase in arsons to conceal evidence with the increased use of DNA evidence (District Court Judge).

The influence of illicit drugs, especially methamphetamine. A tendency towards extreme vengeful behaviour in the context of the breakdown of domestic relationships. An awareness on the part of offenders committing a variety of serious crimes, from murder to stealing of motor vehicles, of the ability of forensic science to reveal the identity of the offender and other aspects of the crime, leading to some offenders resorting more readily to arson to destroy evidence (Supreme Court Judge).

With the global financial crisis and perhaps it being depicted more frequently on television shows or the information accessible on the internet, I think people are more likely to try to find a simple financial solution by insurance fraud; pretending their cars are stolen and set alight or their businesses (Magistrate).

Severity of arson. The majority of respondents (77.4%) indicated that they had observed little change in the severity of arson cases in recent years. A number of respondents (n=7) indicated they were not in a position to comment on any escalation or reduction in the severity of arson due either to limited experience or having dealt with only a few such matters.

Specialist court. Judicial respondents were asked to consider whether a specialist court for arson matters was warranted. There was no support for a specialist court, a view shared by respondents from all court levels, given the small number of arson cases heard in comparison to other offences. The following comments articulated by judicial members suggest a consensus view that the characteristics of arsonists are reflective of versatility, rather than exclusivity, and therefore are best dealt with in the general criminal arena.

No. The number of cases that come before the Supreme Court in (jurisdiction deleted), and the issues that arise in those cases, can be adequately managed within the general criminal jurisdiction of that court. As discussed earlier, the motives and personal circumstances of offenders are varied. In my experience there is not a particular characteristic common to all arsonists that might best be managed by a specialist court. There is a good deal of jurisprudence in respect of sentencing of arsonists that provides sufficient guidance for Judges sentencing at first instance (Supreme Court Judge).

No. There are not enough special or specific aspects requiring expertise to justify this. Any criminal judge in my court is able to deal with the variety of different circumstances involving arson charges and to give appropriate weight to the contents of psychological/psychiatric reports (County Court Judge).

The frequency of the crime does not warrant setting up a special Court. Mental health and related issues can be dealt with through a report from a forensic psychologist if necessary (Magistrate).

I don't think that arson warrants a specialist court. There is such a wide variety of arson cases, and arson offenders, ranging from the drunk who sets fire to a wheelie bin, to the pyromaniac who starts large bushfires, that there is little commonality between the offences that all come under the heading of arson, or the offenders who commit the offence (Supreme Court Judge).

Specialist treatment for arsonists. A further question asked survey respondents to consider whether they would contemplate referring arsonists for specialist arsonist treatment, either in custody or in the community. Of the 62 surveyed judiciary 40.3% (n=25) indicated they would consider recommending an arsonist for specialist treatment, 35.5% (n=22) indicated they possibly would consider, and 3.2% (n=2) responded that they would not consider such a referral. The remaining 21% (n=13) indicated they were not necessarily able to answer this question. This group raised concerns associated with the efficacy of such treatment and expressed their need to have more information about how treatment addressed various motivations for arson, such as insurance fraud. Some respondents raised questions about the lasting impact on the offender:

I doubt whether such treatment would be effective for most arsonists. Their problems are generally entrenched and much deeper than such treatment could touch (County Court Judge).

As I understand it, depending on motive, there is no evidence of the efficacy of such treatment (District Court Judge).

I am unaware of such programs or their efficacy (Magistrate).

If psych issues at play and want to avoid repetition, then yes. If for say, insurance fraud, then no (Magistrate).

The arsonists I have dealt with have not been established recidivists who would benefit from such a program. Although one offender had a prior conviction for arson

it was more than 20 years earlier, and the common theme of his offending behaviour was anger and violence, not fire (Supreme Court Judge).

But I would be concerned (from a lay person's point of view) that such treatment could lend notoriety to the crime and to the offender that is both unjustifiable and unhelpful for the offender. Having said that, it would depend upon the way it was presented, and there might be advantages in such a program (County Court Judge).

Factors contributing to increased sentences for arson. The final issue presented to judicial members concerned increases in mandatory sanctions for the offence of arson. Respondents were asked what factors are likely to have contributed to increases in the maximum sentences for arson in some Australian jurisdictions. Two themes were derived from the responses. These themes were the political imperative, and the impact on community attitudes following recent bushfires. The first theme, the political imperative, was indicated by members of the judiciary from all court levels.

The cynicism of politicians in using cost-neutral law and order initiatives to show the community that something is being done to combat crime. This would be one of a vast array of cost neutral initiatives, such as enacting aggravated offences, enacting mandatory minimum sentences or increasing maximum fines or maximum prison terms for governments to show they are tough on crime, which do not protect the community. What is needed is properly monitored rehabilitation programs, designed by psychologists and other experts who understand what is needed to ensure community safety. But such a sensible approach costs money and as such is unlikely to be initiated (Magistrate).

Politics. The get tough on crime stance by politicians is epitomised by increasing penalties to obtain public support (Magistrate).

Politicians desire to appear tough on crime (District Court Judge).

The usual press fear mongering and craven political exploitation of tough on crime rhetoric (Magistrate).

The same factors as have resulted in increased penalties for many other crimes, principally political posturing driven by the competition for ill-informed law and order votes (Supreme Court Judge).

The second theme identified by the judiciary that may contribute to increased sentences for arsonists, reflected community outrage following recent deliberately lit bushfires that caused significant damage and loss of life. This theme was also indicated by members of each of the three levels of courts.

Presumably the grave problem of deliberately lit bushfires (Supreme Court Judge).

The effect of deliberately lit bushfires has been very newsworthy, particularly where deaths have occurred. Parliament's usual reaction to publicity involving crime is to increase penalties, and the courts are obliged to follow suit (Magistrate).

The prevalence of arsonists in starting bushfires, and for the cases where arson for the purpose of insurance fraud is alleged (Magistrate).

It may have been the deliberate bush fires lit in the southern states (District Court Judge).

Bushfires resulting in many lost lives and substantial property damage (County Court Judge).

Public outrage and fear about recent fires and their scope. Higher populations in fire risk areas make fire more of a threat to more people (County Court Judge).

Discussion

The current study explored the views of the Australian judiciary when sentencing arsonists. Given the increase in specialist courts in Australia (Bennett, 2016; Lim & Day, 2013, Moore, 2000) and references to therapeutic jurisprudence in sentencing legislation, such as the *Courts Legislation (Neighbourhood Justice Centre) Act, 2006*, it was hypothesised that recent arson sentencing transcripts would reveal greater support for rehabilitation, when compared with transcripts from the 1990s. Partial support for this hypothesis was found, as transcript references to a defendant's rehabilitation prospects increased significantly in recent years, as demonstrated by the trend analysis. However, despite current judicial interest in the rehabilitative prospects of arson defendants, there was no support amongst serving members of the judiciary for a specialist court for such matters. This was an interesting result, as in the case of other offence types, a specialist court would enable the judiciary to play an increasingly active role in overseeing and supporting rehabilitative efforts. The lack of support for a specialist arson court may suggest that therapeutic jurisprudence, as a sentencing theory, does not accurately reflect the views of the

Australian judiciary on arson sentencing, or it may simply reflect the lack of need as arsonists constitute a small percentage of all offenders. Given the comments by current members of the judiciary, it is likely that the latter is the reason for their lack of support for an arson court.

The review of sentencing considerations over the 25-year period highlighted increased references to specific deterrence when compared to references to other sentencing principles. This finding contrasts with the accepted judicial view, as expressed by Miller, J. of the Western Australian Court of Appeal (*Western Australia v Bennett*, 2009), who identified general deterrence as the dominant sentencing consideration in cases of arson. Traditionally judicial views have reflected general deterrence as the most important sentencing purpose (Freiberg, 2014), however the current study lends support for the view that over the 25-year research period the judiciary are increasingly focussed on ensuring their sentence impacts on the individual as opposed to prioritising a generally deterrent effect. In terms of the identification of an overarching sentencing theory applicable to arsonists, the increased frequency of references to specific deterrence and rehabilitation over the 25 years, suggest that the utilitarian sentencing theory best reflects the views of the judicial system on arson matters in Australia. As indicated earlier, utilitarian theories of punishment take a prospective view and are primarily concerned with the potential consequences of punishment for the individual, as opposed to the retrospective perspective of a just deserts approach.

Current members of the judiciary reflected a different perspective to those identified in historical transcripts, by endorsing community protection as the prominent sentencing principle when hearing arson matters. This result is consistent with a rise in community concern about violent crimes, evidenced by the establishment of preventative detention legislation in most jurisdictions to combat crimes of terrorism and provide for the continued imprisonment of high-risk sexual offenders (Mercado & Ogloff, 2007; Tyulkina & Williams, 2015). As empirical studies have shown, community members do not ascribe significant

importance to the sentencing principle of general deterrence and are more likely to see denunciation, retribution and punishment (Warner, Davis, Spiranovic, Cockburn, & Freiberg, 2017; Warner, Davis, Walter, Bradfield, & Vermey, 2010) as the most important purposes of sentencing.

Research Questions

Sentencing considerations. The current study sought to clarify which of the various sentencing considerations were likely to influence sentence outcomes. Logistic regression revealed references by the judiciary in historical sentencing remarks to victim impact was highly predictive of a sentence of imprisonment. Reference to a defendant's mental illness at the time of the offence was most predictive of a non-custodial sentence. Given the established high prevalence of mental illness among arsonists (Anwar et al., 2011; Ducat et al., 2013; Harris & Rice, 1996; MacKay et al., 2006), it would be expected that a substantial proportion of defendants convicted of arson would not be imprisoned. The evidence from the analysis of historical sentencing outcomes supports this contention for District Court matters where 31% of sentences were community based. Support for this contention was not observed in Supreme Court matters where only 5.8% of arsonists were sentenced to a community sanction.

Jurisdictional differences. The degree of consistency in arson sentencing across court levels and jurisdictions was reviewed in this study. Based on the historical transcripts, considerable inconsistency was observed in the referencing of sentencing principles and considerations in the different jurisdictions. No single sentencing principle emerged to define the view of the collective judiciary. Substantial variation in the principles referenced in the historical transcripts suggests there has not been a consistent guiding principle for the sentencing of arsonists in Australia. Results from the survey of current members of the judiciary reinforced this view, in that community protection, rehabilitation prospects and

general deterrence were fairly equally endorsed as guiding the appropriate sentence for arsonists.

References to the impact of the arson on the victim varied between 21% and 75% across jurisdictions, and general deterrence was highlighted in 25% of cases in Tasmania compared to 69% in Victoria. Specific deterrence, which was identified as increasingly referenced nationally, was mentioned by sentencing courts in 7% of cases in one state but 40% in another. These differences illustrate the variability associated with the identification of the principles being considered by Judges and Magistrates when formulating a sentence and attest to the complexity of the sentencing task. This was clearly articulated by French J, in *Munda v Western Australia (2013)*, a case of an Indigenous man convicted of killing his partner:

"[T]he interplay of the considerations relevant to sentencing may be complex ... In a given case, facts which point in one direction in relation to one of the considerations to be taken into account may point in a different direction in relation to some other consideration. For example, in the case of a particular offender, an aspect of the case which might mean that deterrence of others is of lesser importance, might, at the same time, mean that the protection of society is of greater importance. It is therefore erroneous in principle to approach the law of sentencing as though automatic consequences follow from the presence or absence of particular factual circumstances" (para 58).

Nevertheless, as the community expect consistency in sentencing there is scope to reflect on whether the establishment of a guideline judgement for the crime of arson is worthy of consideration to minimize the extent of the discrepancy. A guideline judgement on

arson would clarify the emphasis to be proportioned across all considerations and establish clarity as to the key principles guiding the sentencing process. Rather than reduce discretion, a guideline judgement would facilitate the substantiation of any discretion and therefore reflect clearly the courts' considerations.

The lack of consistent sentences for arson was highlighted for sentences imposed in the current study. Several jurisdictions, such as Western Australia and New South Wales only sentenced arsonists to prison, while others, namely South Australia and Victoria, utilised combined sentences and community-based options. These differences may reflect general sentencing trends in these jurisdictions; however, it is beyond the scope of the current research to investigate such variations and this issue is therefore identified for further study.

Sentencing Indigenous arsonists. Differences in the historical sentencing of Indigenous and non-Indigenous arsonists were explored, with three sentencing considerations differentiating the two groups. The first was reference to a defendant's mental illness, with courts more likely to make such a reference when sentencing a non-Indigenous person. This may signal actual differences in the mental health status of the two groups, or, as was suggested in Study One, this may reflect Indigenous people being less likely to have been assessed for a mental illness prior to sentencing. If a psychological or psychiatric pre-sentence report is not before the court, then the Judge or Magistrate would be unlikely to make comments on a defendant's mental illness in the absence of any such evidence. Given the rate of mental illness among arsonists generally, and the evidence of other conditions prevalent in Indigenous communities such as foetal alcohol spectrum disorder (Fitzpatrick et al, 2017) and alcoholism (Gray et al., 2018), silence on the issue of mental illness is unexpected. Further research is warranted to identify whether the lack of reference to mental health reflects systemic deficiencies in the pre-sentence processing of Indigenous defendants, or an authentic difference in mental illness diagnoses between the two groups.

The second sentencing consideration to distinguish Indigenous from non-Indigenous arsonists were references to rehabilitation prospects. Judges and Magistrates were significantly more likely to refer to the defendant's prospects for rehabilitation when that person was Indigenous. This appears to reflect judicial regard for the personal and community circumstances of Indigenous defendants compared to non-Indigenous defendants. As Indigeneity itself is unlikely to be a mitigating factor, as that would contravene the *Racial Discrimination Act 1975*, increased attention to an Indigenous defendants' prospects for rehabilitation appears to recognise the particular social, economic and other disadvantages common to that group. As Wood J remarked in *R v Fernando (1992)*, sentencing principles apply equally to all but the court ought to take cognisance of the circumstances that apply because of one's membership of a particular group. The sentiments expressed by Wood J are echoed by current members of the judiciary who identify "his very particular personal story", "family and cultural background" and "deprived background, especially being exposed to alcohol and other drugs at an age before they can really consent to such use or understand the consequences" as important factors to consider when sentencing an Indigenous person.

The final sentencing consideration separating the two groups was a reference to sentencing precedents. Courts were significantly more likely to refer to previous cases when formulating their sentence if the defendant was non-Indigenous. One explanation for this difference is the predominance of non-Indigenous arsonists compared to Indigenous arsonists appearing before the courts, and therefore a greater number of precedent cases to draw upon. However, it raises the question why a Judge would not utilise non-Indigenous precedents when sentencing an Indigenous person for a similar crime, if the circumstances were similar. This issue warrants further research given the use of precedents in sentencing signifies consistency, and consistency in sentencing usurps ethnic or cultural background.

Judicial knowledge of arson treatments. A final discussion point concerns the relationship between judicial knowledge of arsonists and their views on specialist treatment. This study identified current members of the judiciary have a sound understanding of the various characteristics of arsonists, yet limited knowledge of the specialist treatment options for arsonists. This suggests greater communication between the therapeutic community of treatment providers and the judiciary is warranted, to ensure sentencing reflects not only the pursuit of general rehabilitation but also recognises and articulates support for specific treatment targets to be identified and addressed to reduce recidivism risk. By maximizing the “therapeutic moment” often evident in the sentencing process, courts have a unique opportunity to impact on defendant’s motivation for treatment. Given the significant costs associated with arson, enhanced judicial knowledge of arson treatment would likely contribute to more arsonists participating in treatment.

Strengths and Limitations of this Study

This study reviewed the sentencing considerations from 25 years of arson transcripts in addition to surveying current members of the judiciary to elicit their views on the important considerations when sentencing arsonists. Given the lack of research to date on arson sentencing this study contributes an initial appraisal of the various sentencing considerations and sentencing principles in arson cases. Through trend analyses, this study has identified emerging sentencing considerations and reflects on the salience of current sentencing theories. Cross-jurisdictional analyses and comparisons between court levels contribute a basis for further research on the offender and offence factors that influence judicial deliberations in arson sentencing. As this is the first study to elicit judicial views on arson, this study identified key issues and questions for future researchers.

