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Arson Reconceptualised: the Continuum of Fire Use

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Arson Reconceptualised:

The Continuum of Fire Use

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Dedication

This thesis is dedicated to gran, grandad, nanny, grandpa and Jo. I am so sorry that you aren't here to see it but my memories of you have played such an important part in this journey.

Abstract

In the last decade significant progress has been made in the psychological study of arson. However, there are substantive problems with the existing literature. In addressing these problems, three central arguments are made in this thesis. Firstly, whereas existing research has focussed solely on the act of 'fire *setting',* I propose that the term 'fire *use'* is more appropriate to account for the *process* we go through in our interactions with fire. Secondly, I propose that fire use is a fluid and heterogeneous concept and, thus, it should be represented by way of a continuum, which I term the continuum of fire use (CoFU). At one pole of the CoFU sits *criminalised* fire use, which includes the crime of arson. At the other end sits *non-criminalised* fire use ((i.e. behaviour which is considered to be 'legal'). I argue that in order to reach a better understanding of arson and, ultimately, to reduce it, we must reconceptualise our approach to arson. This should include exploration of the experiences of those who use fire in a non-criminalised manner. In my third line of argument I endorse an interdisciplinary approach, which draws upon evolutionary, cultural and sociological perspectives, alongside psychology. I assert that we must appreciate the long and complex relationship humans have with fire, and this should include an understanding of the role it played in the evolution of our species. The arguments made in this thesis are done so with a view to improving on what we know about arson and, thus, informing treatment and intervention strategies to reduce it.

In this thesis I report on a qualitative study where I explore the psychological mechanisms involved in fire use. Twenty-four adults were interviewed about their fire-related experiences. Consistent with the continuum conceptualisation, each participant has a range of fire-related experiences, but 12 are *predominantly* non-criminalised users and 12 are *predominantly* criminalised (all serving prison sentences). Data was analysed using Grounded Theory and themes were identified for each of the two samples separately, before being combined. The result of combining the data was an overarching theory relating to the

psychological impact of fire use, entitled the *continuum of fire use theory (CoFUT)*. The CoFUT consists of three core themes, namely: (a) Transient Emotional State; (b) Self-Concept, and; (c) Psychological Wellbeing.

The CoFUT is the first theory to consider a spectrum of fire use, rather than solely focusing on arson (i.e. criminalised use). In proposing the CoFUT I am therefore challenging existing frameworks and calling for a re-conceptualisation of fire use. Practical application of the CoFUT is discussed in this thesis and I will argue for more emphasis on early intervention rather than offender rehabilitation in order to reduce the rate of arson in the UK. Future directions for research are proposed, including ideas for my own postdoctoral research. This will involve an exploration of the cultural aspects of fire use, still with an eye towards improving our understanding of arson and, ultimately, informing arson reduction strategy.

Contents

Introduction

"We know little about the psychology of fire [and] fire learning… it is high time that we knew more" (Fessler, 2006, p. 448).

Overview

Although Fessler's position, elucidated in the above quote, dates back to 2006, I argue that it still stands true today. The significant progress which has been made in the psychological study of arson only tells part of the story. In this thesis I will demonstrate that there are many other forms of fire use which, until now, have remained un-addressed in the psychological literature.

In this thesis I will propose a novel conceptualisation of fire use, which takes account of the substantive problems with existing psychological literature on the subject. I will outline a qualitative interview-based study, comprising two participant samples, which are introduced below. An analysis of the data will be presented within section two of this thesis and I will then go on to outline how I synthesised data from the two respective samples in order to develop an overarching theory called the *Continuum of Fire Use Theory (CoFUT)*. The CoFUT highlights the psychological mechanisms underpinning the repeated use of fire. I will propose how the CoFUT can be applied in order to improve our understanding of arson and inform the clinical practice of forensic psychologists and allied professionals.

In this introductory chapter I will outline my professional background and how it led to the iterative conceptualisation of this Ph.D. I will present the context surrounding this programme of study, which includes a discussion of the challenges involved in defining what we consider to be acceptable and unacceptable fire-related behaviour. In doing so I will draw on literature from allied disciplines such as sociology, criminology and anthropology. One of

my central arguments is that understanding fire use from an interdisciplinary perspective is crucial and this approach is one of the unique aspects of my work. The objective, aim and research questions will be presented in this chapter, along with the rationale. I will also provide an introduction to the chosen methodology and I will outline the structure of this thesis.

Professional Background

I am a registered forensic psychologist and chartered psychologist with 15 years' experience as a practitioner working in prisons and forensic hospital settings. Throughout my career I have worked with men and women convicted of a range of offences including sexual, interpersonal violence and arson. I continue to work as a practitioner in private practice, alongside my full-time role as a lecturer in forensic psychology at Newcastle University. My professional background is of relevance to this thesis for a number of reasons. Firstly, it is important in order to understand the conception of the research and how my thought process evolved over time. Secondly, it provides a useful point of reference for understanding what has influenced my interpretation of the data from a critical realist stance, which is discussed in more detail in chapter two.

It was my clinical contact with arsonists in both prison and hospital settings which first inspired this research. This is a strong starting point because it means that I have been able to observe 'first hand' some of the issues with how this group of offenders are dealt with by the Criminal Justice System (CJS) and National Health Service (NHS) in England and Wales. I have become aware through my practice that there are no existing risk assessment tools specifically designed for arsonists (Watt & Ong, 2016), nor are there any fully accredited treatment programmes (Palmer et al., 2007; Bell, 2016; Tyler, Gannon, Lockerbie & Ó'Ciardha, 2018). In fact, a 'one size fits all' approach has generally been adopted with arsonists. In other words, for decades there has been an assumption that arsonists should be

dealt with using the same approaches employed with other types of offender. Whilst this viewpoint is beginning to change (see Tyler et al., 2018) there is still a long way to go in my view.

In my experience as a practitioner, I have sometimes observed there to be a conflict between what makes sense from a therapeutic point of view and what is possible within a prison or forensic hospital environment. This has been apparent to me on occasions in past professional roles where I was working therapeutically with arsonists, for instance in cases where there was evidence of physiological arousal to fire. If unaddressed, physiological arousal to fire could mean that the service user is inclined to seek out that same arousal in the future through further fire setting. In these cases, from a psychological perspective, a course of gradual desensitisation to fire may have been helpful. This would involve exposure to fire-related stimuli on a gradual and systematic basis. The process could commence with exposing the service user to pictures of fire, followed by moving images and then, eventually, 'real' fire such as through interaction with a candle or cigarette lighter. However, security constraints in forensic settings means that this process (particularly the latter stage) is not feasible. In reality, security and risk have to supersede what might be sensible from a clinical/ therapeutic perspective. This is just one of many challenges I have faced in my time as a clinician working with arsonists. This is different from my experiences of working with other types of offender because there are already a variety of well-established treatment options available, which have been embedded within forensic environments. Arson treatment, conversely, remains more of an 'unknown'.

The lack of expertise within teams working with convicted arsonists also appears, to me, to be problematic. In my view this can sometimes fuel helpful myths and stereotypes. I have noted, for example, a view that *sexual* arousal to fire is common amongst arsonists, which means they are 'untreatable'. It is noteworthy that this idea is not supported by the

psychological literature (Prins, Tennent & Trick, 1985; Rice & Harris, 1991). Similarly, in my own experience I have found that non-psychologist colleagues may be inclined to 'label' arsonists as particularly dangerous (when compared to other offender-types) and there is also a common assumption that arsonists must all suffer from severe mental illness. This is important to note because such stereotypes can perpetuate the repeated criminalisation of convicted arsonists. This is of great relevance to the findings of the current research because participants in the convicted sample all make reference to the detrimental impact of carrying the 'arsonist label' (see chapters four and five).

The aforementioned experiences as a clinician strengthened my interest in arson early on in my career and they were important in shaping my ideas for this Ph.D. I continue to be intrigued by the unique set of challenges this group of offenders pose. In my opinion, the lack of available treatment options, in addition to the stigma attached to arson and arsonists are all the result of a lack of knowledge. This highlighted to me at the inception of this Ph.D. that there is a need to better understand arson and this must start with more research.

The lack of specialised assessments and treatment options for use with arsonists is not surprising when we consider the dearth of literature in the subject area. For example, until 2012, there were only two multi-factorial theories of arson, namely the *functional analysis model* (Jackson, Hope & Glass, 1987) and the *dynamic behaviour model* (Fineman, 1995; both discussed in chapter one). My experience as a practitioner leads me to question the lack of specialised approaches available for work with arsonists, both in terms of assessment tools and treatment. Clinically, I would assess that arsonists are highly complex and that at least some of them present a very different picture to other offenders with whom I work. This is supported by research comparing factors linked to recidivism in arsonists with other offenders. For example, Edwards and Grace conclude that "the pattern of correlations between the arson, violent and non-violent recidivism models suggests that the act of arson is different to both

violent and non-violent offending" (2014, p. 226). This indicates that the 'one size fits all' approach is potentially insufficient. There may also be learning here for other offence types, for example with regard to the recent evidence indicating that the prison service Sex Offender Treatment Programme has *increased* the risk of reconviction for some participants (Ministry of Justice, 2017). I will demonstrate, therefore, that this thesis is not only applicable to those imprisoned for crimes of arson.

The study of arson dates back at least to the 1950s, with most of the literature originating from the United States of America (USA), Australia and the United Kingdom (UK). Early work is replete with methodological flaws and studies have varied so dramatically in terms of their methodological approach that it is very difficult to sensibly compare and contrast findings (discussed in more detail in chapter one). More recently, the literature base has grown exponentially but it is still in its relative infancy. Within the last decade researchers at the University of Kent's Centre of Research and Education in Forensic Psychology (CORE-FP) have published a series of empirical and theoretical papers which have improved what we know about arson or *fire setting[1]* as the researchers refer to it (for examples see Gannon et al., 2013; Ó Ciardha et al., 2015). Fire setting is defined as "all acts of setting fire that are not recreational in nature" (Gannon & Barrowcliffe, 2012, p. 2). It is noteworthy that fire setting and fire setter are terms which I contest (see below) but they are used in this thesis when I am discussing existing research.

Research by the team at the CORE-FP has been highly influential. It includes the most up-to-date multi-factorial theory of adult fire setting (the *multi-trajectory theory of adult fire*

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[1] **Fire setting**: Some authors present *firesetting* and *firesetter* as single words. In this thesis I have chosen to present them as two separate words (i.e. fire setting and fire setter).

setting; M-TTAF; Gannon, Ó'Ciardha, Doley & Alleyne, 2012). The CORE-FP team is also behind the emergence of work on non-convicted samples (for example, Gannon & Barrowcliffe, 2012; Barrowcliffe & Gannon, 2015, 2016), with the premise being that many fire setters remain un-apprehended and thus, it makes sense to study particular strands of the general population. Crucially, the work of the CORE-FP has practical application. The team has developed treatment programmes for fire setters, such as the *fire setter intervention programme for mentally disordered offenders (FIP-MO*; Tyler, et al., 2017) and a psychometric instrument (O'Ciardha, Tyler & Gannon, 2015). These practical contributions were, perhaps, predictable in view of the current trend towards manualisation and standardisation (Towl, 2015).

Despite significant progress in the study of arson and fire setting, I will argue below and in chapter one that this only tells part of the story. One problem is that existing research focusses solely on the most troublesome and 'extreme' forms of fire use, meaning that other forms have been neglected. Another problem is that research has, thus far, focussed solely on the act of *setting* or *lighting* fires. I favour a broader term - *fire use* - because our interaction with fire is a *process*, rather than a single event. The way that fire-related behaviour has been dichotomised in the literature is also a problem in my view. In other words, the behaviour has typically been categorised as either non-fire setting or fire setting, which, I argue, serves to over-simplify a very complex and heterogenous construct.

The existing literature has demonstrated that there are many complexities involved in trying to decide what should be classed as non-fire setting or fire setting (for examples see Geller, 1992; Davis & Lauber, 1999; Doley, 2003; Vaughn et al., 2010). There is a troublesome lack of consensus on this matter, which has generally been air-brushed over and is seldom referred to directly within the psychological academic literature. I argue this is an important issue. We surely cannot meaningfully interpret existing research findings about any human

behaviour if we are unclear on the particulars of the behaviour of interest. For instance, as will be seen in chapter one, existing research claims to address psychological characteristics which are associated with non-fire setters when compared to fire setters (for examples see Gannon & Barrowcliffe, 2012; Barrowcliffe & Gannon, 2015, 2016). But, in my view, we cannot be confident that these characteristics truly delineate the two groups if the behaviour is not clearly defined.

In this thesis I challenge the existing categorical conceptualisation. I take a holistic approach by suggesting that fire *use* is better understood as a dimensional construct, i.e. sitting on a continuum. I argue that it is not possible to categorise different forms of fire use because interactions with fire can vary across one person's life span and, indeed, from person to person. Fire use, therefore, is a fluid construct and so it can surely only be viewed as sitting on a continuum. An unpublished MSc thesis which I supervised adds some preliminary support to my argument. Hope (2018) interviewed 16 participants about the attributes they consider as important when distinguishing between two forms of fire use[2]. Of central importance is that Hope found no definitive binary framework through which to identify the two forms of

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[2] **Fire use:** The terms used employed by Hope (2018) were *illegitimate fire use* to refer to that which fails to adhere to laws, rules and social norms and *legitimate fire use* referring to that which adheres to laws, rules and social norms. It is noteworthy that, since then, I have reflected upon the use of these terms, in response to feedback and decided they should be replaced with others for the purpose of this Ph.D. More specifically, in June 2019 I submitted a proposal for a book which is to be published in 2020, based on the findings of this Ph.D. One reviewer commented that illegitimate could be perceived as disparaging and judgemental. Upon discussion with my supervisors I decided that I was in agreement with the reviewer's comment. Therefore, I revised the terms to *non-criminalised fire use* and *criminalised fire use* for use in this thesis. The thought process behind this is expounded in chapter two.

behaviour. In other words, her participants were unable to decide on how to categorise different types of fire use.

It is important to note the contrast between psychological perspectives and the legal system when it comes to defining fire-related behaviour. The legal system seeks to delineate between what is legally acceptable and unacceptable fire use through the legal/ illegal dichotomy. Arson is a legal term, which relates to the specific criminal act of intentionally or recklessly setting fire to property or woodland area (Dickens & Sugarman, 2009, p. 3). It is defined by the Criminal Damage Act 1971, of which section 1 (3) stipulates that any criminal damage caused by fire should be classed, and charged, as arson (Averill, 2010). Since 2008 the offence has been subdivided into three: (a) simple arson, (b) arson reckless as to whether life was endangered and, (c) arson with intent to endanger life. Within this classification the level of severity differs, with simple arson being the least serious and arson with intent the most severe. Legal systems tend to use categorical assumptions, e.g. 'not guilty' or 'guilty' but the world may often be more nuanced than that. The same is so, I would argue, for our understanding of fire use. Definitions employed by the current study (presented below and in chapter two) consider *social rules and norms,* as well as legislation.

Consideration of how the legal system defines a particular behaviour in contrast to how it is defined psychologically is important, but I believe it is even more important to look beyond psychology and to understand how other disciplines contextualise that same behaviour. It is noteworthy again here that approaching fire use from an interdisciplinary perspective forms the basis of one of my central lines of argument and I will return to this at various junctures. Before moving on to expand on my own conceptualisation of fire use, it is prudent to briefly broaden discussion about defining behaviour from fire use to anti-social/ criminal acts more generally. Doing so elucidates why it is so challenging to reach consensus about what is deemed to be acceptable and unacceptable behaviour from a social science perspective. In

criminology, the issue is highlighted by Andrews and Bonta (2014) who discuss the numerous *types* of definition relating to criminal behaviour, namely (i) *legal*, which are acts failing to abide by state law; (ii) *moral,* which relates to the breaching of religious and moral norms; (iii) *social,* which is the breaching of social norms and; (iv) *psychological*, relating to behaviour which causes pain or loss for others.

As the aforementioned categories demonstrate, how a behaviour is appraised can be dependent on many factors beyond what is captured in the written law. Indeed, Schur (1969) makes reference to the variability of the law from country to country. For that reason, he argues, the law cannot possibly be the sole determinant of what is criminal (or non-criminal for that matter). This alludes to the idea that behaviour is socially constructed and that it can be difficult to define because it is highly complex. The complexity in determining whether or not a behaviour is acceptable is further exemplified in the sociological concept termed the *carnival of crime* (Presdee, 2000). In this work Presdee discusses the unclear boundary between carnival and crime and how one can morph into the other. Presdee also asserts that the way in which behaviour is viewed can change over time and he draws on a very apt example – November fifth celebrations in the UK. He notes that in the past this was viewed as dangerous, whereas now it is a commercialised event, which is properly regulated. The latter point is of pivotal importance to this thesis. It demonstrates that not only is our behaviour dynamic, but the way in which it is appraised by others is also likely to evolve over time.

In anthropology, the terms "legality and illegality" are applied (Heyman, 2013, p. 322) along with their many derivatives, and this dichotomy has been the subject of interrogation and critique. Heyman (1999) questions whether it is possible to demarcate legality and illegality and, furthermore, suggests that, "legalisation and illegalisation are processes… rather than states of being" (2013, p. 322). I agree entirely with Heyman's perspective in that one's behaviour might vacillate between what is viewed as legal and illegal. This is a phenomenon

which has support from anthropological research (for examples see Polson, 2013; Botoeva, 2019).

As a clinician working in prisons and forensic hospitals I have observed, firsthand, how some professionals have a tendency to define a service user by their offence. In turn, this can lead to an assumption of homogeneity relating to all those who have been convicted of the same offence. I do not seek to ascribe blame for this. Prison officers, for example, are trained to supervise those in prison, to monitor risk and to issue reprimands where prison conduct is poor. It is, therefore, understandable why they might see the individual as an offender first and foremost. That being said, I have come across the same tendency amongst other professionals. For example, I once witnessed a non-operational colleague within a prison refer to arson offenders as "deniers", i.e. implying that *all* arsonists deny having committed the offence/s for which they have been convicted. There are many dangers of defining someone solely by their offence, one of which is stigmatisation. Another is that service users may not necessarily get their individual needs met in the most effective way. This is related to a wider problem in clinical and forensic psychology, namely, the sole focus on risk and pathology. Encouragingly, there has been some change in this way of thinking recently but there is still scope for more improvement (this is expanded on in more detail below).

So far, I have outlined the ambiguity surrounding how we appraise behaviour which is of central importance to this thesis. It hints at some of the complexities that are involved in defining fire-related behaviour more specifically. Despite the subdivision of arson into three types of offence within the Criminal Damage Act in 2008 the academic literature has not yet fully reflected these developments. Research into arson and fire setting has focused on the criminal act of arson as being one entity. Likewise, as referred to above, fire *setting* has been the sole focus of other research, rather than considering our interactions with fire as a *process*.

Existing literature within my discipline, therefore, is yet to explore the many nuances in terms of severity and type of fire use.

On the premise that fire use is a complex and heterogenous behaviour, I will assert in this thesis that it cannot easily be categorised. I will present my own conceptualisation of fire use upon which this research is predicated. I have entitled this the *continuum of fire use (CoFU)*, which is expounded below.

The Continuum of Fire Use (CoFU)

An important argument I make in this thesis is that, rather than relying on unhelpful dichotomies such as non-fire setting/ fire setting, acceptable/ non-acceptable or legal/ illegal and so on, we should consider fire use as sitting along a dimension or continuum. At one pole of this continuum sits *criminalised fire use,* which includes arson, and at the opposing end of the continuum sits *non-criminalised fire use.*

Non-criminalised fire use   **Criminalised fire use**

Figure 1 The Continuum of Fire Use (CoFU)

In conceptualising fire use as sitting along a continuum, it is important to acknowledge alternative explanatory frameworks and to outline why I discounted them. As already referred to, existing research has typically adopted a *categorical* approach, i.e. fire setting or non-fire setting. In the early stages of this Ph.D. I explored the many uses of fire in the UK through internet searches and informal discussions with colleagues and my supervisors. It became apparent that fire setting (or fire *use* as I term it), is a heterogeneous and nuanced construct,

which cannot be categorised. Moreover, the *degree* to which a particular instance of fire use is non-criminalised or criminalised can vary greatly. I argue that we must appreciate the many nuances of fire use if we are to understand the psychological mechanisms involved. For example, the acts of setting fire to an inhabited residential building and setting fire to a litter bin on a deserted piece of land both, strictly speaking, constitute fire setting. However, they vary greatly in terms of severity and, likely, motivation. I argue, therefore, that it is inappropriate and reductionist to think of them both as being in the same category of fire setting. This is why I discounted a categorical framework.

On account of the heterogeneity of fire use, an alternative explanatory framework is, arguably, a matrix-approach. Nutt, King, Saulsbury and Blakemore (2007) apply this to drug use. They assert that the existing legal classification of drugs (i.e. class A, B and C) fails to account for the many complexities involved in understanding the effects of drugs. As an alternative, Nutt et al suggest that drugs should be classified on the basis of how much harm they cause, through consideration of three factors: (i) physical harm caused to the drug user, (ii) the tendency of the drug to induce dependence, and (iii) the effect of the drug on families, communities and society. The culmination of the work of Nutt et al is a nine category matrix through which a drug can be 'scored' or 'rated' with respect to its level of harm.

The ideas of Nutt et al could, arguably, be applied to fire use. However, at this very early stage of research into fire use as a construct, I have opted for the continuum conceptualisation, rather than a matrix-type approach for a number of reasons. Firstly, whilst Nutt et al's framework is more nuanced than a simple categorisation, it is based on a numerical system (p. 1052). In other words, Nutt et al propose that their matrix can be used to calculate a 'score' for the harmfulness of a particular drug. In my view, this scoring system is still, ultimately, a form of categorisation and, thus, is still somewhat reductionist. Furthermore, the matrix approach, if applied to fire, does not account for the *fluidity* of human fire use. A

numerical score does not reflect the notion that fire use can fluctuate across one person's life and, indeed, from person to person. One single dimension, as represented by the CoFU, is the best way to conceptualise the idea that fire use can 'move up and down' the continuum.

Having arrived at the decision to adopt a continuum conceptualisation, it is important to note that this is my *current* way of thinking about fire use. As I go on to collect more data as a post-doctoral researcher, I fully anticipate that this might develop and may be refined. The applicability of Nutt et al's ideas to fire use is intriguing and so I may revisit the matter in the future. Indeed, this is entirely consistent with the ethos of Grounded Theory (GT) whereby the process of theory building is considered to be ongoing.

The terms at either end of the continuum are defined in chapter two, along with a rationale for why I chose them over other alternatives. In brief, non-criminalised fire use represents that which is viewed by those in society as adhering to the law, as well as to social norms and values. Conversely, criminalised fire use is that which is considered to be breaking the law and to be inconsistent with social norms and values. The two terms reflect my belief that behaviour is socially constructed and that those whose behaviour has been criminalised in a society have gone through a process of being *labelled* (see the work of Becker, 1963, 1974).

The CoFU conceptualisation is the premise on which the current research is based. Importantly, the current data offers support for this continuum, or dimensional, approach. The research findings are expounded in sections two and three of this thesis, as is the resultant theory – *the continuum of fire use theory (CoFUT).* To be clear, the CoFU is a broad conceptualisation or way of thinking about fire use and the CoFU*T* is the theory that is based, specifically, on data from the current study.

The CoFU elucidates the narrow focus of existing psychological literature. As already mentioned, empirical research from my discipline (forensic psychology) has only addressed *part* of the continuum, namely criminalised fire use, leaving much of it unexplored. In other

words, all studies thus far have employed samples of people with arson convictions, or at least people who have engaged in problematic fire use, which has brought them to the attention of mental health professionals. The primary argument that I make throughout this thesis is that in order to understand criminalised fire use, in the form of arson, it is imperative to understand the continuum in its entirety, i.e. also to consider the nature of *non*-criminalised fire use. It is important to highlight here that similar approaches have been applied to other constructs and behaviours in psychology and psychiatry. For example, the diagnosis of mental disorder commonly adopts a continuum perspective (APA, 2013). This discussion is expounded in chapter two.

I am proposing, therefore, that we can learn more about the most extreme and maladaptive behaviour by looking at its many gradations, including adaptive forms. This is consistent with developments in the forensic psychological literature. For decades now there has been a drive in forensic psychology to move away from the sole focus on *risk factors* for offending (i.e. negative characteristics of an individual which are related to their offending). Many argue that we should also take account of *protective factors* (for discussion see Towl & Crighton, 1996; Ward, 2017). Protective factors are those characteristics which mitigate a person's risk of committing crime, or which have led to desistance in ex-offenders. In other words, in the forensic arena, in addition to identifying what is *'wrong'* with an offender and their life in attempt to remove it, we should be striving to identify and build on the individual's strengths. This is underpinned by principles of *positive psychology* (for reviews see Seligman & Csikszentmihalyi, 2000; Seligman, Steen, Park & Peterson, 2005). Positive psychology has been heavily promoted in the academic study of sexual offenders (see Heffernan & Ward, 2017; Ward, 2017). Its premise is that we should focus our attention on an individual's strengths and positive characteristics, such as the "capacity for love and vocation… interpersonal skill… perseverance, altruism… and work ethic" (Seligman & Csikszentmihalyi, 2000, p. 5).

Given the emergence of literature focussing on the principles of positive psychology within forensic psychology, it is not surprising that there has been changes to the way in which psychologists and therapists work with those convicted of criminal offences. As a practitioner I am aware that some of the 'flagship' prison treatment programmes, such as the Sex Offender Treatment Programme (SOTP) have been overhauled and replaced by alternatives which are thought to take better account of protective factors and the strengths-based approach. Theoretically, therefore, this points to significant progress being made and suggests a much more optimistic approach to desistance.

Despite these practical changes, my experience as a clinician is that there is still a long way to go in terms of how professionals in the criminal justice system (CJS) approach work with offenders. In my view, the shift towards positive psychology has to involve much more than just practical changes. There also has to be a change in mentality and ethos, which spans much wider than my own discipline. It is this, in my opinion, which we have not yet fully achieved. For instance, I am acutely aware in completing reports for parole reviews that the parole board's primary concerns relate to *risk factors* and *risk reduction.* Therefore, there is still a tendency amongst professionals to refer to parole reports as '*risk* assessments'. This is evidence of the need for a significant shift in mentality. In order for this to happen professionals, such as those working for the parole board, would need to be convinced that protective factors are as informative as risk factors in psychological assessments. This will only happen if the credibility of the strengths-based approach increases and, ultimately, this is reliant on more empirical research being done.

The aforementioned issues about the need for more progress towards the strengths-based approach is evident irrespective of an individual's offence or sentence-type. However, given that assessment and treatment options for arsonists are lagging behind those for other offence-types, I have noticed the problems more acutely. This is particularly the case given the

many myths and stereotypes which surround arson as discussed above. I am, therefore, advocating a strengths-based approach in this thesis and I believe this must, genuinely, underpin our pursuit towards a better understanding of arson.

The principle of positive psychology outlined above is applicable to all offenders including arsonists. In my view, therefore, as well as identifying the problems in an arsonist's life and in their interactions with fire, it is also useful to consider strengths. This might include an exploration of the non-criminalised ways in which the individual has used fire in the past. More importantly, we should consider the non-criminalised use of fire more broadly and its many benefits. This surely must include a grasp of how humans first came to use fire and, thus, how our relationship with it has evolved. I argue that an historical appreciation of fire use is crucial because this likely forms the basis of how we view, and interact with, fire today. This has support from the work of Presdee (2005) who writes about our complex relationship with fire from a social *and* historical perspective. The exploration of non-criminalised, in addition to criminalised experiences of fire use forms the basis of this thesis. In my view, psychology cannot possibly address these matters as a standalone discipline and so I am calling for an interdisciplinary approach.

If we accept the continuum conceptualisation which is being proposed in this thesis then there are countless types of fire use, which vary in the extent to which they are non-criminalised and criminalised. For the purpose of this research, I decided to focus on forms of fire use which are positioned closest to the two poles of the CoFU because this is the first research of its kind. A brief overview of my chosen methodology and method is provided below.

Study Objective and Aim

Predicated on the CoFU conceptualisation, the overarching objective[3] of this Ph. D thesis is to add to the understanding we have of arson and to inform arson assessment and intervention strategies. The aim[4] is to explore the psychological factors and mechanisms underpinning forms of non-criminalised and criminalised fire use.

I interviewed two samples of participants whose fire use is clustered around the two poles of the CoFU. Inclusion and exclusion criteria were applied stringently and there were a number of significant ethical issues which had to be taken into account. In chapter two I will outline the many challenges which I faced in the planning and implementation of the study and I will expand on how they were mitigated. An overview of the two samples is provided below and expounded in chapter two.

Overview of samples

Sample one consists of 12 adults whose fire use is *predominantly* non-criminalised. It is important to emphasise 'predominantly' because, as is presented throughout this thesis, an individual's fire use is often diverse and can span the whole CoFU. Participants in this sample were chosen because the *majority* of their fire use and, indeed, their *current* fire use has been non-criminalised (albeit to varying degrees). Experiences reported by the non-criminalised sample include performing with fire, such as fire breathing and juggling, participating in fire walks, burning candles for relaxation and spiritual purposes, the ceremonial use of fire and attendance at bonfires (both large-scale organised events and those held in gardens with friends

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[3] **Objective:** Defined in this thesis as the broad purpose of the Ph.D.

[4] **Aim:** Defined in this thesis as a specific statement of what I hope to achieve.

and family). All participants in the non-criminalised group were still engaging regularly with fire at the time of interview. Eight of the non-criminalised sample identify as women and four as men. The age range is 22 to 66 years and the average age is 45. All participants were residing in the UK at the time of interview. They were given pseudonyms in order to protect anonymity (see chapter two).

Sample two consists of 12 adults whose fire use is *predominantly* criminalised. At the time of interview they were all serving a prison sentence. Eleven of the 12 have convictions for arson. The remaining participant, whose pseudonym is Morris, has no arson-related convictions. He is serving a prison sentence for wounding with intent but he has institutional fire setting on record. All of the participants in this sample also have experiences of *non-criminalised* fire use (usually earlier in life), which supports the continuum perspective and demonstrates the fluidity of human fire use. For example, some participants recalled family bonfires and the use of coal fires in the home in addition to their offences. They are placed in the *criminalised* group for the purpose of this study to account for the *majority* of their use being criminalised and for the fact that this is particularly severe. Seven of the criminalised sample identify as women and five as men. The age range is 19 to 43, with an average age of 29 years. All participants were assigned a pseudonym.

It is important to make clear here that the two samples of participants outlined above have not been treated as distinct groups; to do so would be contradictory to the continuum conceptualisation which I am proposing. Rather, I chose them to represent forms of fire use which are likely to sit towards the two poles of the CoFU. As referred to above, within each group the nature and type of fire use varies and many participants have experiences which could span the whole continuum. Crucially, whilst the first stage of this research involved data collection from the two samples individually, the second stage (outlined in chapter five)

involved merging the data to form one overarching theory to account for fire use as a heterogeneous and dimensional construct.

Data from the 24 participants was analysed using techniques informed by Grounded Theory (GT; Glaser & Strauss, 1967), the reasons for which are outlined in chapter two. Common themes were identified in the data which all relate to the psychological effects of fire use. Crucially, including the two samples in this study has enabled me to understand the many forms of non-criminalised uses of fire, in addition to those which are criminalised to varying extents. I will strongly argue that this holistic perspective can improve what we know of arson and has practical application, as discussed in chapter six.

This thesis is broadly separated into three sections, comprising two chapters each.

Structure of Thesis

The conceptualisation of fire use as sitting on a continuum underpins each chapter and is the focus of the qualitative study. In chapter one a review of the literature surrounding non-criminalised and criminalised forms of fire use is presented. The first part of the chapter addresses non-criminalised fire use and the second part addresses criminalised use. The clear disparity in the length of the two parts of this chapter epitomises one of my arguments, namely that the psychological literature has neglected non-criminalised use.

Chapter two outlines methodology and the method for the qualitative study. This chapter begins with a detailed discussion of my philosophical and epistemological stance, which provides the backdrop to the current research and the justification for my decision making. In chapter two I will also provide a description of GT, along with how this informed my research and the data analysis. The samples will be described, and the method is presented in enough detail so as to allow replication in the future.

In chapters three and four I will present an analysis of the qualitative data from the non-criminalised and criminalised samples respectively. This analysis is built upon in chapter five, in which I present a synthesis of the data in the form of an overarching psychological theory – the CoFUT. Chapter six elucidates the importance of the findings from this research and I will emphasise how they could be applied within the forensic arena. The findings are of value in considering the assessment and treatment of arsonists and in developing early intervention programmes. Finally, chapter seven contains concluding remarks.

To summarise, in addition to the introduction and conclusion chapters, the thesis structure is as follows:

Section 1: Background and Methodology

- Chapter one: literature review
- Chapter two: methodology

Section 2: Data Analysis

- Chapter three: forms of non-criminalised fire use
- Chapter four: forms of criminalised fire use

Section 3: A New Theory and its Applications

- Chapter five: the continuum of fire use theory (CoFUT)
- Chapter six: applications and implications

Scholarly Approach[5]

A multi-disciplinary perspective.

My own professional background and training as a forensic psychologist has heavily informed the type of literature I have engaged with, how I undertook the research, my interpretation of the data and, indeed, how this thesis is written.

As already outlined, I argue that if we are to truly understand the CoFU in its entirety, we must consider the history of fire and *how* we came to use it. We must also appreciate its symbolic and cultural significance. Pyne (1998) suggests that a confluence of distinct disciplines is required for this, namely the natural sciences and humanities, with which I agree. As such, although this Ph. D is most heavily influenced by the psychological literature in accordance with my training and specialist knowledge, I have also drawn upon academic work from sociology, criminology and anthropology. The need for an interdisciplinary perspective on fire use is, therefore, a central argument in this thesis.

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[5] **Formatting and writing style:** The formatting of this thesis is aligned with the American Psychological Association (APA, 2011) guidelines. This is in accordance with the requirements for my own discipline, psychology. The American Psychological Association (APA, 2011) recommend that manuscripts for publication should be written in the third person and so this is what I initially set out to do. However, I found it increasingly restrictive because it was preventing me from capturing my thought process and decision making throughout the research. Furthermore, there are sections of this thesis which are written reflectively and writing in the third person is not conducive to this style. Moreover, in qualitative research it is important to immerse oneself in the data and describe how it has been interpreted. These tasks are difficult to do when writing in the third person because it can lead to a sense of detachment from the process of analysing data and reporting on it. After discussion and reflection with my supervisors, I decided that the thesis should be written in the first person. This better accounts for my own reflections, decision making and analysis.

Concluding Comments

This thesis represents an original piece of work, which calls into question and highlights limitations of the existing theoretical foundations in the field of study (arson and fire setting). The work within this thesis advances academic and methodological knowledge through calling for a reconceptualisation of the way in which humans interact with fire. I have proposed a new theory, entitled the CoFUT, which is based on the idea that fire use is best represented as sitting on a continuum. My argument for adopting a continuum-wide view of fire use aligns well with current developments in my discipline, forensic psychology. I draw upon the principles of positive psychology (Seligman & Csikszentmihalyi, 2000) in calling for a better balance in how we conceptualise fire by exploring the many adaptive, as well as maladaptive uses. I argue for the need to adopt an interdisciplinary perspective in order to better inform our understanding of the way humans interact with fire. Furthermore, I suggest that we should see this interaction as a process, rather than a single event. In other words, we should explore every aspect of fire-related behaviour rather than only focusing on the act of *lighting* a fire. The findings of the study outlined in this thesis have many practical applications. I will outline in chapter six how they could inform arson reduction and prevention strategy in the UK. The inception of this research is rooted in my 15 years of experience as a practitioner forensic psychologist. I have observed 'first hand' why a different perspective is required in research on arson and fire setting, in addition to noting a number of issues with existing literature. An appraisal of the current state of play in the field is the focus of the following chapter (chapter one) in the form of a literature review.