Several methodological limitations were identified. Given the two distinct methodologies utilised, comparisons between the historical and current considerations are

made with caution. The low completion rate by current members of the judiciary also limits the utility of the results obtained, however other studies using a similar methodology have generated comparably low response rates of less than 40% (Roberts & Edgar, 2006; Marinos, 2000). As such, alternative methodologies such as conducting personal interviews may prove more useful. Face to face individual or group interviews with members of the judiciary, while logistically demanding, may provide an opportunity for more comprehensive discussion. It is recommended that interviewing judicial members, rather than collecting views through an on-line survey, would not only increase the response rate but also facilitate greater detail and add to the richness of the data obtained. A further limitation was the disproportional availability of sentencing transcripts across jurisdictions. Not all jurisdictions made their sentencing comments available in a similar fashion. Further, Court of Appeal transcripts tended to be shorter when compared to the transcripts obtained from lower courts, and as such may impact on the breadth of remarks.

Future Research

Further research designed to investigate jurisdictional differences in sentencing considerations and sentence outcomes controlling for arson offence severity is indicated by the preliminary results obtained in this study. Differences between those states that only sentence arsonists to imprisonment and other states where a range of dispositions are granted for arson, is worthy of further exploration to consider the need for a guideline judgement.

Given indications from the historical transcripts that courts referenced sentencing principles differently when sentencing Indigenous and non-Indigenous arsonists, and that there were several additional sentencing considerations pertinent to Indigenous defendants, further exploration of factors to be considered when sentencing Indigenous arsonists is also warranted. In particular, as this study found references to a mental illness differentiated the sentencing of the two groups, further research on the prevalence and treatment uptake of

Indigenous arsonists would clarify whether a difference actually exists, or whether the mitigating factor of mental illness is not put before the courts when sentencing Indigenous arsonists.

Gender differences in the sentencing of arsonists was not specifically addressed in the survey of Judges and Magistrates, and only given rudimentary analysis in the study based on historical transcripts due to the small sample size. Based on histories of abuse and neglect many researchers have distinguished the correlates of female offending from male offending (Bartels, 2012; Jackson, 2015; Parker, Kilroy & Hirst, 2018; Woolhouse, McKinlay & Grace, 2017), however this analysis is lacking for those convicted of arson. Therefore, future research focussed on identifying whether courts reference different aggravating and mitigating factors when sentencing female arsonists would provide useful information, given the projected increase in this group.

CHAPTER FIVE

Conclusions

This program of research was designed to address several key gaps in the Australian arson literature. These included a lack of research on illegal firesetting by Indigenous peoples has meant that arson theory has not been evaluated for cultural relevance; an absence of analyses of trends in arson offending over time and no clear typology categorizing Australian arsonists, and a final gap in the study of Australian arson is the lack of literature focused on the sentencing considerations of the Australian judiciary. The hypotheses and research questions for each of the current studies were developed to address these gaps in the literature and advance knowledge in a significantly under-researched area of forensic psychology.

The first study investigated the characteristics of 33 convicted arsonists from the Northern Territory and South Australia. Qualitative themes were extracted to depict participants' cognitions, and these were scrutinized in accordance with the expressive-instrumental motivational dichotomy of the action systems model. The utility of these theoretical constructs was examined to explain the behaviour of Indigenous arsonists. The second study reviewed 305 arson sentencing transcripts from all Australian jurisdictions. A typology of arsonists was developed, and future trends in arson offending were projected. The final study focused on the legal principles, mitigating, and aggravating factors commonly attended to by courts when sentencing arsonists. Historical sentencing considerations from 305 court transcripts obtained between 1990 and 2015 were compared to the views of 62 members of the current Australian judiciary. Differences across jurisdictions and court levels were highlighted. The three studies tested arson theory with specific reference to Indigenous arsonists, provided an analysis of arson offending in Australia over 25 years, and explored the sentencing considerations of courts in this country. By integrating the results of these studies,

this final chapter considers implications for theory, clinical practice, and the court system, and highlights opportunities to extend the knowledge base in this area.

Implications for Theory

Multi-trajectory theory of adult firesetting. This research identified implications for arson theory, specifically focused on Indigenous firesetters. The first study was an exploratory study focused on similarities and differences between Indigenous and non-Indigenous arsonists and investigated the utility of arson theory across cultural boundaries. A qualitative analysis of the offence cognitions revealed interesting themes, with emerging differences between the two groups. Indigenous participants were more likely to have used fire for intrinsic reasons designed to ameliorate negative internal states, or self-soothe, while the thematic analysis of the cognitions from the non-Indigenous group suggested their firesetting was more likely to serve an extrinsic or external purpose. Examples of extrinsic firesetting included gaining the attention from others, avoiding detection by authorities, and profiting financially. This difference between the two groups supports the tentative conclusions drawn by Murray, Fessler and Lupfer (2015) who suggested that familiarity and high exposure to fire in childhood as well as a greater proficiency in fire use, was associated with higher levels of positive attitudes towards fire in adulthood. In the current study the use of fire by Indigenous firesetters appeared to soothe and comfort.

This difference was underpinned by an emerging theme centered around firesetting within the context of grieving for the Indigenous group. The fires set by the Indigenous arsonists were often minor and followed an emotionally charged domestic situation, and it was theorized that firesetting under these circumstances reflected the slow burn of intergenerational trauma common to many Indigenous communities. It is likely that firesetting is one of many responses to heightened social disadvantage, and the experiences of

loss and family dysfunction characterizing Australian Indigenous peoples point to specific criminogenic needs which are community-based, in addition to specific offence-based needs.

Findings from the current studies suggest that mainstream theoretical frameworks may not fully account for cultural differences, and that concepts such as social and emotional well-being (Gee, Dudgeon, Schultz, Hart, & Kelly, 2014), and one's standpoint (Moreton-Robinson, 2004; Nakata, 2007b), are worthy of further consideration to extend theoretical and treatment utility. A greater emphasis on the cultural factors contributing to firesetting such as community/family grief, frustration and trauma, or low social and emotional wellbeing would extend the M-TTAF model and provide greater cultural inclusiveness. An additional M-TTAF trajectory suggested for Indigenous arsonists, based on early indications but warranting further exploration, is *grief and loss saturation*. In addition, the assessment of how each of the SEWB domains has contributed to an individual's firesetting would provide a useful starting point and allow culturally relevant antecedents to influence formulation and treatment planning.

As the Indigenous group in Study One tended to identify intrinsic motivations for firesetting, and a majority of Indigenous arsonists from the historical transcripts were assessed to have an expressive motivation for their offence, it is suggested that an additional trajectory, based on the emotionally expressive trajectory, would better capture Indigenous firesetting behaviour. Such a trajectory would reflect the reactive use of fire in emotionally charged situations, specifically in response to grief and trauma, that characterized many of the Indigenous arsonists in studies one and two.

A culturally inclusive trajectory would incorporate the historical impact of generations of trauma and grief, dislocation, and neglect, and highlight the impoverishment experienced in Indigenous communities. By including these elements, such a trajectory would better represent the pathways to arson offending in this group and point to relevant

treatment targets. The work of Kaurna Elder Rosemary Wanganeen (Wanganeen, 2008; Wanganeen, 2014), who identified a model of grief and loss for Indigenous peoples, represents a sound starting point. Wanganeen separates grief associated with the loss of a loved one, with intergenerational suppressed and unresolved grief, associated with many Australian Indigenous communities. She identified seven phases of grief across a lifetime and integrated ancestral and contemporary losses, to develop a holistic approach to recognizing and acknowledging the pervasive transgenerational effects on individual and communities.

In summary, Study One identified the notion of firesetting serving an intrinsic purpose for Indigenous firesetters and highlighted the opportunistic nature of firesetting by this group. A sense of hopelessness and apathy, poor emotional regulation, disinhibition due to substance use, and lack of planning or preparation, are important elements worthy of further exploration for firesetting trajectories, for this group.

Typology. Typologies assist the expansion and operationalization of theory by classifying behaviour and informing decisions, facilitating the formulation of hypotheses, and clarifying optimum therapeutic responses (Clinard, Quinney, & Wildeman, 1994; Helfgott, 2008; Knight & Prentky, 1990). Study Two identified three types to describe and categorize the arsonists included in the sample of court transcripts. Incorporating offender characteristics and offence features the three types were distinguished by the degree of planning identified, whether the offending occurred alone or in a group context, and whether the firesetting was directed towards instrumental or expressive purposes. Each of the types, (1) solo, planned, instrumental, (2) solo, impulsive, expressive, and (3) group, planned, instrumental, derived from two-step cluster analyses, were verified using a split sample methodology. This typology reflected differences in the offending of Aboriginal and non-Indigenous groups of convicted arsonists.

The typology emerging from this study differed from international arsonist typologies which were based primarily on motivation for the offence (Icove & Estepp, 1987; Inciardi, 1970; Lewis & Yarnell, 1951; Prins et al., 1985; Rix, 1994). The three types developed in the current research reflected a range of variables such as the level of planning, motivation, use of substances, target and whether the offender acted alone or in company. The typology advanced in Study Two also differed from the previous typology of Australian arsonists developed by Kocsis and Cooksey (2002) in that the current study included Indigenous status as a key variable and focused on arson-relevant features only. The Kocsis and Cooksey study included factors such as hair and eye color which are unlikely to bear any relationship to arson offending. The current study also extended the arson target options by separating property targets of known persons from property targets in the general community, therefore differentiating arson offences on the basis of intended victim. This contextual separation informed the identification of arsonist types and has implications for treatment. Lastly, the Kocsis and Cooksey study found evidence of planning in all 148 cases, which is contrasted by the results of the current study where there was clear evidence of unplanned or impulsive offending in 27.5% of transcripts. Whether this dissimilarity between the Kocsis and Cooksey study and the current study is due to differences in the definition of a planned offence or resulted from varying methodologies is unclear. Nevertheless, the unplanned impulsive use of fire for illegitimate purposes is a critical element in the construction of a case formulation.

An interesting relationship between arsonist type and the M-TTAF trajectories was identified. Non-Indigenous arsonists from the sample were fairly evenly represented across each of the three types, however, the Indigenous group were significantly more likely to be identified in the *solo, impulsive, expressive* type (64%). This latter arsonist type was not correlated with any of the five current M-TTAF trajectories, while the remaining two arsonist types were significantly associated with one of the trajectories. This finding provides further

support for the relationship discussed in Study One between firesetting, associated grief and the slow burn of intergenerational trauma, evident in the Indigenous group. Following, a trajectory that de-emphasizes previous offending and emphasizes factors specific to the behaviour of the Indigenous group is indicated.

Sentencing theory. Sentencing theories were considered in this research, with Study Three identifying an increase in the frequency of judicial references to specific deterrence and rehabilitation in sentencing transcripts. This reflects utilitarian views rather than retributive views, when sentencing arsonists. According to Berryessa (2018) the protection of the community reflects utilitarian goals of sentencing and this goal of sentencing was considered by current members of the judiciary to be one of the prominent sentencing considerations. There was little evidence that retribution guided the current judiciary in the sentencing of arsonists, nor was general deterrence the predominant sentencing consideration as previously identified by Justice Miller in *Western Australia v Bennett, 2009*. Therapeutic jurisprudence, considered a recent addition to the continuum of sentencing theories, was not found to be driving the identification of contemporary sentencing principles. Based on the views expressed by the sample of current judiciary, a specialist arson court whereby judges were able to contribute to therapeutic outcomes, found little support.

Implications for Clinical Practice with Indigenous Offenders

As less Aboriginal firesetters interviewed in Study One reported starting fires as a child (<10 years) than non-Indigenous firesetters, onset in the former group is more likely to be associated with adolescent or adult experiences or precipitating factors. This finding is important when mapping contributing factors and formulating, and then conceptualizing treatment targets, as it may indicate the behaviour originated within a given, and in this case, a more mature, context (Bieling & Kuyken, 2003). Other factors identified in the Indigenous group included an underlying experience of sadness and disconnection from others and

emotional volatility, especially following difficulties in intimate relationships. The expression of grief and a sense of shame was observed more commonly in the Indigenous firesetters, representing important treatment targets for clinicians to consider when working with this group.

Input from Indigenous Elders and community members assisted in clarifying the use of fire in Indigenous communities, pointing to treatment targets. Elders suggested that fire use for illegitimate or criminal purposes may indicate a disconnection from culture, and a lack of respect for the value of property. These reflections suggest that interventions with Indigenous firesetters might include an assessment of cultural strength, and the exploration of strategies to reconnect with their culture. Conceptualizing acting-out offending behaviours, such as arson, as symptomatic of cultural disconnection, will challenge theoretical assumptions by identifying a commonality contributing to a range of destructive and antisocial behaviours. In many Indigenous community's cultural disconnection influences offending generally, and arson may be conceptualized as just one of multiple consequential behaviours. The results of Study One raise questions as to whether the underlying historical and social factors contributing to Indigenous offending behaviours generally, should be the primary treatment target, in lieu of, or perhaps followed by, offence-specific treatments.

The value of specialist arson programs versus treatment as usual, which may have included a lack of treatment, was reviewed in a recent evaluation of a UK treatment program for firesetters (Tyler, Gannon, Lockerbie, & Ó Ciardha (2018). These authors found enhanced outcomes on a range of psychometric scales for a sample of mentally disordered firesetters (n=52) who completed a specialist firesetter program, when compared to a comparison group of mentally disordered firesetters (n=40) who undertook other therapeutic programs. They concluded that general offending programs were not as effective in reducing offence supportive attitudes and cognitions associated with fire as the specialist programs for

firesetters. Such an outcome is expected as the specialist program targeted the outcomes measured, the firesetter cognitions and beliefs, however given the lack of availability of specialist firesetter programs across Australia, it is likely that general offending programs will continue to dominate in correctional facilities.

Based on the sentencing transcripts from Study Two, several differences between Indigenous and non-Indigenous offenders were observed, suggesting implications for clinical practice. While alcohol was the most commonly used substance in the commission of arson offences, it was more likely to be used in conjunction with other drugs by non-Indigenous arsonists when compared to Indigenous arsonists. Substance abuse was projected to be present in upwards of 60% of arson cases in the future and is therefore a significant need which must be included in treatment planning as a key precipitating factor.

Higher rates of mental health diagnoses and engagement in psychological or psychiatric treatment also distinguished the two groups. Indigenous participants were less likely than their non-Indigenous counterparts to report a history of mental health issues or treatments. This may reflect under-reporting anomalies and treatment access differentials rather than actual differences in the need for mental health services. Further research is needed to investigate whether this difference is an artifact of service availability/diagnostic opportunity, or propensity to disclose. Given the existing research on the rates of mental illness in Indigenous prisoners, misdiagnosis of mental illness in Indigenous communities, and the lack of culturally sensitive assessments (Dudgeon et al., 2014; Heffernan et al., 2015; Westerman, 2004), it is likely a combination of both. As such it is recommended that arson treatment be precipitated by culturally appropriate screening and/or assessment for Indigenous participants, and that the value of addressing symptoms of mental illness prior to participation in arson-specific modules be considered.

Non-Indigenous arsonists were found to use accelerants at significantly higher rates than their Indigenous counterparts, and this likely reflects a greater degree of planning and perhaps self-control. The firesetting in the Indigenous group was more likely to have been opportunistic or impulsive with motivations largely due to emotional dysregulation. This difference between the two groups highlights differing treatment needs. Intervention for arsonists whose behaviour is both opportunistic and intrinsically motivated would likely include the identification of emotional-regulation strategies, relationship and communication skills, and enhancement of domains associated with social and emotional well-being.

Assessment of risk. General risk assessments are commonly used in Australian forensic evaluations for the re-offence potential of Indigenous arson offenders. The results of the current research suggest there are unique factors impacting on the reoffending potential of Indigenous arsonists, and as such support the need to develop culturally relevant risk assessment tools for this group of arsonists. Factors such as perceived discrimination, intergenerational grief and loss, socioeconomic disadvantage, and loss of cultural connections, warrant further research to ascertain salience in arson offending within this group. As noted by Shepherd (2016), culturally diverse groups have distinct risk and protective factors and “the identification of cultural risk markers is an essential process” (p. 264).

Treatment programs. Offending programs emphasising a strength-based approach, such as the good lives model (Ward, 2002; Ward & Mann, 2004; Ward, Mann, & Gannon, 2007), and acceptance commitment therapy (ACT), are being endorsed across some Australian jurisdictions (Purvis, Ward, & Willis, 2011). The good lives model prioritizes social and emotional well-being (SEWB) or *primary goods* to emphasize the pursuit of goals and facilitate agency/autonomy. This approach to offender rehabilitation aligns well with standpoint theory and social and emotional well-being as it focuses less on risk management,

and more on sustainable ways individuals can achieve prosocial goals and meaningful lives. Gibson, Crocket, Dudgeon, Bernoth, and Lincoln (2018) identify six dimensions that align SEWB within a strength-based approach to working with Aboriginal and/or Torres Strait Islander peoples. These dimensions or strategies are: (a) listen respectfully to the person, (b) build genuine relationships, (c) use appropriate communications skills, (d) critically reflect on Australia's political, social and historical contexts, (e) apply a human-rights based approach, and (f) evaluate the processes and outcomes. These strategies appear simplistic but when unpacked involve considerable attention to the specific needs of Indigenous individuals. By structuring programs and interventions that directly match the needs of the target group, as opposed to generic alternatives, treatment gains can be maximized, and responsivity problems reduced for Indigenous offenders.

Strategies designed to enhance outcomes for Indigenous offenders have been collected over the period of this research and have broad applicability for therapeutic programs. These strategies are drawn from a range of sources reflecting good practice with Indigenous offenders. They emphasize sound cultural awareness, respect for potential responsivity barriers, and the recognition of an Indigenous standpoint:

- Awareness of acculturation / deculturation – deculturation describes the process where aspects of ones' culture is lost after contact with another more dominant culture. This can lead to acculturative stress or feelings of being marginalised, alienated or experiencing identity confusion, and this in turn can impact on therapeutic relationships and trust.
- Respect cultural paranoia – this is the fear of facing white racism and can be very real for Aboriginal people.
- Understand the slow burn of intergenerational trauma from childhood – the child rearing practices and early social learning experiences are often very

different in Indigenous and non-Indigenous communities and a tendency to view one better than the other has led to some practitioners taking a 'deficit' approach to the therapeutic relationship which is not helpful.

- Recognize a tendency for external attribution – this is often difficult for clinicians as they seek to have clients accept responsibility for their own behaviour, especially in a correctional offending behaviour program. The natural tendency is for Aboriginal people to see themselves in context with their environment and their community, and it is common to attribute bad luck, ill health or negative circumstances to some external wrong doing.
- Allow time for engagement – assessment interviews conducted over several sessions are likely to yield more information and a better understanding of an Indigenous client.
- Services and programs are also advised to be mindful of gender differences when working with clients. Research suggests that the greater the extent of cultural difference between a practitioner and a client – the less likelihood there will be successful engagement.
- Visual-spatial learning (See and Do) vs auditory – care with language and a focus on learning by watching and then doing is considered to be a better approach to skills acquisition for Indigenous peoples.
- Paraphrasing or reflective feedback disrupts the story – it is considered better to just listen, rather than interrupting or trying to translate.
- Side by side – this means no spotlighting or putting Aboriginal people on the spot with a direct question (particularly in a group situation). Doing so can often result in them feeling shamed. Questions need to be open-ended and encourage a narrative or a story.

- Vouching - if group facilitators are not Aboriginal or Torres Strait Islanders, it is appropriate to engage a local Elder to 'vouch' for the facilitators, to introduce the program and motivate participants to contribute to their learning and insight development.
- Standpoint and assumptions – this refers to the clinician or program facilitators having recognized and thought through their assumptions or views about working with Indigenous clients. This assists insight and self-awareness and is based on standpoint theory. Co-facilitator reflexivity also provides opportunities for program facilitators to monitor and share any concerns or misunderstandings they may have while working with Indigenous clients.
- Avoidance relationships - prior to the commencement of treatment, a thorough analysis of avoidance relationships amongst group members is necessary to maximize group compatibility. Group participants who have incompatible relationships according to Aboriginal culture and family traditions should not be placed in the same group. If it emerges after a group has commenced that there are incompatible relationships in the group, then changes to the group mix are necessary. Group processes should include an early opportunity for participants to tell their stories (family history). This assists each participant to understand where their group colleagues are from and who they are.
- Acknowledge that there are differences across Aboriginal peoples and reflect the various perspectives on specific behaviours, such as the historical use of fire for cultural purposes and present-day use.
- Use of narratives or stories as tools to assist Indigenous group members to articulate their thoughts, feelings and behaviours.

It is recommended that programmatic responses to Indigenous arson offending consider these strategies in conjunction with appropriate assessment and outcome evaluation protocols. Given the wealth of research on best practice interventions with Indigenous Australians, there is little justification for the clinical failures that characterize current correctional responses to criminogenic needs.

Implications for Courts

Significant disparity across court levels and jurisdictions was found when sentencing considerations were reviewed in the historical transcripts (Study Three). This apparent lack of consistency in the identification of guiding sentencing principles and reference to the factors contributing to a sentence, suggests a guideline judgement may be warranted. In comparison to the historical transcripts there was less disparity observed within the sample of current judiciary, who indicated they would apply the principles of *rehabilitation*, *community protection*, and *specific deterrence* as key considerations when sentencing an arsonist. A guideline judgement might emphasise these three sentencing principles as the purpose of sentencing in arson matters.

The results of the judicial survey clearly indicated that current members of the judiciary were unfamiliar with either the content, or the utility of, arson treatment, and as such questioned the need for court-ordered interventions. As a specialist court for arsonists was not supported, and it is likely that arson matters will remain within the domain of the general criminal court system, any recommendations for treatment are likely to continue to be the responsibility of all judiciary. Opportunities to promote arson treatment with Judges and Magistrates broadly, to enhance their knowledge base, would facilitate greater awareness of this area of specialist practice across the criminal justice system.

Strengths and Limitations of Research

Several key strengths of this thesis include the extension of previous research on arson and an exploration of areas which have not previously been considered. This research identified cultural implications for arson theory and clinical practice, which, given the higher rates of arson in Indigenous communities, is essential for crime reduction. A further contribution is the arson typology developed, extending previous Australian arson typologies. The typology highlighted differences across groups of Indigenous and non-Indigenous arsonists further delineating treatment needs. The projections identified for future arson offending provide useful indicators of the key drivers of arson, and should such trends continue, signal a rise in the proportion of arsonists who are female, the trend analyses alert treatment providers to an emerging target group. This research, being the first to seek judicial views on arson, clarified current sentencing considerations and highlighted how judicial thinking about arson offending has changed over time. A lack of consistent attention to aggravating and mitigating considerations across jurisdictions and court levels was found, underlining implications for community confidence in arson sentencing. Also, a lack of knowledge of arson treatment among current Judges and Magistrates suggests judicial education is warranted.

As previously indicated these studies were exploratory and conducted within an empirical void. Therefore, methodological limitations have been noted for future researchers in this area. As logistical constraints prevented follow-up in Indigenous communities to share findings from Study One, the results of this research will be communicated through publications in Indigenous journals, thereby generating discourse on the topic of Indigenous arson.

The lack of identified Torres Strait Islanders among the defendants from the historical transcripts, may limit the extent of knowledge on Indigenous arson gained from this research.

However, given the estimated number of Torres Strait Islanders in Australia of just 15,000 (Australian Bureau of Statistics, 2016), and the heterogeneity of Aboriginal peoples across Australia, this may not represent a significant limitation.

It is also recognised that the results from Study One are highly dependent on the sample of arsonists who agreed to participate in this study. Further samples from other jurisdictions and other regional areas would add to the quantitative and qualitative outcomes reported here. Similarly, as some jurisdictions restricted the availability of sentencing transcripts, or did not make them publicly accessible until recent years, limited the generalisability of findings from Study Two. A final limitation was the relatively small number of current members of the Australian judiciary completing the survey. A greater sample size would have strengthened the findings from Study Three and provided a broader base for the establishment of initial judicial deliberations on the sentencing of arsonists. Some suggestions to reduce these limitations are offered in the next section.

Recommendations for Future Research

In response to these limitations recommendations to bolster the identification of participants in future research studies on arson are offered. As no members of the Australian Torres Strait Islander communities participated in this study, the generalizability of the results obtained was restricted. This lack of inclusiveness could be addressed by repeated visits to correctional centres over an extended period, thereby maximizing the likelihood of obtaining a representative sample. Arson research can be hindered by the small percentage of convicted arsonists in custody at any one time, when compared to other offence types, so repeated visits are indicated. Given the heterogeneity of Indigenous communities in Australia further research investigating arson in all Australian jurisdictions would significantly add to the knowledge of Indigenous arson.

This study relied on recruiting arsonists in custody or under community-based supervision. A broader group of arsonists might be attracted to participate in research if approaches to peak community agencies were made. Agencies in regional centres and major cities, such as community legal services, rural fire services or Aboriginal and Torres Strait Islander co-operatives offer likely access to arsonists who may have left the criminal justice system. While likely extending the reach, and therefore the sample size, there are ethical issues associated with such a recruitment methodology which may be prohibitive, warranting sensitive assessment.

A second recommendation concerns the identification of gender differences. Given the projected increase in female arsonists in Australia, future research might focus on further distinguishing gender differences, particularly in terms of the cognitions, implicit theories and scripts associated with firesetting. Such research would facilitate more responsive treatments for women who set illegal fires.

Thirdly, an evaluation of the replicability of the arson typology developed, to determine its utility and generalizability, is warranted. This could be achieved by adding more recent published transcripts to the existing database, or by analysing court files to capture unpublished data.

Fourthly, the inclusion of recent arson cases would extend the projected trends of arsonist characteristics. Ideally such future research would include access to all arson cases heard before courts nationwide. Such a national focus may be best achieved through the Council of Australian Governments (COAG) endorsement and by seeking the support of each of the state and territory sentencing or judicial councils.

A final recommended enhancement to arson research concerns the exploration of judicial views on the sentencing of Australian arsonists. To broaden or confirm the range of views obtained from the current study, an alternative approach might include face to face

interviews. Opportunities to engage with large groups of judicial members from all Australian jurisdictions occur frequently throughout the year, when Judges and Magistrates convene for state and national conferences. The support of Chief Magistrates and Chief Justices would be necessary to facilitate access to judicial members at these events and may foster an open dialogue with the judiciary on arson sentencing principles, aggravating and mitigating factors.

Final statement. Adjustments to arson theory reflective of cultural imperatives have been presented in this research, and it is hoped that future research will extend these initial considerations. Despite the cost of arson in Australia, the study of Australian arsonists, while emerging in the literature, remains largely unexplored, and treatment programs are few. It is hoped this research generates interest in the development of firesetter treatments for all Australian arsonists, and particularly those from an Indigenous community.

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Appendices

Appendix A: Case studies of Indigenous arsonists

Case Study One: Mr Barry Thompkins (pseudonym⁸)

Barry was born in a small Aboriginal community called Ngukurr⁹, which is located 635 km southwest of Darwin in the Northern Territory.

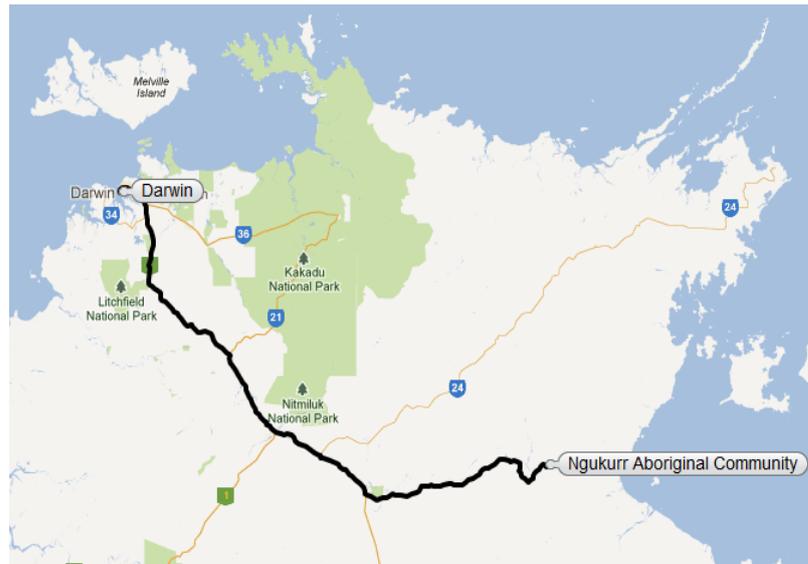


Figure 4. Map of location of town of Ngukurr. Source: Google images.

Ngukurr: History

Aboriginal people have inhabited this region for more than 40,000 years. The traditional occupants of the area around Ngukurr are the Ngalakan speakers, giving their name to the hill on which the town is centred (Sandefur, 1985).

Following the European settlement of Australia, the explorer, Ludwig Leichhardt named the Roper River in 1845, after one of the members of his expedition. Several years

⁸ To protect the identity of this participant, identifying details such as his age and family group are not provided.

⁹ This participant's location is provided in accordance with principle 4 of the Australian Institute of Aboriginal and Torres Strait Islander Studies – Guidelines for Ethical Research in Australian Indigenous Studies, (2012). Identifying this participant's location is regarded as necessary, as connection to place and the importance of one's history provide a valuable cultural context for treatment.

later, in 1872, a depot was established on the Roper River to unload materials for the construction of the Overland Telegraph Line, and for a period of time the depot was home to 300 people making it the largest European settlement in the Territory.

Paddle steamers came up the Roper and brought supplies to the men working on the Telegraph and later to newly established cattle stations. This depot saw the first cattle drive overland from Queensland and the Coast Track stock route was vital to pastoral development across northern Australia. In the 1880s and 1890s the area gained a reputation as a wild outpost, and police first set up a permanent presence in 1885 (Remote Area Health Corps, nd). There was extensive Aboriginal-European conflict during the early 1900's, particularly at the hands of the Eastern and African Cold Storage Company which actively hunted 'wild blacks'. In 1908 the Church of England (Church Missionary Society or CMS) established the Roper River Mission, site of the present town, as a refuge for the many different language groups.

History records the Roper River Mission was intended to bring 'Christianity and civilisation' to the Aboriginal people living in Arnhem Land (George & George, 2014). It was initially designed to be an industrial and agricultural station in addition to providing religious instruction and European education. The Mission also served as a haven to keep Aboriginal people safe from the exploitation of white settlers (Seiffert, 2011). The land was leased to the Mission by the Government of South Australia and the Commonwealth Government paid an annual subsidy to the Mission. By 1909 there were 200 people staying at the Mission. By 1913 the number of children had nearly doubled to 63 including 26 girls and 27 boys between the ages of 5 and 18 years. Dormitories had been established prior to January 1913. Miss Elsie Masson, after visiting Roper River in July 1913, was asked to present a report to the NT Administrator regarding the Mission. In outlining the work being done with the children at the Mission she stated that:

The object of the Mission is to educate these children, instruct them in practical and religious matters, eradicate their savage instincts, and make them capable of looking after themselves. ... All the children attend the school, which is divided into three classes. Here they learn to read, write, tell the time, do simple arithmetic, and learn by heart. ... Before breakfast, and for two hours in the late afternoon the boys work in the vegetable garden or at carpentry. The vegetable garden is irrigated with water pumped from the river. ... The boys look after the engine that pumps the water, of course, under supervision. Their carpentry consists of making plain benches and seats. The girls all learn housework, taking their turn at different kinds. They begin with sweeping the yard, bringing in wood, etc., and go on to laying the table and helping in the kitchen. ... They do all the washing and are learning to iron... (George & George, 2014).

In 1918 the Superintendent of the Mission Reverend E.H. Warren, wrote to the Northern Territory Administrator to say that police wanted the Mission to take 20 Aboriginal people that they considered to be “half-castes”. He expressed his concern about the number of Aboriginal people of mixed descent at the Mission and sought government subsidies of five shillings a week for each “half-caste child on the mission.”

During this period poor soil quality and damage to the buildings and crops caused by white ant infestations led to considerations by the CMS to move the entire Roper River Mission to Groote Eylandt. Superintendent Warren also considered it necessary to segregate the Aboriginal people who they deemed half-caste' from the degrading influences of white settlements (George & George, 2014).