Section One:

Context and Methodology

In the following two chapters, I outline the background to this research in terms of existing literature, rationale and the practicalities of data collection. In chapter one I outline the existing literature, and most importantly, I discuss the key problems with it, which forms the rationale for the current research. Chapter one is presented in two parts. Part one relates to the non-criminalised use of fire and part two is concerned with criminalised use. The literature covered in the chapter as a whole is wide ranging because the subject matter does not fit easily into one academic discipline. In the case of non-criminalised fire use (the first part of chapter one), the psychological literature base is practically non-existent and so I have drawn on work from anthropology. Psychology has contributed much more to the existing literature on criminalised fire use, in the form of arson or fire setting and, thus, psychological research features more heavily in the second part of chapter one.

In chapter two I outline the chosen methodological approach to this research, including an overview of my epistemological stance and the rationale. I also outline the method employed for the participant recruitment and the data collection and analysis.

Chapter One

Non-criminalised and Criminalised Uses of Fire

Introduction

As discussed in the introduction I assert that our use of fire is a dimensional construct and, thus, it is best represented on a continuum. On this basis, there are manifold uses of fire ranging from non-criminalised to the most extreme of criminalised use – arson. Yet, it is only the latter which has received research attention in psychology. This is arguably the result of an entrenched bias in the discipline towards risk factors (Rogers, 2000) and a tendency to focus unduly on what is considered to be deviant and/ or pathological. This thesis promotes the need for a better understanding of the whole spectrum of fire use, including non-criminalised forms of the behaviour.

This chapter is presented in two parts. Firstly, literature relating to the non-criminalised use of fire is analysed. In order to do so it is necessary to look beyond the psychological literature to anthropological work. I argue that the role of fire in the history and evolution of our species must be acknowledged if we are ever to reach a fuller understanding of arson and, thus, how to reduce it. In part two of this chapter existing academic literature on criminalised fire use, in the form of arson and fire setting will be reviewed. This largely comprises work of a psychological nature because there is much more available when compared to non-criminalised fire use.

Part One: Non-Criminalised Fire Use

   The discovery of fire.

   Some of the findings of the current research (presented in section two of this thesis) support the ideas that facets of human fire use that could have an evolutionary basis. An awareness of this is important in improving our understanding of arson. If part of the human connection with fire is 'hard-wired' then this has significant implications for preventative and rehabilitative interventions targeting arson. More specifically, if arsonists find fire appealing because of an innate mechanism then this signals the extent of the challenge involved in trying to reduce the crime. If there is an innate component to fire use, then focussing preventative and rehabilitative efforts on the 'non-innate' components surely offers the most promise. With this in mind, I assert that it is essential to appreciate how fire featured in the lives of our ancestors and the role it has played in the evolution of our species. This is a novel line of argument which, to date, has been neglected in the psychological literature.

   Charles Darwin considered anthropogenic fire use[6] to be "...probably the greatest [discovery], excepting language, ever made by man" (Darwin 1871, p. 137). Not only is this seen as a vitally important skill, it is one which is unique to humans, therefore distinguishing us from other primates (Parker, 2015). Exactly when our ancestors first interacted with fire is open to much debate (Gowlett & Wrangham, 2013). There is general consensus that Africa provides the earliest sites that preserve traces of burning in one form or other (Gowlett & Wrangham, 2013), which is consistent with the widely held belief that Africa was the origin of all human life (Klein, 2008). That said, Sandgathe (2017) convincingly argues that any attempt to pinpoint our specie's first use of fire is oversimplified. He suggests that there are likely to

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[6] **Anthropogenic fire use:** the use of fire by humans.

have been a series of "stages" involved from habituation to naturally occurring fire through to the final point at which our species was able to *manufacture* fire (p. 367).

Sandgathe's ideas broadly support those of Fessler (2006), who highlights that fire use is an action comprised of two facets: (a) the *control* of fire and, (b) its *production*. Fessler also alludes to the notion of 'stages'. He surmises, logically, that the control of fire within the Homo genus must have been the first of facet to emerge because of naturally occurring fires such as those caused by lightning storms (p. 430). Pyne (1998) also alludes to this by suggesting that, initially, our ancestors had to "compete" with natural sources of fire, such as lightning, in order to later "control" it (p. 65). An understanding of how our species first learnt to control and then to produce fire is of central importance because many participants in this study spoke of controlling it (see section two of this thesis). Furthermore, the notion of 'stages' in how our species acclimatised to fire is also of relevance. There are parallels here with my own view that fire use is a *process,* as expounded in section three of this thesis.

According to Parker (2015) there are two main schools of thought with respect to how our ancestors came to acquire "pyrotechnic abilities" (p. 30). It is important to note that some of the typical terms which appear in anthropological literature on this topic, such as 'control of fire' and 'habitual fire use' have recently been critiqued by Sandgathe (2017). He asserts that the terms are poorly defined and used interchangeably. He persuasively presents a series of nuanced points on the matter, but a detailed review is beyond the scope of this thesis. A common argument about how our species first came to use fire is that this occurred by chance, and, Wrangham (2010) posits a scenario through which this might have happened. It is possible that whilst engaging in rock pounding to fashion tools for hunting, sparks led to the occurrence

of small fires. He suggests that habilines[7] may have actively begun to experiment with the flames, perhaps through playfully prodding one-another with a burning branch. The instinct to move away from the flame, coupled with a fear response, was observed, and over time they came to adopt this as a means of warding off predators. Interestingly, Wrangham's scenario alludes to the notion of fire *play*, even over two million years ago (mya). This is of central importance in understanding the evolution of human interaction with fire, including criminalised use, which is integral to this thesis. I will propose below that fire play could be the type of fire use which marks the midway point on the continuum of fire use (CoFU) and could, thus, be the intersection between non-criminalised and criminalised fire use.

Another perspective about how our ancestors first came to use fire has been proposed by Parker (2015). He refutes that this was serendipitous and instead asserts that our ancestors were forced to adapt to fire because its natural occurrence increased over time, across Africa, as a result of geographical and meteorological changes. Parker, therefore, is of the view that our species had to adapt to fire *specifically.* Pyne (1998) agrees that our species were forced to adapt, however, he suggests it was the *"fire regime"* (p. 65), i.e. the *pattern* of natural fire and when it occurred, which we adapted to rather than fire per se. He suggests that fire is just one of many disturbances, drought being another example, to which organisms have acclimatised over time. Irrespective of which perspective one subscribes to, the consensus is that our ancestors somehow became accustomed to fire. It is this point, which is of pertinence to the research outlined in this thesis. The notion of adaptation supports the idea that fire use is 'hard-wired', which is important when we consider how to work with arsonists.

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[7] **Habilines:** Described by Wrangham (2010) as the "missing link" between apes and humans. They are generally considered to be part of the homo genus and show a mixture of prehuman and human characteristics (p. 4).

In anthropological terms, human *adaptation* to fire does not necessarily mean that fire played a role in the process of natural selection. Fessler (2006), for example, asserts that the notion of the development of an innate skill in fire-management is implausible because of the vast array of eco-systems which our ancestors came to inhabit. In other words, Fessler is not of the view that the physical characteristics of our species changed in order for us to use and manage fire. Rather, he suggests, our skills are the result of *learning*. Interestingly, Fessler saw parallels between the way in which children learn about predators, and the acquisition of fire-management skills. Children, according to Fessler, are curious about the flammability of various materials and the consequences of manipulating or rearranging burning objects (p. 433). This is echoed by Jackson et al. (1987) who suggest that "fascination and experimentation with fire is a widespread feature of normal child development" (p. 176). Learning about the utility and dangers of fire, however, cannot be solely a 'hands-on' process; Fessler argues that this would lead to frequent injuries on the part of the child. It seems possible, therefore, that vicarious learning also takes place as children experience the hazards associated with fire from watching others and hearing their stories. From a psychological perspective this is important because it alludes to the significance of interpersonal relationships and the social environment in learning about fire use. These concepts are supported by data from the current study (see section two of this thesis).

Some authors contest the view that our species merely adapted to use fire. They, in contrast, do propose a more direct link between fire use/ management and natural selection. In other words, according to some, our ability to control and use fire actually improved us (genetically), as a species, and meant it was more likely we would survive. In turn, according to this view, our species physically changed (over millions of years) so that we were better able to utilise fire effectively. Parker (2015) suggests that we evolved to be reliant on fire for survival, for a number of reasons relating to our role as hunter-gatherers, one of which was

cooking. According to the cooking hypothesis, proposed by Wrangham (2010) our ancestors evolved over millions of years to eat cooked food which was entirely dependent on fire. Cooked food offered a number of advantages including a greater net energy gain, owing to the ease at which it is digested (Carmody & Wrangham, 2009; Wrangham & Carmody, 2010), a reduction in the time it took to eat because less chewing was required, a wider range of food sources which could be consumed and, an increase in life expectancy through lower predation and disease (Goudsblom, 1992). Wrangham (2010) asserts that these benefits, which were all the result of fire use, played an integral role in the increase of brain size of our ancestors.

It has also been argued that our species evolved to become reliant on fire in the process of *searching* for food, which was a key role for the hunter-gatherer (Winterhalder, 1981). Parker (2015) is of the view that our ancestors observed the profitable effects of natural fires through which grass-dominated landscapes were flattened in that it optimised the opportunity to forage. They later learned to replicate this, which is referred to as *anthropogenic burning*. This played a crucial role in sustaining the life of our ancestors because the clearing of landscapes meant that prey and food were discovered more quickly.

Other important functions fulfilled by fire for our species have received surprisingly little attention in the literature. Fire, for example, served as a source of heat and light, which offered an antidote to cold and darkness. In turn, this helped to keep predators at bay (Goudsblom, 1992; Clarke & Harris, 1985). Wrangham (2010) highlights that the protective function of fire allowed our ancestors to sleep soundly and sleep is irrefutably important for brain development (Li, Yang & Gan; 2017). Furthermore, fire has enabled our ancestors to produce tools (Pyne, 1998; Fessler, 2006). The important point here is that we have come to be *reliant* on fire for a variety of reasons over millions of years. This has been neglected in much of the existing literature on arson and fire setting (see part two, below).

The premise that we adapted to *rely* on fire and that it may even have had a direct evolutionary role is of central importance in this thesis. I argue that, if we are to improve our understanding of arson and develop effective treatment and interventions, we must acknowledge that the relationship humans have with fire is complex, multi-facted and dates back millions of years.

The aforementioned work suggests that, for our ancestors, fire played an overt role in essential tasks such as acquiring and preparing food. It continues to play a crucial role in our survival today, but I believe that we, in the UK, are not always particularly aware of this fact. For example, around 80% of the world's energy is still gleaned through the burning of fossil fuels (World Energy Council, 2013). Furthermore, landscape burning is still undertaken by indigenous communities, such as Aborigines in Australia (Cuthell, Striplen, Hylkema & Lightfoot, 2012) and farmers, who use it to incinerate garbage, prepare land and to eliminate insects. Despite its continuing importance, there are some differences in our reliance on fire today when compared to that of our ancestors, at least in what could be considered the Global North[8]. I assert that in the Global North and, more specifically in the UK where the current research is based, our reliance on fire for survival is less overt in that our exposure to the naked flame (as a functional tool) has lessened. We have come to place more importance on our *psychological* and *social* connection with fire, rather than recognising it as something we depend on. I will argue later in this thesis that understanding this shift in the use and social representations of fire is key to developing effective arson treatments/ interventions.

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[8] **The Global North:** countries in the Northern Hemisphere (in addition to Australia and New Zealand), which are well developed economically and socially (Royal Geographical Society, n.d.)

Within the academic literature there are references to the social aspects of fire. For instance, Goudsblom (1992) notes that it has always been a focus of group life because of the comfort and security it offers. For our ancestors, being in a group enhanced communication skills and solidarity. Presdee (2005) also writes about the social (and cultural) aspects of fire and the complexity of our relationship with it. He makes reference to the fact that our emotions and fire are intertwined, and that fire plays an important role in human identity. These points are highly relevant to the findings of the current research (reported upon in sections two and three of this thesis). Overall, however, we know very little about the psychological and social benefits of fire and, thus, the reasons for our intrinsic connection with it. Part of this connection can be explained through the practical benefits of fire use, which helped our species to develop (as discussed above). However, fire also holds *psychological* importance, which is evidenced in the data from the current study (discussed in sections two and three of this thesis). The psychological and social connection which humans hold with fire is analysed below.

Symbolism and fire.

As previously discussed, we came to rely on fire over millions of years as a tool for survival, but we also began to attach symbolism to it. In other words, we came to see fire as having *meaning* beyond the fire itself. Coverage of the manifold theories and definitions of symbolism is beyond the scope of this thesis. In brief, I subscribe to the view of Sperber (1975) who considers symbolism to be a "cognitive mechanism" (p. xi). The point at which our species started to view fire symbolically has not been addressed in the academic literature but in line with Sperger's definition, it is reasonable to assume that this might have occurred in line with our cognitive development. Many anthropologists agree that the cognitive abilities we have today were "probably in place when the Homo sapiens emerged" (Adler, 2013) and so perhaps this is when we developed the capacity to view fire symbolically. Symbolic representations of

fire have been briefly referred to in existing literature (for example, Fessler, 2006; Winder, 2009) but, overall, coverage within the psychological literature is sparse.

For the participants in this study, symbolic representations of fire are just as important as its physical properties. I will propose throughout this thesis that this may, arguably, be true of society more widely. The degree and nature of emphasis placed on the symbolic meaning of fire is likely to vary across different countries, races, ethnicities, cultures, religions and many other variables but there is a distinct lack of research on such topics. I believe that an insight into the symbolic representation of fire is integral to our comprehension of arson and the design of appropriate treatment/ interventions. For example, if we understand the psychological and emotional function/s which fire use serves for arsonists we may perhaps be able to assist them in 'replacing' it with another, more adaptive, behaviour.

Symbolic references to fire are clear within Greek and Roman Mythology. For example, Topp (1973) explains that in Greek Mythology Hestia was the appointed Goddess of the hearth and that her fire was to be maintained as a place of worship and protection. Similarly, Zeus was the God of the sky to whom the sun belonged. The notion of symbolism in ancient mythology is of relevance in understanding fire's role in religion both past and present. Argyle (as cited in Winder, 2009) suggests that the earliest forms of religious worship were fire related and Winder (2009) highlights its ongoing significance in religion today, with particular reference to Paganism and Wicca, where fires and candles are used in rituals throughout the year.

Although fire is often associated with religion, the symbolism ascribed to it is diverse, multi-layered and complex. I argue that it is important to acknowledge this diversity because it points to the need for an idiosyncratic approach to working with arsonists. In other words, it is important that practitioners establish what fire means to the individual they are working with. Fire's many religious meanings demonstrate this diversity. For example, in Catholicism, for

example, candles are used to convey one's devotion and reverence to God (Schoenstatt Scotland, 2015) and in Judaism, the eight candles of the Menorah are lit during Hanukkah in celebration of the victory of the Jews in recapturing Jerusalem from Syrian Greeks (BBC, 2009). It is not only in the form of candles where fire is used in religion. Winder (2009) refers to the burning of bodies in funeral pyres in Hinduism and Christianity, which is a symbolic act of "freeing the soul of the deceased" (p. 14). In an ethnographic study of Holiness snake handlers in Southern Appalachia, Kane (1982) reports on the ritualistic handling of fire (with no visible sign of injury) as a way of proving dedication to, and faith in God, in addition to demonstrating the power of God (p. 375). Another example is cited by Danforth (2016) who writes of a Northern Greek ritual which involves fire walking, dating back to the 1920s. In this annual "ritual cycle" (p. 4) culminating on May 21st townsfolk dance and engage in fire walking in the belief that St Constantine will heal them of illness.

The ritualistic use of fire does not always have religious meaning (although arguably this could depend on how one defines religion). It is also used symbolically in ceremonies, celebrations and for entertainment (Presdee, 2005). Moreover, Presdee (2005) writes about fire's intriguing dualities, such as that of "destructiveness and creativity" (p. 74), which perhaps indicates why it is viewed as so exciting, intriguing and mesmerising. All of these points relate directly to the data from the current study (see chapters three to five) and, I argue, are key in developing effective treatment/ interventions for arson (see chapter six).

Fire in celebrations and as entertainment.

Fire plays a central role in celebrations around the world. For example, Konvalinka et al., (2011) refer to an annual fire-walking ritual which takes place in a rural Spanish village to mark the summer solstice within a large amphitheatre. Once a large fire is reduced to ash, participants dance before walking across the hot coals, usually whilst carrying a relative on

their back. Similarly, between 1st and 19th March each year, Valencia in Spain hosts the Fallas celebrations in which works of art are displayed in the city and then burnt, as a way of marking the beginning of spring (Visit Valencia, n.d.). Winder (2009) also highlights the use of fire in the form of the Olympic torch which is revealed at the opening ceremony of each Olympic Games.

Another, well renowned, example of the use of fire for celebratory purposes is The Burning Man Festival, held annually in the Nevadan Desert, USA. This is described as a festival of arts and creativity, with a carnival-type atmosphere and a spiritual, rather than religious tone (Gilmore, 2010). The culmination of the festival is the burning of a wooden figure, packed with explosives, which is 40 feet in height (Clipper, 2007; Gilmore, 2010). Finally, a world-renowned ritual, dating back to the 1600s in England is that of November 5th; now commonly known as 'bonfire night'. This relates to the plot by Guy Fawkes and co-conspirators to commit treason by blowing up the houses of parliament with gunpowder (Sharpe, 2005). In the 1600s Londoners were encouraged to light bonfires to celebrate the uncovering of this plot. Nowadays in the UK, I assert that the entertainment value of fire, such as the lighting of bonfires and fireworks, supersedes the historical significance for many who engage in such celebrations. Therefore, 'bonfire night' in the UK is an example of where the underlying symbolism has waned and is not the primary motivation for the millions of people who celebrate with bonfires and fireworks on November 5th nowadays (Sharpe, 2005).

As seen above, the symbolic meaning behind fire-related celebrations are manifold. Winder (2009) suggests that fire represents "a beacon of hope, means of blessing, healing and protection" (p. 15). As referred to above, I argue that this diversity in fire-related symbolism means that a 'one size fits all' approach to the prevention of arson and the rehabilitation of arsonists is unlikely to be sufficient. Furthermore, another complexity is that in the Global North, symbolic meaning often appears to intersect with the entertaining qualities of fire. For

instance, we may light a fire in order to gaze into the flames for relaxation, in addition to using it for decorative purposes and for the marking of events, such as the use of a barbeque (Fessler, 2006) or candles on a birthday cake.

In the existing academic literature the most commonly cited use of fire for what could constitute entertainment purposes is *fire play*, which is defined by Hall (2000) as "a fire deliberately set for no purpose, constructive or destructive, beyond the fire itself" (p. 1). Where fire play sits on the continuum of fire use (CoFU) referred to in the introduction chapter of this thesis is debatable. More specifically, whether it is placed closer to the criminalised or non-criminalised end of the CoFU is difficult to establish from existing research because most of this work has adopted a categorical perspective, i.e. the behaviour is either considered to be 'normal' or not/ 'deviant' or not. This is reminiscent of the broader issue outlined in the introductory chapter relating to the complexity of human behaviour and, thus, the artificiality of categorising it a behaviour as simply 'one or the other'.

Using the CoFU as a framework, I suggest that fire play could be conceptualised as marking the intersection between non-criminalised and criminalised fire use. That said, there are a myriad of considerations, such as how we define fire play. Also, to complicate matters further, there are many gradations in fire play (which could all be represented somewhere upon the continuum).

Research has demonstrated that fire play is relatively common in children and that it can increase linearly with age up to a point (Grolnick, Cole, Laurenitis, & Schwartzman, 1990). That said, Fritzon, Dolan, Doley and McEwan (2011) allude to the complexities involved in considering whether the behaviour should be considered "normal" in young people (p. 395). More definitively, Fessler (2006) asserts that fire play should *not* be considered harmless and that fire safety officers' concern with it is quite justified (p. 434).

Research into the prevalence of fire play amongst children and adolescents has been conducted, however, owing to the variability in the way the behaviour is defined, rates are difficult to establish. Simonsen and Bullis (2001; as cited in Murray, Fessler & Lupfer, 2015) surveyed over 5,000 third to eighth-grade students in Oregon, USA. Forty-seven percent of respondents reported to have played with fire between the ages of one and 15. Interest in fire was reportedly high, as was the perceived entertainment value, for example, 23% of the sample started fires "for fun". In another study, with a sample of 138 young people "match-play", which included "playing with candles and striking matches" (p.21) is considered to be an acceptable form of behaviour, i.e. '*non*-fire setting' (Kolko & Kazdin, 1992). This study found that across three time points in a one year period, over 50% of participants had played with matches. Crucially, Kolko and Kazdin make reference to the overlap between match play and fire setting, which highlights the complexities in establishing where this might sit on the CoFU. In a more recent study Perrin – Wallqvist & Norlander (2003) investigated young men and women's interest in playing with fire through a qualitative study involving psychology students at a university in Sweden. Notwithstanding their vague definition of fire play, 70% of men and 44% of women admitted to playing with fire as children.

Fessler (2006) offers a fascinating ethnographic account of the way in which children from different communities interact with fire. Fessler, at times, uses questionable terms within the paper such as "modern societies" (p. 446) but, essentially, this work could represent some of the key differences between the Global North and specific communities within the Global South. Fessler suggests that in modern societies most children seldom have the opportunity to interact with fire because they are not frequently exposed to it. Therefore, adolescence may be the first opportunity to "experiment" (p. 438), which might be a form of rebellion. In contrast, Fessler observed a specific rural community where fire is "routinely used as a tool" (p. 438). He notes that, here, children interact with fire from an early age, but there is very little fire play

as we might observe in "developed societies" (p. 446). In this community, Fessler found that from the age of around six children are assigned fire-related tasks, such as collecting material and, after a few years, they are tasked with cooking and tending to fires. Crucially, combining his own findings and those of the ethnographers whom he surveyed, Fessler concludes that in communities where fire is used as a tool, it holds less entertainment value (p. 440).

As Fessler alludes to, fire is enshrouded in myth and mystery in the Global North and certainly in the UK where the current research is based. Some people even view it as having paranormal qualities, akin to alien visitation, reincarnation and astrology (Messer & Griggs, 1989). I will assert in this thesis, that this fact, along with the lack of 'every day' exposure to fire for children in the Global North could be one of the contributory factors to arson, at least in the UK. Fessler's observations highlight that any study of fire use must be context-specific, i.e. it should take account of the country where it is based and the many culture/s within that country. The CoFU presented in this thesis is based in the UK and it is possible that it might not apply elsewhere. This is returned to in section three of this thesis where I argue for further research to explore other countries and cultural backgrounds.

It is generally accepted that children are intrigued by fire because it is visually interesting (Pinsonneault, 2002) and some suggest that this interest may wane over time Perrin – Wallqvist & Norlander, 2003). However, as discussed earlier, it is difficult to pinpoint where to locate fire play on the CoFU. If we accept the continuum conceptualisation of fire use, then *playing with fire* and *arson* are two constructs which exist on the same dimension. It is possible that the former might be a precursor to the latter, and this is broadly supported by the data from the current research (see sections two and three). However, to date, there has been no research specifically mapping the trajectory of fire use from play to criminalised use, in the form of arson.

So far in this chapter, non-criminalised use of fire, including its importance in the evolution of our species has been reviewed. I have also suggested that fire-play, although poorly defined, could mark the mid-point on the CoFU. The other end of the CoFU is criminalised fire use and literature pertaining to this is reviewed in part two of this chapter.

Part Two: Criminalised Fire Use

The misuse of fire.

In contrast to the entertaining and spiritual representations of fire discussed above, it also has significant negative connotations. We recognise not only its empowering qualities but also its capacity for destruction (Winder, 2009; p. 11). Bachelard (1938/ 1964; as cited in Winder, 2009, p. 11) highlighted its "opposing values of good and evil" which distinguishes it from the other elements. In the UK in 2019 it is clear that we are aware of the dangers of fire, as exemplified by stringent legislation aimed at promoting fire safety in England, such as the Regulatory Reform (Fire Safety) Order of 2005 and the Smoke and Carbon Monoxide Alarm Regulations of 2015. In hot and dry climates fire can pose an inadvertent danger in its naturally occurring form, such as those observed in rural areas of Australia and parts of the USA. It can also, however, be used by people to deliberately harm and/ or cause damage.

As discussed in the introductory chapter, the task of delineating between what can be considered non-criminalised and criminalised fire use is very difficult. I propose that fire use of all kinds exists along the same dimension and it can vary across one person's lifespan, from person to person, culture to culture and so on. On that basis locating a universal 'tipping point' (between non-criminalised and criminalised) is likely impossible. As discussed in the introductory chapter, there are multiple ways in which to define criminal behaviour (Andrews & Bonta, 2014) and Heyman (1999) highlighted the fluidity of the "process" of legalisation

and illegalisation (p. 322). From a social science perspective, therefore, precisely where certain acts of fire use should sit upon the CoFU is open to conjecture and one's opinion on this might be influenced by manifold factors, such as cultural background, societal norms and moral stance. It could also vary across time. The execution of convicted offenders by burning is one example of this. Execution by burning was lawful in England until 5th June 1790 (Campbell, 1984). It was most often issued against women for a range of offences including petty treason, counterfeiting (Campbell, 1984) and theft (Reinhard, 1941). In addition, 'burning at the stake' was common practice across the world for those suspected of witchcraft (Riddell, 1929; Reinhard, 1941). Whether we view this act of punishment as 'right' or 'wrong' and, thus, non-criminalised or criminalised, is likely affected by our own morals, beliefs and background. Furthermore, in this case it is likely to be influenced by the time in which we live, i.e. the view of those living in the 18th Century may have been very different to the view we hold about execution by burning in England today. Indeed, in line with the definitions provided within this thesis, I would consider execution by burning to be *criminalised* fire use, i.e. it targets a living being and is undertaken to cause loss of life.

The distinction between how the state conceptualises behaviour, by way of the law, and how a society (i.e. members of the public) appraise that same behaviour is important. It further supports my argument that fire use cannot be neatly categorised as criminalised or non-criminalised and, thus, must exist on a continuum. That said, as discussed in the introductory chapter, the UK legal system arguably simplifies this matter by dichotomising behaviour on the basis of whether it is legal or illegal and, in relation to fire use, arson is considered to be an illegal act.

Arson.

As discussed in the introductory chapter, arson is a legal term which defines the specific criminal act of intentionally, or recklessly setting fire to property or woodland areas (Dickens & Sugarman, 2009). It is defined by the Criminal Damage Act 1971, in which Section 1 (3) stipulates that any criminal damage caused by fire should be classed, and charged, as arson (Averill, 2010). The scale of the problem of arson in England and Wales is difficult to establish because the crime is unhelpfully conflated with criminal damage in official statistics (for example, see Office of National Statistics, 2018). Unfortunately, arson crimes have a poor rate of prosecution (Daykin & Hamilton, 2012; Doley, Dickens & Gannon, 2016), which is likely due to myriad factors such as detection difficulties (Brett, 2004) and a lack of witnesses being present, in addition to an absence of forensic evidence and confessions (Averall, 2010). Also, in the case of young fire setters, age may preclude a charge and/ or conviction (Dickens & Sugarman, 2009).

The legal definition of arson is only one, albeit key perspective. It is defined differently by the Fire and Rescue Service (FRS) who use the term 'arson fire', for those where a deliberate or malicious ignition is *suspected* but not necessarily proven (Canter & Almond, 2002, p. 9). This means there are differences in the rates of arson reported by the Police and FRS (Canter & Almond, 2002). Hopkins (2009) highlights the uniqueness of arson in that, unlike other crimes, it is the FRS rather than the Police who are usually the first on the scene. Hopkins notes that there is often an "attrition rate" (p. 80) between a fire being classified as deliberate by the FRS and the same fire being investigated as, and resulting in a conviction of, arson by the police.

The lack of consensus on how arson is defined by the emergency services is mirrored within the psychological literature, in which there are multiple definitions (Labree, Nijman, Marle & Rassin, 2010). As introduced in the previous chapter, rather than using the term *arson*,

some have referred to *fire setting* which is more encompassing and relates to all acts of intentional/ deliberate fire-starting (for examples see Gannon & Pina, 2010; Ó'Ciardha & Gannon, 2012; Butler & Gannon, 2015). I support the notion of using broader terms to include a wider-range of behaviours (over and above those which result in conviction). However, I do contest the term fire setting because of its sole focus on the act of *lighting* a fire, rather than acknowledging that our interaction with fire is a *process* (this is an argument which I will return to at various points in this thesis).

Despite the attempts of some in the psychological literature, there is generally a confusing picture surrounding what, exactly, constitutes arson and fire setting. Terms used have been vague (for example, Geller, 1992), and are often used interchangeably (for examples see Davis & Lauber, 1999; Doley, 2003; Perrin-Wallqvist & Norlander, 2003; Devapriam, Raju, Singh, Collacott & Bhaumik, 2007; Vaughn et al., 2010; Daykin & Hamilton, 2011). As a consequence of this lack of consensus, any review of the psychological literature on arson/ fire setting will inevitably incorporate references to a host of terms. Within this chapter, therefore, the term used corresponds to that which is referred to in the literature being cited. Consequently, I use the terms arson and fire setting interchangeably at times, but this is reflective of the state of the literature. As introduced in the previous chapter, I favour the term *fire use* and so I will go on to use this. However, the current chapter is concerned with existing research and, thus, with the terms that have been used in the research so far.

Psychological research into arson and fire setting.

As discussed above, research into criminalised fire use, in the form of arson and fire setting has prevailed within the psychological literature when compared to non-criminalised use. This research can be organised into three categories on the basis of the main focus of the work: (a) recidivism and dangerousness, (b) characteristics of arsonists/ fire setters, and; (c)

the classification of arsonists/ fire setters, including theoretical perspectives, each of which will be discussed in turn below. Before doing so, however, it is useful to outline the nature of the samples employed in all of this research.

Sample composition.

The majority of psychological empirical research on criminalised fire use has focussed on arsonists, i.e. those convicted of an offence through the Criminal Justice System (CJS), whom either reside in prison or psychiatric hospitals (for example, Hurley & Monahan, 1969; Prins et al., 1985; Jackson et al., 1987; Rix, 1994; Lindberg, Holi, Tani & Virkkunen, 2005). In terms of the CoFU, therefore, most existing research relates to the far (criminalised) end of the spectrum.

Daykin and Hamilton (2011) challenge the use of convicted samples and argue that poor detection rates for arson mean that this approach is "likely to be limited and speculative" (p. 11). A parallel can perhaps be drawn here with much of what we claim to know about sexual offenders. Much of such work has been based on samples of *convicted* samples, who are the overwhelming minority of sex offenders (Towl, 2018). It could be reasonably hypothesised that such samples are unrepresentative. Yet this seems to have been calmly airbrushed out of such a fuller understanding despite us knowing that under reporting of sexual offences is a significant problem (Taylor & Gassner, 2010).

In attempt to circumvent the problem of poor detection of arson offences, some authors have argued that rather than focussing on only those acts which result in an arson conviction and only people in prison, the inclusion of *any* fire-related behaviour, irrespective of whether they have resulted in criminal sanctions is a more appropriate focus for research (Turvey, 2002; Douglas, Burgess, Burgess & Ressler (1992). In other words, it may very well be wise to widen the sample pool to include non-convicted fire setters in community settings. This is a point

echoed by Perrin-Wallqvist and Norlander (2003) who suggest that there is "a need for studies from normal populations" (pg. 152); a comment which epitomises the overreliance on 'abnormal' populations thus far.

Refreshingly, a small number of empirical studies have employed community samples to explore fire setting as a broader concept (for example, Perrin-Wallqvist & Norlander, 2003; Vaughn et al., 2010). Recently, three quantitative studies explored the prevalence of fire setting in the general population and the characteristics of those reporting it, in addition to exploring comparisons between a community sample of fire setters and non-fire setters through the use of self-report questionnaires (Gannon & Barrowcliffe, 2012; Barrowcliffe & Gannon, 2015, 2016). A self-reported prevalence rate of 11% was found for deliberate fire setting within the general population (Gannon & Barrowcliffe, 2012).

Notwithstanding the 'step forward' which community-based research represents, they have a number of methodological limitations, particularly relating to the use of self-report questionnaires. Firstly, as argued previously, the categorisation of participants as 'non-fire setters' or 'fire setters' in quantitative research is subjective. In a study by Gannon and Barrowcliffe (2015), for example, participants were 'screened' in to a non-fire setter or fire setter group on the basis of their response to the following statement: "have you ever deliberately set a fire or fires to annoy other people, to relieve boredom, to create excitement, for insurance purposes due to peer pressure or to get rid of evidence". Participants were requested to exclude fires that they had set before the age of ten years, fires started accidentally, or fires started for organised events such as bonfires (p. 8). I suggest that this statement is somewhat subjective. Furthermore, it is possible that other equally important anti-social motives for fire setting, such as a desire to seek revenge, may have been overlooked, leading the participant to be wrongly classed as a non-fire setter.

A second methodological issue relates more broadly to the use of self-report questionnaires in research. This is an approach which is inherently flawed because it is vulnerable to biased responding (Paulhus, 1998). More specifically, participants may be inclined to manage the impression that they portray to others by describing themselves in overly positive terms (Paulhus, 1998; p. 1). In this instance, this might include denial or minimisation of fire setting behaviour for fear of being judged. In the aforementioned studies (Gannon & Barrowcliffe, 2012; Barrowcliffe & Gannon, 2015, 2016) the researchers attempted to control for biased responding by making all data anonymous. However, the questionnaires were delivered to the homes of target participants, which may have led some individuals to question whether it was truly anonymous. This, in turn, could have raised suspicion and left them more prone to reporting socially desirable information.

Despite the caveats attached to self-report questionnaires as a method, using non-imprisoned samples at least marks an attempt to overcome the unrepresentative nature of research based purely on prison and secure hospital samples. The emergence of this community-based research offers promise because it facilitates access to a previously unstudied sub-population of fire setters (i.e. those who are *un-convicted*). Until more of this research emerges it is premature to assume that convicted arsonists are representative of all criminalised fire users.

Having outlined some of the problems with existing community-based research, it is also prudent to highlight one which is common to *all* existing research on arson and fire setting. All of the aforementioned research (whether based on arsonists or fire setters) focusses on the more extreme end of the CoFU (i.e. fire use which has led to legal reprimands or, at least, contact with the CJS). It would at very best be premature, and I would argue erroneous, to assume that such research can explain the *full* CoFU, i.e. non-criminalised, as well as criminalised fire-related behaviour. Within the remainder of this chapter I provide a critical

review of the existing arson and fire setting research. As referred to above, this is organised under three sub-headings which correspond to the focus of the research, starting with recidivism and dangerousness.

Recidivism and dangerousness.