From 1928 a compound for people suffering from leprosy was established at the Roper River Mission. According to historical government documents and newspaper articles some residents at the Missions were discovered to have the disease and were taken to the Mud Island Lazarette, and after 1931, to the Channel Island Leprosarium.

In 1937 the Federal Council of the CMS took responsibility for the administration and staffing of all CMS Missions including the Roper River Mission. However, in 1940 the mission was destroyed by floods and was relocated to higher ground at a site known as Ngukurr. After the 1942 bombing of Darwin during World War II, many Aboriginal children who were considered to be 'half-caste' were evacuated from Missions in the Northern Territory and those from the CMS Missions at Roper River and Groote Eylandt were moved to a temporary home in Mulgoa, west of Sydney in NSW. This came to be known as the Church Missionary Society Home for Half-castes, Mulgoa. The children lived there until they were again relocated in 1948 and 1949. George & George (2014) report that a majority of the boys from the Mulgoa home were then transferred to St Francis House in South Australia and the girls went to the St Mary's Hostel in Alice Springs.

The administration of the Roper River Mission was handed over to the Welfare Branch of the Northern Territory Administration in 1968 and was then taken over by the Yugul Mangi Community Government Council which had been formed several years earlier. The township then became known as Ngukurr. In recent years the town was administered by the the Yugul Mangi Aboriginal Corporation until it became part of the Roper Gulf Shire Council in 2008.

Ngukurr: Today

Seven clans reside in Ngukurr, the Marra, Ngandi, Ngalakan, Nunggubuyu, Alawa, Ritharrngu, and Wandarrang family groups. The Ponto family are the main traditional owners, with members of the Manbilila clan members also having played an important role in

the community. There are seven language groups represented in the Ngukurr community, and 21 clans overall, but the universal language is Kriol, a recognised Aboriginal language, which includes variations on many English words. Up to two dozen traditional languages are spoken in the area and many people speak multiple languages. The Ngukurr people refer to themselves as Yugul Mangi (all together as one). The Yugul Mangi people have various different cultures but they share a common history. The population of Ngukurr fluctuates depending on the season and ceremonial activity between 500 and 1500, and 99% of the people living there today are Aboriginal.



Figure 5. Ngukurr township from the air. Photographer: F. Yan Leuig, geoview.info.

Retrieved October 2015.

Ngukurr is located on the north side of the Roper, and the only access road is on the south side, resulting in the community being isolated during the wet season. Access during the wet season is only by air or boat from Roper Bar. Many of the south east Arnhem clans living at Ngukurr have traditional country to the south of the Roper and accordingly the location of the mission on the northern side of the River meant that they were isolated from their homelands. During the Dry, Ngukurr is accessible by road from Katherine and Darwin.

In Ngukurr there is a Health Clinic, School, Store with fuel available, Arts Centre, Motel, Airstrip, Boat Jetty, Government Office and a Police Station. There are currently two public telephones in Ngukurr and also Telstra 3G Telephone and Internet coverage. Digital television is connected to all homes and local radio is provided through Roper Gulf Regional Council's Remote Indigenous Broadcast Services (RIBS).



Figure 6. Ngukurr community photograph. Source: ABC Rural archive 2012. Retrieved October 2015.

Barry's history

Barry comes from a large family, with many brothers and sisters, and lived with his parents until he attended school in Townsville at the Shalom Christian College. This school is a co-educational Uniting Church school founded in 1992 by members of Congress, the Indigenous arm of the Uniting Church. It aims to provide a culturally inclusive curriculum for predominantly Aboriginal and Torres Strait Islander students. He completed Year 11 and then returned to his home of Ngukurr where he worked in the youth centre and the store.

He has a girlfriend, Carmel, who is 15 years of age. Barry enjoys playing sport, particularly AFL football, and fishing. He has been involved in Aboriginal ceremonies and

participates in cultural activities in his community. He has two previous convictions for Going armed with an offensive weapon and Damage to property, for which he received fines.

Offending

Barry has been charged with one count of Arson and one count of Unlawful assault. These offences occurred in July 2012 when he attempted to burn down his family home. He was aged 20 years at the time. He explained that he and Carmel were listening to music in his room when he left to get a cigarette from a neighbour's house. Carmel decided to leave and go back to her house while he was away, and he saw her leaving as he returned to his house. He asked her to stay but she kept walking, so he grabbed her by the shoulders and punched her in the jaw. He apologised immediately, and they returned to his house together but started arguing. Barry became distressed when Carmel told him to leave her alone and put a mattress against a wall in his room and lit it with a cigarette lighter. The fire spread quickly, and he tried to put it out but wasn't able to. As he left his house he warned other family members that the room was on fire, and also said 'Carmel is going to dump me now'. All family members were able to exit the house without injury, but the fire caused over \$12,000 worth of damage to the home.

As the fire burned the room he sat down outside and waited for police to arrive. He pled guilty at court and received a sentence of 12 months imprisonment for the Arson offence, to be suspended after 9 months with an operational period of 18 months. This means that he would be under the supervision of a probation officer for 18 months after serving 9 months in custody.

Barry reported that he had not been drinking or taking illegal substances at the time but was upset following the argument with Carmel. He advised he has not lit fires before and indicated that he may have been influenced by black magic or spirits as he "wasn't thinking

right” at the time of the fire. He feels he has disgraced himself. He believes the sentence was fair and hopes to reunite with Carmel when he is released.

Barry spoke about his culture and how important it was to him and thought that he might be punished in a cultural way when he returns to his community. He has used fire for smoking ceremonies in the past and for land management and was remorseful that he had used fire for illegal purposes. He spoke of going for a walk rather than dealing with frustration in this way again. Based on the circumstances of these offences and Barry’s history, interventions focussed on communication skills and mood management would be considered. In terms of M-TAFF, the likely treatment formulation would emphasise program units designed to address problem areas identified in the emotionally expressive trajectory.

Conclusion

Barry comes from a community that has experienced significant changes and a number of influences over the last 100 years. Many of the changes have been imposed and driven by missionaries or government agencies that resulted in the forced removal of children to Sydney, the teaching of foreign religious instruction, and the relocation of the community following floods and other natural events. Add the establishment of a compound for those suffering from leprosy, and a number of different governance structures over the years, and it is not difficult to identify the town of Ngukurr as having an extraordinary history. Despite events designed to divide and conquer the community, culture remains strong and Aboriginal languages have survived. The seven clans continue to live in the community having shared this common history.

Barry’s Elders are likely to have faced many challenges in their lifetimes and as a result may be considered to have developed some resilience to external influences and changes, such that they are able to withstand the divisive forces around them. This may help us to understand how Aboriginal culture in this community may have outlived those who

came and went. Intervention for Barry would be bolstered by encouraging him to reflect on the character of his people and the resilience and strength of those from his community.

When faced with frustration in the future, Barry could be reminded of how his ancestors from Ngukurr have coped and stayed true to their heritage, despite enormous challenges; and that he also, has the potential to manage his emotions in accordance with his community's expectations. Central to his development of emotional coping skills is his sense of connectedness to his culture and community.

Case Study Two: Arthur Watson (pseudonym¹⁰)

Arthur Watson was born in Whyalla¹¹ in the Eyre Peninsula region of South Australia and grew up in the Port Lincoln and Flinders Ranges areas. His Father came from Ceduna on the southern coastline of South Australia, and his Mother from Marree – which is located where the Birdsville track meets the Oodnadatta track in central SA, south of Lake Eyre.



Figure 7. Map of Whyalla. Source: Google images.

The Eyre Peninsula has been home to Aboriginal people for thousands of years, with the Nauo (south western Eyre), Barngarla (eastern Eyre), Wirangu (north western Eyre) and Mirning (far western Eyre) being the predominant original cultural groups present at the time of the arrival of Europeans in 1802 (Tindale, 1974). At that time the population of Aboriginal

¹⁰ To protect the identity of this participant, identifying details such as his age and family group are not provided.

¹¹ This participant's location is provided in accordance with principle 4 of the Australian Institute of Aboriginal and Torres Strait Islander Studies – Guidelines for Ethical Research in Australian Indigenous Studies, (2012). Identifying this participant's location is regarded as necessary, as connection to place and the importance of one's history provide a valuable cultural context for treatment.

people on the peninsula was estimated to have been approximately 2000 people (Berndt & Berndt, 1985). Mathew Flinders named the area Hummock Hill, and this was changed in 1920 to Whyalla, an Aboriginal term meaning “place with deep water.”

This region of South Australia is home to the Barngarla people, and a subgroup, known as the Malkaripangala people, came from the Whyalla area. These groups share major Dreaming significance of this north-east corner of the Eyre Peninsula with two other culturally and linguistically different groups – the Adnyamathanha people of the Flinders Ranges and the Kokatha people from the north-western desert in South Australia. The Barngarla (Malkaripangala) people were known to other Aboriginal people as those who “sang to the sharks”. This is a unique ceremony often associated with the Pacific islands of Tonga and the Solomon Islands, as opposed to the southern coast of Australia. The men would gather at the rocks at Weeroona Bay and sing to the sharks, while women danced on the beach. The sharks and dolphins gathered schools of fish and drove them towards the shore, enabling the men to catch the fish in the shallows. This practice ceased in the 1960’s when the last person known to sing to the sharks passed away.

Early life

Arthur speaks Pitjantjatjara and reported being involved in cultural ceremonies when younger, however as he grew older his participation in Aboriginal cultural activities became less frequent. He attended school to Year 10 in Gladstone and then gained employment through the CDEP in fencing and building work. Arthur was raised by his Mothers sister, his Aunt, which is common in Aboriginal communities. He recalls that he started ‘going off the rails’ when she passed away when he was a teenager. He’d always believed she was his birth mother and when she passed away he felt that anyone whom he got close to, would die. He spoke of grief building up as other family members also passed away, and that he was unable to express his feelings or talk to anyone about them. His attributes his use of drugs and

alcohol to his unresolved grief, and identified those substances helped mask his feelings of loss and grief. He started using drugs and alcohol as a teenager, then as an adult progressed to using speed, heroin, and pills. Arthur spoke of not being able to trust anyone, of having no male mentors and of not coping with the loss of family members. Arthur explained that he didn't know how to deal with grief as no one helped him, and he simply couldn't cope.

Interview

Arthur was interviewed at Port Augusta Prison in South Australia, where he was serving a period of imprisonment with a non-parole period of 23 years for Murder and Arson. These offences occurred in 2008 and he was sentenced in 2010. At the time of the interview he had served 7 years imprisonment which includes 2 years pre-sentence custody.

Offending

In October 2008 Arthur and members of his family were in Ceduna for his sisters' funeral. He was aged 26 years at the time and reports grieving with family members who had gathered for the funeral. He consumed a large amount of alcohol and used drugs, including speed and methamphetamine, during this period. He recalls one evening after a heavy drinking session, he woke up in a man's car. The man – PD – was not known to him but was known to his Uncle. It seems that PD, who was a non-Indigenous man and aged 50 years, and his Uncle had grievances. Arthur's Uncle and PD had been fighting and Arthur heard his Uncle wanted to harm PD.

Arthur and his Uncle beat PD and drove him, still alive, in his car, 7 kms out of town where they continued to beat him until he died. PD's car was then set on fire to hide any DNA evidence that would link Arthur and his Uncle to the crime. Arthur used a lighter to set the car seat material and papers in the car alight. The man's body was left lying on the ground outside the car. Arthur and his Uncle were charged with Murder and Arson and initially both pled not guilty. However, midway through their trial two years later, Arthur decided to admit

his guilt and entered a plea of guilty. This led to his Uncle being released. Arthur was then sentenced to imprisonment with a non-parole period of 23 years.

Previous history

Arthur has been convicted of numerous arson offences in the past, commencing when he was a juvenile. He recalled that he has set up to 10 cars alight in the past, mainly to eliminate evidence. He served periods of juvenile detention and has also served several previous periods of adult custody for other offences, including break and enter, assaults and driving offences.

Motivation

Arthur is unclear as to his reasons for becoming involved in his Uncles dispute with the victim. It seems he was confused at the time likely due to being intoxicated and experiencing great sorrow. He indicated he wanted to help his Uncle who had told him things about PD that angered him, however he had no particular grievance against the man. It seems his motivation was to align himself closer to his Uncle, as they shared grief. Given his personal history of family members passing, this may reflect his inability to cope emotionally with death at the time.

Conclusion

When a person passes away in an Aboriginal family, sorry business, or the process of grieving as a community, may take a number of days and involves different cultural ceremonies depending on which clans are involved. Given the high mortality rates of Aboriginal people across Australia, these ceremonies are all too frequent, and have a significant impact on all. While this context does not excuse Arthur for his crimes, it may assist an understanding of the emotional turmoil Aboriginal people face, and how poor coping responses may develop.

Arthur's motivation for this arson was crime concealment, and he has a history of firesetting in the past to eliminate evidence, indicative of treatment needs based on the M-TTAF antisocial trajectory. In this instance, however, there are also clear indications that he would benefit from intervention targeting emotional regulation, communication skills and mood management, which characterise the emotionally expressive trajectory. This would need to be delivered in a supportive and culturally safe way, recognising the significant grief and loss experienced by Aboriginal people in all communities. The assistance of Aboriginal Elders in developing culturally safe intervention processes and materials would be essential.

Arthur has now adjusted to prison and engages in painting and playing guitar. He considers his culture to be important to him and reports he has had time in prison to reflect on his life and is now able to help others deal with their grief. His insight and learning may assist others experiencing similar trauma associated with unresolved grief.

**Appendix B: Approval letters from correctional agencies in the Northern Territory and
South Australia (with individual's names deleted)**



DEPARTMENT OF
CORRECTIONAL SERVICES

www.nt.gov.au

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Email [REDACTED]@nt.gov.au

Our Ref: CS2013/0017

DCSDOC 14/3205

Therese Ellis-Smith
Bond University
University Drive
ROBINA QLD 4229

Dear Therese

RE: Research Application – Aboriginal Arson: From Theory to Practice

The aim for this research is to contribute to the body of knowledge on arson, specifically the motivation for deliberate criminal firesetting within several of the Australian Aboriginal communities. Also, this research will identify how the characteristics of firesetting may differ between Aboriginal and Torres Strait Islander and non-Indigenous firesetters to further our knowledge of and understanding of the cultural contributions to this behaviour.

The Department of Correctional Services (NTDCS) Executive Directors Group has met and I am pleased to inform you that conditional approval has been given for your research project. The conditions of approval are that:

1. A list of potential participants are selected for the study through a formal request to [REDACTED], Director, Criminal Justice & Alcohol Research and Statistics Unit (email [REDACTED]@nt.gov.au, postal address GPO Box 1722, Darwin NT 0801) to ensure that they satisfy the eligibility criteria.
2. Therese Ellis-Smith is to liaise with [REDACTED], General Manager Community Corrections (ph: 8935 7467) regarding the best method of recruiting research participants under Community Corrections supervision and arranging the interview of offenders who wish to participate in the research.
3. Therese Ellis-Smith is to liaise with the respective General Managers of NTDCS Correctional Centres – [REDACTED], General Manager, Alice Springs Correctional Centre (ph: 89518915); [REDACTED], A/General Manager, Berrimah Correctional Centre (ph: 89220120); [REDACTED], General Manager, Darwin Correctional Precinct (ph: 89287442) regarding:

- 2 -

- The initial meeting to recruit research participants at the Alice Springs Correctional Centre, Berrimah Correctional Centre and Darwin Correctional Centre;
 - Access to the Alice Springs Correctional Centre, Berrimah Correctional Centre and Darwin Correctional Centre for the purpose of interviews; and
 - The use of a recording device at Alice Springs Correctional Centre, Berrimah Correctional Centre and Darwin Correctional Centre.
4. Therese Ellis-Smith is to send [REDACTED] Principal Research and Data Officer, Criminal Justice & Alcohol Research and Statistics Unit, (email [REDACTED]@nt.gov.au) an official notification of ethics approval to conduct Study 2 (interviewing non-Indigenous firesetters) from the Bond University Human Research Ethics Committee.
 5. Any published research findings for this research project are sent to [REDACTED] Principal Research and Data Officer, Criminal Justice & Alcohol Research and Statistics Unit, (email [REDACTED]@nt.gov.au, postal address GPO Box 1722, Darwin NT 0801).
 6. This approval to conduct research is valid for twelve (12) months from the date of this letter.

I wish you every success in your endeavours.

Yours sincerely

[REDACTED]
COMMISSIONER

/ 7 November 2014



Government of South Australia
Department for Correctional Services

**Offender Development
Directorate**

400 King William Street,
Adelaide SA 5000

GPO Box 1747
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Tel: 08 8226 9026
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Our reference: CEN/13/0410
Your reference:

Contact Name: [REDACTED]
Telephone: 08 8226 9026
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E-mail: [REDACTED]@sa.gov.au

15/06/2015

Ms Therese Ellis-Smith
Australian Centre for Arson Research and Treatment
School of Psychology
Faculty of Society and Design
Bond University
University Drive
Robina
QLD 4229

COPY

fwd 15/6/15

Dear Ms Ellis-Smith

Re: Research Project – Arson in Australia

I refer to your recent application to conduct research in the Department for Correctional Services (DCS) entitled 'Arson in Australia'.

I am pleased to advise the Departmental Research and Evaluation Management Committee (REMC) has approved your application. Consequently, [REDACTED], Senior Research and Evaluation Officer (08 8226 9026) will act as your Departmental contact and assist with facilitation.

The Committee has requested that you provide regular updates on project progress. This can be negotiated through [REDACTED], Chair of the REMC.

Please note that your research application is subject to the following conditions imposed by the REMC:

- the words *"the views expressed in this report are not necessarily those of the Department for Correctional Services"* be displayed clearly on your report;
- a draft of your report is made available to the REMC;
- on completion of your study, a copy of the final report and a one to two page summary be forwarded to the Committee; and
- any intended publication of results will need to be approved by the Committee prior to such publication.

The address for forwarding draft and final reports is:

Executive Officer
DCS Research and Evaluation Management Committee
GPO Box 1747
ADELAIDE SA 5001

If you have any queries in relation to your research project please feel free to contact [REDACTED] or myself on 08 8226 9071.

The REMC will continue to assist you wherever possible and looks forward to receiving your completed research.

Yours sincerely

[REDACTED]
REMC Chair
Director, Strategic Policy, Projects & Partnerships
Offender Development Directorate

**Appendix C: Application of the Australian Institute of Aboriginal and Torres Strait
Islander Studies Guidelines for Ethical Research in Australian Indigenous Studies for
Study One**

This document identifies the strategies to be implemented to adhere to the 14 principles outlined in the Australian Institute of Aboriginal and Torres Strait Islander Studies – Guidelines for Ethical Research in Australian Indigenous Studies, 2012.

Principle 1: Recognition of the diversity and uniqueness of peoples, as well as of individuals, is essential.

Strategies to apply the principle

1. Ensure any report or case study based on this research specifically identifies the Aboriginal or Torres Strait Islander communities contributing to the research, unless a preference is stated that the community should not be identified.
2. Results or conclusions drawn from this research will not assume commonalities across all Aboriginal or Torres Strait Islander communities, and this will be clearly stated.

Principle 2: the rights of Indigenous peoples to self-determination must be recognised.

Strategies to apply the principle

1. All participants will be advised that participation in this research is voluntary and reminded that they can withdraw from participating at any time.

Principle 3: The rights of Indigenous peoples to their intangible heritage must be recognised.

Strategies to apply the principle

1. Any written reports or summaries of the outcomes of this research will clearly state that the knowledge shared by participants belongs to those participants, and that the researcher/institution conducting the research has no ownership rights. Therefore, permission to publish the information provided will be obtained in the Consent Form.

Principle 4: Rights in the traditional knowledge and traditional cultural expressions of Indigenous peoples must be respected, protected and maintained.

Strategies to apply the principle

1. Acknowledge my non-Indigenous status and chronicle my thoughts on the impact of my status on the research - practice reflexivity to inform on-going processes.
2. Reference all communities that have contributed to the knowledge base through this research, if they wish to be identified.

Principle 5: Indigenous knowledge, practices and innovations must be respected, protected and maintained.Strategies to apply the principle

1. Acknowledge in any publication that there are differences across Aboriginal peoples and reflect the various perspectives on the historical use of fire for cultural purposes and present-day use.
2. A statement identifying the ownership of the information provided by Aboriginal or Torres Strait islander community members will be included in any publications/reports.

Principle 6: Consultation, negotiation and free, prior and informed consent are the foundations for research with or about Indigenous peoples.Strategies to apply the principle

1. Informed consent document in plain English has been developed to facilitate the giving of free, prior and informed consent.
2. Identification of Elders and community members to speak on behalf of their communities will be sought from the communities themselves. Confidentiality, including the de-identification of all participants, will be maintained.

Principle 7: Responsibility for consultation and negotiation is ongoing.Strategies to apply the principle

1. Preliminary meetings will be held with community members in the target localities to introduce the research and answer any questions and to seek feedback on the cultural appropriateness of the methods to be used.
2. The author will be available by telephone or email for community members who may wish to discuss the research before, during and following data collection.
3. If any unforeseen matters (such as the identification of risk to self or others) arise during the prisoner/offender interviews permission will be obtained from prisoners/offenders at the time to discuss their interview with Elders/community

participants or correctional staff as appropriate. The researcher's clinical judgement and ethical obligations to report concerns will guide this process.

Principle 8: Consultation and negotiation should achieve mutual understanding about the proposed research.

Strategies to apply the principle

1. This methodology will ensure all participants are provided with information - through the Explanatory Statement brochure and the Informed Consent Form - about the purpose and nature of the study, who is carrying it out and the objectives of the research.
2. This will also include discussing the process of recruitment of incarcerated participants with community members and Elders and incorporating any advice or direction as to changes to the proposed processes.
3. Consultation with Elders and community members will be at the discretion of community members/Elders with respect to timing and location of consultations and flexibility will be offered with regard to the number or format of consultation sessions.
4. Consultation with the Cultural Adviser assisting the researcher will be on-going and provide opportunities to discuss and resolve any methodological issues.
5. Participants will be provided with a link to the Bond University (formerly the Australian Centre for Arson Research and Treatment ACART) website where details of any publications on this research can be found.
6. All participants will be consulted as to their expectation of the outcome of this research, in so far as recommendations for programs/interventions and policy/legislative change. This will be formally addressed in the interview schedules.
7. Elders and community representatives in each of the areas/towns sampled will be kept informed of any risks or potential adverse impacts of the research and consulted if any problems are encountered and their advice sought as to resolution.

Principle 9: Negotiation should result in a formal agreement for the conduct of a research project.

Strategies to apply the principle

1. When conducting initial meetings with Elders and community members in each of the localities being researched, the researcher will seek guidance as to whether a formal agreement would be appropriate/required to guide the conduct of interviews with the community sample. If a formal agreement is preferred, advice will be sought from community members as to the items to be included and this will be prepared in consultation with legal advisers from Bond University. BUHREC will be provided with a copy of any agreements.

Principle 10: Indigenous people have the right to full participation appropriate to their skills and experiences in research projects and processes.

Strategies to apply the principle

1. Some participants may initially agree to be involved in this study and then choose to withdraw. All participants will be advised that any information provided by them prior to withdrawal, will be destroyed and will not contribute to the research.
2. Community members and Elders will be identified at the commencement of this research and their input and advice will be sought as the project is conducted to ensure this research is conducted in accordance with this principle.

Principle 11: Indigenous people involved in research, or who may be affected by research, should benefit from, and not be disadvantaged by, the research project.

Strategies to apply the principle

1. Elders in each of the areas will be asked how this research might provide a reciprocal benefit, other than publication of research findings which may contribute to a broader discussion and understanding of the motivations for firesetting in Indigenous communities.

Principle 12: Research outcomes should include specific results that respond to the needs and interests of Indigenous people.

Strategies to apply the principle

1. The researcher will provide all Elders and community members and all offender participants involved in the study with details of where the outcomes/publication details can be found. Bond University (formerly ACART) maintains a website where information can be found regarding the publication of results and findings. In order to maintain confidentiality and ensure the protection of individuals' details, specific community results will not be identified.

Principle 13: Plans should be agreed for managing use of, and access to, research results.

Strategies to apply the principle

1. During the data collection phase, feedback on the outcomes of the research will be provided to participants involved in the community consultations and the arrangements for the provision of this feedback will be negotiated at the commencement of consultations. Feedback to Elders and community members will likely be on-going throughout the consultation period.
2. Advice will be sought from the Cultural Adviser assisting the researcher as to how the results of this study might best be communicated.

3. The information provided by all participants will be stored securely as previously advised elsewhere, and arrangements for its safe management will be discussed with Elders and community members in initial meetings.
4. The arrangements to maintain confidentiality, including the de-identification process, will also be discussed with Elders and community members, with the aim of resolving any concerns jointly.

Principle 14: Research projects should include appropriate mechanisms and procedures for reporting on ethical aspects of the research and complying with these guidelines.

Strategies to apply the principle

1. Participants in custody or under community corrections supervision may feel vulnerable and query the implications of their involvement in this study. The independence of the researcher will be emphasised in the Explanatory Statement brochure, and potential participants will be assured that their personal information will not be passed on to their correctional agency or correctional supervisors, unless risk to self or others is identified. This will be clearly explained to participants at the beginning of the interview.
2. The *Code of Ethics* and the *Guidelines for the provision of psychological services for, and the conduct of psychological research with, Aboriginal and Torres Strait Islander people of Australia* developed by the Australian Psychological Society will guide the researcher in conjunction with Bond University supervisors.

Appendix D: Information sheet for participants in Study One

INFORMATION SHEET



Have you ever been in trouble for setting fires?

Would you yarn with a researcher about setting fires?

My name is **Therese Ellis-Smith** and I am from Queensland.

I am doing research into **firesetting behaviour** as part of a Doctor of Philosophy degree at Bond University.

I am specifically interested in any differences between **Aboriginal and Torres Strait Islander firesetting and non-Indigenous firesetting**.

- **I would like to yarn with you if you have lit fires in the past and ask you some questions about your firesetting. I would also like to yarn with you about culture.**
- **Interviews will be conducted at your centre or reporting office and can be spread over a couple of sessions. They will not be more than an hour each.**
- **You can have someone else with you during the interviews if you'd like.**

Participation in this study is **completely voluntary** and you may withdraw at any time without risking any negative consequences.

If you choose to withdraw, the information you have provided will be immediately destroyed.

All the information collected from you will be treated with **complete confidentiality** and not provided to any person outside ACART. Correctional officers will not be given your confidential information.

If you agree I would like to **record your interview** so that I don't miss anything you say, and to make sure I record your interview accurately. However, if you don't want me to record you, that's fine - I won't.

The information I obtain from you will be kept securely and your name will not be recorded with your comments. All information will be stored securely at Bond University.

The information collected during this study will assist us to understand any differences between Aboriginal and Torres Strait Islander and non-Indigenous firesetting. Your participation in this research will also help us develop **treatment programs for firesetters**.

You will be asked to sign the **Informed Consent Form** which is attached for you to have a look over, but please don't sign it until we meet.

If you would be willing to yarn with me please let your Community Corrections Officer know or tell an Officer at your centre, and they can contact me. I'll then arrange to come and yarn with you.

Thank you for taking the time to assist me with this research.



Appendix E: Informed consent forms for Study One



Informed Consent Form (A)

(Prisoners / community corrections clients)

Research Project – Arson in Australia

Therese Ellis-Smith

Australian Centre for Arson Research and Treatment, Bond University

PLEASE DO NOT SIGN THIS FORM BEFORE YOUR INTERVIEW

- 1 I understand what this project is about.
 I have read or had read to me the Plain English Research Statement which explains what this research project is about, and I understand it. I understand that the researcher is doing a Doctor of Philosophy course about Aboriginal and Torres Strait Islander and non-Indigenous folk who have lit fires.
- 2 I have had a chance to ask questions about the project, and I am comfortable with the answers that I have been given. I know that I can ask more questions whenever I like.
- 3 I have volunteered to participate.
 I agree to participate in the research. I know that I do not have to participate in it if I don't want to. I made up my own mind to participate – nobody is making me do it. I know that I can have another person in the interview with me if I like.
- 4 I know that I don't have to answer any questions I don't like. The researcher will make notes about what I say but if I ask her not to write something down then she won't. The researcher will turn off the tape if I ask her to.
- 5 What will happen if I want to stop participating?
 I know that I can pull out at any time without getting into trouble with the researcher or anyone else. Pulling out of this research will not have any effect on my placement in the prison or my supervision level, or my sentence/order. If I pull out, the researcher will not use any information that I have given them before then, and they will be able to write down that I have stopped participating, but they won't be able to make me keep participating if I don't want to.
- 6 How will the researcher keep my name and information confidential?

I agree that the researcher can interview me for the research and write down or tape what I say. I understand that the researcher will also look at my corrections file and write down some background information about me. The researcher will not use my name – she will give me a code and that code will be on all the written documents she makes. If the researcher keeps a record of what I said during the research she will keep it in a locked filing cabinet in her offices at Bond University or in a secure location on a computer.

7 How will the research work?

The researcher will see me at the prison or in the community corrections office. I understand the researcher will ask me questions which might take place over a couple of interviews. The time will not be more than 1 hour for each interview. I can end an interview session when I want to. If I have further questions I can arrange for the researcher to come back to meet with me at another time.

I know that I won't get paid for answering the questions or participating in the research project.

I won't pass on any specific identifying information (who, where, when etc..) about offences I have not been charged with. If I want to talk about things I've done that I haven't been charged for then I will do so in a very general way. If I give specific details of a crime I've committed then I understand the researcher may have to tell an authority about it and I could get charged for it.

I agree that, when the researcher has collected all the information she needs, she will talk to me about what to do with any secret or sacred information that I have provided. I will be able to say what should be done with this information and if I don't want it included in the research results then I can tell the researcher to keep it out of the results.

8 Who will be the authors of the research?

I understand that the researcher is Therese Ellis-Smith and that she wants to write about the research and that she may publish some of the information I give her. She will mention my community and where I am now, but she won't ever use my name. I understand that anyone can read the book/article/report that comes out of this research, and that even people on the other side of the world might see it, maybe on the internet. That's OK with me.

I understand that the researcher will be supervised at Bond University by Dr Rebekah Doley and Dr Bruce Watt, and that her supervisors will also be able to read what I have said.

I agree that the researcher can present information from the research at conferences even if I'm not there. I understand that the researcher can do this without asking me first. I understand that the information that I provide to the researcher may be used in other studies that are about firesetting, as well as this study.

9 I know that the risks of the research are -

- I might be asked about some parts of my history which I find hard to talk about and that talking about those things with the researcher might make me feel unhappy;
- that if I tell the researcher about criminal acts I've done, the police might be able to force the researcher to tell them about it. I understand that the researcher will ask me about crimes that I might not have been caught for, but that these questions will not seek specific details of those crimes.

10 Complaints

I know that if I am worried about something I have said in the research project, or some other issue, then I can contact the researcher through (Corrections contact officer) and talk to her about it.

If I have a complaint then I know that I can contact a couple of agencies:

Bond University Human Research and Ethics Committee, by writing to -

The Research Ethics Manager, Office of Research Services, Building 1C, Level 4, Bond University
QLD 4229 and citing Application ID – 15022.

OR

Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS)

Phone: 02 6246 1116

Post: PO Box 553, Canberra ACT 2601

Ms Chrissy Grant, Chair of the AIATSIS Research Ethics Committee,

Phone 02 6246 1145

I have read this Informed Consent Form and I agree with it.