Whether arsonists should be considered 'dangerous' has been addressed in a number of papers. Interestingly, authors have tended to equate dangerousness with recidivism, which is debatable, as I will go on to discuss below. The question of recidivism amongst arson offenders is important but it is prudent to note certain caveats when interpreting empirical findings of this nature, such as the "unsystematic nature of data generation" (Dickens et al., 2009, p. 636). In other words, the methods employed and the way in which recidivism is defined (i.e. operationalised) has varied greatly. This has resulted in a vast disparity in reported rates of recidivism, ranging from four to 60 percent (Brett, 2004). For example, rates of ten percent, 38 percent and 60 percent are reported by Hurley and Monahan (1969), Koson and Dvoskin (1982), and Rice and Harris (1991) respectively, but 'recidivism' is operationalised differently by all of them. More recently, Edwards and Grace (2013) cite a low arson recidivism rate of just over 6% in their sample of arsonists, but a much higher rate for violent and non-violent offences, supporting the findings of Rice and Harris (1996). This pattern of higher "*general* recidivism" (p. 12), rather than 'arson-specific' recidivism, in samples of convicted arsonists has been replicated in Australia (Ducat, McEwan & Ogloff, 2015). It might ostensibly suggest that repeated arson is less of a problem than other offences, but we should be mindful of the aforementioned methodological variability and low detection rates.

Research into the correlates of recidivism in arsonists and fire setters is valuable because it informs clinicians on what should be considered when assessing risk and when delivering therapeutic interventions. 'Risk factors' for recidivism in arsonists/ fire setters

include a young age at the time of the first fire setting incident, a lower Intelligence Quotient (IQ) and/ or history of special educational needs intervention, less interpersonal aggression, and a family history of violence and/ or substance misuse (Rice & Harris, 1996; Dickens et al., 2009). More recently, Edwards and Grace (2013) have cited three variables which are predictive of arson recidivism, namely: being under 18 at the time of the first arson offence, multiple arsons (i.e. multiple counts of arson at the time of the "criterion offence") and prior vandalism offences (pg. 224). The optimal predictor in their study was found to be multiple arsons. Of pertinence is the authors' assertion that, on the basis of their data "the act of arson is different to both violent and non-violent offending" (pg. 226). This is important because it further refutes the 'one size fits all' approach to arson assessment and treatment.

Ducat et al., (2015) also identify variables predictive of arson including: multiple arsons at the time of index offence, age at first arson offence, and psychiatric illness. The authors conclude that general anti-sociality, especially from a young age, remains the best predictor of repeat fire setting. A strength of Ducat et al's study is their attempt to offer an operational definition of recidivism (p. 7) but, still, the terms arson and fire setting are used interchangeably throughout the paper which impedes clarity at times.

There are clear commonalities across the results cited above, indicating that certain variables have been repeatedly associated with arson recidivism. This type of research paves the way for the development of arson/ fire setting-specific risk assessment tools. More widely, it could prove valuable to CJS professionals such as probation officers, the police and the FRS through assisting in the identification of 'high (recidivism) risk' offenders. That said, this relates solely to *risk* rather than taking on board the positive psychology perspective which I referred to in the introductory chapter and expand on below.

As alluded to above Dickens et al., (2009) offer a refreshing perspective on dangerousness in arsonists, and one which may at first seem counter-intuitive. They highlight

a tendency among researchers and professionals to treat dangerousness and recidivism as synonymous (Dickens et al., 2009). This issue dates back decades, for instance in a 1982 paper Faulk states "when the question of future dangerousness of a patient is discussed, one is asking what is the likelihood of the patient repeating that or a similar offence in a variety of situations" (pg. 76). On the contrary, Dickens et al., (2009) argue that recidivism and dangerousness are mutually exclusive, with which I concur. For example, an arsonist who repeatedly recidivates by setting fire to litter bins in a remote area is arguably less *dangerous* than a one-time arsonist who sets an inhabited house alight. Indeed, existing risk assessment instruments encourage clinicians to assess a range of factors, not only recidivist status, in order to determine the level of dangerousness of an individual (for example, the HCR-20 V3; Webster, Douglas, Eaves & Hart, 2013). This is an important point, which, makes the case for an idiosyncratic and nuanced approach to the assessment and treatment of arsonists. Furthermore, it adds weight to the continuum conceptualisation by highlighting that fire use comes in many different forms.

Characteristics of arsonists and fire setters.

Characteristics of arsonists and fire setters has attracted the attention of researchers since, at least, the 1950s. The vast majority of studies utilise convicted samples (i.e. arsonists), which, as discussed earlier, casts doubt about their generalisability. In addition, studies have tended to employ quantitative methods. Qualitative studies into arson and fire setting are sparse but I argue that this is an approach which offers promise as demonstrated by the contribution of the current research (as presented in sections two and three of this thesis).

The question of whether arsonists differ from other types of offender has received attention. Gannon et al., (2013) refer to this as the *generalist and specialist hypothesis* (p. 4). Proponents of the generalist viewpoint see arsonists as generic offenders, whereas supporters of the specialist school of thought assert that arsonists are different in some way. Even in the

early 1990s support for the latter had already emerged. For instance, Rice and Harris (1996) state "fire setting is quite distinct from both violent and other non-violent crime", adding that it is most different from violent offending (pg. 373). For CJS practitioners, such as forensic psychologists, there is great value in establishing the similarities and differences between arsonists and other offenders in order to determine how they should be worked with, from a risk and rehabilitation perspective. Once again this illuminates the question of whether the 'one size fits all' approach is appropriate.

The generalist and specialist debate is ongoing. There is some indication that arsonists have less direct interpersonal violence on record when compared to other types of offender (McKerracher & Dacre, 1966; Koson & Dvoskin, 1982; Jackson et al., 1987; Rice & Harris, 1991; Day, 2001; Soothill, Ackerley & Francis, 2004). These findings suggest that arsonists may be *unlike* violent offenders. Some research has raised the possibility of similarities between arsonists and property offenders, in that they have more of these types of offences on record than non-arsonists (McKerracher & Dacre, 1966; Hurley & Monahan, 1969). This notion is supported by Hill et al. (1982) who compared the characteristics of arsonists referred for psychiatric assessment to two other groups of offender, namely property and violent. Hill et al conclude that, whilst arsonists share some commonalities with both groups, they most "resemble non-violent property offenders as a group" (pg. 653). Crucially the authors suggest that the intentions of arsonists are unlike those of violent offenders in that, in general, they do not wish to inflict bodily injury on victims. It must be noted that the arson group in Hill et al's study comprises only those who have set fires for "psychological rather than economic reasons" (pg. 649). This casts doubt on the generalisability of the sample because it indicates that other arsonists, such as those who may have lit a fire in pursuit of a false insurance claim, were not included.

The aforementioned studies explored the criminal and behavioural *histories* of arsonists when compared to non-arsonists, whereas others have explored *psychological* characteristics. One such variable to receive attention has been *assertiveness*. Under-assertiveness is identified by Jackson et al (1987) as being more prevalent in arsonists than violent offenders, although other studies have found no differences in assertiveness between arsonists/ fire setters and violent/ sexually violent offenders (Day, 2001; Gannon, et al., 2013). When interpreting any research where arsonists (or fire setters) have been compared to other groups of offender, however, the heterogeneity of each sub-group must be borne in mind. More specifically, the comparison might be an over-simplification. For instance, the category of violent offenders could be defined in a multitude of ways and the individuals being studied might actually have a wide-range of offences on record.

Self-esteem has also been explored as a psychological characteristic. Duggan and Shine (2001) compared arsonists with other offenders at HMP Grendon on a range of psychometric assessments, which revealed that the arsonists reported lower levels of self-esteem. This employs a highly specialist population because the study took place in a Therapeutic Community (TC), which houses offenders with very complex needs. Research employing a mainstream prison sample also found lower self-esteem in arsonists when compared to other offenders (Gannon et al., 2013). Conversely, however, Day (2001) found no differences in self-esteem between arsonists and other offenders.

Other psychological characteristics found to be of relevance in arson/ fire setter populations include impulsivity (Labree, 2010; Dolan, Millington & Park, 2002; Richie & Huff, 1999), an external locus of control (Gannon et al., 2013), increased hostility (Hagenauw, Karsten, Akkerman-Bouwsema, de Jager, & Lancel, 2015), and poorer social and relational skills when compared to other offenders (Hagenauw et al., 2015). Furthermore, rates of suicide have been indicated as higher in arsonists when compared to others (Richie & Huff, 1999) and,

importantly, self-harm might be a characteristic which is particularly prominent in women arsonists (Coid et al., 1999). 'Psychopathology' has also been explored, and some studies indicate that rates of mental disorder are relatively high (Bradford, 1982; Bradford & Dimock, 1986; Richie & Huff, 1999; Enayati, Grann, Lubbe & Fazel, 2008; Anwar, Långström, Grann and Fazel, 2009; Ó'Ciardha et al., 2014), although lower rates have also been cited by others (Repo & Virkunnen, 1997; Labree et al., 2010).

A recent research approach to emerge in the psychological literature has explored *fire-specific* psychological characteristics in non-fire setters and fire setters (Ó'Ciardha et al., 2015). Based on self-report measures, four factors have been found to discriminate prisoners with at least one incident of fire setting on record from those with no fire setting history. The relevant factors are identification with fire (meaning the degree to which fire is considered by participants as being central in their life), level of interest in serious fires, knowledge of fire safety, and the degree to which fire setting is considered by participants to be 'normal'. These findings have good utility because they assist clinicians in determining the variables of interest when assessing and working therapeutically with fire setters.

When interpreting research findings it is important to reiterate the point made above relating to generalisability and, more specifically, the fact that we cannot draw broad inferences about arsonists and fire setters from research based in specialist prison and psychiatric settings. Such samples may not be representative of all convicted arsonists and, indeed non-convicted fire setters. Overall, whilst the generalist versus specialist debate is ongoing, there are certainly indications of some differences between arsonists and other types of offender. This requires more exploration, empirically, for the reasons outlined above.

Whereas the research, such as that discussed above, draws comparisons between arsonists and non-arsonists (i.e. a *between-groups* design), other studies have adopted a *within-groups* design, which means that different sub-types of arsonist/ fire setter have been compared

against one-another. For example, comparisons have been made between adult and adolescents who set fires, in which the former group were found to have higher rates of substance misuse disorder, personality disorder (PD)[9] and other psychopathology (Bradford & Dimock, 1986). Another study compared psychotic fire setters with non-psychotic fire setters and found socio-demographic differences, along with differences on a multitude of variables including history of psychopathology and offence-related characteristics (Dalhuisen, Koenraadt & Liem, 2015). In a further study, arsonists with varying sentence lengths (which represents the severity of their offence) were compared. The factor to best distinguish the three groups in this study was *history* of arson but psychological differences were also found, for instance those serving life sentences were more likely to have a psychiatric diagnosis than those serving the shortest sentences (Sapsford, Banks & Smith, 1978). Similarly, Sakheim and Osborn (1999) compared groups of fire setters on the basis of severity ("severe/ high risk" versus "minor/ low risk"; p. 416) and found that variables such as excitement about fire, revenge fantasies, history of playing with fire and a history of cruelty to animals accurately discriminated between the two groups.

A more recent approach has been to compare similarities and differences between "pure arsonists" and "non-pure arsonists" (Lindberg., et al., 2005; pg. 5), i.e. those offenders who have *only* committed arson and those with a more versatile criminal history. According to the research findings pure arsonists most often have psychotic disorder and cognitive difficulties, whereas PD diagnoses are more common in non-pure arsonists. Ducat, McEwan & Ogloff, (2013) followed this with a similar study exploring the concept of offence "exclusivity and

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[9] **Personality Disorder (PD):** A diagnosis associated with pervasive, life-long personality characteristics which cause serious problems for the individual and/ or those around them.

versatility in fire setters" (p. 552). The authors make comparisons between an extensive list of variables between those with an offence history *only* consisting of arson, those with *predominantly* arson on record, those classed as "mixed-fire setters", i.e. participants with a varied offence record and, finally, non-fire setters. Whilst the majority yielded non-significant findings, there are some interesting significant results. For example, exclusive fire setters are more commonly women and older at the time of the first conviction when compared to the remaining two fire-setter groups. In addition, Ducat et al., (2013) also found that exclusive fire setters are less likely to have a PD or substance misuse disorder diagnosis (but only when compared to the mixed-offence group).

Ó'Ciardha et al., (2015) explore comparisons between recidivist fire setters and those with only one fire setting incident on record. From their set of variables, only 'identification with fire' distinguishes the two groups, indicating that recidivists view fire as being more essential to their daily functioning than one-time fire setters. Most recently, an Australian study comparing recidivist fire setters with one-time offenders also found differences. According to the research the former are more likely to have been victim of childhood sexual or physical abuse and to be diagnosed with learning disability[10] (Bell, Doley & Dawson, 2018).

I assert that the aforementioned research exploring different *sub-types* of arsonist/ fire setter should have as much influence on practice as does that which makes comparisons between arsonists and other offenders. If the specialist hypothesis is to be accepted, then generic approaches to offender assessment and treatment are not appropriate for arsonists/ fire setters. However, if we also accept that they (i.e. arsonists/ fire setters) are themselves are a

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[10] **Learning Disability:** This diagnosis is associated with deficits in the way a person learns, how they understand and retain information and how they function socially.

heterogenous group (Thompson et al., 2015), then it might be necessary to tailor our approach even more precisely to cater for different sub-types. For instance, it may be the case that one-time fire setters require different treatment to recidivists and that those *only* committing arson have different psychological needs to those of versatile offenders.

Summary of empirical work.

As discussed above, findings from research based in prisons and secure hospitals are arguably unrepresentative of *all* fire setters because of the low detection rate (Daykin & Hamilton, 2011). The slow emergence of community-based research is encouraging (for example, Gannon & Barrowcliffe, 2012; Barrowcliffe & Gannon, 2015, 2016). However, relative to those who are convicted, we still know very little about community samples and so the topic area would benefit from further work to explore psychological characteristics alongside the type/s of fire which participants self-report.

As discussed, there are also methodological issues with a lot of existing research, such as the difficulties in comparing and contrasting findings from studies which have employed different methods. These issues, along with the fact that fire setting has attracted less attention than other fields of forensic psychology could explain why there are no validated risk assessment tools for use with fire setters (Watt & Ong, 2016). This can lead to general risk assessment tools being applied to individuals convicted of arson which is by no means always appropriate (Gannon & Pina, 2010; Watt & Ong, 2016). Similarly, there are currently no *accredited* and empirically validated treatment programmes for fire setters (Palmer, 2007; Bell, 2016; Tyler et al., 2018), although in section three of this thesis I will make reference to the *non*-accredited options available currently. That said, we need to be mindful that the accreditation of treatment programmes in the UK is not necessarily the 'be all and end all'.

What seem to have been overblown claims about the efficacy of accredited programmes have been called into question (for example see Crighton & Towl, 2007).

Notwithstanding the matter of accreditation, until recently, it was considered that the treatment needs of criminalised fire users could be tackled via a generic intervention. However, a tailored approach is now recommended (Tyler et al., 2018). This perhaps reflects more general learning with regard to the conceptual incoherence of using 'offence type' as a significant part of a selection process for offender groupwork. The conceptual conflation here is with the legal and psychological categorisation referred to in the introductory chapter. Offence category does not necessarily touch upon sufficient commonality between prisoners because there can be different motivations for the commission of the same crime category. As referred to above, most existing research has adopted a quantitative design, which has yielded some, albeit limited, useful data. However, on specific consideration of treatment and intervention approaches, qualitative research could be more useful than quantitative approaches, in order for researchers and clinicians to understand the experiences and needs of fire setters. This approach was adopted by Haines, Lambie and Seymour (2006) who interviewed imprisoned arsonists about their experience of treatment and how it could be improved.

Despite the shortcomings, research into the demographic, criminal and psychological characteristics of arsonists and, in some cases, fire setters has been integral in informing the practice of forensic psychologists and other professionals working within the CJS. Furthermore, empirical work paves the way for the development and refining of theoretical perspectives, which are important for guiding assessment and treatment. These are discussed below.

Theoretical perspectives.

In the previous section, empirical research exploring the characteristics of arsonists and, in more recent cases, fire setters was addressed. In the following section work which has specifically sought to classify arsonists and/ or fire setters is reviewed. This includes theoretical perspectives. The structure of this section is broadly chronological to reflect how our theoretical understanding has evolved over time.

Typologies.

One of the first classificatory systems of those who set fires is known as *typologies,* which have most often been based on research conducted with convicted samples, i.e. arsonists (Gannon & Pina, 2010). These classificatory systems adopt either an *inductive* or *deductive* approach, the former being the most popular by far (Dickens & Sugarman, 2012). A key premise is that arsonists can be categorised into sub-types on the basis of the motivation underpinning their crime, in addition to other characteristics (Dickens & Sugarman, 2012; p. 50).

Typologies, as a system of classification, are flawed for a number of reasons and as Dickens and Sugarman (2012) highlight "there is little evidence that the development of category headings for classificatory purposes has involved any more than *thinking about* the data" (pg. 50). Firstly, deriving a motivation from an offence is difficult. It relies on 'raters' making judgements about the underlying motivation for an act on the basis of file information (for example, Prins et al., 1985) and/ or on the perpetrator's self-report (for example, Rix, 1994). Both approaches are arguably unreliable because motivation is an inherently ambiguous concept, which is open to interpretation. Bias may have been relevant in the case of self-report by the arsonists themselves (Paulhus, 1998) because they might have been unwilling to disclose information pertaining to motive. Furthermore, the ability to accurately *recall* one's offence

could also be a problem, particularly given that a significant number of arsonists are intoxicated at the time of their offence (Rix, 1994; Richie & Huff, 1999). Another issue with categorising arson offences on the basis of motivation is that the approach assumes only one motivation was of relevance at the time, which is not necessarily the case (Prins et al., 1985).

Notwithstanding the aforementioned issues, typologies as a means through which to understand arsonists have dominated the literature for decades. A seminal monograph by Lewis and Yarnell, that was based on a typology approach, is still widely cited today despite the fact that it was published in 1951. This work was innovative in its time and was based on data from an extensive sample comprising 1145 men and 200 women arsonists. The resultant classificatory system is complex, however. It includes five categories which are not mutually exclusive and the research lacks experimental rigor, casting doubt over its clinical utility. Nevertheless, the work of Lewis and Yarnell paved the way for further inductive typologies, such as those by Inciardi (1970), Prins et al., (1985), Icove and Estepp (1987), and Rix (1994). The work of Inciardi (1970), for example, highlights six categories of arsonist, namely: (a) revenge, (b) excitement, (c) institutionalisation, (d) insurance claim seeking, (e) vandalism and (f) crime concealment. Despite their flaws, my own view is that typologies have been valuable in encouraging the consideration of arson *sub-types*. They have moved the literature beyond the view of arsonists as a homogenous group. This was a very important turning point, which paved the way for more complex theoretical perspectives (see below).

Typologies adopting an alternative *deductive* approach also feature in the literature. The most widely cited of these is the work of Canter and Fritzon (1998) who scrutinised 175 cases of arson dealt with by the courts, identified over 50 relevant variables and developed a two-axis classificatory system. The first axis relates to the target of the fire (either an object or person) and the second relates to the motivation (either an expressive or an instrumental act). This is a very different approach because it is based on crime scene information, such as the

presence of accelerants or suicide notes. It can, therefore, aid the investigatory process but it has not been applied in the assessment or treatment of arsonists/ fire setters (Gannon, 2016, p. 15). That said, I have found the framework by Canter and Fritzon useful in thinking about the complexity of the CoFU. More specifically, it can be helpful in considering where the vast array of fire types and motives might sit at various points upon the continuum. It reinforces my earlier point about the difficult task of deciding where a particular instance of fire use sits on the continuum. It highlights that, when making this decision, we must not only consider the *type* of fire but also the *motive* behind it. For example, an individual who sets fire to a residential building might have a number of very different motives including the personal expression of anger/ revenge, an act of attempted suicide or being threatened/ coerced into doing it by a third party. This, in turn, might determine the extent to which we consider the fire to be *criminalised.*

Multi-factor theories.

Following on from typologies, there was an emergence of theoretical perspectives on arson. However, until recently there were only two multifactor theories (Fritzon, 2012, p. 29). The first of these, the *functional analysis model* (Jackson et al., 1987) explains recidivistic arson as a function of certain antecedents, followed by behaviourally reinforcing consequences. The model has clinical utility, however it has little empirical support (Gannon & Pina, 2010). The *dynamic behaviour model* (Fineman, 1995) shares commonalities with the work of Jackson et al. It, too, addresses historical factors which could contribute to anti-social behaviour, the role of reinforcement and also the environment. This more recent model has some important additions when compared with the work of Jackson et al., however, including reference to the role of cognition in fire setting (Fritzon, 2012).

The two aforementioned theories were the first to approach fire setting from a multi-factor perspective. In my own practice as a forensic psychologist I have found both theories to

be useful in 'making sense' of an individual's arson offence, not only when conducting assessments but also when working therapeutically with them. However, they are limited in scope and do not provide adequate coverage of all potentially relevant risk factors (Gannon et al., 2013). Putting aside the well documented problematic nature of reductionist terms such as 'criminogenic' (i.e. risk factors), there was a need for a more comprehensive theory, and thus, the *multi-trajectory theory of adult firesetting (M-TTAF*; Gannon et al., 2012) was postulated and subsequently published.

The M-TTAF, it is argued by its proponents, builds on the strengths of the aforementioned theories by Jackson et al and Fineman and is structured as a two-tiered theoretical framework. Tier one relates to the aetiology of fire setting, including multiple interconnected factors such as biological predisposition, culture, context, the role of social learning and psychological characteristics. The latter includes reference to fire-specific cognition, in much more detail than is the case in Fineman's work. A key addition is the explanation of the maintenance and desistance of fire setting (Gannon et al., 2012), which is an important comparative strength of the M-TTAF.

Tier two of the theory contains five prototypical trajectories, based on patterns of characteristics leading to fire setting (Gannon et al., 2012). In brief, these are: (a) *anti-social cognition,* which includes individuals who set fires within the context of a generally anti-social lifestyle; (b) *grievance,* concerning those who light fires as a mode of revenge, and for whom characteristics such as hostility are of relevance; (c) *fire interest* relates to those for whom fire acts as a coping mechanism by increasing or decreasing physiological arousal; (d) *emotionally expressive/ need for recognition,* relates to individuals whose primary risk factors involve communication-skill deficits, and; (e) *multi-faceted,* including those individuals with a generally anti-social lifestyle but who also have a particular interest in fire. Owing to its contemporary status the M-TTAF is yet to be fully evaluated. A recent study into the

characteristics of fire setters admitted for a pre-trial psychiatric assessment in the Netherlands offers partial support (Dalhuisen, Koenraadt & Liem, 2017), however it is noteworthy that the 'clusters' discovered by Dalhuisen et al do not map on to the M-TTAF trajectories exactly, highlighting some differences.

As a practitioner, the way in which the M-TTAF builds on the theories by Jackson et al and Fineman is clear to see. It offers a broad framework through which to consider a multitude of factors of relevance to fire setting. It can be used flexibly to allow for the fact that the significance of these factors in each person's life is likely to vary. For example, for one individual biological predisposition may be considered to be key, whereas for another, psychological factors might be most important. Another of its strengths is its coverage of the role of cognition in fire setting. The central role of cognition, in the form of *implicit theories* (ITs)[11] has been acknowledged in relation to other crimes such as rape (for example, Polascheck & Gannon, 2004). However, until recently, it had not been addressed in fire setters. Empirical research has now begun to explore cognition in fire setters, including relevant ITs (Ó'Ciardha & Gannon, 2012) and cognitive scripts (Butler & Gannon, 2015). Further research aimed at 'testing' tier two of the M-TTAF (the trajectories), including the role of cognition, is required, given the mixed findings from Dalhuisen et al., (2017).

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[11] **Implicit Theory:** people's understanding of their own "beliefs, desires, needs and behaviors" (Polaschek & Gannon, 2004, p. 300).

Summary and implications of existing research.

The literature-base addressing arson and fire setting is growing. Psychological research has improved our understanding of the 'risk' and 'dangerousness' associated with this population, as well as demographic and psychological characteristics. It is now acknowledged that arsonists and fire setters are a heterogeneous group, whose needs may vary greatly. Research drawing comparisons between sub-types of arsonists and, more recently, fire setters shows particular potential. For instance, studies indicating that one-time fire setters might differ from those who repeat the behaviour have great utility from an applied-psychological perspective in terms of informing assessment and treatment approaches.

To summarise, there are significant limitations with existing research including a failure to sufficiently define terms (namely arson and fire setting). Furthermore, the use of predominantly convicted samples, or at least those in contact with mental health professionals, means that existing psychological research findings only relate to one end of the CoFU (i.e. criminalised fire use).

The fact that existing psychological research focuses on the criminalised end of the continuum supports the claim of bias towards risk factors (Rogers, 2000) in forensic psychology. It indicates a preference for exploring the pathological (Seligman & Csikszentmihalyi, 2000) rather than paying equal attention to the non-pathological. The bias towards risk and, thus, the negatives of a person's case or a particular behaviour is clear in other areas of forensic psychology. For example, research with sexual offenders has explored factors such as psychopathy and sexual deviance (Hildebrand, Ruiter & De Vogel, 2004; Olver & Wong, 2006), as well as cognitive distortions and affective deficits (Ward, Hudson & Marshall, 1995). I argue that the focus on 'risk' in the arson and fire setting literature reviewed above is inconsistent with positive psychology (for a review see Seligman, Steen, Park &

Peterson, 2005). Similarly, considering only what is 'bad' about fire, in general, is also inconsistent.

In the spirit of the strengths-based approach being promoted by positive psychology I argue that full CoFU must be explored. This will enable us to understand non-criminalised fire-related behaviour, in addition to the negative and 'risky' aspects of criminalised use. Indeed, many criminalised fire users in this study have also engaged in non-criminalised behaviour in their lifetime, which is relevant to understanding the trajectory of their experiences with fire over time. As discussed in part one of this chapter, the psychological literature has offered very little insight into non-criminalised fire users and fire use. This thesis is predicated on the argument that we need to understand this, including how we first came to use fire as a species, in order to better inform our understanding of arson, with a view to preventing it and reducing recidivism. If we better understand non-criminalised use of fire, i.e. the positive qualities of fire use, perhaps this can be bolstered through early intervention and treatment programmes (discussed in depth in section three of this thesis).

Chapter Two:

Methodology

Introduction

The current research was designed to address, what I believe to be a significant gap in the psychological literature. As discussed in chapter one, existing academic research in psychology is concerned with criminalised fire use, which means that non-criminalised use has been neglected. This thesis marks the first attempt to understand non-criminalised *and* criminalised fire use as two forms of behaviour which sit on the *same* dimension or continuum. I argue that in order to understand criminalised use of fire in the form of arson, we must also understand how and why people engage with fire in a non-criminalised manner.

The current research takes the form of a qualitative exploration of fire use with two samples of participants. Data was analysed using techniques informed by Grounded Theory (GT; Glaser & Strauss, 1967). The rationale for my choice of methodology is outlined below. The first sample comprises 12 adults who predominantly engage, or have engaged, with fire in a non-criminalised manner. The second sample comprises 12 adults who are predominantly criminalised fire users, namely those serving prison sentences for arson and/ or who have set fires whilst in prison. Demographic details relating to gender and age for both samples are provided below. Consistent with the dimensional perspective, I do not believe it is possible to dichotomise non-criminalised and criminalised fire use/ users. As such, in this thesis, I have emphasised participants' *predominant* mode of use, as is explained in more detail below. It is important to note that the nature and extent of fire use reported by participants in both samples is diverse, which offers more support for the dimensional argument.

The over-arching *objective* of this Ph.D thesis is to add to the understanding we have of arson in order to inform assessment and intervention strategies. I am calling for a new way

of thinking, which promotes the refinement of existing approaches to working with arsonists and the development of much needed standardised early intervention programmes. The *aim* of the research is to explore the psychological factors and mechanisms underpinning predominantly non-criminalised and predominantly criminalised forms of fire use. The two forms of fire use occupy the two poles of the continuum which I am proposing in this thesis - the continuum of fire use (CoFU; see figure one). It is imperative to reiterate here that the two forms of fire use are not intended to be seen as distinct categories (indeed, that would undermine the main argument I making). Rather, the groups represent the two ends of the CoFU but, within them groups, there is significant diversity, which reflects the fluid and heterogenous nature of fire use.

The specific *research questions* are as follows:

- What psychological mechanisms underpin predominantly non-criminalised forms of fire use?

- What psychological mechanisms underpin predominantly criminalised forms of fire use?

In this chapter the methodology and method for the current research is outlined. I begin with a discussion of its philosophical underpinnings.

Epistemology[12] and Qualitative Research

According to Carter and Little (2007) epistemology, methodology and methods are inextricably linked. In this Ph.D. I have drawn explicitly upon my own epistemological perspective to inform the research methods. Some significant gaps in the literature (as highlighted in the introductory chapter and chapter one) informed my decision to undertake a programme of qualitative research. Similarly, these gaps led me away from a quantitative project which has previously been the default position for much of the research that I have undertaken. I disagree with the traditional positivist, objectivist philosophy from which quantitative research is epistemologically derived because it assumes there is just one reality, and therefore 'one truth' (Willig, 2013). Positivism is inconsistent with my overarching research questions and approach. To adopt a purely positivist stance in this research I would, presumably, have had to take the view that the non-criminalised and criminalised use of fire can be explained by a formulaic set of variables, uncovered through research, which are not influenced by individual differences nor by the meaning that individuals bring to their own behaviour. This is incompatible with my contribution to a more informed and, I argue, theoretically coherent, conceptualisation of fire use.

It has been argued that many scientific researchers distance themselves from a purely positivistic perspective (for example see Willig, 2013). This has given rise to what has become termed, *Hypothetico-Deductionism (HD)* - the basis of experimental psychology today. HD (and the extreme positivist position preceding it) is a deductive perspective based on the notion that existing theory can be used to generate hypotheses, which are then tested empirically

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[12] **Epistemology:** The study of the theory of knowledge (Carter & Little, 2007). In this branch of philosophy, some specialise in the nature of *scientific* knowledge; in other words how scientific researchers' beliefs are formed and sustained (Kitcher, 2002; as cited in Carter & Little, 2007)

(Willig, 2013). The HD approach does have utility in some fields of psychology. For example, in neuropsychology where we already understand the function of a particular region of the brain, we might devise hypotheses about how damage to that same region could affect neurological functioning. Research can then test the hypotheses through brain scanning techniques and quantifiable data is produced. In other words, the cause and effect relationship between brain damage and the resultant neurological functioning can be measured and quantified. Research underpinned by HD is therefore conducted to "statistically measure" an "objective reality" (Yilmaz, 2013, p. 312).

I recognise limitations with this approach, however and so I decided that HD was not an appropriate approach for this research. As Frosh (2007) suggests, the approach of "let us see what bits of the brain light up" such as in the example referred to above, could be entirely reasonably viewed as reductionist (p. 635). From a more general perspective, quantitative methods have been criticised because they fail to adopt an idiosyncratic perspective (Yilmaz, 2013). HD is therefore, I would argue, inadequate where the objective, aim or goal of a research study is to explore human experience, rather than a causal relationship between two variables (Willig, 2013).

Yilmaz (2013) states that "social phenomena are so complex and interwoven that they cannot be reduced to isolated variables" (pp. 311 – 312). I endorse this view with respect to the continuum of fire use (CoFU). The factors which motivate and maintain human fire use are likely to be wide-ranging including cultural, environmental and individual but they have not yet been adequately researched. Initially I did consider a quantitative *component* to this research (see below for details) but I decided that it would be very difficult to pinpoint, prospectively, the optimum variables of interest required for a traditional quantitative programme of research. To isolate a set of variables at the embryonic stage of research into the CoFU poses the risk that other equally important factors could be neglected. Van Heldon

(2013) writes about this using the example of research into the contributory factors to a condition or disease. In order to conduct such a study, researchers would typically start by identifying the associated "risk factors" (for the disease) so that they could then be investigated. According to Van Heldon this is flawed because the researchers would be approaching the task with bias and therefore would select only certain factors out of "perhaps hundreds of possibilities" (p. 104).

In addition to the reductionist argument, there are other reasons why I have not endorsed the traditional HD epistemology for this research. HD is predicated on the assumption that *existing* theories are sufficient in explaining a particular phenomenon. According to HD, the main task of the researcher is to test and validate these theories by using quantitative scientific procedures (Charmaz, 1983). I assert that existing theory is *in*sufficient in explaining the *full spectrum* of fire use (i.e. the CoFU as a whole), which is the focus of this research. As discussed previously, literature has thus far focused only on *criminalised* fire *setting* and cannot explain the use of fire as a broader and deeper construct. If existing theories provide only a partial view by focusing on one end of the CoFU, it would be inappropriate to generate experimental hypotheses for this research based upon them.

As an alternative to positivism, which underpins HD, another broad epistemological position is *social constructivism (SC)*. There are a myriad of perspectives, which fall within this school of thought, which makes it a complex position to understand. In simple terms, SC makes the claim that there is no one reality and that our realities are *entirely* socially constructed (Oliver, 2012). According to Willig (2013) this is characterised by a belief that there is no one knowledge, rather, there are knowledge*s* (p. 7). Social constructivists believe that an objective reality does not exist, and so, curiously, there is no such thing as tangible facts which can be evidenced. It is therefore clear to see how SC differs from positivism, which postulates that a single observable and measurable reality *does* exist. According to SC, we *construct* reality

differently in relation to how we perceive the world (Burr, 2015, p. 9). Our experience and perception of the external world is therefore just one interpretation. Theoretically, then, there are as many interpretations as there are people in the world. Social constructivists adopt a *relativist* ontological stance. They propose that rather than researchers being able to measure a true reality, all we have access to is the reality as seen by the individual we are studying (Burr, 2015).

I am not persuaded by the basic tenets of SC in its purest of forms. I would argue that a phenomena may, at least in some cases, be explained through underlying mechanisms, rather than *only* by a person's subjective experience. My perspective on this matter has likely been informed by my professional role as a practitioner psychologist. I am accustomed to applying models and theories, which propose underlying mechanisms and principles, in order to understand an offender's behaviour. For example, I might draw on a particular theory to help me understand why an offender has committed a violent crime. The notion that no set mechanisms exist is therefore inconsistent with my training and professional experience.

I argue for a less radical version of SC generally known as *realism* in the psychological and sociological literature. Realism does acknowledge the existence of an objective reality (Willig, 2013). Proponents of realism, or *critical realism* more specifically, consider that a particular phenomenon can and does exist independently from our perceptions, experiences and views of that phenomenon (Willig, 2013). Crucially, however, according to critical realists there are "filters" in the way we experience and describe that reality, such as "language, meaning-making and social context" (Oliver, 2012, p. 374). Critical realism rejects the notions of both a single definitive reality as postulated by positivism and the idea that reality is *entirely* socially constructed as indicated by SC. Critical realism aligns well with my own professional background because it allows for underlying psychological mechanisms to be understood, whilst also acknowledging the complexity and homogeneity of human experience.

It is important that researchers recognise their own philosophical stance in order to understand not only the nature of the phenomena under investigation, but also the nature of their data. Critical realists maintain that the researcher must actively *interpret* their data in order to *uncover* reality, i.e. the mechanisms underpinning the phenomena of interest. Critical realism assumes that participants themselves are not fully aware of what underpins their behaviour and experiences. A skilled researcher is required to 'make sense' of participants' narrative and to understand the psychological and sociological mechanisms underpinning their experiences. This position acknowledges that the way in which we, as researchers, acquire knowledge from our research is inherently subjective (Madill, Jordan & Shirley, 2000) because it relies on our *interpretation* of that data.

As a result of my broad philosophical stance as outlined above, the key epistemology underpinning this programme of research is critical realism. I am of the view that my participants were able to communicate their experiences of non-criminalised and criminalised fire use, however, they were not necessarily aware of the network of factors, or mechanisms underpinning these experiences. I believe that these mechanisms exist independently of my participants and it is my role, as researcher, to make sense of the data in order to identify them. For example, many of my participants identified that they enjoy the sensory aspects of fire, such as the light and warmth it emits. It is my role as a researcher to interpret *why* this is the case.

I have made reference, above, to how my epistemological stance led me away from a quantitative study. In some areas of fire setting research, such as the collation of recidivism rates, quantitative approaches are useful because they enable us to isolate specific variables and statistics. However, the CoFU is an entirely novel conceptualisation. I assert that a qualitative study, facilitating a semi-structured exploration of the mechanisms which underpin participants' experiences is the best starting point. Qualitative research is also more conducive

to an exploration of the multiple *stages* of fire use. As previously highlighted, in this thesis, I conceptualise fire use as a *process.* This position contrasts with that of other researchers who have only focused on the act of *lighting* a fire.

My research is informed by a broad methodological approach known as *grounded theory (GT*; Glaser & Strauss, 1967), as discussed below.

Grounded Theory (GT)

In order to explain why GT is the most appropriate methodology for this research, it is first important to understand the approach. GT is a widely used methodology in qualitative research (Bryman, 2004). It originated from sociology (Gibson & Hartman, 2013), having been developed by two sociologists, Barney Glaser and Anselm Strauss. In 1967 they published their first book entitled "The Discovery of Grounded Theory: Strategies for Qualitative Research".

According to Bryant and Charmaz (2007) the development of GT was highly significant and played a role in the qualitative revolution which ensued throughout the late 1960s and the 1970s. Until this point, quantitative research had dominated, as had its philosophical roots in positivism. Prior to this revolution qualitative research was viewed, at best, as an adjunct exploratory strategy (Bryant & Charmaz, 2007). It was the intention of Glaser and Strauss to depart from positivism, although some argue this was not entirely achieved (Bryant & Charmaz, 2007). Corbin and Strauss (1990) note that GT was informed by *symbolic interactionism.* According to Blumer (1986) this is the view that the way in which we act or behave is informed by the meaning we ascribe to the particular object which we are behaving towards. A key premise of symbolic interactionism is that the meanings we hold about, and express towards, objects are derived through our social interactions with others. Blumer argued that the notion of meaning has often been neglected by psychology and much of sociology.

Through introducing GT Glaser and Strauss hoped to challenge deductive reasoning, namely that which underpins HD discussed above. It was their view, at the time, that inductive reasoning, i.e. the development of theory from research held potential. They proposed that theories should be grounded in the data and, thus, should be able to *explain* the data (Charmaz & Bryant, 2010, p. 406). As Charmaz (2008) puts it, Glaser and Strauss provided a strong rationale for "inductive qualitative inquiry" (p. 399) and were highly influential in it gaining momentum. They believed that theory should *emerge* from the data (Willig, 2013). In other words, according to the founders of GT, we should be using data to develop new theories, rather than only 'testing' existing theories. In my view, the introduction of GT as a methodological approach marks an important turning point in social science research because it provides scholars with a choice about how to conduct their research. As discussed earlier, I acknowledge that deductive approaches to data collection are entirely appropriate in some circumstances, most notably where existing theoretical work is robust and thus one can be confident in generating hypotheses. This is not always the case, however, such as in the current case relating to the CoFU. In this instance, I am not confident in the relevance of existing arson/ fire setting theories. As such, I have developed an alternative theory (see sections two and three) on the basis of the data collected from this study.

In the 1970s the two founders of GT (Glaser and Strauss) parted intellectual ways as a result of a divergence in opinion, each going on to publish their own individual perspectives. Willig (2013) explains that Glaser became associated with 'classical GT'*,* whereas Strauss (who later joined forces with Corbin) developed a more structured approach (Dillon, 2012). There are a number of nuances in the disagreement between Glaser and Strauss. Essentially, Glaser remained passionately committed to the notion of induction (Willig, 2013). He believed that the only way to authentically achieve this was for the researcher to remain entirely objective. This, according to Glaser, involved giving no consideration to one's philosophical

and theoretical stance prior to engaging in research (Dillon 2012; Gibson, 2013), or to existing literature on the topic of interest. Conversely, "deduction and verification" played an increasingly important role in Strauss and Corbin's perspective (Heath & Cowley, 2004, p. 144). My perspective is most closely aligned to (but not entirely consistent with) that of Strauss and Corbin. I assert that it is not possible to remain *wholly* objective and so it is important to acknowledge one's own views and biases at every stage of the research process. As referred to above, the whole premise of critical realism (which underpins this research) is the notion of *interpretation* by the researcher and this is inconsistent with Glaser's view.

Up until the early nineties the two perspectives outlined earlier, namely those of Glaser and Strauss were the only options and thus grounded theorists had to decide which school of thought they subscribed to. However, a contemporary version of GT was proposed by Kathy Charmaz in 1990 – *constructivist GT*. Her views certainly depart from those of Glaser. She argues that categories and theories do not *emerge* from the data; rather, they need to be *constructed* by the researcher through interaction with the data (p. 1169). Crucially, according to Charmaz (2000) "the story reflects the viewer as well as the viewed" (p. 522). Essentially, constructivist GT acknowledges that a GT is the result of two perspectives combined: the participant *and* the researcher (through the way in which they have interpreted the participants' contributions). Charmaz (2000) suggests that her approach requires a "self-consciousness" from the researcher (p.523) in that he/ she must reflect on the impact of their own preconceptions, knowledge and experiences on their analysis of the data. The divergence in views between Charmaz and Glaser does not mean, however, that she is in full agreement with the Strausian school of thought either. In a 2000 chapter she argues that Strauss and Corbin's guidance is prescriptive and didactic rather than interactive (p. 524). I agree with this. I assert that, whilst it is important to approach the analysis of qualitative data systematically, adopting an overly prescriptive approach could limit the degree to which the researcher can be

responsive to their data. It could prevent them from immersing themselves to a level that would be possible were they not following a set protocol such as that which Strauss and Corbin advocate.

The notion of an interaction between the data and the researcher as proposed by Charmaz resonates strongly with me and is entirely consistent with critical realism. I have found it useful to immerse myself in data from the current study on an emotional and cognitive level. This has helped me to understand each of my participants. In addition to understanding their narratives, I have been able to build a picture of who they are, as individuals, which was crucial during the data analysis process. Adopting a purely objective stance, as proposed by Glaser, would not have afforded the same degree of familiarity with the data. Furthermore, if I had avoided a review of the existing literature prior to embarking on this Ph.D., as Glaser suggests, I would not have identified the gaps on which the research is predicated.

One of the appeals of constructivist GT for me is that it emphasises the need to be aware of one's influence (as the researcher) upon the interview and data analysis process. This is highly reminiscent of an aspect of my practitioner training. As a registered forensic psychologist, I am trained in reflective practice, of which there are countless definitions. Shea, Goldberg and Weatherston (2016) define it as an "awareness of one's personal beliefs, thoughts and feelings as well as the knowledge of how these beliefs and practices affect others" (p. 654). Essentially, then, constructivist GT demands a reflective approach from the researcher, which is instinctive for me. In GT the process of reflecting on one's research data and, more specifically, being self-aware about how one is viewing the data is known as "reflexivity" (Finlay, 2002, p. 209), which I will return to throughout this chapter. So far, I have outlined the GT approach. I will now go on to expand on why it is the most appropriate methodology for this research.

Why Grounded Theory (GT)?

There are a number of reasons why I chose GT as the most appropriate methodology for this research. Firstly, the originality of the research area meant that methodologies which advocate the collection of copious amounts of data before delving into the analysis (Charmaz, 1990, p. 1162), were not appropriate. Broadly speaking the decision was underpinned by my aim, which is to explore the psychological mechanisms underpinning fire use. This aim aligns well with GT which is concerned with the development of explanatory theories of basic social processes (Starks & Brown Trinidad, 2007, p.1373). Fire use falls within the remit of social processes because it occurs within the social world. As already mentioned, I believe a continuum-wide theory is required to explain fire use and GT is conducive to developing new theories.

I considered other forms of methodology but discounted them because they were not sufficiently compatible with the aims for the research or my philosophical stance. In *interpretative phenomenological analysis (IPA)*, for instance, the researcher is concerned with the nature of humans' experience of a phenomenon (Willig, 2013) rather than understanding how and why a phenomenon occurs. IPA is predicated on the notion that one's subjective experience of the world is *the* 'truth' which the researcher hopes to access. It is assumed by IPA advocates that each participants' experience can offer a different 'truth'. Therefore, a set of common underlying principles are neither sought nor established on the part of the researcher. Whilst many of the questions asked of my participants centred on their experiences, this was with a view to understanding the mechanisms, processes and structures underpinning fire use and then developing an explanatory theory. Obtaining reflections on participants' experience, therefore, was a means through which to develop a theory, rather than being the aim of the research per se.

As with IPA, I also discounted other approaches, such as *discourse analysis (DA)*. Underpinned by a relativist stance, DA focuses on the way in which people talk about their experiences, i.e. the language that they use. Discourse analysts view the process of constructing and using language as the means through which reality is created and understood (Willig, 2013). In other words, as with IPA, it is based on the premise that reality is *wholly* subjective, which is inconsistent with my own epistemological position. As outlined earlier, as a critical realist I believe that psychological mechanisms *do* exist and that they can be identified through research. I reject the idea that the 'truth' is *entirely* subjective even though the way in which data is expressed by participants and interpreted by the researcher is very important.

Why constructivist GT?

As outlined above there are a number of versions of GT which I considered as my approach for this research. I chose the social constructivist approach (Charmaz, 1990) because this is most clearly aligned with my epistemological stance. There are a number of reasons why I do not agree with Glaser that the researcher should approach a study with full objectivity, i.e. having never explored the literature base surrounding the topic of interest. Firstly, pragmatically, my experience of working with arsonists as a practitioner means that I could not possibly have approached this research from a wholly objective perspective. Prior to embarking on this Ph.D. I had already observed the limited treatment options and the various myths and stereotypes surrounding arson and arsonists. Indeed, it was from these experiences that my interest in researching the area first arose. Secondly, my decision to embark on a full literature review prior to embarking on the study meant I could assess the limitations of existing research, most notably, the sole focus on criminalised fire use. This helped me to identify the area of focus for this Ph.D. Had I not initially engaged with the literature, I would have been unaware that the literature base was lacking. I agree with the suggestion of critics of Glaser's approach,

namely that knowledge of the literature and any preconceptions of the topic area held by the researcher need not be insurmountable. Rather, a researcher's prior knowledge should be considered *alongside* the emerging data (Hallberg, 2009). In other words, whilst categories and themes should emerge from the data, they can then be interpreted through the researcher's eyes and alongside existing literature.

In deciding to follow a social constructivist approach to GT, I also rejected Strauss and Corbin's perspective. They endorse use of a standardised coding protocol (Hallberg, 2009), which I believe is too prescriptive. In my view, the qualitative researcher should have a degree of freedom to interact with one's data in order to identify categories and themes. Furthermore, Strauss and Corbin emphasise the incorporation of existing theories into the data analysis process (Hallberg, 2009) – in this case, this would apply to existing theories of fire setting/ arson. Although an appreciation of existing theoretical perspectives has been crucial in enabling me to contextualise my own findings, the limitations of the existing theories (i.e. the sole focus on criminalised fire use) means they are only partially applicable to this research (i.e. to part of the continuum of fire use).

The social constructivist approach resonates with me because it is more flexible than the traditional perspectives outlined above. Moreover, Charmaz's view of *reality* is consistent with my stance as a researcher and, indeed, a practitioner. Charmaz emphasises the "multiple social realities" (Hallberg, 2009; p. 146), which exist simultaneously, rather than there being a one and only truth. She also refers to the relevance of cultural background, which can impact the perspective of both researcher and participant. This is highly relevant to my Ph.D. because I believe that culture must be considered in understanding a person's fire use – as is emphasised in section three of this thesis.

Research Rationale

I highlighted in chapter one that a significant issue with the literature base on arson and fire setting is that most psychological research has used convicted samples. This is problematic because of the low detection rate for arson, when compared to other types of offence (Daykin & Hamilton, 2011). The narrow focus of existing research, therefore, calls in to question whether findings can be generalised to those people in the community who have not been convicted but may, nevertheless, be engaging with fire in a criminalised way. Moreover, findings certainly cannot be applied to the CoFU in its entirety.

A critique of the focus on anti-social fire setting in the psychological literature prompted me to reflect on how we actually define the act. Understanding existing definitions is very important to this methodology chapter because it highlights how my approach has contributed something new. Since 2008 the Criminal Damage Act has subdivided arson into three separate offences (arson; arson reckless as to whether life was endangered; and arson with intent to endanger life) on account of the differing levels of severity, however the psychological literature has not yet fully reflected these developments. Research into arson and fire setting has focused on the act of lighting fires as being one entity and is yet to explore the many nuances in terms of severity. As outlined in the introductory chapter, one of my key arguments is that human fire use should be conceptualised as sitting along a continuum (see figure one, introductory chapter). At one pole of the continuum sits anti-social fire setting, which I term *criminalised fire use* and at the other pole is *non-criminalised fire use.* For the purpose of this study I am interested in *extensive* forms of fire use. The terms used throughout this thesis are defined below.

Definitions

As discussed in chapter one, the way that terms are defined in the arson/ fire setting literature is often ambiguous. There is a lack of clarity regarding what *specifically* is being 'measured' in existing empirical studies, making meaningful comparisons of the findings difficult. I have addressed this matter below by providing clear definitions of the terms and concepts used within this thesis. In providing these definitions I am expanding on those which have already been referred to in the introductory chapter and chapter one.

Fire use.

It is evident in the existing literature that studies have thus far focused solely on the act of *lighting* a fire (for examples see Hurley & Monahan, 1969; Prins et al., 1985; Jackson et al., 1987; Rix, 1994; Lindberg et al., 2005; Gannon et al., 2013, Ó'Ciardha et al., 2015). I argue that this is only one element of the way in which we interact with fire. I conceptualise fire-related behaviour as a *process* comprising a number of stages from planning and the collection of flammable materials, to the aftermath, which might include extinguishing the fire and cleaning the area (discussed further in chapter six). Therefore, in this study, I apply the term *fire use* which is defined as: any behaviour in which a person is engaging with fire either directly by acting upon it, or indirectly by being in the vicinity of it.

Non-criminalised and criminalised fire use.

As already discussed, I view fire use as a heterogeneous concept, which is best represented by way of the CoFU framework. In developing the CoFU I had to choose terms which could distinguish its two poles on the basis of the *type* of fire use. I initially considered the terms *'pro-social'* and *'anti-social'* fire use to demarcate the two poles. However, they were

discounted because I decided that the latter was misleading. Non-problematic, healthy interactions with fire are not necessarily *pro*-social (i.e. they do not have to be *altruistic*), rather, there is just an absence of *anti*-sociality. I also considered the terms *'legitimate'* and *'illegitimate'* fire use. However, I discussed with my supervisors the danger that the latter might be interpreted as disparaging or stigmatising. This was a critique echoed by one of the reviewers of a book proposal submitted to Routledge, which I have since had approved for publication in July 2020, based on this research.

In consultation with my supervisors I decided on the terms *'non-criminalised fire use'* and *'criminalised fire use'* for a number of reasons. Firstly, the two terms clearly distinguish between the two poles of the CoFU. Secondly, I wanted the distinction between the poles to be based on more than just what is legal and illegal within the eye of the law. Rather, I believe that this distinction should also convey a sense of how a behaviour is socially constructed. This is a more flexible approach and draws on the work presented in the introductory chapter (for example, Andrews & Bonta, 2014; Botoeva, 2019). I consider the term 'criminalised' to be less stigmatising than 'illegitimate' in that it alludes to the subjectivity involved in deciding what is acceptable and unacceptable behaviour. My chosen terms also reflect the systematic differences between those groups within society who have their behaviour criminalised and those who do not. People in prison do not represent a random selection of the population but rather are a reflection of some key structural power inequalities in our society (Newburn, 2017). Considering such inequalities is consistent with the inter-disciplinary approach I am advocating by taking account of sociological and criminological perspectives.

To summarise, in this research I have employed the term '*non-criminalised fire use'* to mean fire-related behaviour, which is generally considered to adhere to laws, rules and social norms, is seen as justifiable and is unlikely to have been enacted with malicious or reckless intent. I have employed *'criminalised fire use'* to mean fire-related behaviour, which is

generally considered to violate laws, rules and social norms, is seen as non-justifiable and which is likely to have been enacted with malicious or reckless intent. To reiterate, the aforementioned terms are used to denote the two ends of the CoFU. They are *not* intended to represent two distinct categories – this would be entirely inconsistent with the argument I am making in this thesis. Within the two groups of participants (non-criminalised and criminalised) there is a great deal of diversity with respect to fire-related experience and this supports the dimensional/ continuum perspective.

Extensive fire use.

In addition to considering type/ nature of fire use (see above), it is also important to define the frequency of fire use which I am interested in. For this study I decided to recruit *extensive* fire users because these are the people who have the most experience. *'Extensive'* is defined as a *pattern* of fire use. In other words, rather than one-time occurrences, I am interested in people who have multiple experiences of fire use (whether that be of a predominantly non-criminalised or criminalised nature).

In order to provide more context to the aforementioned terms, and, indeed to the study as a whole it is prudent to expound upon the continuum conceptualisation of fire use, which I have done below.

The continuum of fire use (CoFU).

As briefly presented in the introductory chapter the conceptualisation of fire use as sitting along a continuum is a fundamental premise of this research. The focus of existing psychological literature is narrow in that it only addresses part of the continuum, i.e. the most extreme forms of criminalised fire use, namely arson or fire setting. This means that a large

proportion of the continuum remains unexplored. I argue that in order to understand criminalised fire use in the form of arson, it is imperative to understand the continuum in its entirety, i.e. to also consider the nature of many forms of *non-criminalised* fire use. This is a deceptively simple concept, which is analogous to other areas of forensic psychology. For example, in empirical research into sexual offending, studies have sought to understand paraphilic (deviant) sexual interests through an understanding of normophiliac (non-deviant) sexual interests (Joyal, Carpentier & Martin, 2016). The same concept is also of relevance in forensic practice with sexual offenders. For instance, one of the characteristics assessed in the risk of sexual violence protocol (RSVP; Hart et al., 2003)[13] is sexual deviance, which is defined as "a stable pattern of deviant sexual arousal" (p. 62). The clinician must consider the level of deviance, but in order to do so they must understand this "relative to non-deviant sexual interests" (p. 62). In other words, in part, sexual deviance is assessed by comparing it to what *non*-deviance looks like and to how those who are non-deviant present. The same principle can be applied to fire use; in order to fully understand deviant use in the form of arson, we must have an understanding of the vast array of behaviours which might constitute forms of non-deviant use, i.e. non-criminalised fire use.

As discussed in the introduction chapter the notion of considering what is *non*-deviant in addition to what is deviant is consistent with the growing influence of positive psychology in work with offenders. Assessment tools now exist which can help us identify *protective* factors in an offender's life alongside risk factors, for example the structured assessment of protective factors for violence risk (SAPROF; de Vogal, de Vries Robbé, de Ruiter & Bouman, 2011). Furthermore, a change of tack towards a 'strengths-based' approach has also been

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[13] **The RSVP:** A tool designed to aid clinicians in assessing the nature of risk posed by a sexual offender.

adopted in the treatment of offenders (for examples see Heffernan & Ward, 2017; Ward, 2017). The continuum conceptualisation represents a balancing of the positives and the negatives associated with fire use, thus taking account of the aforementioned changes in work with offenders more generally.

As outlined in the introductory chapter, consistent with the continuum conceptualisation is the fact that many participants in this study have a mixture of non-criminalised and criminalised experience of fire use. For example, Viv (a criminalised fire user) who is serving a prison sentence for arson with intent to endanger life and assault occasioning grievous bodily harm also recalls a law-abiding and appropriate use of fire: *"do you know when you're just sitting on the sofa and the fireplace is burning; it's quite a pretty scene"* (lines 115 – 116) [14]. In contrast, she also speaks of her offence which involved setting an associate's flat on fire following an altercation: *"I just started throwing clothes in and then I just sort of watched it for a few minutes. I don't know why I just stood there and watched and then I just left"* (lines 1106 – 1108). Likewise, some (but not all) of the non-criminalised participants shared examples of criminalised fire use. For example, Harry, who owns a fire-performing company says this of his professional job: *"the principle aim of the business was to get work for me doing solo fire shows which was my dream to be a solo fire performer, driving up and down the country doing solo fire shows"* (transcript lines 51 – 53) but later in the interview he also speaks of reckless use of fire when he was younger, which sits closer to the criminalised end of the spectrum: *"we were in the shed and we got a wheelbarrow and filled it full of straw and lit it"* (lines 283 – 284). The diversity in individuals' fire use is highly significant. This diversity suggests that in our work with arsonists it is prudent to consider their healthy

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[14] In this thesis, line numbers correspond to the line numbers on the transcript from which a quote is taken.

interactions with fire as well as their offence/s. The heterogeneity in participants' fire use is the reason why they are more accurately described as *predominantly* non-criminalised or *predominantly* criminalised. However, for brevity, I will not insert the word 'predominantly' each time I make reference to them.

If fire use is best represented on a continuum, then this means that the two poles of that continuum (i.e. non-criminalised and criminalised use) are related. In turn, this means it is not sufficient to explore one without the other. I argue that there is much to learn from understanding the positives associated with forms of non-criminalised fire use. If we can isolate what factors enable people to interact with fire in functional and non-harmful ways, then we may be able to encourage this in others, namely those who have a history of arson and also pre-emptively in those who could be at risk of arson in the future (as discussed in section three of this thesis).

In the previous section I presented terms which are referred to throughout this thesis. They are integral in the design of the research which is discussed below.

Research Design

Very early on at the inception of this research I planned to employ a mixed methods design for this research, comprised of at least three empirical studies. The first two studies were to be qualitative in nature, to explore the experiences of non-criminalised and criminalised adult fire users respectively in order to develop an explanatory model of underlying motivations. The third empirical study was intended to be quantitative in order to 'measure' psychological characteristics in fire users, through the use of self-report psychometric assessments, I initially thought. The target psychological characteristics for study three would be those highlighted through studies one and two. In addition, I would explore characteristics which have been identified in existing studies with arsonists and fire setters, such as self-esteem

(Duggan & Shine, 2001; Gannon et al., 2013), assertiveness (Jackson et al., 1987), impulsivity (Labree et al., 2010) and personality disorder (Bradford, 1982; Bradford & Dimock, 1986; Virkkunen et al., 1989; Enyati et al., 2008; Ó'Ciardha et al., 2015).

The aim of the quantitative strand (study three) had been to explore which, if any, psychological factors could distinguish between non-criminalised and criminalised groups of fire users. In other words, I planned to compare the two groups on a series of variables. It was my initial thinking that such comparisons might illuminate why some adults follow a predominantly non-criminalised fire use pathway, whereas others follow a criminalised pathway. This, I thought, might aid the identification of risk and protective factors in fire use, which could inform treatment and early intervention strategies. As my thinking around the construct of fire use developed and as it gained more conceptual focus, I decided that the intended quantitative study was incompatible with the fundamental values underpinning this research. Implicit in the administration of psychometric instruments is the assumption that the psychological constructs being measured, such as personality, are *the* variables of interest, and that they may be meaningfully 'measured' through the use of such a tool. As discussed earlier, I reject this positivist epistemological stance and I recognised that selecting a series of psychological variables to assess via self-report measures would be insufficient and inexorably reductionist. Furthermore, a *comparison* of non-criminalised and criminalised groups would have meant treating fire use as a categorical variable (i.e. either one or the other). This is inconsistent with the whole philosophy of the *dimensional* CoFU conceptualisation. I ultimately decided that a focus on qualitative data was more consistent with my own position as a researcher, with the continuum conceptualisation of fire use and also with the novelty of the field of study. This change in methodology from the original plan for a mixed-methods design to a qualitative-only design has resulted in a greater focus, as well as better conceptual and scholarly rigour.

The remainder of this chapter is dedicated to a detailed description of how the current study was conducted.

Samples

The programme of research undertaken comprises one study with two samples. The first sample consists of non-criminalised fire users and second consists of criminalised fire users. An overview of the recruitment process is outlined below (the process was slightly different for the two samples). Information is also provided on the nature of the two samples.

Overview of sampling procedure.

I followed the guidance of Robinson (2014), who provides a useful step-by-step approach to considering the sampling process and specific techniques to be employed in a study. Firstly, I decided on the "sample universe" (p. 25), i.e. the groups of people to be represented in my study (this is discussed separately for both samples below). Next, according to Robinson, the researcher must decide on one's intended sample size. It is acknowledged that guidance on GT is flexible with respect to the number of participants (Glaser, 1978; as cited by Robinson, 2014). Stern (2007) advises that the sample size for a GT study cannot be predetermined and that the decision about when to cease data collection should be made when the researcher "hears nothing new" (p. 117). That said, Stern also suggests that a sample size of between 20 and 30 participants is usually adequate. From the outset I intended to allow the data collection process, as it progressed, to guide the overall sample size. Data collection for both samples ceased when saturation point was reached. Saturation or *theoretical saturation* is the point at which the researcher "stops theoretically sampling for data pertinent to a category" (Birks & Mills, 2015, p.96). In other words, saturation in this study was reached once the

themes became similar and there was no new information arising in interviews. The two samples both consist of 12 participants giving an overall sample size of 24. This is consistent with Stern's estimation of 20 to 30.

Robinson suggests that stage three of the sampling process is to identify the specific "sampling strategy" (p. 31) to be implemented. I have expounded on this (below) through describing the way in which my participants were recruited.

Recruitment of the non-criminalised fire user sample.

For this sample, I recruited those with extensive experience of using fire in a predominantly non-criminalised manner. Participants had to be 18 or over and resident in the UK at time of interview. A desirable inclusion criteria was that participants were able to discuss fire related experiences from their childhood/ adolescence (as well as adulthood). Exclusion criteria included a conviction for arson, or another fire-related offence and any mental health/ emotional difficulties which could make participation difficult.

I employed purposive sampling (for explanations see Robinson, 2014; Etikan, Musa & Alkassim, 2016) to identify a range of people with relevant experiences of fire use. This means that I identified people (from the general public) whom I considered to have extensive experience and knowledge of non-criminalised fire use. I determined the following as categories of interest: (a) those using fire for entertainment purposes, for example, fire performers/ entertainers; (b) those using fire for religious reasons; (c) those using fire within the home, and; (d) those using fire outdoors, such as in the form of camp fires or bonfires. I decided that at least one participant per category should be included in the sample in order to secure adequate breadth. I consciously discounted a number of other possible categories of people in the non-criminalised group, such as those working within the Fire and Rescue Service (FRS). FRS personnel come across fire in a predominantly *professional* context. I believe that

a separate research study exploring their experiences could be warranted, rather than conflating them with non-criminalised fire users.

Owing to a distinct lack of existing literature on non-criminalised fire use I could not employ any specific framework in deciding on the aforementioned categories of interest. They were devised through consultation with my supervisors and an internet search of common uses of fire in the UK. It is important to note that it was not my intention to secure a diverse cross section of the population on the basis of demographic variables such as age, nationality, cultural background or religion. Rather, purposive sampling concentrates on people who have characteristics of relevance to the research (Etikan et al., 2016, p. 3), i.e. experience of non-criminalised fire use in this case.

Two methods were utilised to recruit the non-criminalised fire users. Firstly, internet searches were conducted to identify relevant organisations, such as fire performing groups and fire walking companies. Once identified, emails were sent to contacts via these websites to advertise the research and invite participation. The initial contact point then disseminated information on my behalf, via social media or email to their associates who were asked to contact me if they wished to participate. Secondly, the 'snowball' technique (as referred to by Hood, 2007) was also effective in a number of cases. In other words, once someone had been interviewed I asked them if they knew of others who might be interested. If so, I asked them to make contact with the individual and to pass on my details.

Everyone who contacted me to register an interest in the study was sent a copy of the information sheet by email which they were asked to read before making a decision. For those who agreed to take part, a mutually convenient date and time was arranged for the interview.

Description of the non-criminalised fire user sample.

The sample comprises 12 adults with extensive experience of fire use, all of whom were assigned a pseudonym for the purpose of the study.

There is great diversity in the type of fire-related experiences in this sample, however participants are *predominantly* non-criminalised fire users. This sample is comprised of eight people identifying as women and four as men, with an age range of 22 to 66 years and an average age of 45. All participants were residing in the UK at the time of interview. Two of the participants (Alice and Amanda) were already known to me.

Each participant was interviewed about their fire-related experiences (summarised in table 1 below). Amongst the non-criminalised sample there are no convictions for arson (one of the exclusion criteria). Harry disclosed a number of convictions for breach of the peace (he could not recall whether this was two or three in total) and Laura disclosed having received a police caution for being in possession of cannabis. Neither participant could recall the dates of these reprimands, but they all relate to many years ago. Harry also disclosed a history of reckless and risky fire play in childhood/ adolescence, as did Connor and Jane. Among other historical experiences, Daisy used fire as a form of self-harm in her adolescence by burning her skin.

Experiences reported by the non-criminalised sample in adulthood include performing with fire, such as fire breathing and juggling, participating in a fire walk, burning candles for relaxation and spiritual purposes, the ceremonial use of fire, and attendance at bonfires (both large-scale organised events and those held in gardens with friends and family). It is noteworthy that all participants are fond of the outdoors, and/ or of some form of physical activity. It is important to highlight that the participants' narratives contain a mixture of retrospective and recent/ current fire-related experiences. All participants in the non-criminalised group were still engaging regularly with fire at the time of interview.

Table 1

Experience of non-criminalised fire use

Participant pseudonym	Past experiences	Adult experiences
Mary	Coal fire at home; rural use of fire; cooking using fire; witnessed (but was not involved in) an out of control fire	Coal fire in the home; campfires
Amanda	Coal fire at home	Owns a fire pit, which she lights regularly, open fire at local public house
Daisy	Bonfires in the family garden; self-harm using fire	Bonfires in parents' garden; lights candles at home
Jane	Candles at home; experimentation with candles (i.e. burning small objects, such as pieces of food)	Candles at home; uses technology to view fire (i.e. watches video clips of flames on YouTube); was previously a fire performer
Harry	Reckless fire play (for example, setting fire to aerosol cans); family bonfires at home; coal fire at grandparents' home	Fire performer
Elle	Cooking using fire; candles at home	Fire festivals; fire performing; spiritual and ritualistic use of fire
Laura	Candles at home	Fire performing; campfires; coal fires, and log burners
Alice	Candles at home; observed a memorable fire performance; functional fire use within the family home (i.e. used as a method of waste disposal)	Completed a fire walk; has experimented with a fire hoop

Participant pseudonym	Past experiences	Adult experiences
Kimmy	Very few clear memories of fire. Recalled fire work displays, and burning herself on a coal fire at a friend's home, although there was no injury sustained	Spiritual and ritualistic use of fire as a Pagan; sells fire-related goods in the shop that she owns (for example, incense burners)
George	Open fire/ log burner in family home, and at school; cooking using fire; campfires; use of fire in metal work classes at school Also recalled seeing a total eclipse of the sun whilst at school, which he likened to fire	Spiritual and ritualistic use of fire as a Pagan; coal fire in the home; functional use of fire in holiday home where no electricity is available
Connor	Experimentation with fire by melting toy soldiers; reckless fire play on a few occasions (namely setting aerosol cans alight); bonfires in the family garden	Fire performer; teaches fire performing to others
Jim	Coal fire in the family home; was tasked with lighting bonfires to dispose of garden waste in his employment as an adolescent; campfires. Also recalled being told of a fatal fire in the local area as a child	Coal fire within the home; garden fires in order to dispose of waste

Semi-structured interviews (SSIs) were conducted either on a face to face basis or via Skype, according to each participant's preference (see appendix 1 for SSI schedule). In this case, eight of the interviews were conducted by Skype and the remainder were face to face. I noted some initial differences between interviews conducted over Skype and those which took place in person. With respect to the former, there were some delays and interruptions caused by problems with internet connections. This is captured in an extract from a memo written to

summarise my interview with one non-criminalised fire user named Harry (more details on the memo-writing process are provided below).

A number of interruptions during the interview via Skype. Connection initially poor – had to disconnect and reconnect on three occasions. This interrupted the first part of the interview and made it difficult to build rapport at first. On last disconnection, decided to leave for ten minutes before calling back. When I did the line was much better. Rest of interview ok. No breaks taken and seemed to answer questions very openly.

On reflection, I found the issues with Skype distracting and, at times, this impacted on the flow of the interviews. However, overall, once initial technical issues were rectified, the format was very similar to the interviews undertaken on a face to face basis.

All interviews were recorded using a dictaphone or on a laptop computer in the case of Skype. Interviews ranged in length from 50 minutes to 168 minutes, with an average of just under 114 minutes. Audio recordings were transcribed, saved and encrypted. Hard copies were stored securely. A detailed discussion of the findings from this sample is provided in chapter three.

Recruitment of the criminalised fire user sample.

Recruitment of the criminalised sample was complex and time consuming. The process comprised two stages, firstly I had to be granted permission to enter prisons as a researcher and secondly, I had to identify willing participants. Each stage is described below.

Access to prisons.

Prior to recruiting participants for the criminalised sample, it was necessary to negotiate access to prisons. The first stage of this involved being granted approval from the National Offender Management Service (NOMS[15]) which I received in June 2017. I then approached eight prisons in the UK with my research proposal to request permission to undertake the research. I chose to target establishments where I already had contacts, usually in psychology. This included prisons where I had previously worked and/ or where friends/ colleagues were based. Initially, I sent an email to the person I knew and sought their advice on who I should contact to discuss being granted access to the prison. This process led to me liaising with senior members of operational staff within each establishment, which was a time consuming task. In addition to the ethics documents completed for NOMS there were also local requirements for documentation and further information. Unfortunately, after nearly 12 months of negotiating, four of the eight target establishments (50%) declined to host my research, the reasons for which either related to operational demands or security matters.

A particular hurdle to being granted access to prisons related to the proposed use of a dictaphone, which prison governors routinely prohibit. From an ethical perspective, the recording of an interview could compromise prisoners' anonymity and pose problems for the establishment as a whole because of the potential for data breaches. It is possible, for example, that a prisoner could mention their own name or name the prison on the recording, which, if allowed into the public domain (either deliberately or inadvertently), could pose a security threat. The repercussions of data breaches are well documented. For example, in 2014 the

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[15] **NOMS** was the National Offender Manager Service. This has since been replaced by Her Majesty's Prison and Probation Service (HMPPS).

Information Commissioner's Office (ICO) fined the Ministry of Justice £180,000 as a result of failing to protect the data of prisoners in England and Wales (Smolaks, 2014). With the recent introduction of the General Data Protection Regulations (GDPR) in May 2018 the penalties for serious data breaches have been increased. Fines of up to €20 million (or four percent of annual global turnover if higher) can be levied (IT Governance, 2018). Two of the four prisons who declined my research proposal did so primarily because of concerns relating to the consequences of data breaches owing to the use of a dictaphone. Even after a significant amount of time in negotiation it was not possible to agree on a plan which was mutually acceptable.

I was eventually granted access to four prisons within the UK (two facilities for women and two for men), however, there were no willing participants in one of the male prisons, leaving me with three overall (two prisons in the female estate and one in the male estate). In all cases I secured direct communication with either the prison governor or deputy governor and discussed the proposed methodology. A member of staff was then allocated to act as contact point.

Identifying participants.