Signed by the research participant

Date_____

OR

I read this Informed Consent Form aloud to [name of research participant] and I believe that s/he understood and agreed to it:

Signed by witness_____

Name of witness_____

Date_____

AND:

Signed by or on behalf of the researcher(s)

Name_____Date_____



Informed Consent Form (B)
(Elders and Community members)
 Research Project – Arson in Australia
 Therese Ellis-Smith

Australian Centre for Arson Research and Treatment, Bond University

PLEASE DO NOT SIGN THIS FORM BEFORE YOUR INTERVIEW

- 1 I understand what this project is about.
 I have read or had read to me the Plain English Research Statement which explains what this research project is about, and I understand it. I understand that the researcher is doing a Doctor of Philosophy course about Aboriginal and Torres Strait Islander and non-Indigenous folk who have lit fires.
- 2 I have had a chance to ask questions about the project, and I am comfortable with the answers that I have been given. I know that I can ask more questions whenever I like.
- 3 I have volunteered to participate.
 I agree to participate in the research. I know that I do not have to participate in it if I don't want to. I made up my own mind to participate – nobody is making me do it. I know that I can have another person in the interview with me if I like.
- 4 I know that I don't have to answer any questions I don't like. The researcher will make notes about what I say but if I ask her not to write something down then she won't. The researcher will turn off the tape if I ask her to.
- 5 What will happen if I want to stop participating?
 I know that I can pull out at any time without getting into trouble with the researcher or anyone else. If I pull out, the researcher will not use any information that I have given them before then, and they will be able to write down that I have stopped participating. But they won't be able to make me keep participating if I don't want to.
- 6 How will the researcher keep my name and information confidential?
 I agree that the researcher can interview me for the research and write down or tape what I say. The researcher will not use my name – she will give me a code and that code will be on all the written documents she makes. If the researcher keeps a record of what I said during the research she will keep it in a locked filing cabinet in her offices at Bond University or in a secure location on a computer.

7 How will the research work?

The researcher will see me in a place mutually agreed upon. I understand the researcher will ask me questions which might take place over a couple of interviews. The time will not be more than 1 hour for each interview. I can end an interview session when I want to. If I have further questions I can arrange for the researcher to come back to meet with me at another time.

I know that I won't get paid for answering the questions or participating in the research project.

I agree that, when the researcher has collected all the information she needs, she will talk to me about what to do with any secret or sacred information that I have provided. I will be able to say what should be done with this information and if I don't want it included in the research results then I can tell the researcher to keep it out of the results.

8 Who will be the authors of the research?

I understand that the researcher is Therese Ellis-Smith and that she wants to write about the research and that she may publish some of the information I give her, but that she won't ever use my name. If I do not want my community identified then I can tell the researcher this and she will not refer specifically to my community in any publications. I understand that anyone can read the book/article/report that comes out of this research, and that even people on the other side of the world might see it, maybe on the internet. That's OK with me.

I understand that the researcher will be supervised at Bond University by Dr Rebekah Doley and Dr Bruce Watt, and that her supervisors will also be able to read what I have said.

I agree that the researcher can present information from the research at conferences even if I'm not there. I understand that the researcher can do this without asking me first. I understand that the information that I provide to the researcher may be used in other studies that are about firesetting, as well as this study.

9 I know that a risk of the research is-

- I might be asked about some things which I find hard to talk about and that talking about those things with the researcher might make me feel unhappy.

10 Complaints

I know that if I am worried about something I have said in the research project, or some other issue, then I can contact the researcher by telephone or email and talk to her about it.

If I have a complaint then I know that I can contact a couple of agencies:

Bond University Human Research and Ethics Committee, by writing to -

The Research Ethics Manager, Office of Research Services, Building 1C, Level 4, Bond University
QLD 4229 and citing Application ID – 15022.

OR

Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS)

Phone: 02 6246 1116

Post: PO Box 553, Canberra ACT 2601

Ms Chrissy Grant, Chair of the AIATSIS Research Ethics Committee,

Phone 02 6246 1145

I have read this Informed Consent Form and I agree with it.

Signed by the research participant

Date_____

OR

I read this Informed Consent Form aloud to [name of research participant] and I believe that s/he
understood and agreed to it:

Signed by witness_____

Name of witness_____

Date_____

AND:

Signed by or on behalf of the researcher(s)

Name_____Date_____

Appendix F: Semi-structured interview schedules for Study One Arsonists

Interview Schedule (1)

Group One: Aboriginal and/or Torres Strait Islander Arsonists

*Acknowledge the land and Elders past and present from the area.
Confirm whether an interpreter is needed.
Check whether participant would like another person present.
Discuss/sign the Informed Consent Form and answer any questions.*

Demographics

De-identifier (initials/year of birth)

.....

Interview date

.....

Interview location

.....

Age

.....

Gender

Male

Female

Current offences

.....
.....
.....
.....

Sentence/s

.....
.....
.....
.....

Preamble

Thank you for agreeing to meet with me to answer some questions. As you know I'm a student from Bond University and I am studying firesetting behaviour in Aboriginal and Torres Strait Islander communities. I am grateful that you've agreed to yarn with me. All of the information you give me will be private and will not be given to corrections staff or anyone

else here. I'd like to start off with some questions about you, if that's ok, and then ask you to tell me about what brought you are here.

Family background

1. Where were you born? Which mob/family group do you belong to?
2. Tell me about your family? Who is in your family?
3. What language do you speak with your family?
4. Have you ever lived away from your family? Travelled?
5. Where did you go to school?
6. What jobs have you had?
7. Can you tell me about your current and past relationships? Children?

Self-perceptions

8. Can you tell me a little about yourself?
9. What things do you like to do in your free time?
10. How would your mother describe you now?
11. Have you ever suffered a mental illness? Been to see a counsellor? Been prescribed medication for a mental illness?
12. Do you have thoughts that trouble you?
13. Do you have friends? Who are you close to?

Sharing story about culture

14. Can you share your story with me?
15. What does your culture mean to you?
16. Does culture mean the same for your parents/Elders?
17. What traditions do you normally participate in?
18. Has your participation in culture changed over recent years at all?
19. What do you think are the main ways your people express their culture?
20. Has your offending effected how you experience/express your culture?
21. Are there cultural practices that no longer occur? Why do you think this is so?
22. How important is your culture to you at this time?

Importance

1	2	3	4	5
Not Important				Extremely Important

23. How involved are you in Aboriginal or Torres Strait Islander culture normally (outside prison if incarcerated)?

Involvement in Cultural activities

1	2	3	4	5
Not Involved	Rarely Involved	Sometimes Involved	Regularly Involved	Frequently Involved

Fire and Aboriginal and Torres Strait Islander Culture

24. Have you or your family used fire for cultural or spiritual purposes?
25. What do you know about the use of fire for cultural or spiritual purposes in your community?
26. Is fire ever used for 'payback' in your community?
27. Are there good uses and bad uses of fire?

Current offence questions

28. Could you please tell me about the circumstances that have brought you to prison/community corrections?
29. What happened? What were you feeling/thinking/doing at the time?
30. Who were you with?
31. Why did you light the fire?
32. How did you feel after you had lit the fire?
33. How do you feel about your sentence? Fair/unfair?
34. How do you feel about what you did now?
35. How did you family respond at the time?

Previous firesetting

(Re-emphasis confidentiality of information provided here)

36. Have you lit fires previously?
37. Can you tell me when you lit the first fire? (Child, Adolescent, Adult)
38. Were you caught?
39. If so, what was the outcome?
40. Approximately how many fires do you think you've lit before?
41. Why do you think you started lighting fires?

Previous offending

(Re-emphasis confidentiality of information provided here)

42. Have you ever been charged with other types of offences?
43. What happened when you went to court for these?
44. Have you drunk alcohol or taken drugs in the past?
45. How old were you when you started drinking alcohol/taking drugs?
46. Were you under the influence of alcohol or drugs when you offended in the past?
47. Were you under the influence of alcohol or drugs when you offended this time?

Future predictions

48. Do you think you will light another fire in the future?
49. What would stop you from lighting another fire?
50. What are your plans for the future?

Interview Schedule (2)

Group Two: Non-Indigenous Arsonists

Thank participant for contributing to the research.

Confirm whether an interpreter is needed.

Check whether participant would like another person present.

Discuss/sign the Informed Consent Form and answer any questions.

Advise participant that some file background information has been obtained about him/her.

Demographics

De-identifier (initials/year of birth)

.....

Interview date

.....

Interview location

.....

Age

.....

Gender

Male

Female

Current offences

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.....
.....

Sentence/s

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.....

Preamble

Thank you for agreeing to meet with me to answer some questions. As you know I'm a student from Bond University and I am studying firesetting behaviour. I am grateful that you've agreed to speak with me. All of the information you give me will be private and will not be

given to corrections staff or anyone else here. I'd like to start off with some questions about you, if that's ok, and then ask you to tell me about what brought you are here.

Family background

1. Where were you born?
2. Tell me about your family? Who is in your family?
3. What language do you speak with your family?
4. Have you ever lived away from your family? Travelled?
5. Where did you go to school?
6. What jobs have you had?
7. Can you tell me about your current and past relationships? Children?

Self-perceptions

8. Can you tell me a little about yourself?
9. What things do you like to do in your free time?
10. How would your mother describe you now?
11. Have you ever suffered a mental illness? Been to see a counsellor? Been prescribed medication for a mental illness?
12. Do you have thoughts that trouble you?
13. Do you have friends? Who are you close to?

Current offence questions

14. Could you please tell me about the circumstances that have brought you to prison/community corrections?
15. Were you under the influence of alcohol or drugs when you offended this time?
16. What happened? What were you feeling/thinking/doing at the time?
17. Who were you with?
18. Why did you light the fire?
19. How did you feel after you had lit the fire?
20. How do you feel about your sentence? Fair/unfair?
21. How do you feel about what you did now?
22. How did your family respond at the time?

Previous firesetting

(Re-emphasis confidentiality of information provided here)

23. Have you lit fires previously?
24. Can you tell me when you lit the first fire? (Child, Adolescent, Adult)
25. Were you caught?
26. If so, what was the outcome?
27. Approximately how many fires do you think you've lit before?
28. Why do you think you started lighting fires?

Previous offending

(Re-emphasis confidentiality of information provided here)

29. Have you ever been charged with other types of offences?
30. What happened when you went to court for these?
31. Have you drunk alcohol or taken drugs in the past?
32. How old were you when you started drinking alcohol/taking drugs?
33. Were you under the influence of alcohol or drugs when you offended in the past?

Future predictions

34. Do you think you will light another fire in the future?
35. What would stop you from lighting another fire?
36. What are your plans for the future?

Appendix G: Code Book for Study One

46 Variables

Demographic Variables (7)

Charges and sentences (6)

Criminal history (6)

Mental Health variables (4)

Offending background (8)

Firesetting Variables (15)

Demographic and Court Variables (7)

Variable	Identifier	Indigenous Status	Education	Relationship Status
SPSS name	Name	IndStatus	Educ	RelSt
Type of data	Nominal	Nominal	Nominal	Nominal
Coded as	Initials and year of birth	1 Aboriginal 2 Torres Strait Islander 3 Non-Indigenous	1 Primary only 2 Part secondary 3 Full secondary 4 Tertiary	0 Not Known 1 Single 2 Current de facto /in a relationship (not nec cohabiting) 3 Married 4 Divorced/separated 5 Widowed
Notes				At time of interview

Variable	Age - offence	Age at interview	Gender
SPSS name	AgeOff	AgeInt	Gender
Type of data	Scale	Scale	Nominal
Coded as	Age at time of arson offence 0 Not known	Age at time of interview 0 Not known	1 Male 2 Female
Notes			

Charges and sentences (6)

Variable	Jurisdiction	Current Order	Most serious sentence
SPSS name	Jur	Ord	MSSent
Type of data	Nominal	Nominal	Nominal
Coded as	1 Northern Territory 2 South Australia	1 Imprisonment 2 Probation, fine or recognizance 3 Parole 4 Suspended sentence	1 Fines or Bonds only 2 CCS supervision 3 Imprisonment < 5 years 4 Imprisonment > 5 years 5 Combination of imprisonment and CCS 6 Suspended sentence
Notes			

Variable	Arson sentence	Number current arson charges	Arson in conjunction with murder charge
SPSS name	ArsonSent	NumArson	Murder
Type of data	Nominal	Scale	Nominal
Coded as	0 Nolle Prosequi 1 Fines/Bond only 2 CCS Supervision/CW 3 Imprisonment <5 years 4 Imprisonment >5 years 5 Combination - imprisonment and community supervision 6 Suspended sentence	Number charges for arson/arson-related offences	1 Murder charge in conjunction with arson charge/s 2 NO Murder charge in conjunction with arson charge/s
Notes	Exact sentence given for the arson offence/s, if specified.	Number of current charges for arson/related offences in this episode	

Criminal History (6)

	Property offences	Violent offences	Substance use offences
Variable SPSS name	CHProp	CHViol	CHSubs
Type of data	Nominal	Nominal	Nominal
Coded as	0 No history 1 Previous or current	0 No history 1 Previous or current	0 No history 1 Previous or current
Notes			

	Breach order offences	Sex offences	Alcohol related offences
Variable SPSS name	CHOrdBr	CHSexOff	CHAlco
Type of data	Nominal	Nominal	Nominal
Coded as	0 No history 1 Previous or current	0 No history 1 Previous or current	0 No history 1 Previous or current
Notes			

Mental Health (4)

	Mental Health Diagnosis	Mental Health Treatment	Dichotomous Treatment	Diagnosis
Variable SPSS	MHDiag	MHtreat	DicotMHTrt	TypeMHDiag
Type of data	Nominal	Nominal	Nominal	Nominal
Coded as	1 None 2 Adult Mental Illness only 3 Adult Personality Disorder only 4 Childhood disorder/diagnosis only 5 Child and Adult diagnoses	1 Community based agency Support and counselling 2 Community based psychological treatment 3 Community based psychiatric/GP treatment 4 Inpatient psychiatric hospitalisations 5 None	0 No identified mental health treatment 1 Mental health treatment identified	0 None 1 Depression 2 APD 3 Depression and anxiety 4 Bipolar disorder 5 Schizophrenia
Note	Any history of MI mentioned			Primary diagnosis

Offending Background (8)

Variable	First time offender	Number previous convictions	Juvenile History
SPSS name	First-timer	OffNum	JuvCH
Type of data	Nominal	Nominal	Nominal
Coded as	1 First time offender – no previous offences 2 NOT first-time offender – has previous offences (any type)	1 < 5 previous convictions 2 between 5 and 10 3 between 10 and 15 4 15plus	0 Court mentioned that there is no juvenile criminal history 1 A juvenile criminal history is mentioned 7 Not applicable or no information available
Notes			

Variable	Previous firesetting	Total number previous arson convictions	Exclusivity: Versatility
SPSS name	PrevFire	FirHy	ExclVers
Type of data	Nominal	Scale	Nominal
Coded as	0 none disclosed 1 Legitimate purpose 2 Illegitimate purposes	Number of total convictions for arson	1 Exclusive –only arson/arson-related offences 2 Versatile –both arson/arson-related offences and other types of offences 7 No information available on versatility or exclusivity
Notes	Irrespective of whether convicted or not	Includes current convictions for arson	As available/taken from sentencing comments

Variable	Age firesetting commenced	Previous substance use
SPSS name	AgeCom	PrevSubs
Type of data	Nominal	Nominal
Coded as	1 Child- less than 10 years 2 Adolescent – between 11 and 17 years 3 Adult – 18 years or older	1 None 2 Alcohol only 3 Drugs only 4 Both drugs and alcohol
Notes		

Firesetting Variables (15)

Variable	Motivation	Motivation - Expressive or Instrumental	Target of offence	Victim
SPSS name	Motvn	MotivExpInst	Target	DichotTarget
Type of data	Nominal	Nominal	Nominal	Nominal
Coded as	1 Anger prompting revenge/payback 2 Profit 3 Attract services/attention 4 Eliminate evidence/crime concealment 5 Excitement/sexual 6 Self-pity/upset 7 Due to intoxication can't recall or explain 8 Other 9 Mixed motives (from several above) 10 Gang related violence 11 Mental Illness – delusional	1 Expressive 2 Instrumental	1 Own place of residence/business 2 Own property – vehicle 3 Bush/scrub 4 Random, community or govt property (incl stolen vehicle) 5 Relatives/friends/associates dwelling/property 6 Relatives/friends vehicle/boat 7 Other	1 Intimate, family or known victim 2 Stranger victim or unknown
Notes	As identified by participant		Target of arson	Owner of property targeted

Variable	Number of Co-offenders	Presence of Co-offenders	Relationship to Co-offenders	Method 1 Use of accelerants
SPSS name	M2CoOff	Co_Off_Dichot	M3CoRel	M1Accel
Type of data	Scale	Nominal	Nominal	Nominal
Coded as	Number of persons offending with participant in most serious arson offence	0 No Co-offenders 1 Co-offenders present	0 N/A offender acted alone 1 Co-offenders were related 3 Co-offenders were not related	0 No accelerants used 1 Evidence that accelerants were used
Notes				Includes cooking oil, fuel etc

	M-TTAF Trajectory	Substance use	Planning	Cognitions
Variable SPSS name	MTTAF	M4Subs	M5Plan	Cognitions
Type of data	Nominal	Nominal	Nominal	Nominal
Coded as	1 Antisocial cognition 2 Grievance 3 Fire interest 4 Emotionally expressive 5 Multifaceted	1 None 2 Alcohol only 3 Drugs only 4 Both drugs and alcohol 5 Inhalants	1 Planned offence/s 2 Unplanned or impulsive offence/s	1 Extrinsic 2 Intrinsic Unknown or mixed
Notes		Substances involved in commission of current arson offence/s	Degree of planning in current offences	Allocated from thematic analyses

	Implicit Theories	Grief	Scripts
Variable SPSS name	Implicittheory	Grief	
Type of data	Nominal	Nominal	
Coded as	1 dangerous place 2 Violence is normal 3 Fire is powerful tool 4 Fire is fascinating 5 Fire can be controlled 7 None identified	1 Grief present/identified 2 No mention of grief	1 Powerful messenger 2 Best way to destroy evidence 3 Fire is soothing 7 None identified
Notes	MTTAF Implicit theories		

**Appendix H: Semi-structured interview schedule for Aboriginal and/or Torres Strait
Islander Elders and community members**

Interview Schedule 3

Group Three: Aboriginal and/or Torres Strait Islander Elders

*Acknowledge the land and Elders past and present from the area.
Confirm whether an interpreter is needed.
Check whether participant would like another person present.
Discuss/sign the Informed Consent Form and answer any questions.*

Preamble

Thank you for agreeing to meet with me to answer some questions. As you know I'm a student from Bond University and I am studying firesetting behaviour in Aboriginal and Torres Strait Islander communities. I am grateful that you've agreed to yarn with me. All of the information you give me will remain confidential.

I'd like to start off with some questions about you first and then yarn about culture, if that's ok, and then talk about firesetting.

Demographics

*Collect basic demographic details –
Age; Land of origin/mob; Occupation or role in community.*

Views of Aboriginal culture

I'm interested to understand your culture and would like to ask you some questions about the traditions of your family and community – is this ok?

1. What does your culture mean to you?
2. Does culture mean the same for other members of your family such as young people?
3. Are there differences in cultural expression between those living in cities/towns and those living in regional communities?
4. What cultural activities or traditions do you normally participate in?
5. Has your participation in culture changed over recent years at all?
6. What do you think are the main ways your people express their culture?
7. Has offending in communities effected how you or others experience/express your culture?
8. Are there cultural practices that no longer occur? Why do you think this is so?
9. How important is your culture to you at this time?

Importance

1	2	3	4	5
Not				Extremely
Important				Important

10. How involved are you in the traditions of your culture normally?

Involvement in Cultural traditions/activities

1	2	3	4	5
Not	Rarely	Sometimes	Regularly	Frequently
Involved	Involved	Involved	Involved	Involved

Firesetting – culture (legitimate)

11. In your culture when is fire used? What purpose does it serve?
12. Can you tell me about the use of fire for spiritual or cultural purposes?
13. When is it ok to set a fire? When is it not ok?
14. If you used fire for cultural purposes do you think you might be charged with arson? Why/why not?
15. Who makes the decision as to whether acts of firesetting are offences/illegal or culturally ok and not offences?
16. Is fire used in traditional lore?

Firesetting – offences (illegitimate)

As you know I'm researching illegal or criminal firesetting behaviour in Aboriginal and Torres Strait Islander communities and I'd like to move on to talk about this, if that's ok?

17. Are you aware of any Aboriginal or Torres Strait Islander people who have been charged with arson or arson-related offences?
18. What do you think of this behaviour?
19. Do you think the police and the courts handled these acts properly?
20. What were the circumstances of these offences? Accelerants? Targets of fire?
21. What group/type of people are involved in these types of offences? (no names)
22. Why do you think they were committed?
23. How often do these types of offences occur in your community?
24. What is the general community response when these offences occur?
25. How do you feel about these types of offences?
26. Why do Aboriginal or Torres Strait Islander people light illegal fires?
27. What needs to change for arson offences to cease in Aboriginal or Torres Strait Islander communities?

Other

28. Do you have any other thoughts about firesetting in Aboriginal or Torres Strait Islander communities?
29. Have you thought of any other examples of firesetting whilst we have been talking?
30. What else would you like to say?
31. Who else should I talk to about this topic?

Appendix I: Researchers' Reflexive Notes

Throughout this project reflexive notes have been kept describing and documenting key learnings. These notes provide a backdrop to the issues raised as a non-Indigenous researcher enquiring about Aboriginal matters and are summarised and presented under the principles of the Australian Institute of Aboriginal and Torres Strait Islander Studies – Guidelines for Ethical Research in Australian Indigenous Studies (2012). The principles are:

Principle 1: Recognition of the diversity and uniqueness of peoples, as well as of individuals, is essential. This principle requires that each individual participant is treated as an individual and that their particular perspective is not generalised or taken to be the perspective of all Indigenous people. This means that the comments from Elders and community members from the various regional areas or cities, are recognised as unique to them, and not taken as representative of their area or community. It would be tempting to suggest representativeness, but this would violate this principle and has been avoided. The individual comments have therefore been presented verbatim where possible and clearly identified as such.

While some comments from Elders for instance, are similar to others; some have diverged, and one in particular, challenged the need for this research altogether. This was confronting, and the researcher was extremely uncomfortable that offence was taken, however it was an important lesson in clear articulation and the careful choice of words to describe the research.

This principle also warns against generalising the findings and the researcher is mindful that the Aboriginal firesetters in this study are few, and their behaviours, motivations and attitudes do not represent all Aboriginal firesetters. As this study was largely exploratory, the conclusions drawn from the results of the various analyses are therefore posited within this cautionary context.

Principle 2: the rights of Indigenous peoples to self-determination must be recognised. This principle was interpreted in several ways. All participants who agreed to be interviewed for this study were advised verbally, and in writing, that they could withdraw at any time and that if they chose to withdraw, their information would not be included. Several potential participants declined to continue with the interview once the purpose was explained, and while this was disappointing, their wishes were respected. The researcher was careful to ensure that those prisoners choosing to withdraw were advised that their withdrawal would have no consequences in terms of their custodial placement or treatment.

This principle, in particular, inspired the researcher's consideration of collective reflexivity, or how new treatment approaches might better meet the needs of Indigenous firesetters in a correctional setting, by extending self-determination to include rehabilitative efforts. In this sense, by sharing responsibility for rehabilitation interventions between correctional providers and community representatives, Indigenous self-determination would be substantially enhanced. The decision to include input from Indigenous Elders and community members was taken to enhance ownership of the outcomes of this research.

Principle 3: The rights of Indigenous peoples to their intangible heritage must be recognised. There were occasions when participants declined to answer a question or refrained from a full response to a sensitive question. The researcher noted this particularly when discussing some areas of cultural expression with male participants. It was important to reflect on how some issues may make male participants uncomfortable and that for them discussing some topics with a woman was not appropriate. In some instances, gender became a barrier to open communication, and this may have contributed to some participants holding back or measuring their contributions.

The researcher learnt to withdraw or pull back the level of enquiry in these instances, and while this may have reduced the detail of the information obtained from some

participants, it was a necessary approach to ensure respect was maintained. On several occasions, demonstrating interviewing restraint led to participants disclosing more, as they came to respect the interviewers discretion and feel more comfortable in the interview situation. This highlighted the importance of interpersonal reflexivity, which the researcher defined as not setting the tone of the interview and consciously adjusting to the pace set by the participants.

Principle 4: Rights in the traditional knowledge and traditional cultural expressions of Indigenous peoples must be respected, protected and maintained. This principle requires that cultural knowledge shared must be attributed and recognised as owned by those providing it, not those receiving it. The information obtained in this study from Aboriginal participants remains their knowledge. The researcher is grateful that sensitive and often personal information was shared in discussions with participants and claims no ownership or propriety over this knowledge. Care has been taken interpreting information shared in interviews with Indigenous offenders, and the methodology, a thematic analysis, was developed with caution.

In relation to interviews with Elders and community members, thematic analysis was not undertaken in accordance with this principle. Therefore, this study reports some of the information with minimal interpretation. The researcher, as a non-Indigenous person who does not live or belong in the communities where participants came from, has no authority or right to interpret some of the knowledge provided. The Cultural Adviser has gently reflected this at times when interpretation has tended to overstep this principle, and this has been invaluable.

Efforts to correctly and fully attribute information provided have been balanced with the need to maintain the confidentiality of those who contributed such knowledge. In order to

strike this balance all those interviewed have been de-identified, however their community, region or location has been identified.

Principle 5: Indigenous knowledge, practices and innovations must be respected, protected and maintained. Any publications prepared will reference participants' locations and specifically note that the views of individuals do not represent the views of their communities or Aboriginal people in general. One of the benefits of having interviewed community members and Elders from four states, including remote communities, was to experience some of the diversity among Aboriginal people. The researcher was privileged to have been invited into the homes of some participants and sought guidance on how to act, listen and show respect, particularly when on community.

Principle 6: Consultation, negotiation and free, prior and informed consent are the foundations for research with or about Indigenous peoples. All participants were invited to sign the Informed Consent Form, and where appropriate this document was read aloud, and any questions discussed. All interviews were conducted in a confidential space where participants could not be overheard, and this was particularly important when interviewing those in custody. The majority of participants in custody were happy to be involved in this study and it seemed that, for some, the interview process was a welcome relief from the daily monotony. The unexpected candour was refreshing in many of the interviews as each participant recounted their story and reflected on their offences.

There were several Indigenous participants in custody whose first language was not English, and these interviews were taken slowly. The offer to have an interpreter or another person present during these interviews was declined in all such instances, and in order to ensure an accurate picture of the person, the researcher developed an interview style that confirmed each statement made by the participant, and regularly checked understanding. As such some interviews were quite lengthy, at one and a half hours duration, and participants

were always offered an opportunity to have a break and resume later. Several took advantage of having a break during the interview and this worked well in terms of maintaining rapport.

At times, operational intrusions or restrictions within the custodial centres interfered with the interview process. For instance, loud overhead announcements were common, and at times the interview was interrupted by officers for various reasons. These interruptions did not interfere with privacy or confidentiality.

Principle 7: Responsibility for consultation and negotiation is ongoing. The essence of this principle is that any research involving Aboriginal peoples should include two-way consultation that is on-going over the life of the project. In order to encourage on-going contact with participants, each was provided with the contact details for the researcher should they wish to have input into this study after their interview. Unfortunately, it has been logistically impossible to return to the locations where either community or correctional interviews were held to provide feedback on the results of the study. Had this study involved just one community, ideally several return visits would have occurred; however, as interviews with Elders and community members were conducted across various locations, this was not possible.

Follow up interviews with those interviewed in custody, to disseminate results have not occurred. The current location of those who were interviewed in custody is not known, as some would have been released and others transferred to other facilities since the interviews. It was explained to those interviewed in custody at the time of their interview that the researcher would not attempt to locate them once the results of all interviews had been considered. None of the participants requested the results of this study, nor have any contacted the researcher since their interview.

Principle 8: Consultation and negotiation should achieve mutual understanding about the proposed research. An explanatory statement was provided to each participant

outlining, in plain English, the purpose of this study. Participants were invited to contribute to an understanding of firesetting behaviours for the purpose of identifying appropriate treatment targets and the usefulness of the current theories developed to explain firesetting. Community members and Elders were more likely to express views on potential treatments or criminal justice sanctions, than the offenders convicted of arson offences. This may reflect a broader perspective on behalf of the community members as many of the discussions with this group considered general crime themes, causes and contributing factors. These discussions greatly assisted the researcher to learn about local community issues and the challenges faced by those living in remote locations.

Principle 9: Negotiation should result in a formal agreement for the conduct of a research project. The researcher was not required to enter in to a formal agreement with any of the individual participants. Had one community been the sole focus of this study, such an agreement would have been appropriate, however in the current study this was not necessary or considered further. Future research might focus on a single community where firesetting is particularly problematic, and in such an instance a formal approach to the community through its Elders would occur.

Principle 10: Indigenous people have the right to full participation appropriate to their skills and experiences in research projects and processes.

The researcher discussed the proposed methodology with a number of Indigenous Elders and community members at the commencement and during, the project. Sound advice was also received from the University's centre for Indigenous students, the Nyombil Centre, as to the best methods of approach to community members. Also, key Aboriginal advisers employed by the correctional jurisdictions involved in the study were consulted. The researcher was ever mindful of the negative imputations of non-Indigenous researchers seeking to include Indigenous peoples in studies, and the historical distaste this has

engendered. The development of such awareness has been important during the research process and has guided all steps taken, from making an initial contact, through to the preparation of the final thesis.

Principle 11: Indigenous people involved in research, or who may be affected by research, should benefit from, and not be disadvantaged by, the research project.

The application of reciprocity, and the consideration of real opportunities to show reciprocity, has challenged the researcher. As it is unlikely individual participants would benefit from this research, the principle of reciprocity and creating a benefit for Indigenous peoples has been a key driver in focussing this study on the development of treatment options. By extending theory through the application of information gained, towards the identification of new approaches to psychological treatment, the researcher hopes to demonstrate reciprocal value and benefit to Indigenous offenders and their communities in the future.

Elders and community members were asked how they would like this research to benefit their communities. The clear message was for non-Indigenous people and agencies working with Indigenous offenders to understand their people better, and particularly the historical trauma experienced and the impact this had had on substance use and criminal behaviour. To this end the researcher has maintained a strong focus on enhancing social and emotional wellbeing when addressing the research questions. These studies aim to impact the current theoretical approaches to arson to inform intervention and treatment of Indigenous people in custody, by taking an offender-focussed approach as opposed to an offence-focussed approach.

Principle 12: Research outcomes should include specific results that respond to the needs and interests of Indigenous people. The outcomes of this research will be made

available publicly to Indigenous forums, agencies and groups through conference presentations, publications and network meetings.

Principle 13: Plans should be agreed for managing use of, and access to, research results. All participants who contributed to this study were given current contact details of the University and the researcher and encouraged to keep abreast of the results and outcomes. Elders and community members were specifically invited to contact the researcher for detailed results if interested in obtaining these at the conclusion of the study. Permission to publish results of this study was obtained from all participants.

Principle 14: Research projects should include appropriate mechanisms and procedures for reporting on ethical aspects of the research and complying with these guidelines. The researcher has been guided by Code of Ethics, and the Ethical guidelines for the provision of psychological services for, and the conduct of research with, Aboriginal and Torres Strait Islander peoples of Australia, developed by the Australian Psychological Society, and the Guidelines for Ethical Conduct in Aboriginal and Torres Strait Islander Health Research (AIATSIS, 2012). By addressing these principles through reflexive thought over the duration of the study, the researcher has maintained a focus on the ethical responsibilities and professional obligations inherent in this research. Access to the Cultural Adviser for the purpose of discussing methodological and ethical issues has been invaluable.

Appendix J: Details of Aboriginal Elders and Community Members interviewed

Initials	Brief summary	Location of interview
A1	A1 is an Elder of the remote community of Kintore, Northern Territory.	Home of A1 in Kintore, Northern Territory.
A2	A2 is an Aboriginal chaplain from Bundaberg, Queensland.	A2 provided information by email.
A3	A3 is an Aboriginal businesswoman from Darwin, Northern Territory.	A3 provided comments by email.
A4	A4 is an Elder of the remote community of Kintore.	Home of A4 in Kintore, Northern Territory.
A5	A5 is an Elder and also a correctional officer at the Port Augusta prison.	Port Augusta Correctional Centre, South Australia.
A6	A6 is an Elder within the Port Augusta community and works for a local Aboriginal support agency.	Port Augusta office of local support agency, South Australia.
A7	A7 is an Aboriginal professional from the Gold Coast region, Queensland.	A7 provided comments by email.
A8	A8 is an Aboriginal Community Constable with the South Australian Police Service.	Place of employment in Port Augusta, South Australia.
A9	A9 is an Aboriginal professional from Adelaide, South Australia.	A9 was interviewed by telephone.
A10	A10 is an Aboriginal professional from the Gold Coast, Queensland.	Place of employment, Gold Coast, Queensland.
A11	A11 is an Aboriginal woman from Tennant Creek, Northern Territory.	A11 was interviewed by telephone.
A12	A12 is an Elder from the Gold Coast region, Queensland.	Home of A12 in the Gold Coast area, Queensland.
A13	A13 is an Aboriginal professional from the Gold Coast region, Queensland.	Place of employment, Gold Coast, Queensland.
A14	A14 is an Aboriginal Elder from northern New South Wales.	Home of A14 in northern New South Wales.