The target sample for this study was adults, aged 18 or over who had extensive experience of predominantly criminalised fire use. Inclusion criteria was that each participant had to be serving a prison sentence at the time of the interview. They had to have at least one conviction for arson and/ or a history of setting fires whilst in prison. As with the non-criminalised sample, a desirable inclusion criteria was that people had early experiences of fire which they could discuss in interview. Exclusion criteria related to mental health/ emotional difficulties.

Recruitment of participants was coordinated by a contact member of staff within each prison. The contact identified potentially suitable participants, i.e. all those with criminalised

fire use on record, by way of the prison electronic database – the Prison National Offender Management Information System (P-NOMIS). A cover letter was sent to all those who were identified, and they were invited to express an interest in taking part by way of a signed consent form returned to the named contact point. Expressions of interest were collated by the prison staff member and they arranged appointments for the interviews.

In the case of the male participants, there was an additional step in recruitment because this prison is very large and so there were many individuals with a history of fire setting. In this instance, a list of all men with criminalised fire use on record was generated from P-NOMIS. The contact member of staff then highlighted every fourth name on the list in order to ensure random selection. From that point onwards recruitment followed the same process as above. The recruitment process is outlined in figure 2.

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│                                                                   │
│   Cover letter and information Sheet / consent form sent to all   │
│                  potential suitable prisoners;                    │
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│                                                                   │
│   Signed consent form returned by willing participants. These     │
│    were received and collated by the named contact point;         │
│                                                                   │
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│  Named contact arrange appointments for willing participants and  │
│                           researcher;                             │
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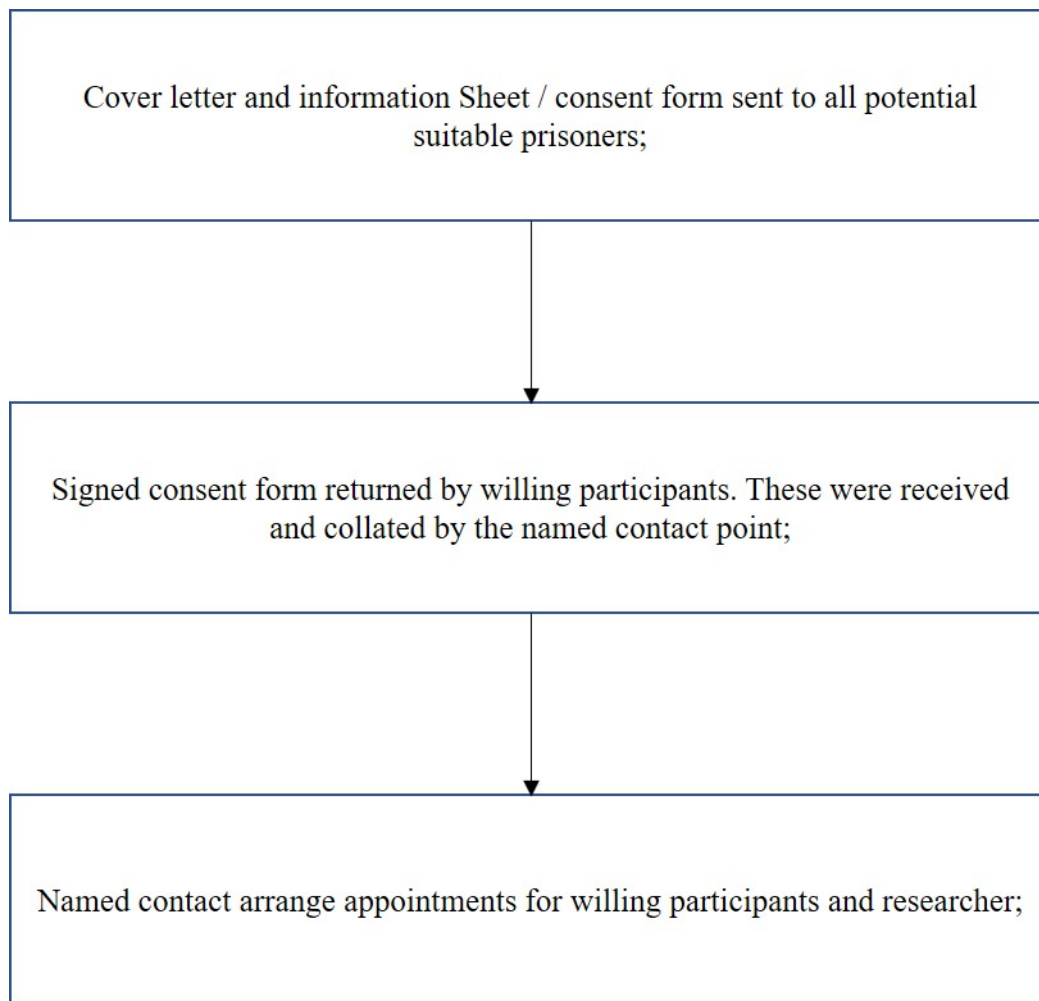
Figure 2 Prison Recruitment

Once recruitment was complete, I had a sample of 12 participants. The nature of the sample and each participants' experiences are described below.

Description of the criminalised fire user sample.

Twelve convicted offenders were interviewed in prison settings, seven of whom identify as women and five as men (see table 2[16] for details). The participant age range is 19 to 43, with an average age of 29 years. All participants were assigned a pseudonym.

Interview data indicates that all participants grew up in the UK, however, Viv is Malawian and spent the first two years of life in her country of origin before moving to the UK with her parents. All but one of the participants have been convicted of arson at least once, but this does not necessarily constitute their index offence. The remaining participant, whose pseudonym is Morris, is serving a prison sentence for wounding with intent but has set multiple fires whilst in custody as a form of protest and to gain the attention of staff.

A wide array of fire-related experiences are reported by the criminalised sample, including many *non*-criminalised experiences. In other words, the experiences recalled by this sample span the full CoFU. When interviewing participants in this sample I considered it important to allow them time to discuss the full breadth of their fire-related experiences in order to build and maintain rapport and so that they could speak freely. Providing this freedom of speech is important because it helps to reduce the likelihood that I might inadvertently 'lead' participants. Most importantly, enabling participants to move between non-criminalised and criminalised experiences during interview is consistent with the notion that fire use is a fluid construct, as suggested by the CoFU.

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[16] Table 2: The format of this table differs from that of table 1 because it is designed to summarise participants' *criminalised* fire use, namely, their offence history.

Table 2

Experience of criminalised fire use

Participant pseudo-name	Current offence/s	Previous offence/s
Tia	Arson (with intent)	None reported
Ellen	Grievous bodily harm (with intent)	Caution for arson
Rory	Armed robbery Actual bodily harm	Arson
Milly	Arson (reckless)	None reported
Nelly	Arson Actual bodily harm	Multiple previous violent and non-violent offences
Clarissa	Arson Possession of razor blades	Arson
Sherry	Arson (with intent)	Multiple convictions for arson (with intent)
Viv	Arson (with intent) Grievous bodily harm	None reported
Tyrone	Arson (with intent; later reduced to reckless) Simple arson	Caution for arson
Tony	Arson	Arson arrest previously[17]
Zane	Arson (simple) – recall prisoner	None reported
Morris	Wounding (with intent) – recall prisoner Fire setting in custody (not formally charged/ convicted)	None reported

SSIs were conducted on a face to face basis within the prison where participants were residing, either in a private cubicle in the legal visits area or a private room elsewhere (see appendix 2 for SSI schedule). Interviews were recorded using a dictaphone and ranged in length

[17] Participant could not recall if this led to formal conviction.

from 54 minutes to 156 minutes, with an average of just under 84 minutes. All interviews were completed in one sitting, although there were some interruptions from members of staff entering the interview room on occasions at which point the dictaphone recording and interview was paused until they left. Audio recordings were transcribed, saved and encrypted. Hard copies were stored securely. A detailed discussion of the findings from this sample is provided in chapter four.

In recruiting and collecting data from my 24 participants, there were a number of challenges which are described in detail below.

Ethical and Practical Considerations

Data collection involved interviews with individuals who have experience of extensive fire use. This posed a number of significant ethical challenges, namely informed consent and the limits to confidentiality, the two of which are closely related. As a practitioner psychologist I am bound by ethical principles published by the British Psychological Society (BPS; 2018) and the Health and Care Professions Council (HCPC; 2016), which have considerable overlap. In my role as a researcher I must also adhere to the Code of Human Research Ethics (BPS, 2014). Furthermore, owing to the fact that I draw on sociological and criminological perspectives throughout this research, it was prudent to familiarise myself with ethical guidelines relating to these disciplines, namely The Statement of Ethical Practice published by the British Sociological Association (2017) and the Statement of Ethics published by the British Society of Criminology (2015).

Gaining informed consent is essential prior to any research undertaken by psychologists (BPS, 2018). In addition, a high standard of privacy and confidentiality is key to ensuring that psychologists work in a respectful manner but any limits to this should be communicated to service users/ participants (BPS, 2014, 2018). It was the latter point, i.e. potential breaches of

confidentiality and how these should be dealt with, which presented a particularly complex challenge in the planning for data collection from both samples. Whilst the issues arising were similar across both samples, the action required to mitigate them differed and therefore they are discussed separately below. Additional ethical and logistical issues relating specifically to the criminalised sample are also discussed in the next section.

Non-criminalised fire users.

Confidentiality.

The research question for the non-criminalised sample concerns *non-criminalised* fire use predominantly. Nevertheless, in preparing for the interviews, I had to consider the potential for disclosures of anti-social behaviour, either relating to fire or otherwise. I anticipated that disclosures might relate to historical behaviours, and/ or plans for the future and so I had to be clear about what protocol I would employ should any disclosure be made during interview.

Ultimately, as a researcher, I am ethically bound to pass details of unconvicted anti-social and potentially criminal behaviour on to the police. However, this raised other questions relating to what, exactly, constitutes 'anti-social' and 'criminal' behaviour. It is important to note here that, ethically, it is acceptable for people to speak in general terms about unconvicted behaviour as long as they do not disclose *details* such as exact locations, dates or names of associates/ victims. If these details are disclosed then this is where confidentiality must be breached, and the information should be passed on. Informing participants, prior to interview, about the potential for confidentiality breaches of this nature was essential.

I consulted two colleagues, both of whom previously held senior ranks in the UK police force. After much discussion I concluded that it was impossible to envisage every possible disclosure which could be made by participants and to decide, in advance, if each of these would need to be passed on to the police. Therefore, in the participant information sheet (see

appendix 3) I informed participants that any *detailed* disclosure of behaviour (either historic or those pertaining to future plans) which I believed *could potentially* indicate a criminal offence would be passed on to the police. They were informed not to disclose any information which *might* be viewed as anti-social or criminal. I advised them that if they were unsure of whether a particular piece of information might be classed as anti-social or criminal, they should assume that it would and therefore not disclose it to me during interview. Participants were reminded that they could speak in general terms about their experiences as long as they avoid providing details such as locations and dates.

I devised a detailed protocol to manage participants' disclosures, which was submitted as part of my application for ethical approval to the university. The first point of action, described in the previous paragraph, was a pre-emptive measure designed to prevent disclosures being made. For use during interview, a *disclosure warning system* was embedded at regular intervals within the indicative SSI (see appendix 1) which reminded participants not to disclose details of any behaviour which might be considered anti-social or criminal. The protocol I devised also highlighted that if, during the course of an interview, I felt that a disclosure was about to be made I would immediately interject in attempt to prevent it. I had to implement this step during my interview with Harry (in the non-criminalised sample) because I felt he was at risk of disclosing too much information about anti-social conduct in his teens. I also developed a plan for retrospective action, i.e. action to be taken in the event that a disclosure was made. In such a scenario I decided that I would halt the interview, inform the participant of my concerns relating to the disclosure and advise them that I would be passing the information on to a third party, namely the police.

I also considered how I would respond if a participant appeared to be at risk of harming themselves. I planned for two possible scenarios, which would require slightly different action, namely: (a) an emergency, i.e. if I believed a participant to be in *imminent* risk of harming

themselves and, (b) a non-emergency. I identified that both cases could potentially require involvement of external services. I decided that in the first scenario, a mental health crisis team and/ or ambulance may need to be called while the participant remained in the interview room, in addition to the police if the participant decided to leave. In the second scenario I decided that the participant should be signposted to mental health services and their own General Practitioner (GP).

It is important to note that no concerning disclosures were made during interview with the non-criminalised participants and, as such, it was not necessary to involve any third party.

Informed consent.

It was essential that each participant in the non-criminalised sample was fully informed about the potential for confidentiality breaches such as those outlined above prior to taking part. The information sheet was reviewed with participants at two stages. Participants were first asked, via email, to read the information and to respond if they were willing to proceed with the interview, attaching a signed copy of the consent form. I then reviewed the information sheet with them again before the interview commenced.

Criminalised fire users.

Data collection in prison was particularly complex. In the following section the key challenges are outlined, which I have categorised under three subheadings: (a) practical and physical, (b) interpersonal and, (c) ethical.

Practical and physical challenges.

I encountered many practical challenges whilst collecting data in prison. Similar challenges are noted by Reiter (2014) who refers to prison as a "structurally and

bureaucratically closed off" environment (p. 417). I found that regimes within the target establishments were diverse, which is a point previously made by Beyens, Kennes, Snacken and Tournel (2015) who make reference to the variety of "dynamics, routines and cultures" across different prisons (p. 67). These differences were hard to navigate at times and meant that an identical 'one size fits all' approach to recruitment and interviewing was not possible.

Restrictions in the amount of time available to interview participants was a common practical challenge. This was because of the need for them to return to the wing after the morning period for lunch-time roll-check and then again at the end of the day. Also, I spent time waiting for individuals who did not arrive as scheduled. Furthermore, interview rooms were not always ideally placed. For example, in one of the women's prisons I was allocated a room which was adjoined to a busy office, meaning that interviews were interrupted on occasion and there was a fair amount of background noise. Immediately following each interview, it was not possible for me to write my memo notes electronically (see below) because I was prevented from taking a laptop into the prisons. Therefore, I had to write them by hand initially which was more time consuming.

Another common challenge across all of the host prisons was the unpredictability of day-to-day occurrences and the tendency for unforeseen circumstances to arise. For example, on a particular day I visited one of the prisons to interview four participants and none of them were available for a variety of reasons. More specifically, two of the participants had been transferred to other prisons, one participant had been taken to court on the day I arrived and one had been hospitalised. The academic literature highlights some of these issues. An excerpt from Liebling (1999) exemplifies the chaotic, risky and unpredictable nature of the prison settings perfectly. When describing her experience of conducting research in a maximum security prison environment she notes: "staff had earlier that week received information that a hostage situation might be likely. Five prisoners had been transferred out. Five others from one

particular wing were being held in the segregation unit. Even so, one-to-one interviewing on the wing (for lifers and long-termers) was inadvisable. We needed to interview 100 prisoners by the end of the week" (p. 150). Liebling's work, along with my own experiences, highlights the need for a flexible approach to data collection in prison and an expectation that things will not go to plan.

Interpersonal challenges.

Prison research can be difficult from an interpersonal perspective. For example, the way in which researchers are received by prison staff is highlighted by Tournel (2014; as cited in Beyens et al., 2015) who notes that prison officers can sometimes express suspicion towards researchers, or indeed anyone not usually working in the establishment. This is understandable given that operational members of staff are trained to be vigilant to potential security threats. Outward suspiciousness from staff was not my experience whilst conducting this research but some staff did enquire about the purpose for my being there. A more pertinent experience, in my case, was a sense from some members of staff that my presence was an added burden to their already busy schedules. On a number of occasions, I had to request that a member of staff ring a wing or work-place within the prison in order to establish the whereabouts of participants who were late for our arranged interview. This was always responded to efficiently, however, at times it was clear that staff were extremely busy and that assisting a researcher was not considered to be part of their role. From working in prisons for over a decade this has generally been my experience of how research is viewed by staff. Ultimately, the prison regime, security and care of prisoners are the priorities and therefore, it is understandable, albeit at times frustrating, that academic research is viewed as a non-essential 'extra'.

Another interpersonal consideration raised within the academic literature is the age and gender of the researcher (Newburn, 2017). For example, Newburn makes reference to male

researchers "using aspects of masculinity in order to attempt to blend in with those they study" in a men's prison environment (p. 1028). In my experience, the gender of staff (and, indeed, external researchers) in prisons cannot be overlooked because it can have an impact on the process of rapport building with participants.

An extensive review of literature on the relevance of gender in prison settings is beyond the scope of this thesis. However, a concept referred to by Rawlinson (2000; as cited in Newburn, 2017) as 'bending gender' is relevant to my own experiences. In this case, 'bending gender' could refer to a woman trying to fit into a masculine environment, which is something I am personally aware of when working in men's prisons. For example, I am particularly aware of the type of clothing I select, my choice of jewellery and the use of cosmetics. Indeed, the importance of these considerations is exemplified in the strict dress codes which each prison publishes, including the prohibition of 'low cut' tops and 'short' skirts. In prison I play close attention to the way I present in attempt to avoid gender based objectification, which I believe detracts from my professional role, whether that be as a practitioner or a researcher. A sense of being objectified as a woman working in men's prisons is quite familiar to me. For instance, when I was based in a male open prison as a trainee psychologist, a steady stream of 'wolf whistles' along the route to and from my office was the norm on a daily basis. As a result of previous experiences, I am always very conscious of being a woman when entering a male establishment.

I felt particularly aware of the masculinised environment when collecting data for the current study because I am less experienced as a researcher than as a practitioner, which added to a sense of vulnerability. In other words, being a woman *and* a researcher in this instance was a twofold challenge. Rawlinson (2008) alludes to this dual role when reflecting on interviews she conducted with male Russian criminals. She recalls the tone of one participant which was

"an odd mix of courtesy and condescension", which she found to be humiliating *both* as a "researcher and a woman" (p. 17).

Ethical challenges.

There were a number of ethical challenges relating to the criminalised sample which require further explication here owing to the uniqueness of a prison environment and my own situation. Firstly, I had to consider, and try to mitigate, the risk of any conflict of interest. As a practitioner psychologist I regularly visit prisons to conduct independent psychological assessments with prisoners for purposes such as parole reviews. My remit in this capacity is, therefore, *practitioner psychologist*. However, for the current study my role was *researcher*. This dual role presented a number of issues. Firstly, I had to make sure that no prisoner with whom I have previously worked (as a practitioner) took part in the research. To allow this would have been a serious conflict of interest. I explicitly stated on the information sheet that anyone who already knew of me in my capacity as forensic psychologist should not take part in the research. Had anyone who was known to me attended for an interview, I would have informed them that the interview could not go ahead and explained why. I also had to be aware of my dual role during interview. More specifically, I had to avoid the temptation to explore topics which I would normally delve into as part of a parole interview, such as current psychological problems and plans for the future.

Potential breaches of confidentiality also had to be considered. The purpose of the interviews was to predominantly explore participants' *criminalised* fire use and therefore discussion about anti-social behaviour was fully anticipated. As referred to earlier, a discussion on anti-social/ criminal behaviour is ethically acceptable as long as no *details* are disclosed by a participant. Guidance was provided to participants prior to getting their consent (in the information sheet; see appendix 4) and a protocol was embedded in the indicative interview

schedule in the form of the aforementioned disclosure warning system. It was made clear to participants that any information pertaining to previously unrecorded anti-social and criminal acts would not only be passed on to police, but also prison authorities and potentially other agencies.

As with the non-criminalised sample, I also had to consider how to respond if I felt a participant could pose a risk to themselves during the interview. This was less problematic for the criminalised sample when compared to the non-criminalised group because of the secure location in which they were residing. There are already set protocols in place within the prison and probation service, with which I am familiar through my previous employment. I know it is important to pass on any disclosures raised by participants about intentions to harm themselves. Participants were therefore informed, prior to consenting to take part in the research, that if they made any such statements during interview, I would need to inform prison staff.

Summary of challenges involved in prison research.

To summarise, the academic literature cites a multitude of challenges faced by researchers in prison settings, many of which were relevant to my own experience of data collection for the criminalised sample. Above, I have outlined the interlinking issues I encountered which I categorised as practical/ logistical, interpersonal and ethical. Having provided an overview of key methodological difficulties, the next section of this chapter provides a narrative of how I conducted the research, starting with the interview process.

The Interview Process

The Semi-Structured Interview (SSI) Schedule.

The semi-structured interview (SSI) schedule was designed to serve as an aid-memoire for interviews with my participants (see appendices 1 and 2). I developed the SSI independently owing to the novelty of this research and, thus, the fact that there were no existing instruments to use as a basis. In considering what the SSI should focus on, I referred back to the aim of the study, i.e. to explore *psychological mechanisms* underpinning experiences of fire use. I therefore decided that questions in the SSI should relate to those experiences. In order to capture the *psychological* aspects, specifically, I made sure that questions relating to thoughts, emotions and physiological sensations were included.

I structured the SSI into three sections. The first of these, I decided, had to include general questions to allow rapport building. Through my experience as a practitioner I have learnt about the importance of building rapport with individuals I am planning to interview. In the majority of cases I had never met the participants prior to the day of the interview and, thus, I expected that they might be apprehensive about sharing their memories and experiences. In order to allow time for them to 'settle' into the interview, I included rapport building questions such as "why were you interested in taking part in this study"? I designed the second section of the interview to explore *past* experiences, namely those from childhood/ adolescence. Again, I drew on my knowledge as a practitioner in designing this. In my view, interviewing someone about their experiences is most effective if it is roughly chronological. In other words, it makes sense to start with early memories before progressing to exploring adulthood. This is also helpful for rapport; I find that asking questions about one's past is perceived as less threatening than enquiring about behaviour/ experiences which may be very recent. In the last section of the interview, therefore, I decided I should move on to explore participants' fire use in adulthood.

In every interview across the two samples the SSI schedule served as a guide. It enabled me to explore pertinent topics without being too prescriptive. It was particularly helpful in situations where the conversation became stilted, such as in the example with Milly cited above. I included mostly open-ended questions in the interview schedule in order to elicit detailed responses from participants. For example, *"how much control do we have over [fire]"?* and *"tell me about times you have been around fire as an adult".* On some occasions it was clearer to ask a closed question but I made sure that I probed participants' responses in more detail as a follow up, for example, *"do you have any other memories about fire or fires"*? Followed by, *"how do you feel when you think back to those times"*?

I made changes to the interview schedule after the first block of interviews (i.e. with the sample of non-criminalised fire users). I 'fine-tuned' the questions based on my experience up to that point. For example, the non-criminalised participants all indicated that fire use has somehow influenced their identity. As such, I added the following question into the schedule for the second round of interviews: *"throughout your life, how important has fire been to you,* and, *what role has fire played in your life"?*

Overall, the data collected through the two sets of interviews is of a high standard, as exemplified by the degree of detail in the participants' narratives. Even where participants were less forthcoming, this was only the case at points in an interview. There were also times where they spoke more freely, and this tended to improve as our rapport developed. In every case I gained an insight into the psychological mechanisms relating to fire use, which means that I met the original aim. An example of the high quality of data can be seen in the extract from Harry's interview below. Harry is a non-criminalised fire user, but he cited examples of criminalised use in his teenage years. Harry provides a lot of detail which helps me to visualise how he designed his 'fire toys':

When we were kids we used to get aerosols and then you'd hold a rag, light the rag, spray the aerosol on it and then lift it up. And then you had a flame thrower that you could wave around. My mate did that and it blasted me in the face; went in my eyes, I shit myself. Another time me and my mate were making a tennis ball gun. So you get a big clubbing pipe and you make a gun. You put a tennis ball in and you pour a little bit of gas in. You put a lighter in and you pull the lighter and it [makes whooshing noise], like a cannon. We put too much gas in - way too much - and it didn't work. Thank God but if it did work, we probably would have been dead (lines 187 – 197).

As a practitioner psychologist I am very accustomed to interviewing as part of the assessments I undertake on convicted long-term prisoners, namely for the purpose of parole reviews. However, interviews undertaken for this study were of a very different nature to those in which I am experienced. More specifically, my parole interviews are very structured owing to the set topics which I must explore to assist me in writing the final report. In contrast, for this study, it was important to allow participants a relatively 'free reign' to discuss whatever experiences came to mind as long as they broadly related to the prompts within the semi-structured interview schedule. Managing the disparity between the type of interviews to which I am accustomed and the interviews for this research was a challenge.

There were also challenges which, in my experience, are more generic to a range of interview contexts. Most participants were willing and able to speak freely about their experiences, however, others were more reticent in some of their responses. At times, this meant that the conversation became stilted. Below, I have included an extract from my interview with Milly (a criminalised fire user) which provides an example of this. Here, Milly provides short answers to my questions, which are not conducive to free-flowing conversation.

Interviewer: *What do you think some people find fun about fire?*

Milly: *I don't know. I haven't got a clue, I don't know.*

Interviewer: [Pause] *What might people find exciting about it?*

Milly: *I don't know, I don't understand them if they do.*

Interviewer: [Pause] *Is that something you have ever felt?*

Milly: *No.*

Interviewer: *When we talk about fire what does it make you think of? When I say the word 'fire'?*

Milly: *Burns.* (lines 196 – 205)

On the occasions where the interview failed to flow effectively, I had to be mindful of the way in which I was asking questions to avoid putting pressure on the participant to provide answers. This can be seen through the inclusion of pauses in the extract above. I also re-phrased questions to aid participants' understanding. That said, there were instances where I failed to phrase a question clearly enough, leading to confusion. Poor phrasing of questions on my part was particularly noteworthy when I conducted interviews via Skype, with the non-criminalised sample. On reflection, I find this type of interaction impersonal and, hence, it was more difficult to remain focused at times. An extract from the interview with Jim (a non-criminalised fire user whom I interviewed via Skype) exemplifies this. Here, the way I ask the question is unclear, which confuses Jim:

Interviewer: *Does anybody else have control over the fires that we light?*

Jim: *Erm, I'm not quite sure what you mean. Anybody? The fires that we light?*

Interviewer: *Yes, so if other people are around a fire that we've lit, do they have any control over it? [Pause]. Does that question make sense to you?* (lines 73 – 76)

In situations where I had not worded the question clearly enough, it was necessary to re-phrase and to check that the participant understood before continuing.

Another challenge in the interview process was the sensitive nature of our discussions. It was important to be empathic in order for participants to feel emotionally safe, whilst also maintaining a professional researcher – participant relationship. For example, Daisy (a non-criminalised user) self-harmed using fire to burn her skin when she was an adolescent. In this instance, I was keen to give her the opportunity to talk but also to ensure she did not feel pressured to disclose anything she was uncomfortable with. The extract below is an example:

Daisy: *Yeh. I remember being interested in the way fire damages your skin and…*

Interviewer: *Yes. I don't know how you'd feel about talking a bit about that?*

Daisy: *Erm, yeh. I don't mind talking about it a little bit.*

Interviewer: *Ok. Just share as a little or as much as you'd like.*

Daisy: *Erm, I think I'd self-harmed quite a lot as a teenager. I almost found that the scars made me feel better because it was more concrete and visible* (lines 501 – 513).

Some of the challenges I encountered during the data collection process relate specifically to the interviews with criminalised fire users in prison. I had no control over where the interviews took place, the surrounding environment or the allotted time. As referred to above, some interviews took place in rooms within busy departments meaning that there were interruptions and background noise which was distracting at times. Furthermore, the strict regime in each prison meant that I had a finite amount of time for each interview, particularly if participants arrived late. For example, my appointment with Ellen had been scheduled for immediately after lunch. However, while I waited for her to arrive I was informed that she had been taken to a dental appointment outside of the prison. Staff were unsure what time she would

return and, indeed, if she would be willing to speak with me. I made the decision to wait for Ellen. She did eventually attend the appointment. She had undergone a tooth extraction but was still keen to speak with me despite the fact that her mouth was heavily anaesthetised. When I checked with Ellen that she was willing to continue with the interview she said *"yeah, talking wise I'm fine; it's just, my tongue [and] my gums that are just a bit numb"* (line 49). This example highlights the unpredictability of prisons and the fact that operational decisions have to supersede other planned activities.

In order to maintain a record of each interview (across both samples) I made notes on my experience of the interview process. Note-taking, referred to as *memo writing* in GT, is a well-known feature of the data collection and analysis process. It is an important aspect of "reflexivity" (Finlay, 2002, p. 209), which was referred to earlier in this chapter and is returned to in more detail below. Charmaz (2006) states that "memo-writing provides a space to become actively engaged in your materials, to develop your ideas and to fine-tune your subsequent data-gathering" (p. 72). Rightfully, available guidance is concerned with the fundamental importance of keeping notes, rather than adhering to a prescriptive format, which remains flexible. The flexibility surrounding memo-writing is succinctly summarised by Charmaz (2006) who pragmatically advises that a researcher should "do what works for [them]" (p. 80), which is a sentiment echoed by Lempert (2007). I agree with this assertion entirely. I believe that a researcher should have the freedom to engage with the data in whichever way is most effective for them (as long as this is systematic in order to maintain rigor). As such, I believe that the researcher should be unrestricted in how they make notes and what is contained within them.

My interview memos include what went well, difficulties encountered and my assessment of the participant's openness towards being interviewed. The records proved particularly useful to aid reflection on the criminalised fire users because of the many

challenges associated with collecting data in a prison setting. I have provided extracts from my data collection notes below, the first of which relates to an interview with a non-criminalised fire user and the latter two relate to interviews with criminalised users.

My reflections on an aspect of the interview with Harry were documented as follows:

I had to inject at one point during interview - it appeared that he might be about to disclose information relating to criminal offences. Reminded him of the information sheet (notes made on interview with Harry, non-criminalised fire user).

The above extract highlights an instance where I believed Harry was at risk of disclosing too much detail about criminalised fire use in his teens. I had to inject to prevent him from doing so. As referred to earlier, I took this action in order to protect his anonymity and ensure that I would not need to pass on information to the police.

In reference to the interview with Ellen I wrote:

I had to wait an hour and a half for Ellen. She had been taken to an outside dentist and arrived really late for interview. Had tooth extraction. Asked if she was happy to proceed, which she said she was. Reported numb tongue and lips and then, later, tingling sensation, owing to anaesthetic. Offered her breaks but she declined and seemed happy to continue with interview (Notes made on interview with Ellen, criminalised fire user).

The above extract provides an example of the delay encountered with Ellen. It is important that I noted this in the memo because I had less time than expected with the participant. This meant that I was limited in terms of the depth at which I could probe some of her responses. Also, she was somewhat distracted by the effects of dental treatment and this might have impacted on

her willingness to 'open up' in the interview. Similarly, when reflecting on my contact with Tony I noted:

Tony didn't arrive for the interview. Had to ask officers to call wing, who said he had gone to work. Officers then had to call work place. Waited for around 30 minutes and Tony then arrived. Interview was initially difficult. Tony not forthcoming with much information in first part of interview. Had to probe a lot initially and felt more like question and answer session at times than an SSI. Tony struggled to remember much from childhood/ adolescence. Had to be mindful not to ask leading questions. Improved vastly as interview progressed and Tony started to open up (notes on interview with Tony, criminalised fire user).

The extract above highlights another type of delay which I encountered whilst interviewing in prison, this time relating to Tony. Again, the delay is noteworthy because it meant I had less time to interview Tony, which impacted on how much material we could cover. In the above memo I have also captured my reflections on Tony's reticence in answering questions at first. This was a useful record to refer back to when analysing his transcript so that I could check that none of the questions I had asked were unduly leading.

Overall, the process of interviewing participants was challenging. I found that my previous experience of conducting highly structured interviews was burdensome as I tried to adjust to a new format which was far more flexible. Some of the difficulties I encountered related specifically to the criminalised sample, which exemplifies the challenging nature of prison-based research. The semi-structured interview schedule was helpful in overcoming some of the issues I faced because it helped me to prioritise topics for discussion and to remain on track. This is discussed in more detail below.

Data Analysis

Audio data was transcribed by hand using Microsoft word, rather than through the use of Voice Recognition Software (VRS). Whilst Park and Zeanah (2005) indicate the advantages of such software, others argue that accuracy can be impeded, in addition to very little difference in the overall time required for the task (Johnson, 2011). Given the disparity in opinion it would seem that the decision about the use of VRS is one of personal preference. My view is that in order to fully immerse oneself in the data, transcribing by hand is essential. Rather than merely being an administrative task the process of transcribing forms the first stage of analysis because this is where the researcher becomes familiar with participants' experiences. Listening, repeatedly, to the same participant allowed me to familiarise myself with them as people and their overall narrative. This helped me to build a formulation on each person which was crucial in constructing sub-themes and themes.

I discounted Computer Assisted Qualitative Data Analysis Software (CAQDAS; Leech & Onwuegbuzie, 2011) such as NVivo (QSR International Pty Ltd, 2008) for the same reasons as those outlined above. I consider it crucial to become familiar with one's participants and as a critical realist, I value the interaction I was able to have with my data. As a researcher, I need to feel I have fully immersed myself in my data in order to understand it. I am of the view that any form of software designed to aid the analysis process only serves as a distraction. I strongly believe that another consideration relates to the level of respect afforded to the data by a researcher. My participants dedicated valuable time to speak about their experiences, at length, to someone previously unknown to them. They received nothing in return by way of compensation. As such, in my view, I should dedicate the same care and attention to analysing the transcripts rather than seeking 'short cuts'. There is also a pragmatic consideration with respect to the use of software. Birks and Mills (2015) highlight that CAQDAS should only ever be an "adjunct tool" (p. 98) rather than as a form of analysis per se. Therefore, I estimated that

it would take a similar amount of time to analyse by hand than it would take for me to train to use the programme, implement it and then thoroughly check the analysis.

Once transcribed I employed a systematic process of data analysis specific to GT, based on guidance by Willig (2013). This is outlined below. It is noteworthy that stages one to five were repeated for each individual interview transcript one by one. Stage six involved looking at all transcripts together. Data from the non-criminalised and criminalised samples were analysed separately.

Step one – memo writing.

After an initial read through of an interview transcript I reviewed it again in more detail. Prior to embarking on the subsequent stages of analysis outlined below, I wrote memos to record my reflections about the participant, their life, their personality, and their use of fire. To be clear, these memos are different from those which focus on the interview *process* (as discussed above). These memos relate to my thoughts about each participant specifically. That said, both forms of memo writing (i.e. on the interview process and on each participant) are examples of reflexivity. Two extracts are provided below to illustrate my reflections on participants:

In relation to Kimmy I wrote:

"c*harismatic, and energetic. A deeply spiritual person with a love for life. Down to earth and easy-going. However, she takes fire very seriously and respects it greatly. Views fire in a spiritual sense."* (notes on analysis of Kimmy's transcript, non-criminalised fire user).

Here, I have commented on Kimmy's character and the seriousness with which she views fire, which appears to be linked to the level of respect she has for it. Kimmy is a Pagan and so her use of fire is mainly spiritual. When reflecting on Viv I wrote:

"Young but with very anti-social background. Very articulate. Presented as somewhat condescending at times, e.g. addressed me as 'babe'. Callous attitude toward fire and fire setting; spoke with little emotion about considering setting victim on fire and then deciding to set victim's home on fire" (notes on analysis of Viv's transcript, criminalised fire user).

The extract above contains some of my reflections on Viv. As a critical realist, I believe that my sense of being condescended was crucial to note. I needed to be aware that the way I perceived this participant's interpersonal style might be influencing the way in which I interpreted the data and, indeed, my view of Viv on the whole.

Overall the reflective diaries helped me to build a formulation of each participant as a whole, rather than only focusing on their fire use. This was important because I had to get to know them in order to understand the context surrounding their use of fire.

Step two – descriptive coding.