Appendix K: Austlii court transcript online availability

Court	Year commenced
Queensland	
Supreme Court – Court of Appeal	1992
Supreme Court	1994
District Court	1998
Magistrates Court	2006
New South Wales	
Supreme Court – Court of Appeal	1997
Supreme Court – Court of Criminal Appeal	1998
Supreme Court	1993
District Court	1992
Victoria	
Supreme Court – Court of Appeal	1998
Supreme Court	1994
County Court	1993
Magistrates Court	2006
South Australia	
Supreme Court – Full Court	2010
Supreme Court	1989
District Court	1992
Western Australia	
Supreme Court – Court of Appeal	1998
Supreme Court	1996
District Court	1999
Northern Territory	
Supreme Court – Court of Appeal	1986
Supreme Court – Court of Criminal Appeal	1986
Supreme Court	1986
Local Court	2016
Magistrates Court	2002-2016
Tasmania	
Supreme Court - Court of Criminal Appeal	2010
Supreme Court - Full Court	2010
Supreme Court	1985
Magistrates Court	2002
Australian Capital Territory	
Supreme Court - Court of Appeal	2002
Supreme Court - Full Court	2014
Supreme Court	1986
Magistrates Court	2012

Appendix L: Codebook for Study Two

36 Variables

Demographic variables (6)

Charges and sentences (6)

Criminal history (5)

Mental Health variables (6)

Firesetting variables (13)

Demographic variables (6)

	Name	Relationship status	Relationship status revised
Variable SPSS name	Name	RelSt	
Type of data	String	Nominal	Nominal
Coded as	Convicted persons surname	0 Unknown 1 Single 2 Current de facto relationship 3 Married 4 Divorced/separated 5 Widowed	1 Not in a relationship at sentence 2 In a relationship at sentence
Notes		Relationship Status at time of sentence	Dichotomous status

	Gender	Age	Indigenous status
Variable SPSS name	Gender	Age	IndSt
Type of data	Nominal	Ordinal	Nominal
Coded as	1 Male 2 Female	Age in years at time of offence	1 Aboriginal 2 Torres Strait Islander 3 Non-Indigenous or not specified
Notes			

Charges and sentence (6)

Variable SPSS name Type of data Coded as Notes	Year sentenced	Jurisdiction	Court
	YearSent	Jur	Court
	Ordinal	Nominal	Nominal
	Year of sentence	1 Queensland 2 NSW 3 Victoria 4 South Australia 5 Western Australia 6 Northern Territory 7 Tasmania 8 ACT	1 Magistrates/ Local Court 2 District court 3 Supreme Court 4 Court of Appeal 5 High court
Notes			

Variable SPSS name Type of data Coded as Notes	Arson sentence	Sentence revised	Number of arson charges
	ArsonSent	Sentence_revised	NumArson
	Nominal	Nominal	Ordinal
	0 No information about sentence imposed 1 Fine/ Bond only 2 CCS supervision 3 Imprisonment <5 years 4 Imprisonment >5 years 5 Combined imprisonment and community sentence 6 Detained under mental health legislation 7 No sentence or order granted/deferred sentencing	1 Fine / Bond / CCS supervision 2 Imprisonment <5 years 3 Imprisonment >5 years 4 Combined imprisonment and community sentence 5 Deferred or unknown 6 Detained under mental health legislation	
Notes			

Criminal history variables (5)

	Juvenile offending	Criminal history	Previous arson
Variable SPSS name	JuvCH	CrimHistory	PrevArson
Type of data	Nominal	Nominal	Nominal
Coded as	0 Court mentioned no juvenile criminal history 1 Juvenile criminal history mentioned 7 Not applicable or no information provide on juvenile offending	0 No previous convictions mentioned 1 Previous convictions mentioned 7 No information available on previous offending	0 Court mentioned no previous arson offences 1 Previous arson convictions mentioned 2 No information available – no mention in transcript
Notes			

	Exclusivity/Versatility	First Time
Variable SPSS name	ExclVers	FirstTimer
Type of data	Nominal	Nominal
Coded as	1 Exclusive –only arson/arson-related offences 2 Versatile –arson/arson-related offences and other types of offences 7 No information available	1 First time offender – no previous 2 Not first time offender – has previous 7 No information available
Notes		

Mental health variables (6)

	Mental Health Diagnosis	Personality Disorder	Adult Mental Illness
Variable SPSS name	MHDiag	PDDiagnosis	AMI
Type of data	Nominal	Nominal	Nominal
Coded as	1 None 2 Adult mental illness alone 3 Adult personality disorder alone 4 Childhood disorder or diagnosis only 5 Childhood and adult diagnoses mentioned 7 Intellectual disability alone 8 Both personality disorder and mental illness co-occurring 10 No information available	1 Antisocial PD 2 Borderline PD 3 Schizoid PD 4 Mixed – Narcissistic and Histrionic 5 Mixed – Borderline and Histrionic 6 Mixed – Antisocial and Borderline 7 PD mentioned but not specified 8 Mixed – Antisocial and Narcissistic 15 Not applicable	1 Depression 2 Anxiety 3 Schizophrenia 4 Bipolar disorder 5 Psychosis including single episode 6 Mixed 7 PTSD/Panic disorder 10 Mental illness not specified 15 Not applicable
Notes		Some diagnoses identified are no longer included in DSM5	Primary adult mental illness identified as current at time of sentencing

	Childhood diagnoses	Mental Health Treatment	Diagnoses revised
Variable SPSS name	ChDiag	MHTreat	MHDiag_revised
Type of data	Nominal	Nominal	Nominal
Coded as	1 ADHD 2 Conduct Disorder 3 Dyslexia or other learning disorder 4 Autism SD 15 Not applicable	1 Community based agency support and counselling 2 Community based psychological treatment 3 Community based psychiatric treatment 4 Inpatient psychiatric hospitalisation 5 No previous treatment mentioned in transcript	1 None or no information 2 Mental Health Diagnosis/Disorder identified
Notes			

Firesetting variables (13)

Variable	Motivation	M-TTAF Trajectory	Target	Use of accelerants
SPSS name	Motvn	MTTAF	Target	M1Accel
Type of data	Nominal	Nominal	Nominal	Nominal
Coded as	1 Anger prompting revenge/payback 2 profit 3 Attract services/attention 4 Eliminate evidence 5 Excitement/sexual 6 Self-pity/upset 7 Due to intoxication cannot recall 8 Other 9 Mixed motives 10 Gang related violence 11 No information on motivation available 12 Delusional due to mental illness 13 To murder someone 14 Land management/legitimate backburning 15 Racial or religious hatred	1 Antisocial cognition 2 Grievance 3 Fire interest 4 Emotionally expressive 5 Multifaceted 6 Cannot identify trajectory from transcript	1 Own place of residence 2 Own property eg vehicle 3 Bush 4 Random community or government property 5 Relatives/friends dwelling 6 Relatives/ friends vehicle 7 School 8 Other 9 A person 10 A targeted business 11 A Church	0 No accelerants used 1 Accelerants used 7 No information on accelerant use
Notes	As identified by sentencing comments		Target of arson.	

Variable	Co-offenders	Dichotomous Co-offenders	Substance use	Planning
SPSS name	M2CoOffenders	CoOffenders_revised	M3Substances	M4Planning
Type of data	Nominal	Nominal	Nominal	Nominal
Coded as	0 No co-offenders mentioned in transcript 1 Co-offenders mentioned in transcript but not related 2 Co-offenders mentioned and related	0 No co-offenders 1 Co-offenders	1 None 2 Alcohol only 3 Drugs only 4 Both drugs and alcohol 5 Inhalants 7 Alcohol and inhalants 9 No mention of any substance used in offending	1 Planned offence/s 2 Unplanned or impulsive offence/s 7 No information on planning in transcript
Notes				

Variable	Murder	Dichotomous Motivation	Dichotomous Substance Use	Target simplified
SPSS name	Murder	MotivationExpIns	Substances_revised	Target_revised
Type of data	Nominal	Nominal	Nominal	Nominal
Coded as	0 No murder charge/s 1 Also charged with murder or manslaughter	1 Instrumental 2 Expressive 3 No information and deleted from analyses	0 No substances used 1 Substances used	1 Own property 2 Friends or relatives' property 3 Community property 4 Specific person
Notes				

Variable	Arsonist Type
SPSS name	ArsonistType
Type of data	Nominal
Coded as	1 Solo, planned, instrumental 2 Solo, impulsive, expressive 3 Group, planned, instrumental
Notes	Type based on cluster analyses

Appendix M: Sample letter to senior judiciary seeking participation in Study Three



Addressee details

Date

Dear Your Honour

I am writing to you to seek your permission to survey (insert Magistrates/Judges) across (jurisdiction). I am currently undertaking a Doctor of Philosophy program in forensic psychology at Bond University, specifically within the Australian Centre for Arson Research and Treatment (ACART).

ACART is sponsored by Bond University and external research grants to aid better understanding and management of deliberate fire setting in the Australian community. ACART supports clinical and forensic researchers in their endeavours to understand, assess and treat deliberate fire setting in juveniles and adults.

My research aims to establish a profile of those who deliberately and maliciously set fires, with a specific focus on understanding the offender and offence features associated with Aboriginal and Torres Strait Islander firesetters.

I am undertaking three studies in this area and have been conducting interviews with incarcerated arsonists across several Australian jurisdictions. I have also reviewed over 300 sentencing transcripts from 1990 to 2015, to identify trends in judicial considerations when sentencing arsonists. My final study seeks direct input from current members of the judiciary, to collect their views on a number of issues including sentencing considerations, knowledge of, and attitudes towards arsonists, and trends in the frequency of arson cases before the (insert) Court.

In order to collect their views, I would like to send an on-line survey to all (insert Magistrates/Judges), which is accessed through an emailed link. It is envisaged that this questionnaire would take approximately 5-10 minutes to complete and could be emailed to (insert Magistrates/Judges) as directed by your office. I have recently sent this survey link to all Associates of Judges of the Supreme Court, as suggested by Her Honour (deleted).

Once the study has been completed I would be delighted to provide detailed feedback to you.

I would be grateful if you would consider supporting this request, and I am available to discuss further in person as required. Should you wish to preview the survey I am able to send the link to you to access it at your convenience. I can be contacted directly on (07) 5595 5601, or at this email address - tellissm@bond.edu.au.

Yours sincerely

Therese Ellis-Smith
BBSoc, GradDipAppSocPsych, M Psych, MAPS
Forensic Psychologist, PhD candidate
National College Forensic Psychologists, Australian Psychological Society

Appendix N: Code book for historical transcripts - Study Three

15 Variables

Sentencing Considerations (SC) (15)

Variable	SC – Impoverished background	SC - Plea	SC – Mental Illness	SC- Victim Impact	SC- Value of property
SPSS name	SC-ImpB	SCPlea	SCMentIll	SCVicIm	SC-ValProp
Type of data	Nominal	Nominal	Nominal	Nominal	Nominal
Coded as	0 No reference to impoverished background 1 Reference to impoverished background	0 No reference to offenders' plea 1 Reference made to offenders' plea	0 No reference to offenders' mental illness/history 1 reference made to offenders' mental illness/history	0 No reference to impact on victim 1 Reference to impact on victim	0 No reference to the value of property destroyed 1 Reference to value of property destroyed

Variable	SC – Intellectual disability	SC – General deterrence	SC – Specific deterrence	SC – Rehabilitation prospects	SC – Previous offences
SPSS name	SCIntDis	SCGenDet	SCSpecDet	SCRehab	SCPrevCH
Type of data	Nominal	Nominal	Nominal	Nominal	Nominal
Coded as	0 No reference to offenders' intellectual disability 1 Reference to offenders' intellectual disability	0 No reference to general deterrence 1 Reference to general deterrence	0 No reference to specific deterrence 1 Reference to specific deterrence	0 No reference to offenders' prospects of rehabilitation 1 reference to prospects for rehabilitation	0 No reference to offenders' previous offences 1 Reference to offenders' previous offences

Variable	SC – Punishment	SC – Retribution	SC – Community protection	SC – Offenders age	SC - Precedents
SPSS name	SCPun	SCRetrib	SCCommProt	SCAge	SCPrec
Type of data	Nominal	Nominal	Nominal	Nominal	Nominal
Coded as	0 No reference to punishment as consideration 1 Reference to punishment as a consideration	0 No reference to need for retribution 1 Reference to need for retribution	0 No reference to community protection 1 reference to community protection	0 No reference to offenders age 1 Reference to offenders age	0 No precedents considered 1 Precedents considered

Appendix O: On-line survey on arson for Australian judiciary (Study Three)

Arson in Australia

Dear members of the Australian Judiciary,

My name is Therese Ellis-Smith and I am undertaking a Doctor of Philosophy degree at Bond University in forensic psychology. My research aims to establish a profile of those who deliberately and maliciously set fires, with a specific focus on understanding the offender and offence features associated with Aboriginal and Torres Strait Islander firesetters.

I am undertaking three studies in this area and have been conducting interviews with incarcerated arsonists across several Australian jurisdictions. I have also reviewed over 300 sentencing transcripts from 1990 to 2015, to identify trends in judicial considerations when sentencing arsonists. This study is my final study and seeks direct input from current members of the judiciary. It is designed to explore Australian judicial sentencing decisions and sentencing considerations by directly surveying Judges/Magistrates of courts across all jurisdictions. I aim to collect views on a number of issues associated with the sentencing of arsonists, including whether sentencing considerations differ between Indigenous and non-Indigenous fire-setters.

The following survey questions are both open-ended and multiple choice and seek your views on various issues associated with crimes of arson. This survey is anonymous and should take you between 5 and 10 minutes to complete. Once completed, your responses will be collated with those of your colleagues from all Australian jurisdictions. Following, I will provide each Chief Justice or Chief Magistrate with a summary of responses received from all members of the Australian judiciary who have completed this survey.

Thank you for taking the time to complete this survey and assist my research.

Thank you for taking the time to complete this survey and assist my research.

yours sincerely,

**Therese Ellis-Smith
PhD candidate
Bond University, Queensland**

If you consent to participate in this survey, please click on the 'Continue' button below.

- 1) Please identify your jurisdiction
- 2) Please identify which court you are appointed to

The following questions seek your views about the crime of arson, and the factors you consider when sentencing an arsonist. Please take some time to answer each question and

add additional information as necessary, as your detailed responses are vital for a comprehensive understanding of these issues.

- 3) In your experience is there a 'typical arsonist'? What characteristics of arsonists have you observed?
- 4) In your experience why do most people set illegal fires?
- 5) What factors influence your sentencing of an arsonist?
- 6) What aggravating factors might you consider when sentencing an arsonist?
- 7) What mitigating factors do you consider important when sentencing an arsonist?
- 8) Are there any additional factors that you might consider when sentencing an Indigenous arsonist?
- 9) Which of the following principles are most likely to guide you when sentencing an arsonist?
- 10) Have you observed changes in the frequency of arson cases coming before your court in recent years?
- 11) What factors do you attribute this change in frequency to?
- 12) Have you observed changes in the severity or seriousness of arson cases in recent years?
- 13) To what do you attribute this increase in severity or seriousness of arson cases in recent years?
- 14) In your opinion does arson warrant a specialist court? Please explain your view.
- 15) Would you consider recommending arsonists participate in a specialist firesetter treatment program in custody or community corrections?
- 16) In some Australian jurisdictions the maximum sentence for arson has been increased in recent years. What factors do you think have contributed to this?

Arson in Australia

**Thank you for contributing to this research.
Your time and opinions are appreciated.
All submissions will be analysed, and the results will be made available through the
head of each jurisdiction.**

For maximum confidentiality, please close