After familiarising myself with the participant, I read through the transcript for a third time and assigned descriptive codes to each and every concept which appeared, on a line by line basis. These descriptive codes, took one of two forms: (a) a brief summary of what the participant was saying. In some instances this took the form of a verbatim note and in others I re-phrased it for the purpose of brevity, or; (b) a *process* code which was my interpretation of what the participant was doing in making a particular statement, for example, 'trying to assert

her authority'. Table 3 provides examples of the stages followed for analysis in the case of Elle

(a non-criminalised fire user) and Rory (a criminalised user).

Table 3

Data Analysis Stages

Statement	Step One: Descriptive code	Step Two: Descriptive category	Step Three: Analytical category
[In discussing her role as a fire performer]: *"It is an honour to perform with fire"* (Elle)	Fire = an honour	Looks up to fire	Inspiration
[In discussing petrol bombing houses in order to coerce the targets to pay drug debts]: "…I emptied a jerry can into someone's letter box…[for] a couple of grands worth of drug debt" (Rory)	Petrol bombing to collect drug debt	Getting what he wants	A tool

Step three – descriptive categories.

Once a full transcript had been coded, I wrote, by hand, each descriptive code on a

separate piece of adhesive paper. Each of these codes were then displayed on a blank wall so

that they were all visible. I sorted descriptive codes into descriptive categories. This was a

process through which provisional themes in the data were identified and each code was

organised into a category which I considered to be representative of its *essence*. In the case of

Elle, I determined that the descriptive code 'fire = an honour' is an example of how she idolises

fire and so I assigned the descriptive category name 'looks up to fire'. Rory speaks of his use

of fire to collect debts from people, which was initially assigned the descriptive code 'petrol bombing to collect drug debt'. I decided that Rory therefore *uses* fire to get what he wants and, thus, I assigned the descriptive category name 'getting what he wants'.

To construct the descriptive categories (highlighted in table 3) I physically moved the descriptive codes (displayed on the separate adhesive notes) into groups on the wall where they were displayed. I found the process of moving the labels highly beneficial because I consider myself to be a *kinaesthetic learner*. This is defined by Gilakjani (2012) as individuals who learn best through adopting a "hands on" approach, i.e. learning by doing (p. 106). Physically moving categories into groups on the wall helped me to understand how each was formed, as well as the differences and similarities between each category. Furthermore, this sorting technique was a useful means through which inconsistencies began to emerge, which are discussed in more detail below.

Stage four – analytical coding.

Once descriptive codes had been arranged in to descriptive categories, I then employed higher-level analysis in order to assign analytical categories as recommended by Willig (2013). This was the process of identifying the psychological mechanism/s underpinning a descriptive category, which involved moving from the specific to broader, more abstract concepts. I relied on my psychological knowledge to analyse what was underlying each descriptive category. Being able to draw on my practitioner experience was exceedingly helpful at this stage of the analysis. I employed what is known as the "downward arrow technique" (Dudley & Kuyken, 2006), which is concerned with accessing the "meaning" underlying statements and events and in identifying the associated "feelings" (p. 35). This is a technique commonly used in Cognitive Behavioural Therapy (CBT) in which I have experience. I employed it in order to ask questions of the descriptive categories such as 'what does that *mean* for [participant X]?' to facilitate

scrutiny of the categories at a deeper and more abstract level. This stage demanded a global understanding of each participant, as well as their fire-use experiences (see table three for examples of the transition from descriptive to analytical categories). In Elle's case, I decided that 'looking up to fire' indicates that she personifies it. She views fire as an entity which sets a 'positive example' and engenders positive qualities. In order to reach an appropriate depth of analysis I interrogated this further, for example by asking of the data 'what does this *represent* for Elle?' and 'what is Elle trying to say here'? Eventually, I arrived at the conclusion that, for Elle, fire is 'inspiring'. Similarly, having decided that Rory uses fire to get what he wants, I interrogated this by asking questions such as 'what does this tell me about how Rory sees fire and about his use of fire'? I decided that, for Rory, fire is a 'tool' and, thus, this became the analytical category.

Stage five – sub-themes and themes.

Focussing still on each transcript individually, once analytical categories had been assigned, each of these was further arranged into overall themes and sub-themes on the basis of similarities between them. Once I identified similarities, I employed the downward arrow technique again in order to establish the fundamental essence of the theme, i.e. the common meaning underpinning all of the analytical categories. In the case of Elle, the analytical category 'inspiration' aligned with other analytical categories which I identified in her interview transcript such as 'fire is omnipotent' and 'respect for fire'. I decided that these all formed the sub-theme *Fire: A Religion*. I came to this decision because the way in which Elle views fire is reminiscent of the way religious people might speak about their God/s. This reflects a sense that Elle's interactions with fire are on a deep and spiritual level. I interpreted all of these as being reminiscent of religious practice, and therefore the title Fire: A Religion was assigned. I asked further questions of the data at this point, such as 'what does Elle get

from viewing fire as a form of religion'? I decided that, ultimately, it contributes to maintaining her psychological wellbeing and it, thus, formed part of the *Mental Health* sub-theme for Elle. This was relevant in the next stage of analysis (axial coding; see below).

In Rory's case, I found that there were similarities between 'fire is a tool' and another of the analytical categories I identified in his case which was entitled 'the only option' (i.e. a view that fire was the *only* route through which to get what he wanted/ needed). I interrogated this further to establish that both of these categories relate to the resolution of *interpersonal* problems. Therefore, I entitled the corresponding sub-theme *Interpersonal Problem Solving*. I continued to explore this concept at a deeper level by asking questions such as 'what does this achieve for Rory'? and 'what type of problem solving is this'? I decided that the setting of fire offers a relatively hasty resolution to difficulties for Rory, but this is ultimately maladaptive and leads to longer-term issues. This is relevant in the next stage of analysis (axial coding; see below).

Stage six – axial coding.

The aforementioned five steps were repeated for each interview transcript across both samples individually, resulting in a set of sub-themes and themes for each of the 24 participants. The axial coding step was the first in which I looked *across* transcripts in the same sample, i.e. first the non-criminalised sample and then the criminalised sample. The aim was to look for commonalities in sub-themes and themes across each participant in the same sample. To be clear, the axial coding stage was conducted for each sample separately. In other words, all sub-themes and themes for the non-criminalised participants were considered. Once this was complete, the same was done for the criminalised sample. At the axial coding stage, the themes across the 12 participants in a sample were written on a separate piece of paper and displayed on a large table. It was important for me to be able to see all themes and sub-themes for each

of the 12 participants simultaneously. Themes and sub-themes were then grouped together (again by physically moving the pieces of paper) on the basis of similarities. For example, as described above one of the themes identified for Elle was Mental Health. I looked across the remaining 11 participants in this sample and found others with similar themes. In Kimmy's case I also found a theme entitled Mental Health, and a similar theme was identified in George's case. Using this example, therefore, all sub-themes and themes across the 12 participants which related to aspects of mental/ psychological health and wellbeing were grouped together.

Once this clustering process was complete, I employed analytical skills as referred to above, in order to build an understanding of the essence of each common theme. Continuing with the example of mental health in the non-criminalised sample, I used *constant comparison* (see below) to identify that, fundamentally this was related to a sense of 'emotional security' for participants. *Emotional Security*, therefore, became one of the overarching themes spanning the whole non-criminalised sample data set (see chapter three). I arrived at four overarching themes in total for the non-criminalised group and three overall for the criminalised group, all of which are discussed in section two of this thesis. Each theme has sub-themes, which were all defined in the same way.

Throughout every stage of data analysis I employed specific techniques, in addition to memo writing (discussed above), which are associated with GT. These are outlined below.

The audit trail.

Schwandt (2001) suggests that an audit trail should involve systematically recording and presenting information gathered whilst conducting qualitative research (p. 8) and this has support from others (for example see Bowen, 2009). I produced a word-processed record of each step from descriptive to axial coding (see appendix 5 for example). The records proved to be extremely valuable because it allowed me to understand connections between categories

across all participants in each sample and to keep track of my thought process. They also helped me to describe the data analysis process in this thesis. Through referring back to my audit trail I have demonstrated that a structured and systematic approach was adopted.

Constant comparison.

Constant comparison is partly concerned with finding similarities in data, and finding groups that are "more comparable than incomparable" (Gibson, 2013, p. 13). However, Willig (2013) points out the importance of not only looking for similarities but also differences between emerging categories (p. 71). Willig suggests, therefore, that constant comparison should involve "moving back and forth" between the similarities and differences in one's data set (p.71). This process enabled me to 'break down' the different dimensions of the data (i.e. the descriptive codes, the descriptive categories and the analytical categories) into their constituent parts. This ensured that the nuances in the data were accounted for and were not simply absorbed or ignored.

I employed constant comparison throughout the data analysis process. Displaying all of the data pertaining to one participant on adhesive labels on a wall in front of me (as described above) facilitated the constant comparison technique. I was literally able to move items of data around until I was content with how they all linked together. At a transcript-by-transcript level I compared and contrasted different descriptive codes and analytical categories within the same participant's narrative in order to identify themes in the data. This can be expounded by way of an example, using the transcript from Harry's interview (see appendix 5). One of the overarching themes identified for Harry is Identity, of which one of the sub-themes is Role Model/ Idol (this relates to his perception of fire). At the sub-theme level, however, there are important nuances in descriptive codes and categories which I observed through checking and comparing them against one-another. For example, Harry speaks of fire as being both

'attractive' (visually) and 'dominant' (i.e. a powerful force). Whilst both of these qualities ultimately contribute to the same sub-theme (Role Model/ Idol), I discovered through constant comparison that they refer to slightly different aspects of fire (i.e. its visual appeal and its personified 'character' respectively). These important differences had to be considered and recorded in the audit trail. In the axial coding stage I repeated the process of comparing and contrasting but across all transcripts in order to cluster the sub-themes and themes.

It was also important to engage in *theoretical comparison*, which involved referring to existing theories to help me to interpret and 'make sense of' my own data. More specifically, I interpreted my data alongside theories of fire setting, for instance, the functional analysis theory (Jackson et al., 1987) and the multi-trajectory theory (M-TTAF; Gannon et al., 2012). This enabled me to contextualise my own data and to understand the similarities and differences between what I was finding and what others have found. For example, the process of *reinforcement* of fire use is a similarity between my own data and features of existing theories. I was also able to observe differences. For instance, although the physiological effect of fire identified in my own data also features in the M-TTAF, Gannon et al focus predominantly on the *arousing* aspects of fire, whereas my participants speak of the arousing *and* relaxing properties. Ultimately, in engaging in theoretical comparison, I had to be aware that existing work relates only to fire setting/ arson, whereas my research adopts the continuum wide approach.

Reflexivity.

As already referred to, reflexivity addresses the influence of investigator - participant interactions on the research process (Hall & Callery, 2001, p.258) and relates to the researcher's self-awareness (Finlay, 2002, p. 209). Willig (2013) suggests working reflexively includes consideration of the researcher's assumptions, values, sampling decisions, analytic technique

and interpretations. Adopting a reflexive approach has been essential in increasing the rigor of the data I collected and the analysis conducted. As a concept, reflexivity is entirely consistent with the social constructivist school of thought because it emphasises the researcher's *interaction* with the data.

I ensured I was adopting a reflexive approach at every stage of the research and this was informed by published guidance (for examples see Coffey & Atkinson, 1996; Finlay, 2002, 2003). Earlier in this chapter, I made reference to one example of reflexivity - memo writing. This enabled me to reflect on the interview process as a whole and on how I perceived each individual participant. Whilst analysing the data I also employed another example of reflexivity called *negative case analysis,* which is discussed below.

Negative case analysis.

According to Willig (2013) negative cases can be loosely defined as "instances that do not fit" (p. 71). In other words, they are inconsistencies in the data. McPherson and Thorne (2006) argue that the tendency to "overlook" data which is inconsistent with our interpretations, expectations and observations has been a common occurrence in qualitative research (p. 2). McPherson and Thorne add that attending to such "outliers" is important in order to ensure that the analytic process is thorough (p. 2). They suggest that careful interrogation of observations which are categorised as "exceptions" within the data set *and* consideration of the "theoretical possibilities" of negative cases are both important steps to be taken by the qualitative researcher (p. 5). I agree with this line of argument entirely. In my view, considering negative cases helps to reduce subjectivity and bias in data analysis. As mentioned previously, I acknowledge that the way in which a researcher *interprets* their data plays a central role in the data analysis process. This is a key premise of critical realism. However, it is important to be aware when these interpretations could lead to serious bias which might impact on the overall rigor of the

study. An example of bias in this case could be ignoring aspects of the data which do not appear to fit with what we hoped and/ or expected to find. Furthermore, I believe that attending to negative cases increases a researcher's understanding of their data, which can illuminate points for discussion that may, otherwise, have been missed.

I found two types of inconsistencies in my own data. The first relates to specific descriptive codes (on a participant-by-participant basis) and the second type is much broader, relating to the nature of experiences reported by participants. The way in which I responded to the inconsistencies is outlined below.

On a participant-by-participant basis, every individual descriptive code which failed to neatly fit with a particular analytical category was noted. After all other data had been sorted into analytical categories, the inconsistencies, which came in the form of two sub-types, were interrogated. Firstly, there were some descriptive codes which I considered *irrelevant* to the research question and to the categories and themes being identified. Secondly, there were those which did not fit into existing analytical categories for each participant but were, nevertheless, relevant (or, at least, potentially relevant). For brevity and ease, I termed the latter *misfits*. Four examples of inconsistent descriptive codes are presented in table 4 below along with commentary on how they were dealt with.

Table 4

Inconsistencies in Data

Inconsistent descriptive code	Type
1. "[Humans] can't sustain natural life" (Jane, non-criminalised fire user)	Irrelevant
2. "Nature is violent" (Kimmy, non-criminalised fire user)	Misfit
3. "A friend in prison set a fire to try to kill herself" (Tia, criminalised fire user)	Misfit
4. "I'm a self-sabotager" (Tony, criminalised fire user)	Irrelevant

In all examples detailed in table 4 above, I carefully considered each one before determining whether it was irrelevant or a misfit and before deciding what action to take. More specifically, I employed constant comparison in order to check if the descriptive code could fit with any of the analytical categories which were already established for that particular participant. I also considered if the code was of any relevance to the research question, discussed it with my supervisors where necessary and decided on the final action to be taken. In the case of Jane, this quote relates to something she went on to say about fire, however, as a standalone statement, I concluded it was of no relevance to the research question. It was recorded in the audit trail but omitted from analysis. The descriptive code provided as example

two relates to Kimmy's view of nature. It is clear from her narrative throughout the interview that she views fire as a form of nature but she is not referring directly to fire in this statement. Therefore, I recorded it in the audit trail but omitted it from further analysis. The key here was not to force inconsistent descriptive codes into existing analytical categories.

In example three, Tia makes reference to a friend trying to kill herself by setting a fire. Initially I identified that, whilst relevant, it did not appear to fit into any of Tia's existing analytical categories. However, through applying the constant comparison technique I reconsidered. I decided that it fits with one of her themes, entitled 'defence mechanisms'. In this case, therefore, further analysis determined that example three was *not* an inconsistency as I had originally thought and so it could appropriately be placed into an existing theme.

After careful consideration, I decided that example four (Tony) is unrelated to the overall research objective and research question. Here, Tony is making a statement about himself. In this study I am interested in *themes* in the data relating to fire use, rather than individual cases per se and so I decided this is irrelevant and could be omitted. This action was recorded in the audit trail.

The second type of negative case in my data was on a broader level and involved any participant whose narrative/ circumstances are ostensibly in some way inconsistent with the general patterns identified in the data. Three participants in the current study were considered as possible negative cases. I interrogated each of the three negative cases by considering the following: (a) the function of their fire-related behaviour and how this differs from the function of behaviour of others in their sample, (b) how the case can be explained, theoretically. Where applicable and appropriate, and in line with guidance by Morse (2010), the two emerging theoretical frameworks (based on the non-criminalised and criminalised samples respectively) were revised in order to integrate negative cases. Each negative case is described below.

Daisy (non-criminalised fire user).

Daisy is predominantly a non-criminalised fire user in that the majority of her experiences relate to bonfires in the garden of her family home, in addition to the use of candles for relaxation purposes. However, during interview Daisy also speaks of using fire to self-harm as an adolescent by burning her skin, which she describes as *"almost like a fascination with what happened. And the scars that they caused; it made me feel better in the short term. So even that was sort of a positive memory"* (Daisy, lines 498 – 500). I determined that using fire to self-harm is an unusual occurrence in the data set and so, during data analysis, it was prudent to consider whether Daisy might be a negative case. Objectively speaking, self-harm is not *strictly* consistent with the definition of non-criminalised fire use applied in this research (i.e. fire use that does not violate laws, rules and social norms, is seen as justifiable and which is unlikely to have been enacted with malicious or reckless intent). More specifically, some might argue that self-harm violates social norms (although I consider this to be a contentious point, which is open to debate). Consequently, it could be argued that Daisy is a negative case because her fire use does not 'fit' with that of her non-criminalised counterparts.

In thinking about Daisy's case, I refer back to the continuum conceptualisation. In this thesis I am arguing that fire use is a fluid and heterogenous construct, which cannot (and should not) be *categorised.* With this in mind, I consider that Daisy is appropriately placed in the non-criminalised group. Irrespective of how one might view self-harm, her *predominant* use of fire (for instance, enjoying family bonfires) sits closer to the non-criminalised end of the spectrum. Although self-harm was not reported by other non-criminalised fire users, the general diversity in Daisy's fire use is similar to that of her counterparts. This simply reflects, and supports, the basis of the CoFU. That said, to ensure robustness, I carefully interrogated Daisy's narrative surrounding the self-harm to compare and contrast its *function* alongside the functions of other fire-related behaviour in the same sample, such as fire walking and lighting candles. I identified

Morris (criminalised fire user).

Unlike his contemporaries in the criminalised sample, Morris has no formal convictions for arson. His criminalised fire use was carried out in prison, while serving a sentence for wounding with intent. While analysing the data, it was important to consider whether Morris' fire use differs from the other fire users in his sample. After careful consideration I determined that the underlying function is very similar, as depicted in the overlap of themes and sub-themes between Morris and the other criminalised participants. For example, Morris' fire use is partly related to interpersonal problem solving, as is that of many of his peers in the same sample. Again, the diversity represented by Morris's case serves to strengthen the argument for a continuum conceptualisation.

It is important to note that in considering each negative case I made use of supervision. I discussed my preconceptions openly, in order that my supervisors were aware and could assist by asking questions to challenge my assumptions. This also gave me a forum through which to verbally reflect on how my thoughts and feelings were influencing the data analysis process.

Chapter Summary

This chapter provides an account of the methodology and methods employed in the current study. I have presented my epistemological position as a qualitative researcher which contextualises the decisions made throughout the research process. This includes why GT is the most appropriate methodological approach. I have outlined the unique premise on which this research is based, namely that fire use should be understood as a continuous/ dimensional, rather than categorical concept. I have also provided definitions of key terms used throughout this thesis. This chapter has outlined the methods employed for participant recruitment and data collection, for the non-criminalised and criminalised samples. I have elucidated the challenges I faced, particularly relating to the prison-based research. I have covered the process of data

analysis in detail in order to demonstrate that it was structured, systematic and based on published guidance. I have emphasised the importance of reflexivity throughout this chapter, which allows me to remain aware of my influence as a researcher and, likewise, of the way the research process influences me. Having reviewed methodology and the specific methods employed, chapters three and four will present data from the non-criminalised and criminalised samples respectively. Together they form section two of this thesis.

Section Two: Data Analysis

Non-Criminalised and Criminalised Fire Use

In the preceding two empirical chapters, findings from the current study are presented and analysed. Chapter three contains analysis on data from non-criminalised fire users and chapter four is concerned with criminalised users. For each sample, themes in the data are presented and discussed. Diagrammatic theoretical frameworks are also included in order to demonstrate how themes and sub-themes connect. Findings are interpreted alongside existing literature, and areas of similarity and difference across the two samples are considered. Furthermore, links are made to the continuum of Fire Use (CoFU) conceptualisation, which is a key component of this thesis.

Chapter Three:

Non-Criminalised Fire Use

Introduction

In this chapter, data from the non-criminalised fire users is discussed. The research question for this sample was 'what psychological mechanisms underpin non-criminalised fire use'? The data was analysed using techniques informed by Grounded Theory (GT), following the steps outlined in chapter two. Four themes were identified in the data, each with two sub-themes. All of the themes relate to the psychological benefits of fire use for participants, some of which are transient and others are long-lasting. All benefits are positively reinforcing for participants, which encourages a continuation of the behaviour. Unlike the focus of existing literature on arson and/ or fire*setting* (for example, Hurley & Monahan, 1969; Prins et al., 1985; Jackson et al., 1987; Rix, 1994; Lindberg et al., 2005; Gannon et al., 2013, Ó'Ciardha et al., 2015), data from the current study relates to the *use* of fire more broadly, including the preparation of a fire and its aftermath. This points towards a fire use *process,* which is expounded in chapter six. In this chapter, I have presented data along with the participants' pseudo-name and the line number/s corresponding to the transcript from which data has been taken.

All non-criminalised users speak of both past and current contact with fire. For instance, George recalls a memory from childhood of watching his father tend to the fire at home: *"I used to find that quite mesmerising and quite magical and this bright yellow glow in the centre where the coke was starting to burn"* (transcript lines, 208 – 210), and Jim spoke of ongoing use: *"when we're home, we will have an open fire every night. Because it's a central point of the room and it makes the room feel much more homely than if it weren't there"* (lines 142 – 144). Another commonality in all of the narratives in this data set is the sense that participants

interact with fire; their experiences were described in terms of the connections between themselves and a fire. For example, Laura, who is a professional fire performer describes performing with a fire hoola hoop in this way:

> *One of my favourite hoop tricks means that the hoop goes round my back and I catch it on my foot and I can do that with fire and people find that really impressive cause I'm on the outside of the hoop, with the fire facing toward me* (lines 706 – 709).

Below, the four themes which were identified in the non-criminalised participants' data are discussed. They are presented in the form of a preliminary theoretical framework. A diagram is included in order to depict the linkages between the themes and sub-themes. It is important to understand how the themes interact with one-another so that they are conceptualised as one whole process, rather than isolated/ standalone constructs. The diagrammatic theoretical framework 'tells the story' of how themes identified in the data represent psychological mechanisms underpinning non-criminalised fire use. The framework is preliminary because, in the spirit of GT, it is open to revision on the basis of further data collection, such as through the proposed post-doctoral research discussed in chapter six.
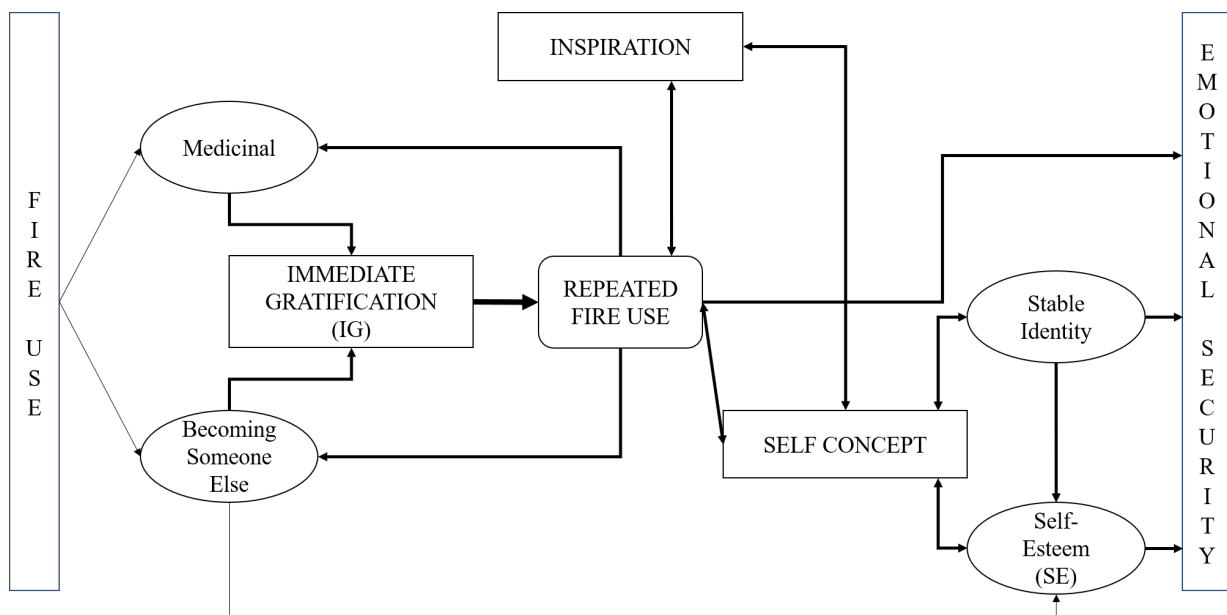
Figure 3. Non-Criminalised Fire Use Theoretical Framework

The framework in figure 3 is grounded in the data and, thus, represents the four overarching themes identified in the non-criminalised fire user sample. These are: (a) *immediate gratification*, (b) *inspiration*, (c) *self-concept*, and (d) *emotional security*, which all depict the psychological benefits of fire use for participants according to the data. These benefits are reinforcing which could explain why participants choose to engage with fire repeatedly. Arrows in the framework depict the linkages between themes and sub-themes.

The psychological mechanisms underpinning fire use, according to this data, are presented from left to right in figure 3, starting with a single/ first instance of fire use, which, in the case of all participants occurred in childhood/ adolescence. Immediate Gratification relates to the short-term benefits of fire use, which have a reinforcing effect leading to repeated fire use. The remaining three themes (Inspiration, Self-Concept and Emotional Security), represent long-term benefits. In the following section each theme in the data is discussed.

1. Immediate Gratification.

Participants talk of the immediate benefits of fire use, occurring each time they interact with fire. The title of the theme reflects the sense that the effects of fire use are satisfying and instantaneous, but they cease as soon as the episode of fire use comes to an end. It is noteworthy that Immediate Gratification also features as a theme in the data from the criminalised sample (see chapter four), suggesting it might be universally associated with fire use irrespective of where that use sits on the continuum of fire use (CoFU; i.e. whether it is most closely related to criminalised or non-criminalised use). That said, there are important differences in this theme between the two participant samples which are expounded in later chapters of this thesis. The Immediate Gratification theme based on non-criminalised fire users is formed of two sub-themes, which relate to the nature of the benefits described by participants. The theme and its sub-themes are discussed below.

Medicinal.

This sub-theme relates to the immediate therapeutic value of fire for participants. I chose this title because it embodies the notion that fire can have an effect, which is very similar to that of taking medication, such as the use of paracetamol for a headache – this is discussed in more detail below. Participants speak of the immediate impact of fire on their proximal affective state, via three mechanisms. These mechanisms are not mutually exclusive, and the majority of participants speak of benefiting from more than one, if not all of them.

Firstly, fire is seen as a *stimulant*, as exemplified by Kimmy: *"maybe I just need a little bit of a boost of something, I'll often put a candle on because it's that spark that seems to ignite the energy again"* (lines 283 – 285). Similarly, Amanda acknowledges the *"pick me up"* effect of fire (line 315). In contrast to this, a second mechanism through which fire impacts on participants' affective state is through acting as a *sedative*. Participants speak of the relaxing

nature of fire's sensory qualities, in particular the light, and warmth which it emits. For example, *"it's really comfortable and homely and warm and nice"* (Alice, line 1033) and some participants even make reference to the notion of fire making them feel *"sleepy"* (Laura, line 473). There are parallels between the effects cited here and those associated with another sub-theme (Emotional Security), however there are also key differences, which are expounded below. Most notably, whereas the Immediate Gratification theme relates to short-term benefits, Emotional Security captures longer-term improvements in participants' psychological wellbeing.

The Immediate Gratification theme captures the fact that, in addition to serving as a stimulant or sedative, fire also impacts immediately on participants' affective states through *distracting* them. It offers participants temporary relief from unpleasant emotions and/ or can temporarily replace unpleasant emotions with a more tolerable state. This function is pertinent in Daisy's case, who used fire as a form of self-harm during her teens. She explains: *"it was almost like a fascination with what happened and the scars that the burns caused; it made me feel better in the short term"* (lines 498 – 500). In her narrative here Daisy refers to a number of inter-linking factors. Firstly, she is speaking of a distraction, and secondly, she speaks of the improvement in her mood. It could be considered, therefore, that the use of fire provided Daisy with a form of *escapism* as a teenager.

Like Daisy, Harry also benefits from fire as a distractor; he spoke of the *"flow state"* (line 1020) entered in to while fire performing. This is echoed by Laura who likens fire performing to *"an active meditation, cause you can just zone out, and think about the feeling of it"* (line 640 – 641). The notion of fire as a distractor not only positively influences participants' affective state, but also has a cognitive impact. It is portrayed as a means of clearing the mind of unwanted, and troublesome thoughts, demonstrated by Kimmy, and Elle:

"there's a thousand and one things going through your head. It's the only way I can get myself to switch off" (Kimmy, lines 1408 – 1409), and *"your mind goes free"* (Elle, line 896).

Data within the Immediate Gratification theme suggests that fire use impacts on participants *physiologically*. Participants' descriptions share similarities with the effects of drug use, both legal and illicit. Dodgen and Shea (2000) present four categories of drugs based on their pharmacological effects on the central nervous system (CNS). Some drugs act as CNS depressants, whereas others are stimulants; much in the way participants describe the impact of fire use. Similarly, the process of reinforcement between Immediate Gratification, and repeated fire use resembles aspects of drug addiction, i.e. the positive and immediate physiological impact of fire makes it more likely that participants will engage with it again. This is much in the way that the experience of drug intoxication might lead users to seek it out repeatedly.

Notwithstanding these parallels, I do not consider the psychological mechanisms underpinning drug addiction to be identical to those at play in fire use. Volkow and Li (2004) suggest that the former manifests as "an intense desire for the drug, with impaired ability to control the urges to take that drug" (p. 963). There are no overt statements from participants in the current study about urges or cravings for fire. This important difference might be explained by the fact that drugs act *directly* on the CNS through being ingested, whereas the effects of fire are indirect, via one of the senses, i.e. sight, smell, sound, touch.

Although participants may not experience physical cravings for fire (such as the physical withdrawal symptoms in drug use), there is a sense that fire is *used* in times of need, to make them feel better. This is perhaps in the way that some may take a paracetamol for a headache or drink a glass of wine after a difficult day. The quote by Amanda about fire providing a "*pick me up*", exemplifies this. Likewise, references to freeing one's mind by participants in this study suggest that they *deliberately* engage with fire when they need a

distraction. This is reminiscent of aspects of mindfulness, which Bishop et al., (2004) describe as a technique for focussing one's attention on the present moment. This is a non-pharmacological l intervention. However, parallels between the way participants speak of fire use and mindfulness are wholly relevant to this sub-theme. This is because research indicates that mindfulness, too, has a physiological effect. More specifically, much has been published on the neurological impact of mindfulness, including its effects on the amygdala (Wheeler, Arnkoff & Glass, 2017), which plays a key role in the processing and regulation of emotion. To date, there has been no research specifically into the use of fire as a mindfulness technique. Given that participants' narratives allude to this, the impact of engaging with fire in different ways (for example through watching it or listening to the flames crackle) might be worthy of investigation.

Most of what is written about the physiological effects of fire in the existing psychological literature relates to pyromania (Geller, 1992; Doley, 2003). This is a distinct mental disorder included in the Diagnostic and Statistical Manual for Mental Disorder (DSM-V) as an Impulse Control Disorder (APA, 2013)[18]. This, in my view, is a limitation of existing research. The diagnostic criteria for pyromania is very specific (see chapter four). I believe there are many instances of physiological arousal to fire which warrant exploration but which are not necessarily the result of pyromania. Indeed, some other references to fire-related physiological arousal are made within the literature, which do not relate to pyromania specifically. For example, Fineman (1995) discusses the impact of fire on our sensory system

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[18] **Pyromania:** A mental disorder characterised by the presence of multiple episodes of deliberate fire setting, physiological tension/ affective arousal before setting the fire along with pleasure and gratification afterwards and a fascination with fire (APA, 2013, p. 476).

and Gannon et al., (2012) refer to the "arousal-reducing" and "exhilarating" properties of fire (p. 31). These references are brief, but are discussed further in chapter four.

The physiological effect of fire is just one of its immediate benefits according to participants in in the non-criminalised sample. Another relates to identity, and is discussed below in the form of the next sub-theme, entitled *Becoming Someone Else.*

Becoming someone else.

In addition to fire impacting on participants' affective and/ or cognitive state, in some cases it has a subjective impact on their perceived character, and personality. For some participants in this study, there is a *subjective and transient* change from the real them (often a person lacking in confidence) to someone who is powerful, in control and admired whenever they engage with fire. The title of this sub-theme is intended to express the *change in self* which forms its essence. It is noteworthy that, in some cases, this sub-theme is connected to the *Self-Concept* theme, which is discussed below and, specifically one of its sub-themes (*Self-Esteem*). Over time, the transient subjective transformation which participants undergo whilst engaging with fire can have longer-term benefits by improving self-esteem. However, the key difference between the Becoming Someone Else sub-theme and the Self-Esteem sub-theme is that the former is transient, meaning that changes occur only for as long as the instance of fire use lasts.

Alice, a fire-walker, exemplifies the subjective shift associated with the Becoming Someone Else sub-theme very clearly. When recounting her past fire walks, she says: *"I was somebody. Rather than somebody who did everything everyone said, and had no personality whatsoever"* (lines 327 – 329), and: *"[fire walking] made me feel a lot stronger about me. I was somebody; I was a really, really strong and powerful person"* (lines 327 – 329). This personal transformation is echoed by Harry who describes himself as *"a fuckin' ninja"* (line 1031) and *"an absolute rock star"* (line 1218) when fire performing. Likewise, Laura becomes

someone brave and fearless when fire performing, indicated by the level of detail she uses to describe the risky activities she engages in: "*I have a trick where I do a fire hoola hoop on my stomach, on my chest and on my hand all at the same time. So I encase the top half of my body in flames*" (lines 860 – 862).

Psychological literature on The Self is of relevance in understanding participants' description of the shift in 'self-state' captured above. It has long been suggested that there are three domains to the self: (a) the ideal self, (b) the actual self, and (c) the ought self (Higgins, 1987). Higgins argued that a person's ideal self, along with their actual self (i.e. an appraisal of the attributes they consider themselves to have) could be defined as their self-concept. Any discrepancy between these domains can lead to distress, whereas alignment between them results in contentment. This could be applied to interpret the mechanisms involved in the Becoming Someone Else sub-theme. Engaging with fire enables participants to *become* their ideal self. In other words, their ideal and actual selves merge, leading to positive psychological effects. According to the data, this merge is transitory in that it ceases as soon as the individual disengages from fire and/ or stops thinking about it. At this point, it is possible that a discrepancy between the two domains may re-emerge, at least for some participants. However, over time, repeated fire use could result in a more permanent merging of the ideal and actual self, which impacts positively on self-esteem, as depicted in the theoretical framework (figure 3).

As discussed above, the Immediate Gratification theme relates to transitory benefits, which cease when the individual disengages from fire. These benefits are reinforcing, and therefore lead to repeated fire use. In turn, repeated fire use continues to provide Immediate Gratification, therefore resulting in a cycle of reinforcement. The concept of reinforcement is underpinned by the work of Skinner (1938) on operant conditioning, and features in theoretical work on arson, and fire setting (for example, Jackson et al., 1987; Gannon et al., 2012). This is

returned to in later chapters. Whereas the Immediate Gratification theme relates to transient benefits of fire use, the remaining three themes depict longer-term benefits. I term the first of these longer-term themes *Inspiration.*

2.   Inspiration.

I chose this title because the theme is about the motivating qualities of fire. This only applies to the non-criminalised fire user data set. Inspiration is not a theme identified from the criminalised user data, the significance of which is discussed in chapters four, five and six of this thesis. Through their narratives, non-criminalised participants generally convey a desire to be the best that they can be, as portrayed by George *"that's kind of like a spiritual goal really; to make yourself the best you can be, and to give the best to whatever projects you go forward into"* (George, 936 – 942). This is strongly reminiscent of the concept of *self-actualisation*, as proposed by Maslow (1943). In his model of human motivation, self-actualisation is seen as the highest echelon of achievement, at which point an individual has reached their ultimate potential. According to the data, fire assists non-criminalised users in their quest for self-fulfilment in two ways, and these correspond to the two sub-themes described below.

Role model.

This sub-theme is so called because many participants speak of fire as being something to look up to, admire and even to idolise, much in the way that we would a human role-model. For example, when speaking about a furnace in a factory where he worked in the past Harry said, *"it's a very, very impressive thing. And fire was literally at the heart, well literally at the core of it"* (Harry, 750 – 755). Similarly, Mary speaks of her awe at her grandmother's range oven when she was a child: *"it was kind of like the top of a volcano you know; it really was fire and fiery* (lines 161 – 163). Moreover, fire serves as a guide or mentor for some participants

by aiding self-improvement, as described by Elle: *"the fire is there to teach you everything you need to know. So the fire becomes a bit of a master; you will see the fire as your, kind of, guru"* (Elle, lines 765– 768).

The admiration which participants have for fire means that they respect it. In the data there is acknowledgement of a responsibility to sustain and *"tak[e] care"* of it (Elle, line 371), as well as enormous gratitude being expressed. For example, Kimmy says:

So while it seems a silly little thing, but lighting the gas hob; it should be done with some sort of gratitude and thanks, because we've been given the gift of learning how to create fire. But even just lighting an ordinary candle in the evenings - a nice little fragrant scent - it's always, you say, 'an honour to the universe (lines 454 – 462).

Whilst some participants express respect on a spiritual level, as conveyed above, others describe fire on a much more practical level. They recognise its dangers, and therefore the need to treat it carefully, which is also indicative of respect. This is captured in a quote by Connor:

Don't go near fire; it'll get you, it can catch you, it can jump on your clothes, it can jump from thing to thing. All our narratives about fire is about something that's alive. It's not just a process that's occurring, it's a live thing and you need to be careful of it (lines, 50 – 55).

Broadly speaking, psychological literature suggests that having role models to look up to can have a positive impact on us (Lockwood, Jordan & Kunda, 2002). It has been suggested that their greatest influence is where we appraise the qualities depicted by that role model as achievable, and of personal relevance (Lockwood & Kunda, 1997). In other words, we are

influenced most when we can personally relate to our role model and when we see their situation as similar to our own. Forensic research has added weight to this. For example, Walters (2016) conducted a study into the impact of role models on youths who were defined as being 'at risk' of criminal behaviour. The findings suggest that in situations where there were similarities between role models and the youths, the former had a positive impact on the latter. Research within the occupational sphere has highlighted what we look for in role models. In a survey of 195 medical students, Wright (1996) found that a combination of professional skills, personality, and teaching ability, are considered to be important. Crucially, however, to my knowledge all research in this area has focussed on *human* role models.

An area not yet explored is whether inanimate entities, such as fire, could have a similar impact on us as a human role model. Ostensibly, as living beings, we share nothing in common with fire – a non-living entity. According to the 'similarity principle' (Lockwood & Kunda, 1997), therefore, we should not be positively influenced by it, however participants in this study are. Of crucial importance in interpreting this finding is that all participants in this study personify fire, which is exemplified by Connor here *"it's constantly moving. I think that's something else that makes it seem alive. It's kinetic"* (lines 431 – 432). Therefore, although fire is not 'alive' per se, participants bring it to life in the way they think and talk about it. Thus, I believe that this personification might enable them to relate to it as a fellow living 'being'.

Psychological literature has addressed the human capacity to ascribe human qualities to non-living things. In his writings on the cognitive development of children Piaget (1964) suggests that from a young age, we have the ability to label inanimate objects as living. In terms of the current study, it seems that the non-criminalised participants' personification of fire enables them to relate to it. This, in turn, explains how it can act as a role model. The personification of fire is essentially a form of symbolism, i.e. seeing fire to be representative

of something else. Symbolism is of great relevance to the next sub-theme - *hope and empowerment*.

Hope and empowerment.

The essence of this sub-theme relates to the positivity, optimism and energy which participants consider fire to embody, and how these qualities can help them in their quest for self-improvement. Participants speak of fire as the embodiment *hope*, which has been identified previously as a key component of what could be reasonably considered a 'good life' (Kekes, 1994). George, who is a Pagan speaks of fire in this way: *"at the heart of that festival for us is a log, and a bright burning fire so that at the darkest part of the year, there's hope"* (lines 653 – 654). Here, George makes a connection between the light of a fire, and hope, which is consistent with the way in which others speak about it. Similarly, Kimmy alludes to 'new beginnings' when speaking of the practice of burning heather moors to control foliage: *"you have to get rid of the dead parts in order for new life to come. If we're heating something off, we get rid of the negative"* (lines 782 – 784).

Not only does fire breed optimism and hope for participants, some speak of its enabling, and empowering qualities. There is a sense that engaging with fire has offered opportunities, as described by Elle: *"it has opened different worlds to me because I got in to festivals and art"* (lines 724 – 725). For some participants, fire also contributes to self-improvement by helping them to become 'better' and stronger. For instance, Connor provides an example of how using fire has improved him as an all-round circus performer, *"learning to perform with fire, learning to manipulate objects that are on fire, makes you better at the manipulation of [objects] generally. Because the fire sharpens up your reflexes"* (lines 397 – 400).

The notion of self-improvement bears resemblance to the aforementioned Becoming Someone Else sub-theme (within the Immediate Gratification theme). It, too, is concerned with

becoming a 'better person'. However, the key distinction is that the current sub-theme (Hope and Empowerment) is about real, tangible and long-lasting personal changes, whereas Becoming Someone Else is concerned with a *subjective perception* of change and one which is transient.

The symbolic meaning ascribed to fire by participants, such as it being a beacon of hope is not a new concept. There are many examples of our capacity, as humans, to impose symbolism on to entities, events, and experiences. Fire already represents hope, and forward thinking in our culture. A review of some of the symbolism ascribed to fire is presented in chapter one. Fessler (2006) suggests that nowadays fire is a "romanticised marker of special occasions" (pg. 441). Another example, referred to in chapter one, is the important role of fire in celebrating the opening of each Olympic Games whereby the Olympic torch, which constantly remains alight, is carried from place to place evoking anticipation, positivity, and excitement (Winder, 2009). Winder (2009) points out that we appreciate fire on a spiritual level, and that burning a candle is associated with purity, hope, protection and renewal (p. 13). She also discusses the role that fire plays in many religions around the world. As discussed in chapter one, fire is used in rituals, and to represent rites of passage, for instance the burning of bodies in funeral pyres seen in Hinduism. Arguably, then, symbolic meanings of fire are embedded in most, if not every culture, and so it is not surprising that these messages are conveyed in the narratives of non-criminalised fire users in this study.

Despite the many examples of positive symbolism, fire also carries negative connotations. For example, in the Muslim religion, the word for Hell – "al-nar" – translates to "the fire" (Rustomji, 2009). In their narratives, non-criminalised participants in this study mainly focus on positive symbolism, rather than the negatives, which might be explained by the sampling I employed. Participants were selected because they frequently engage with fire. In general, they had positive early experiences of fire which means they are more likely to hold

positive views of fire. These views could be thought of as *schemas,* which Huesmann defines as "any macro knowledge structure representing substantial knowledge about a concept" (1998, p. 79). It is likely that when I asked about fire, participants relayed information consistent with their largely positive schemas. Had participants with predominantly negative early experiences been interviewed, for example, those with a history of fire-related trauma, it is possible that negative symbolism may have been the main focus. Another possible explanation for the largely positive content of participants' narrative on fire symbolism could relate to existing personality characteristics. No measures were taken to assess baseline levels of general positivity prior to the interviews but all participants have some interest in the outdoors, most are physically active, and some have spiritual beliefs. It is reasonable to assume, therefore, that the non-criminalised fire user group comprises generally optimistic people, who might be more inclined to appraise experiences as positive.

It is important to note that, whilst participants speak mainly of positive symbolism associated with fire, their narratives are not *exclusively* positive. As described above, some speak in a symbolic way about the dangers of fire. For instance, in describing his experience of spinning fire poi[19] as part of his role as a fire performer Connor notes that the flame sometimes appears to move towards his hands: *"that's the fire is detecting that you are edible. It's going towards a source of fuel and that's creepy [laughs]"* (lines 109 – 111). Participants are, therefore, not naïve to the negative aspects of fire but, rather, they simply choose to focus more heavily on the positives, possibly for the reasons outlined above. Furthermore, where participants do make negative statements like Connor's, I consider these to be examples of the

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[19] **Fire Poi:** equipment which can be held in the hand (usually one in each hand), set alight and spun around in order to create a visual spectacle.

respect they hold for fire, which overlaps with the Role Model sub-theme outlined above. According to the data, the motivation and positivity associated with non-criminalised fire use feeds into the next theme, *Self-Concept (SC)* - this is depicted in figure 3. The two are connected because, through inspiring participants to be 'the best', fire can have a positive impact on identity and how participants feel about themselves.

3.   Self-Concept.

This theme is concerned with participants' sense of self. According to the data, Self-Concept has two interlinking components, namely, who participants consider themselves to be and how they feel about this. It is noteworthy that I identified the same theme in the data from the criminalised sample. This suggests that Self-Concept might be a construct which is universal to fire use, irrespective of where it sits on the continuum of fire use (CoFU). This is an important discussion point which is considered in chapters four, five and six of this thesis. I chose to entitle this theme Self-Concept because the name encompasses both the aspect of *who* a person thinks they are and *how* they feel about the person they are. As such, the Self-Concept theme based on data from the non-criminalised sample has two sub-themes, the first of which is *Identity*, and the second, *Self-Esteem*. It is important that both of these elements are covered in order to capture the data.

Identity.

This sub-theme pertains to participants' understanding of who they are, in terms of their heritage, their purpose in life, and their social standing. The non-criminalised users are cognisant of the omnipresence of fire and they view it as an important root of their existence as human beings. Some make reference to the history of fire and its use, which is reminiscent

of the literature discussed in chapter one. This is exemplified by George: "*[fire] underpins so much of who we are, and what we do, and our history, and our culture, in ways that we haven't even scratched the surface of*" (lines 968 – 970).

In addition to how fire features in the history of human beings as a collective, many participants make reference to their personal roots, namely in the form of childhood memories. For some, the connection between memories and their identity is very clear, for example, *"there's this smell of a peat fire; it's in my bones; I love it. From a time when I was very little*" (Mary, 967 – 968). In the above quote, Mary conveys how she considers fire to be 'part of' her, and, thus, it became part of her identity. Fire remains part of participants' identity as adults because it is a regular feature in their life. Also, in some cases participants have a fire-related *role.* This keeps it at the forefront of their mind and feeds into how they define themselves. For example, Jim discusses the systematic approach he takes in creating fire; a task with which he engages frequently. The language used conveys that this is a well-practised process, which has been a feature of his life for many years:

And all I do is, I take an old newspaper, screw up some sheets into balls, stuff them under, at the bottom, and then away we go with a match. Usually, if it's nice, and dry material, there's no problem (lines 443 – 446).

Mary also sees herself as having a fire-related role. She discusses the part she plays in the aftermath of a campfire. This which supports my assertion that fire use is a *process* rather than being an isolated event involving only the setting/ lighting of a fire:

I'm actually quite neurotic. So if we [have a fire] in the woods I bring a shovel, and lift

the sod. I take the grass off. So we leave it as we found it, you know. That is my training.

(lines 936 – 938).

What is clear from the quotes from both participants (Jim and Mary) is the seriousness with which they approach fire-related tasks, which suggests they place great importance on them.

Through becoming a 'role' in life, fire use provides participants with a sense of purpose. This has consistently been found to relate to life satisfaction, health (McKnight & Kashdan, 2009), and life expectancy (McKnight & Kashdan, 2009; Hill & Turiano, 2014). A sense of purpose has also been highlighted as important within the forensic literature. Ward and Stewart (2003) term this *spirituality* (p. 356) and cite it as one of the nine primary human goods. According to the good lives model (GLM; Ward & Brown, 2004) offenders have a tendency to select maladaptive means through which to pursue these primary human goods, and they should be supported in identifying alternative routes through which to acquire them pro-socially. Conversely, then, it could be assumed that non-offenders, such as the non-criminalised fire users in this study already know how to achieve the primary human goods adaptively, including through their interactions with fire. With this in mind, therefore, we could learn much from observing how non-criminalised fire users engage with, and view, fire. This could inform treatment strategies for arsonists. This is one of my central arguments and is expounded in section three.

In addition to providing non-criminalised participants with a purpose or role, fire use also contributes to identity through providing a sense of *belonging*, which helps them to establish their 'position' in society. Jane speaks here of the social aspect of communal fires and how it helps her to *relate* to like-minded people *"[we] burn stuff on the fire, have barbeques, and do our fire toys. I guess I'd met my fire kindred spirits. Everyone I know likes setting stuff*

on fire. Everyone likes a good fire" (lines 854 – 856). Similarly, Daisy speaks of fire being something which she shares in common with her father, which enabled them to build a bond when she was a child: *"[fire] was something my dad enjoyed; I suppose it was something we both enjoyed"* (lines, 324 – 325).

Research indicates that a sense of belonging is associated with feelings of happiness, and health (Newman, Lohman & Newman, 2007). Conversely, its antithesis – social isolation, otherwise called social exclusion – has been linked to negative emotional states (MacDonald & Leary, 2005), and even high mortality rates (House, 2001). In the forensic literature, Ward and Brown (2004) highlight a sense of *community* as another of the primary human goods (p. 356), which features in the GLM.

In addition to connecting with other people through the use of fire, some participants identify an existential influence of fire in terms of how it helps them to feel 'at one' with the world. For example, Mary speaks of her love of cooking over an open fire outdoors and says *"I really like being outdoors and I really like using [a camp fire]; I really like the awareness of the environment that it gives me"* (lines 691 – 693). Similarly, Kimmy describes how the practice of meditating with candles enables her to feel connected to the universe as a whole:

> *The flame comes, and then it joins with the air. And so whatever energy, thoughts, you're putting to that flame as you focus, it then goes up to the universe. So it's almost like [the flame] taking your thoughts, your prayers up there* (lines 1433 – 1436).

The narrative from Mary and Kimmy cited above are examples of the way in which fire use can validate one's existence, thereby contributing to identity. The concept of identity has received a great deal of attention in the psychological literature but there are manifold definitions meaning that it remains a somewhat ambiguous term. Burke and Stets (2009) and

Stets and Burke (2014) offer a useful framework by suggesting that there are three *types* of identity: (a) *role*: the social position we consider ourselves to hold, for example, we may view ourselves as a student, or a parent; (b) *social/ group*: the way in which we relate to relevant social group/s, such as those of the same ethnicity; and, (c) *person*: the characteristics which we believe make us unique.

Burke and Stet's ideas could be applied to the current data. As discussed above, many participants consider themselves to have a fire-related *role,* such as Mary who is viewed as the 'fire-handler' of the family. Secondly, as depicted by Jane (above), fire use helps some participants to relate to other, like-minded people, and thus is consistent with the *social/ group* aspect of Burke and Stet's framework. Burke and Stet's third identity type (person), however, is less clear in the current data set because it is difficult to delineate from the previous two (role and social/ group). For example, in Mary's case, the way she identifies herself as a unique *person* is partly through the *role* she has as the 'fire-handler' in her family. Therefore, whereas Burke and Stet's present the three identities as distinct, in the non-criminalised fire user data they appear more intertwined.

The fact that the current study focusses solely on fire use means that I did not explore other aspects of participants' lives which might also form part of their identity. Therefore, the current data tells us nothing about the relative contribution of fire use to participants' identity, when compared with other aspects of their life such as relationship status, friendship groups, occupation and other hobbies not related to fire. In other words, we do not know how much emphasis participants place on fire use, specifically, when defining themselves. This is likely to differ from person to person, and might be mediated by factors such as personality and environment. Future qualitative research could address participants' views of fire in relation to other aspects of their life in order to explore their relative importance in terms of identity.

According to the current model, being clear on one's identity could strengthen one's self-esteem which is the second sub-theme within the Self-Concept theme.

Self-esteem.

Within this study, self-esteem is loosely defined as a person's feelings about who they are (I will present a more precise definition below). In this study, Self-Esteem is closely related to Identity (the previous sub-theme). Whilst there is a high degree of overlap between the two, the data indicates they are best conceptualised as two constructs in this study. Whereas identity concerns how a person defines themselves, self-esteem relates to how they feel about that definition. I decided on this title because the essence of the data, as described below, is reminiscent of how self-esteem, as a construct, is presented in the psychological literature. For many participants, interacting with fire improves their self-esteem and, over time, the more this occurs, the more stable their self-esteem becomes. There are a number of mechanisms through which this occurs. Firstly, participants gain *external recognition* from others, most often in the form of praise. This is depicted by Alice as she reflects on her fire walk: *"it's good because everybody goes 'yey', and they cheer; everybody's cheering, and the music's going, and it's really good"* (lines 637 – 641). Laura echoes this in her reflections as a fire performer: *"it's really exciting 'cause it can make people scream, and it's a good way of getting their attention"* (lines 1172 – 1173).

In addition to praise from others, some participants gain *intrinsic reinforcement* through acknowledging they have 'done a good job' with respect to fire use. For Amanda, the ability to maintain a fire is an important benchmark against which she judges herself:

I think I do rate myself on making a good fire. 'Cause I think that's the bit I enjoy; of almost feeling I've done a good fire; a proper fire. So, feeling a sense of, I guess, pride, on that front (lines 264 – 274).

Harry also gains intrinsic value from fire. When reflecting on the process of learning to perform with fire, he says:

Then I did it, and I could do it, and lit it, and I was doing this trick on fire. I was doing this trick on fire. I was like 'holy fuck, I can do it'. So it was a life changing moment (lines 975 – 977).

Some participants, such as Harry even speak of an interaction between external and internal factors influencing self-esteem: *"there was definitely an element of boosting my self-esteem by, one: being very good, and two: being seen to be very good"* (lines 1373 – 1375).

Whilst there are numerous definitions of self-esteem in the literature, I subscribe to that offered by Rosenberg, Schooler, Schoenbach & Rosenberg (1995) which is "the individual's positive or negative attitude toward the self" (p. 141). Research into self-esteem has a long history. Low levels of self-esteem have been linked to a range of problems including depression (Orth, Robins & Meier, 2009; Sowislow & Orth, 2013), anxiety (Sowislow & Orth, 2013), and even physical health issues (Trzesniewski et al., 2006). Aggression and violence are also thought to be related to self-esteem, although the nature of this relationship is still open to debate. Some argue that *low* self-esteem is associated with aggressive behavior (Donnellan, Trzesniewski, Robins, Moffitt & Caspi, 2005), whereas others argue that it is *high* self-esteem, which can raise the risk of this type of behavior. Proponents of the latter view suggest that

when an individual's usually high self-regard is threatened in some way, they may respond violently (Baumeister, Smart & Boden, 1996; Bushman et al., 2009).

Burke and Stets (2009) and Stets and Burke (2014) highlight that most existing research has focused on self-esteem as a global construct, rather than its component parts. They suggest that it has three components: (a) *self-worth*: the degree to which we feel good and valuable; (b) *self-efficacy*: the degree of influence we assess ourselves to have over our environment, and; (c) *authenticity*: our striving for meaning, coherence, and understandings about the self. Self-worth is the main focus of the self-esteem sub-theme within the current data in that participants' perceptions of their fire-related skills helps them to 'feel good' about themselves. It is noteworthy that this resonates with the Becoming Someone Else sub-theme (part of the Immediate Gratification theme discussed above). However, the key difference is between long-term self-worth and a transient 'feel good' state, which relates to Immediate Gratification.

The sense of mastery which the non-criminalised fire users gain through engaging with fire is consistent with the GLM, most notably the Excellence in Work and Play (Ward & brown 2004, p. 356) primary human good. In line with the GLM, non-criminalised fire use could be thought of as an instrumental good, i.e. a route through which participants gain a sense of excellence. Perceived excellence, and its relationship with self-esteem, is not something unique to non-criminalised fire users. This is also identified in the criminalised group, although the connection is more complex (as discussed in chapter four).

Overall, the narrative from participants in the non-criminalised group indicates that fire use contributes to a healthy and balanced self-concept. However, the *degree* to which it does this cannot be established from the current data. This is because I did not measure participants' baseline self-concept, i.e. the stability of their identity and their level of self-esteem *before* they started to engage with fire extensively. Therefore, it is impossible to gauge how much of a contribution fire use, alone, has made to a person's self-concept. Furthermore, the nature of the

relationship between non-criminalised fire use and self-concept (i.e. causality) cannot be established. The data indicates that fire use has a positive impact on self-concept but it is also possible that the converse is true. In other words, perhaps those with a strong self-concept are more inclined to engage in non-criminalised fire use (as opposed to criminalised use). This is explored further in the following chapter and in section three of this thesis.

According to the current data a healthy self-concept can improve one's sense of emotional security, which is the last theme. One's emotional security is not entirely reliant on their self-concept, however. It is also related to repeated fire use directly, as depicted in figure 3.

4.   Emotional Security.

In this study, the Emotional Security theme refers to a permanent state in which the person is at ease, comfortable, and feels 'safe' and unthreatened. Whilst some non-criminalised participants refer to the benefits of fire from a *physical* safety point view, the main emphasis of the narrative is more abstract and relates to the *psychological* benefits of fire use. This is why I have included the word *'emotional'* in the title. Psychological literature on human needs is relevant to the Emotional Security theme. For example, Maslow's seminal work on human motivation (1943) indicates that we have a series of needs, arranged in a hierarchy of importance. According to Maslow, once basic needs, such as food, and warmth, have been fulfilled humans are driven to seek high-order needs such as safety (including *psychological* safety), and love/ affection. The fulfilment of those higher-order needs is observable in the current data. This suggests that Emotional Security represents the ultimate in psychological wellbeing. In other words, if the themes in the non-criminalised data set were placed in to a hierarchy, Emotional Security would occupy the highest position and the others would all feed in to it. Interestingly, this positive and permanent state was not identified in the data from the

criminalised fire users, indicating that they may not enjoy the same degree of long-lasting psychological wellbeing (discussed in chapter four).

Like Maslow, Kekes (1994) writes about human needs, described as the *Primary Values* and *Secondary Values* (p. 49), which are required in order to lead a 'good life'. According to Kekes, there are three primary values, which are a 'minimum requirement': (a) physiological needs, including food and warmth; (b) psychological needs, such as companionship, and the "absence of terror" (p. 49), and finally; (c) social needs, including our requirement for security and respect. Aspects of the Emotional Security theme in the current data are closely aligned with the needs discussed by Kekes, which is discussed later. Based on the data from the non-criminalised group, the Emotional Security theme comprises two sub-themes, each of which is reviewed below.

Authenticity.

I chose to entitle this sub-theme Authenticity to convey the simple, genuine and unthreatening nature of fire, as described by my participants. There is a sense from participants that fire is 'down to earth' and transparent in nature which appeals to them. It is important to reiterate that participants also spoke of the danger of fire use during interview (within the context of respect as discussed under the previous sub-theme). However, to them, this generally seems to be superseded by its positive qualities, probably underpinned by the close 'relationship' they have formed with fire over time. As highlighted earlier, a common feature of participants' narratives is the personification of fire. Its non-threatening nature is akin to the "absence of terror", as described by Kekes (1994; p. 49). Ultimately fire's simplicity contributes to a sense of emotional security because it puts participants at ease. Jane provides an example of this:

Everything's just so nice by candle light. It's just a really warm, friendly glow. My childhood was quite austere really. There wasn't that much fun to go round, and [lighting candles] was nice, cheap fun. It was just really nice to have the candle light, and just be like 'oh, what a lovely treat, look at the lovely light (lines 210 – 215).

Some participants speak of how the simplicity of fire allows them to connect with nature, which seems to help them feel grounded, 'at one', and therefore secure. For example, *"It just feels all quite natural; it's just going back to the natural elements sort of side of things. That feels quite nice 'cause I quite like being outside anyway"* (Amanda, 318 – 320).

There is a sense in participants' narratives that the many demands, the stress of daily living, the unpredictability of life, and our reliance on technology is unnerving. Some participants appear to view fire as an antidote to this. For example, George speaks of holidaying in a farm house with an open fire and no electricity: *"there was something rather nice about the fact that we had no electricity, therefore we had none of the distractions of modern life"* (lines 630 – 631).

Some participants compare the authenticity of fire with sources of heat, and light which they consider to be less 'authentic'. For example, Jim speaks here about a real fire, *"[It] is much more attractive than sterile [heat]; I would find it more sterile if you just put radiators or a convector heater on, or indeed if it's an electric one with that flame effect"* (Jim, 168 – 170).

The simplicity of fire provides an opportunity for participants to recalibrate and rediscover what is really important to them in life, without the distractions of daily living. Some similarities could be drawn between this sub-theme (Authenticity) and the Medicinal sub-theme (within the Immediate Gratification theme discussed above). This is because both broadly relate to fire as a therapeutic tool. However, the two are distinct because Medicinal relates to a short-term 'fix', whereas Authenticity relates to the longer term, cumulative benefit

of repeated fire use and reflects a philosophy for living, in that fire use reminds participants of what is important in life and helps them to feel at ease.

Fire is also viewed as authentic by my participants because it is a *constant* in life, i.e. it has always existed throughout history and will always continue to exist. This means that it is appraised as reliable, and predictable, therefore linking to the overarching theme (Emotional Security). For example, when discussing a fire going out, Alice says: *"it keeps coming back. Fire's gone on forever. You know; fire's gone on forever and the Phoenix rises out of the flames; rebirth and death"* (lines 1055 – 1058). Here, Alice refers to the notion of rebirth. This bears some resemblance to the Hope and Empowerment sub-theme discussed above (within the Inspiration theme), which is also associated with positivity and 'new beginnings'. However, I have included this data as part of an Emotional Security sub-theme because rebirth specifically relates to a *cyclical* or *repetitive cycle* of regeneration. It is this *repetition* (i.e. a predictable pattern), which is fundamental to the Authenticity sub-theme within the Emotional Security theme. This predictability of fire is echoed by George who says:

> *There's a sense of continuity with fires; the notion of continuity, of life, and of the home as it were. So the common focal point of the fire is the same as the focal point of the fire when a family who moved here 300 years ago were living in this house. So that's kind of important, so there's a continuity of human experience that the fire brings out* (lines 615 – 621).

In addition to speaking about fire's continual existence in a general sense, participants also make reference to its constancy in their own life specifically. For example, Jim states *"I've always had bonfires so I'll carry on having bonfires"* (line 417).

Participants' love of the constancy of fire and, thus, their familiarity with it, could be interpreted through a social-psychological phenomena known as the *Mere Exposure Effect* (Zajonc, 1968). Zajonc highlights that we have evolved to be fearful of novel stimuli and so the more we are exposed to a stimulus, the more familiar it becomes, and thus the more we 'like' it. According to Zajonc, familiarity means that fear subsides and is replaced by positive feelings. The Mere Exposure Effect could therefore explain why participants speak favourably of the predictable existence and continuity of fire.

Adaptions of Zajonc's work came later, for example the Two-Factor Model (Berlyne, 1970; Stang, 1973; as cited by Montoya, Horton, Vevea, Citkowitz, & Lauder, 2017). In addition to increased familiarity (which they term *stimulus habituation*) Berlyne and Stang propose a second pathway, which they term *stimulus satiation* (p. 460). This refers to our tendency to become 'bored' by a stimulus the more often we are exposed to it. Whilst data from the non-criminalised participants in this study support Zajonc's initial ideas (i.e. that familiarity is appealing) there is no indication of satiation (i.e. that they are becoming 'bored' of fire). This is inconsistent with the Two-Factor Model and hence refutes Berlyne and Stang's ideas. Also inconsistent with the two factor model are Sluckin, Hargreaves and Colman's (1983) excellent point, which might explain the absence of satiation in the current data. They argue that even familiar stimuli, such as our favourite piece of music, has unfamiliar elements. For example, the music may be re-recorded using different rhythms, and harmonies. I assert that this could easily be applied to fire. There is constant variability in a flame, which impacts on multiple sensory modalities, such as changes in colour, sounds and smells. As such, there is an element of novelty each time we engage with fire, which may explain why there is no mention of 'boredom' by the participants in the non-criminalised group. Therefore, whilst the current data supports the early ideas of Zajonc, it does not support a two-factor framework.

Application of the *mere exposure effect* to the current data raises some interesting questions, and areas for future research. For instance, is the emotional security conveyed by participants specific to fire, or could *any* familiar stimuli have the same impact? It is possible that the answer lies somewhere in between these two alternatives. In other words, perhaps many different forms of familiar stimuli provide participants with a sense of emotional security but there might also be characteristics specifically associated with fire that enhance this. In order to explore this, an examination of the psychological benefit of familiar stimuli in general, when compared to fire specifically, would need to be conducted. For example, this could include an exploration of the impact of exposure to other elements, such as water (i.e. in the form of the ocean). Another interesting line of enquiry for research could be an exploration of the benefits of fire amongst a group of people who engage with it *infrequently*, i.e. for whom it is not as familiar. Research designed to isolate any psychological benefits which are *specific* to fire use versus those which are associated with a broader array of familiar stimuli is important because it could offer direction in developing treatment for arsonists and early intervention strategies. This is discussed in more detail in section three of this thesis. In addition to the Authenticity sub-theme, the reassuring nature of fire also contributes to participants' emotional security through offering reassurance, which is the next sub-theme discussed below.

Reassuring.

There is a sense amongst the non-criminalised participants that fire is comforting, which, in turn, they find reassuring, hence the title of this sub-theme. This is particularly the case in situations where participants may otherwise feel uneasy, such as if they are alone, or when they are feeling 'low'. According to participants, fire is reassuring in a number of ways, each of which are outlined here. For Mary fire provides her with company, for example:

"It's one of the comforts I have when I'm in the house by myself. In a way that central heating wouldn't give it to me; I do think there's life in [fire] and company in it" (Mary, lines 874 – 876).

Here Mary personifies fire and, thus, it has a similar effect as would a human companion. She also conveys a sense of comfort about the fact that fire can indicate that people are nearby. When speaking of childhood memories of her neighbours' homes, she says: *"the houses that were near enough to see; you'd actually know by the [chimney] smoke if someone was at home"* (lines 193 – 195).

For some participants, fire is ascribed the human characteristics of caring and nurturing, for example *"to me it's nurturing; certainly if I'm lighting my candle as that end of the day warming, nurturing; that blanket around, that homely feeling"* (Kimmy, lines 1117 – 1119). Similarly, Elle says *"the fire comes to hug you and the fire brings flowers and everything else. So, it's just a unique thing. It's a unique thing. You feel a lot of love"* (lines 848 – 850). Interestingly, Jane uses very similar language when describing fire: *"it's like a little hug experience"* (Jane, line 454).

In addition to the companionship and nurturance, some participants speak of fire's protective nature. For example:

> *Well purely from a fire perspective, you can see what's near the fire and you can't see what's away from it. So away from the fire is where the potential danger lurks and near the fire; in the light and warmth and security of other people – that's where the safety is* (Connor, lines 997 – 1000).

Whereas nurturance, and protection appear as separate concepts in most participants' narratives, George conflates the two, indicating that nurturance *provides* a sense of safety: *"[Fire] is about nurture and warmth and protection. So it's at the heart of what keeps you safe and what keeps you alive in a way that most modern people probably don't realise or see"* (George, lines 663 – 666).

The data in the Reassuring sub-theme being discussed here shares similarities to some of the data comprising the medicinal sub-theme of the immediate gratification theme discussed above. In the Medicinal sub-theme participants also speak of fire as being relaxing and calming. However, there is an important distinction between the two. The medicinal, sedative benefits of fire are immediate and transient, hence why they sit within the Immediate Gratification theme. The medicinal sub-theme also refers to a *passive* relationship between participant and fire, i.e. fire *acts upon* participants' physiological state. Conversely, the current sub-theme (Reassuring) is concerned with a two-way *interaction* between the participant and the fire. For example, a *"hug",* requires the participation of both parties. It is this interaction, which offers the deeper-rooted and longer term benefits which form the essence of the Reassuring sub-theme and, indeed, the Emotional Security theme as a whole.

Maslow, Hirsh, Stein and Honigmann (1945) address the concept of emotional security, and its antithesis – emotional *in*security, offering a detailed distinction between the two. They indicate that emotionally secure individuals feel they are treated with warmth by others and are trusting, calm and stable. In addition, these people generally consider the world to be a safe place. In contrast, insecure people are tense and anxious. They feel that the world is a cold, uncertain and dangerous place, leading to unhappiness and mistrust. The benefits of fire described by non-criminalised participants in this study are largely consistent with Maslow et als' ideas. Participants see fire as trustworthy and reliable; it provides them with a sense of stability. The comforting interactions, which the non-criminalised users speak of having with

fire convey warmth and affection. Maslow et al consider emotional security/ insecurity to be a trait, i.e. something that is relatively fixed and stable. This aligns with my conceptualisation of emotional security based on this data in that it is a long-term and permanent benefit of repeated fire use.

The concept of emotional security also features within the forensic literature, namely within the GLM (Ward & Brown, 2004). Whilst Ward and Brown do not term it as such, I would argue that emotional security is implicit within a number of their primary human goods, such as *Inner Peace* and *Happiness* (p. 356). It is also reasonable to assume that if emotional security is the *'ultimate'* in terms of psychological wellbeing, this might be what is achieved once all nine primary human goods within the GLM have been fulfilled in a person's life.

There are a number of possible explanations for why fire use provides emotional security for the non-criminalised participants in this study. I assert that this can be, at least in part, explained by evolution. Throughout history fire played an essential role in maintaining life, for instance through providing warmth and light (Karkanos et al., 2007). Fire allowed us to cook food and produce hunting tools (Fessler, 2006). It also served protective functions (Clarke & Harris, 1985) allowing us to sleep more soundly, which enabled dreaming (which is known as Rapid Eye Movement sleep) to evolve (Wrangham, 2010). According to principles of evolution therefore, we may be conditioned to attribute life-sustaining and protective qualities to fire, which could explain the sense of emotional security conveyed by participants. That said, an argument against this interpretation concerns the fact that we have also been conditioned to associate fire with danger. For example, Yin (2016) highlighted that smoke can burn our eyes and sear our lungs. Also, food could be coated in char, which can increase the risk of cancer. In addition, fire typically encourages people to congregate, which can increased the spread of disease.

Curiously, the non-criminalised fire users appear able to reconcile the 'risky' aspects of fire and devote more attention to its life sustaining, positive aspects. As referred to earlier, a reason for this might lie in the fact that this sample of participants were specifically recruited because they are *extensive* fire users who engage with it in an adaptive way. Therefore, they may naturally be more inclined to speak favourably about fire. Other samples, perhaps those with a history of fire-related trauma, for example, may have focused more on the negatives. More discussion on the link between fire use and evolution is provided in section three of this thesis, as is a discussion on why it is important for us to be mindful of this when working with convicted arsonists.

It is important to note that the degree of permanence in emotional security for non-criminalised fire users cannot be established from the current data. Whilst it is conceptualised here as a long-term benefit, it is not clear whether a participants' sense of security would remain intact if they ceased interacting with fire altogether. Similarly, whether the relationship between emotional security and fire use is uni or bi-directional cannot be established from this qualitative data. There is clear evidence that non-criminalised fire use leads to a sense of emotional security. However, it is also possible that one's baseline level of emotional security might then determine the nature of the fire use they go on to engage in (i.e. where it might be situated on the CoFU).

Interestingly, the sense of emotional security conveyed by the non-criminalised participants in the current study is in sharp contrast to many of the characteristics associated with criminalised fire users (i.e. arsonists and fire setters) according to the forensic psychological literature. For example, a number of trajectories, as presented in the multi-trajectory theory of adult fire setting (M-TTAF; Gannon et al., 2012) relate to anger, hostility and emotional instability, which are redolent of emotional *in*security. This could suggest that arsonists/ fire setters are less emotionally secure overall when compared to their non-

criminalised counterparts. This is also supported by data from the criminalised sample in this study (see chapter four). Further exploration into whether there is, indeed, a relationship between fire use and emotional security could present an interesting line of enquiry. More specifically, the *direction* of this relationship could be explored through future research. If the 'level' of emotional security (such as high, moderate or low) is found to be in any way *predictive* of the type of fire use (i.e. its position on the CoFU), this could be a useful consideration when assessing the risk and protective factors of arsonists. For example, if 'low' emotional security is found to be predictive of criminal fire use, those classed as being in a 'low' group could be targeted pre-emptively through therapeutic intervention. The challenge here would be in deciding how to 'measure' emotional security.

Conclusion

In this chapter data from interviews with 12 non-criminalised fire users was discussed. A theoretical framework was developed (figure 3). In the spirit of Grounded Theory (GT), this is preliminary in that it might be amended in the future if further data is collected. This framework presents the data in diagrammatic format in order to show how themes and sub-themes are related to one-another and how fire use is reinforcing. Four overarching themes have been identified in the data from this sample, namely, (a) Immediate Gratification; (b) Inspiration; (c) Self-Concept, and; (d) Emotional Security, each of which have two sub-themes. All themes relate to the psychological benefits of non-criminalised fire use, the first of which (Immediate Gratification) is concerned with transient benefits and the remaining three being longer-term benefits. Although dangers and drawbacks of fire use are discussed by participants, the main emphasis in participants' narratives is on its positive qualities. This might, at least in part, be explained by the nature of the sample, i.e. they all *choose* to engage with fire *extensively*

and, thus, they are likely to do so because fire appeals to them in some way. In this chapter, the themes and sub-themes were interpreted alongside existing research.

The positive elements of non-criminalised fire use resemble concepts discussed in the existing psychological literature such as those featuring in the work of Maslow (1943) and Kekes (1994). There is also overlap with a popular framework in forensic psychology, the GLM (Ward & Brown, 2004). When interpreted through the lens of the GLM, non-criminalised fire use could be considered an adaptive route towards achieving one's goals. On this basis, and if we accept the dimensional conceptualisation of fire use, it is reasonable to assume that fire use which is approaching the criminalised end of the spectrum might be *mal*adaptive. I investigated this through interviews conducted with criminalised fire users, the findings of which are presented in the following chapter.

Chapter Four:

Criminalised Fire Use

Introduction

In this chapter, data from the sample of 12 criminalised fire users are discussed. Eleven of these participants have convictions for arson and one has set fires while in custody and has no convictions for arson. The research question was 'what psychological mechanisms underpin criminalised fire use'? I recruited this sample to provide an insight into the criminalised pole of the Continuum of Fire Use (CoFU). Together, data from both samples in this study represent the two opposing poles (i.e. non-criminalised and criminalised fire use). It is, therefore, imperative that the findings discussed in this chapter are interpreted alongside those discussed in chapter three. The data from this sample was analysed using techniques informed by Grounded Theory (GT), following the steps outlined in chapter two. Three themes were identified, namely, (a) *Immediate Gratification*, (b) *Self-Concept*, and, (c) *Self-Preservation*. Each of these has a number of sub-themes. I have constructed a preliminary theoretical framework to present these themes and the linkages between them (see figure 4). For the criminalised sample these themes reflect a mixture of the positive *and* negative psychological outcomes of fire use. This is in contrast to the themes relating to non-criminalised fire use, which are solely positive (as discussed in chapter three).

It is important to note that there is a difference in the wider context surrounding participants' experience of fire between the non-criminalised and criminalised samples in this study. All participants in the former group were still actively engaged in fire use at the time of interview. Therefore, the narrative of each participant in that sample is quite evenly split between past recollections of fire use and present fire use. On the contrary, the criminalised participants refer mainly to retrospective experiences. This is because, in prison, the

opportunity to use fire is drastically reduced for security reasons (in recent years a ban on smoking in cells was introduced meaning that prisoners have even less opportunity to come into contact with fire). As a result, participants were generally not engaging with fire on an extensive basis at the time of interview. That said, most participants tend to vacillate between past and present tense when discussing their views of fire because they still have some examples of 'current' experiences in the criminalised group. For instance, Clarissa whose excitement at the thought of fire is palpable in the interview, recalls recent memories of November 5th in prison: *"I opened my cell window and I loved it 'cause I could smell the smoke"* (line 130).

Analysis of data from the criminalised sample reveals a number of similarities with the non-criminalised sample. These are briefly summarised here and expounded in section three of this thesis. Firstly, in the themes from both samples there are a mixture of transient and long-term factors linked to fire use. Secondly, the role of reinforcement in explaining *repeated* fire use is relevant across both samples, and thirdly all data focusses on the *process* of fire use (as opposed to only the act of *lighting* a fire). The latter point supports one of the central arguments made throughout this thesis, i.e. that interaction with fire consists of a number of stages and should not only be thought of as the act of lighting a fire. Lastly, fire-related experiences of participants in both samples are variable and span the CoFU. This supports another of my key arguments relating to diversity both in terms of one individual's fire use across their life span and fire use across different individuals. In turn, this is why I assert that fire use is best conceptualised as a dimensional rather than categorical construct. An example of this diversity can be seen in Milly's narrative. She has an arson conviction but she also recalls childhood memories of a coal fire in her family home (i.e. non-criminalised use): *"it were like an old house and having a warm coal fire would make a glow in the room and it seemed really comforting"* (lines 357 – 385). In the preceding chapter, I present my analysis of data from the

criminalised fire user sample. First, a preliminary theoretical framework is outlined, followed by an analysis of the data. As with the framework in chapter three, this is preliminary because the ethos of GT is that a theory should be revised wherever new data is collected.

Data analysis has revealed three themes, each of which has its respective sub-themes. I have developed a theoretical framework (figure four) based on criminalised user data in order to make sense of the themes and to understand how they connect. As with figure three (chapter three), this framework 'tells the story' of how themes identified from the data represent psychological mechanisms underpinning fire use.
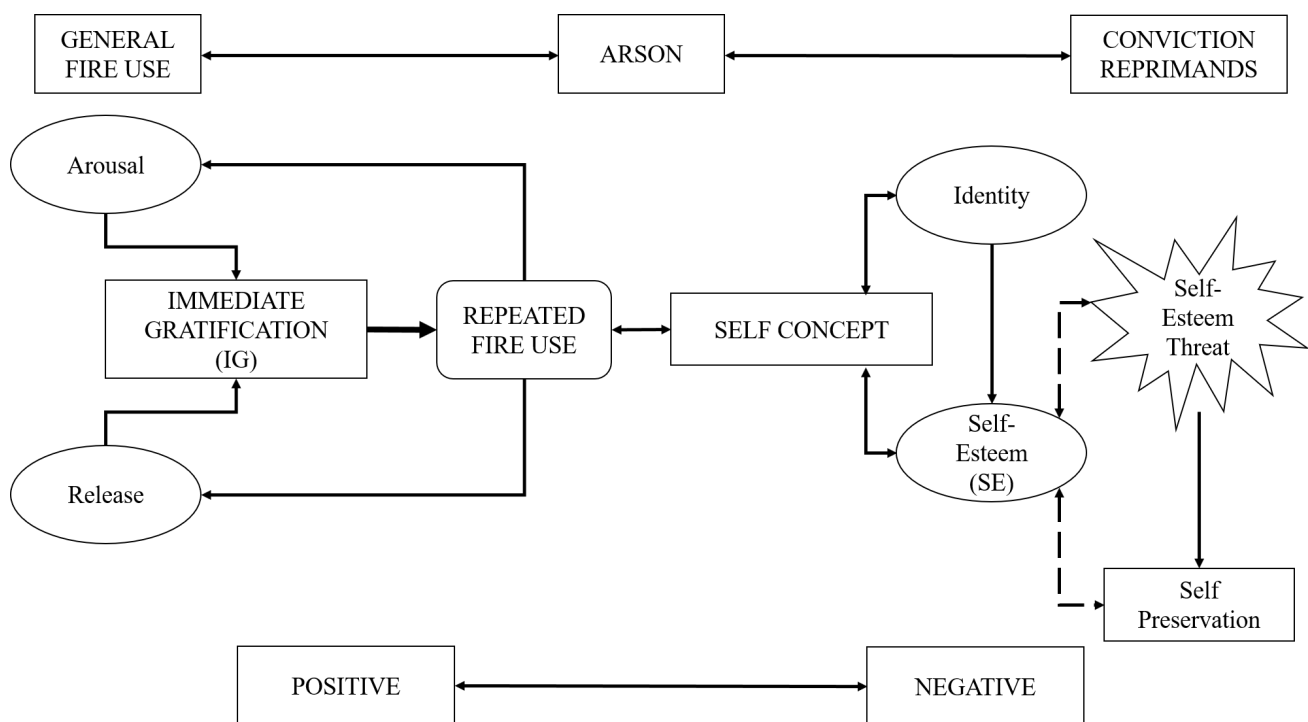
Figure 4 Criminalised Fire Use Theoretical Framework

The framework in figure 4 is grounded in the data and, thus, represents the three overarching themes identified from the criminalised fire user data: (a) *Immediate Gratification*, (b) *Self-Concept*, and, (c) *Self-Preservation*. These themes capture both the positive and

negative impact of criminalised fire use, which is depicted along the bottom of the diagram in figure 4. As I will discuss in this chapter, the positive characteristics (captured in the Immediate Gratification theme and, partially, in the Self-Concept theme) highlight the appeal of fire for the participants which could explain why they have continued to engage in criminalised fire use throughout their life. The last theme (Self-Preservation) offers some explanation of how participants overcome the negatives associated with fire use. Arrows in the framework depict the linkages between themes and sub-themes.

Based on this data, participants delineate their 'general' fire use from their most significant instance/ instances of *criminalised* fire use (i.e. either the arson offence or, for Morris, the instances of institutional fire setting). This partial disconnect is depicted along the top of the framework (figure 4) with the words 'fire use' and 'criminalised fire use' indicating two different sections of the diagram. General fire use includes criminalised *and* non-criminalised examples which has had a mixture of positive and negative influences on participants' psychological state. In contrast, the most significant instance/ instances of criminalised fire use has had a solely negative impact on participants from a psychological perspective.

The psychological mechanisms underpinning fire use, according to data from the criminalised sample, are presented from left to right in figure 4. This starts with a single/ first instance of fire use, which usually occurred in childhood/ adolescence. In the following section each theme is discussed for which the theoretical framework provides a useful structure. I have presented data along with the participants' pseudo-name and the line number/s corresponding to the transcript from which data has been taken.

1.   **Immediate Gratification.**

The Immediate Gratification theme relates to the immediate, short-term and transient benefits of fire and how it helps to regulate participants' emotional state. The title of the theme reflects that effects are satisfying and instantaneous, i.e. occurring as soon as the participant engages with fire. They are also reinforcing, thereby increasing the likelihood of the fire use being repeated. This theme is best depicted as an emotional *state* (something which is dynamic and changeable) rather than an emotional *trait* (a permanent way of being and feeling). There is clear overlap here with the theme of the same name from the non-criminalised group (see chapter three). This suggests that the immediate and positive impact of fire might be universal, i.e. applicable to the entire CoFU. At a sub-theme level, however, there are differences between the Immediate Gratification themes relating to both samples in this study, which are discussed below and expounded in section three of this thesis. The two sub-themes belonging to the Immediate Gratification theme for the criminalised sample are discussed, in turn, below.

Arousal.

This sub-theme is about the immediate impact of fire use on participants' arousal *level*. It is so-called to reflect the fact that this relates to participants' physiological state, in its most primitive form. Here, fire use is an *input,* i.e. the act of engaging with fire directly *influences* participants' level of arousal and it does this through acting as a *stimulant* and/ or *relaxant*. These mechanisms are not mutually exclusive; the majority of participants speak of fire as both stimulating and relaxing at different times.

For some participants, the properties of fire are stimulating. Clarissa, for example, appeared animated when commenting on the olfactory characteristics of fire: *"I just like the smell, like you know something's burning and it just smells nice"* (lines 439 – 444) but more commonly it is the visual qualities of fire which are stimulating, as noted by Rory:

The flames get out of control and change and stuff… the bright orange colour of it was

appealing, even at school with Bunsen burners. I used to sit there and admire it. And like,

when you loosen the valve off [the flame will] it'll go blue and stuff; I was like 'wow

(lines 1330 – 1337).

Similarly, Ellen recalls here to the visual properties of a bonfire: *"it looked amazing to see the*

fire burning in the middle of the field, and it was amazing to see all the flames…" (lines 148 –

149). Some participants are so absorbed by the way a fire looks that they endow it with magical

qualities, for example Milly says: *"the flames sometimes take the shape of a pixie's head or*

something like that, or, an elf's head, and it's flickering" (lines 1603 – 1604). The acoustic

appeal of fire is also referred to by some, such as Tony who notes *"the crackling noise and*

that and the pops and bangs…" (lines 765 – 766) and Rory: *"you put an aerosol can on [a*

fire]; it goes bang [laughs]. That's interesting [laughs]. It makes a big bang and it's exciting"

(lines 38 – 43).

Many make reference to physiological changes whilst engaging with fire, such as

Clarissa: *"my heart just races and stomach's full on giddy. I'll get really giddy and my heart*

will be pumping" (lines 615 – 617). Morris also refers to the wider context surrounding his

criminalised use with respect to the possibility of being apprehended by police: *"the excitement*

of possibly getting caught I suppose; like a cat and mouse game" (lines 683 - 688).

In addition to the direct effect of fire on the sensory system, some participants suggest

that fire is *cognitively* stimulating because it makes them 'think'. For instance, Nelly says:*"*

it's definitively the flame that interests me. That flame can cause so much damage and hurt to

people and, it's mad" (lines 1266 - 1267) and Viv says: *"[fire] fascinates me cause I wanna*

know why you can't control it" (lines 1457 – 1458). Tyrone echoes this sentiment here: *"it's*

like a moth to a flame kind of thing, isn't it? You're drawn if you see [a fire]; you obviously wonder what it is" (lines 762 – 764).

In contrast to stimulation, a second mechanism through which fire use impacts on participants' arousal level is by *reducing* it, thereby acting as a sedative which relaxes and calms. According to the data this effect is associated primarily with participants' *non-criminalised* experiences usually from childhood/ adolescence, such as being in the presence of coal fires in the home, lighting candles and attending organised bonfire events, however some participants do also make reference to criminalised fire use being relaxing. Milly reflects on the coal fire in her family home in this way: *"it would give me warmth and light in the room; it was comforting"* (lines 354 - 355). This is echoed by Tia who speaks of having a candle burning: *"it's calming; I can't run out of candles in my home because they relax me"* (437 – 438). Some participants describe the relaxing effect in more detail, for example Sherry likens watching the flames in a fire to *"mindfulness"* (line 437), which is similar to Nelly's comment here: *"you zone out when you're looking at the fire; you just zone out of all the noise in the background and you're focused on that fire"* (lines 904 - 906).

Participants convey a sense of safety in fire, which also helps them to feel relaxed. For example: *"everything else around me crumbles. But I'm safe next to [the fire]"* (Tyrone, line 2406), and *"I think I turned to [fire] for comfort 'cause I was being abused by various members of the family"* (Sherry, lines 540 - 541) and *"it was like a comfort blanket"* (Sherry, line 562). Interestingly being around fire is described by Milly as *"having a cuddle"* (line 552), which is the same way in which a number of non-criminalised fire users describe it (see chapter three).

The stimulating and relaxing effects of fire for criminalised users is very similar to those described by the non-criminalised group. As discussed in chapter three, these effects could be likened to the physiological effects of drugs on the body. However, I have already highlighted

in chapter three that drugs have a *direct* effect on the brain because they are ingested whereas fire impacts *indirectly* through different sensory modalities.

References to the physiological effects of fire within the arson and fire setting literature offer support for those cited by the criminalised participants in this study. For example, Ó'Ciardha and Gannon (2012) identify that those holding the *fire is mesmerising/ exciting* implicit theory attend to fire-related stimuli and view it as dangerous and exciting (p. 18). Sensory stimulation associated with fire is also noted by Vreeland and Levin (1980), Jackson et al., (1987) and Fineman (1995). As already referred to in chapter three, physiological arousal is a key characteristic of the mental disorder *pyromania.* The fifth edition of the Diagnostic and Statistical Manual for Mental Disorder (DSM-V; APA, 2013) cites "pleasure, gratification, or relief when setting fires" (p. 476) as being associated with the disorder. However, whilst certain DSM-V characteristics might be of relevance to individual cases, being emotionally aroused by fire is not sufficient to secure a diagnosis of pyromania because the diagnostic criteria are very stringent. This may explain the low prevalence rates reported (Rice & Harris, 1991; Richie & Huff, 1999; Lindberg et al., 2005; Odlaug & Grant, 2010; Burton, McNeil & Binder, 2012).

As can be seen from the above examples, there are references to the physiological effect of fire within existing literature. However, this concept is yet to be expanded upon in any detail. Most of what has been written suggests that fire is a *stimulant* but Gannon et al., (2012) also acknowledge its "arousal-reducing" properties (p. 31). A likely reason for the lack of detail on the physiological effect of fire in the literature is that it is yet to be investigated empirically. This is a challenging task but that does not mean it cannot be done. Scanning techniques could be used to monitor brain activation in response to fire-related stimuli. This type of approach has been used in other fields of forensic psychology, such as measuring brain activation to emotional stimuli in psychopathic offenders (Muller et al., 2003).

The findings from the two samples together, along with existing work on arson/ fire setting are important. They suggest that, irrespective of the *type* of fire use (i.e. where it is situated on the CoFU), it has some form of physiological impact which increases its appeal. This presents a challenge for treatment with arsonists, as well as early intervention strategies, which is discussed in section three of this thesis. According to the current data the Arousal sub-theme discussed above represents an *input* in that it impacts on the *level* of arousal. This is in contrast with the next Immediate Gratification sub-theme, entitled, *Release,* which is discussed below.

Release.

I consider this sub-theme to be an *output*. It captures the fact that fire use provides a means through which negative emotions can be released/ reduced, hence the title of the sub-theme. Fire acts as an emotional *regulator* by restoring equilibrium in participants' emotional state, albeit if only for a short time. Participants describe engaging with fire as a useful form of release when they are experiencing 'pent up' emotions, usually in the form of anger, as a result of negative life experiences. This sub-theme is exclusive to the criminalised sample; non-criminalised fire users do not speak of a build of negative emotions (see chapter three).

Viv epitomises the use of fire as a release as she talks about her emotional state immediately prior to the arson offence which she committed: *"I was angry to the point where I didn't know what I was capable of at that point"* (lines 971 – 972). Likewise, when reflecting on her feelings at the time of setting a fire, Clarissa states *"[I] felt angry and pissed off with them [the victims of her fire setting]"* (lines 1339 – 1341).

The concept of a build-up of negative emotions followed by a 'release' is captured within the psychodynamic literature. Breuer and Freud (1893 – 1895/ 1955; as cited in Bushman, 2002) discuss the negative psychological impact of pent up frustration and anger

over time. They use the metaphor of hydraulic pressure within a closed environment in order to describe an eventual explosion of "aggressive rage" (p. 725). Breuer and Freud argue for the therapeutic process of *catharsis,* which involves discharging anger gradually in order to manage negative emotions rather than allowing them to build up over time, culminating in a significant outburst (Bushman, 2002). I consider that some instances of criminalised fire use in this study, including participants' arson offence/s are examples of an 'explosion' of anger. According to Breuer and Freud this could indicate that participants did not have the means through which to release their feelings gradually over time.

From participants' narratives it appears that they consider themselves to be better off once they have 'released' their anger in an aggressive, criminalised manner (i.e. through arson/ fire setting). For example, Tyrone refers to: *"endorphins and trying to make yourself feel better"* (line 1127). However, existing literature suggests that, objectively, this might not be the case. The *Cognitive Neoassociation Theory* (CNT; Berkowitz, 1993) posits that our memory system is comprised of interconnected nodes. In an anger/ aggression-invoking situation, once one 'aggression node' is activated in our memory, other connected nodes are also then activated in the form of a 'domino effect' (Ward, Hudson, Johnston & Marshall 1997). On this basis, Bushman (2002) argues that an outpouring of anger by way of aggressive behaviour actually activates anger-related memory nodes which leads to a perpetuation, rather than a ceasing of angry/ aggressive cognitions and emotions.

I subscribe to Bushman's view. This, along with my critical realist stance, influenced the way in which I have interpreted the release discussed by criminalised fire users. In line with CNT I have interpreted the release of anger through fire setting to be *maladaptive*. This is because it is unlikely to resolve participants' emotional difficulties in the long-term at least in part because it has led to serious reprimands. As such I see Release as a sub-theme belonging to the Immediate Gratification theme to denote *transient* benefits, rather than those which are

longer-lasting. Another fundamentally maladaptive impact of fire use for the criminalised group, which also features as an Immediate Gratification sub-theme is *Resolution.*

Resolution.

This theme captures the use of fire as a form of resolution to interpersonal problems which, in the short-term, makes participants 'feel better'. Participants have employed fire use in their lives (usually in the form of fire *setting*) in order to communicate their needs and resolve interpersonal difficulties, leading to an outcome which they appraise as positive. Like the previous sub-theme (Release), this sub-theme is exclusive to criminalised fire users. According to the data, the non-criminalised participants do not view fire as a social problem solving tool, the possible reasons for which are discussed in chapter five.

Problem resolution through fire setting provides a subjective solution to interpersonal difficulties for criminalised participants. It is included within the Immediate Gratification theme (which relates to *transient* benefits) because this is a maladaptive resolution and, thus, does not help participants in the long-term. Evidence for this lies in the fact that using fire to solve problems has resulted in serious reprimands for participants, thus, only serving to perpetuate other problems.

The way in which fire has served as a subjective resolution is conveyed through participants' narrative. Fire enables them to 'be heard', for example, Tyrone explains: *"I don't like lashing out. I like voicing myself; not aggressively but quite assertively. And the [fire] does it; it makes people notice"* (lines 2300 - 2303). In setting fires, some participants not only wanted to gain attention but were also looking for a specific need to be met, for example Rory says: *"within prison environments, I had to set fire to my cell to get my mental health medication"* (lines 56 - 57). In Viv's case, who has an arson conviction, *threatening* to set a fire was a sufficient resolution on one occasion:

I was in the Segregation Unit and no-one was listening to me. So I just got frustrated and I just said 'I'm gonna burn this place down'. And then they [members of staff] came; they took immediate action (lines 1407 - 1410).

It is possible that, here, Viv's threat was viewed by staff as being particularly credible owing to her conviction history. Interestingly, many participants have, in the past, viewed fire setting (or, in some cases, making threats to do so) to be the *only option* in order to express their feelings and to communicate needs. Morris, an institutional fire setter says:*" [it] just felt like, there's no other way of getting [staff] to my [cell] door"* (lines 1141 – 1143).

The degree of forethought involved in the use of fire as a problem solving tool is striking in the narratives of some participants. For example, when speaking of her arson offence Viv describes considering various options to aggress towards her victim but decided that setting fire to his home was the optimal choice because *"I know fires do more damage; in my head it was sort of the fact that I could hurt someone without physically hurting someone"* (lines 926 – 929). Similarly, Sherry explains that she committed arson in order to secure a prison sentence because she was struggling to survive in the community. This was a conscious decision, as conveyed here:

Then I started thinking about the type of crime I wanted to do. Arson wasn't my first thought. I did think about shoplifting [but]I thought 'no, that wouldn't work' so then I thought, 'I know - fire' (lines 1037 – 1050).

As well as enabling their needs to be met, namely through gaining attention from others, fire use offers a route to 'escape' interpersonal problems. Zane, for example, used it to end a

relationship which he no longer wanted to be in: *" by setting that fire [I knew] we were never gonna get back together. We couldn't be back together"* (lines 1348 – 1350). Similarly, Ellen wished to help her sister to escape an abusive relationship: *"the only thing I could get him away with was by me [setting the fire]"* (lines 415 - 416). For Rory, fire use had financial benefits in the past, through enabling him to coerce the payment of drug debts from others. He said *"I used to chuck petrol in people's letterboxes and set it on fire to, put fear in 'em, so we could get money"* (lines 633 - 634). Milly also sought an escape but this was on an emotional, rather than physical (literal) level. Her partner committed suicide in their flat, which she continued to live in and she set fire to it because she *"wanted to, sort of cleanse [the flat] from all the evilness"* (lines 1213 - 1217). As mentioned above, the use of fire as a resolution to interpersonal problems is maladaptive for participants because, in every case, it has led to subsequent problems. Ellen's use of fire to drive her sister's partner away, for example, did nothing to protect her sister in the long-term, either from the same partner or other abusers. Rather, it led to Ellen being issued with a prison sentence. Nevertheless, to participants, the setting of fires has served as a convenient solution which temporarily impacts on their emotional state in a positive way.

Existing research has found arsonists and fire setters to be socially inadequate and to lack social skills (Vreeland & Levin, 1980; Jackson, et al., 1987; Noblett & Nelson, 2001), which could explain why the participants in this study speak of maladaptive problem solving strategies. Furthermore, Gannon et al., (2012) note that fire setters have deficits in problem solving, emotion regulation and social skills, which increases the likelihood of maladaptive behaviour. Gannon et al describe a scenario whereby the fire setter feels unheard and hopeless, leading them to consider that the setting of a fire is "the only viable option" (p. 32).

It is possible that criminalised participants have selected fire use as a problem solving mechanism during their life because of previous fire-related experiences and the process of

reinforcement. If they observed its positive effects, over time, fire use may have become one of their 'go to' solutions. What is not clear from the current data is the proportion of interpersonal problems addressed through fire use when compared to other maladaptive solutions, such as direct interpersonal violence or drug use. It cannot, therefore, be established whether fire use is participants' *preferred* problem solving strategy or just one of many.

Arousal, Release and Resolution discussed above are all sub-themes of the Immediate Gratification theme. The whole premise of the Immediate Gratification theme, i.e. short-term gains in relation to the criminalised sample is consistent with existing literature. Research indicates that offending is related to the inability to resist short-term, immediate gratification. For example, *the general theory of crime* (Gottfredson & Hirschi, 1990) is predicated on the notion that offenders lack self-control and this has been supported empirically (for example see Pratt & Cullen, 2000). These self-control difficulties, and their possible origins, are explicated in chapter five. The Immediate Gratification theme captures how fire use impacts on participants' *immediate* emotional state. Its influence is positive in this respect, although it is transient and has not contributed to long-term emotional health, because of the reprimands received as a result. Also of relevance to emotional health is the second core theme, Self-Concept. This is discussed below.

2.   Self-Concept

This theme relates to participants' identity and how they appraise it. All participants explained during interview that fire has been 'part of them' for most of their lives in terms of direct and vicarious experiences and it also has a bearing on self-esteem. I have chosen to entitle this theme Self-Concept because the name encompasses two important aspects, namely, *who* a person thinks they are and *how* they feel about being that person. It is important that both of these elements are covered in order to capture the data from this sample.

There is clear overlap between this theme and that of the same name based on the data from the non-criminalised sample. The structure of the themes are very similar across the two samples, i.e. they both comprise the sub-themes *Identity* and *Self-Esteem.* This suggests that Self-Concept might apply to the CoFU as a whole, which is expounded in section three of this thesis. Despite the obvious similarities between the Self-Concept theme for the two samples in this study, there are some nuanced differences which are explained below.

Identity.

This sub-theme is so-called to convey the sense that, for criminalised participants, fire has contributed to who they are. It is subtly different from the non-criminalised sub-theme of the same name in terms of its level of abstraction. Identity for the non-criminalised group is an abstract construct concerned with the way in which participants define themselves, i.e. their *perception* of who they are. For the criminalised group, however, this sub-theme relates to identity in a more concrete sense. More specifically, this sub-theme captures the 'mental imprints' left by past experiences of fire use and how these became integrated into participants' memory structure. Within the current sub-theme, therefore, identity and memory are considered to be inextricably linked.

Through their narratives the criminalised participants relay many memories of fire, some of which are positive. For example, Ellen recalls family time in her childhood: *"it was lovely then; the memories that I had then. Just sitting in my nan's living room and [I] just used to watch the fireplace"* (lines 235 - 236). Similarly, Milly recalls *"I used to lie in front of the fire; I used to stare at it all the time when I was laid on the rug at the side of the fire"* (lines 274 – 277).

Conversely, some memories are negative and even traumatic in nature. Ellen, for example also speaks of an arson attack on the home she shared with her mother which occurred

when she was a teenager: *it was so terrifying. My mum was shaking like a leaf. She was absolutely terrified. I had to go in a women's refuge because of it"* (lines 481 – 482). Some participants experienced the traumatic potential of fire vicariously through being told stories and seeing evidence of the harm it can do. For example, prior to his birth, Tyrone's father and siblings were involved in a serious accident whilst carrying a gas cannister. His father told him stories of this event and, thus, a vicarious memory was formed:

> *[My dad] bought a gas tank and walked past an open fire, and there was a crack in the side of the actual gas tank, and it exploded in his hands. It burned him badly, and one side of my sister's face down here was burnt [gestures to own face]. And my brother's hand was burnt* (lines 293 - 296).

Some participants were 'warned' of the dangers of fire by relatives as they grew up, which has therefore influenced their beliefs and knowledge. For example, Viv recalls her mother *"nagging about fires in the past. Like, when you leave something in the oven and it's burning"* (lines 658 – 659). Likewise, Tia's grandmother regularly *"drilled [the dangers of fire] in [to me and my siblings]"* (line 394).

For many participants criminalised fire use was a 'normal' part of life as they grew up, thus explaining why it became so entrenched within their memory structure. Tony, for instance, speaks here of daily occurrences on his home estate: *"there'd be empty houses on fire or there'd be cars on fire or there'd be a fire built"* (line 377). A similar environment is conveyed by Nelly who says of her home area: *"it's a rough estate There's certain people like, on that estate that are clowns and set people's cars on fire"* (lines 426 - 432).

As well as being surrounded by it in their home environment, many participants gained *first-hand* experience of criminalised fire use from an early age. For example, Morris describes

how he and his friends used it to combat boredom: *"just standing around a bit fed up and nothing to do[and so we] burnt [our] name[s] into a fence so it goes black, like a tag"* (lines 470 - 472). Rory's first experience as a young child led to serious consequences *"I first experienced messing around with a lighter; stood there flicking it away and, without noticing, there's a gown [hanging] on the back of the door, and it's gone up [in flames]"* (lines 363 – 371). According to my interpretation of the data, early experiences of criminalised fire use (either vicarious or direct), are likely to have contributed to the way participants are stigmatised and, thus, to their identity as criminalised fire users. In turn, this is likely to have perpetuated their own criminalised interactions with fire. This idea is reminiscent of the premise of labelling theory. Rocque, Posick and Paternoster (2016) explain that, according to this theory, those who come to think of themselves as delinquent or criminal are more likely to engage in that type of behaviour. In the contemporary criminological literature, much has been written about the role of identity or, rather, a *change* in identity in desistance from crime. This is expanded upon below.

The basis of the Identity sub-theme for the criminalised group is that memories have formed of their early experiences of fire, which, in turn impacts on who they are as adults. This idea has support in the literature. Much has been written on autobiographical memory, i.e. our memory for events and how this contributes to the knowledge we hold about ourselves and our "self-narratives" (Rose Addis & Tippett, 2004; p. 56). Gillis (1994) argues that memory and identity are inextricably linked because our identity is sustained by our memories and likewise, our assumed identity can actually determine what we remember (p. 3). However, he notes the fluidity of both constructs, as well as their subjective nature. This subjectivity is also a point referred to by Schechtman (2011) who discusses the distinction often drawn between "actual memories and delusory memory-like experiences" (p. 67). There is ample support for the subjectivity of memory, for example in the legal arena concerning eye witness testimony

(Wells & Olson, 2003; Fradella, 2006; O'Neill Shermer, Rose & Hoffman, 2011). This demonstrates that our recollections cannot always be relied upon to be entirely accurate. I would argue that whether this is considered a problem is dependent on the purpose of the recollection/s being made. In the aforementioned example of eye witness testimony, for instance, inaccurate recognition of a crime is a very serious matter and has very important consequences. However, in other cases the way a person *interprets* a particular memory is more important than 'accuracy'.

None of the memories recited by criminalised participants can be corroborated and this, according to some, could be a limitation in relation to the Identity sub-theme. However, I would argue that seeking to establish the veracity of participants' claims about fire-related experiences would not only be futile but would also be inconsistent with the core values underpinning this, and arguably all, qualitative research. Ultimately, this study is concerned with 'giving a voice' to my participants. In line with my critical realist stance, I have interpreted the data in order to extend my understanding of underlying structures and mechanisms and, I believe that it can tell me "something" about the phenomena of interest, which is fire use in this case (Willig, 2013; p.16). I have not taken the data at the same "face value" as would those who adopt a naïve realist approach (Willig, 2013; p.16) but that does not mean that I am inclined to routinely 'doubt' or cast judgement on what my participants have shared. My participants' memories tell me something about how they view fire and, thus, how it is integrated with their identity, irrespective of how 'accurate' their memories are. In other words, for my participants, it is the way they *interpret* their memories of fire use which has formed part of their identity and, thus, whether a memory is factually correct is irrelevant to this sub-theme and, indeed, to this study.

If we accept that memory and identity are linked then the work of Burke and Stets (2009) and Stets and Burke (2014) mentioned in chapter three could be applied to the Identity sub-theme based on data from the criminalised fire user group. As already outlined in chapter

three, they propose three types of identity (Role, Social/ Group and Person), the first two of which apply well to the Identity sub-theme data for the non-criminalised sample. In the case of criminalised participants, however, 'Person' identity, is most applicable because this is concerned with the characteristics which we think make us unique and one's memories of fire-related experiences surely do this. The fact that Burke and Stet's identity types apply in slightly different ways to the two samples in this study supports my observation that there are nuanced differences between the Identity sub-theme for non-criminalised and criminalised fire users.

In addition to influencing identity through becoming part of the memory system, fire also influences criminalised fire users' *appraisal* of who they are, i.e. their self-esteem and, hence, this is the second sub-theme.

Self-esteem.

For the purpose of this research self-esteem is loosely defined as participants' feelings about the person they are. This sub-theme captures a range of fire-related experiences (not only those which are criminalised in nature) thus supporting my argument that fire use is a dynamic and heterogeneous construct. It is important to note that, for the criminalised participants, the 'boost' to self-esteem which is gleaned through interacting with fire is a *temporary state* of being. This is because it is constantly 'under threat', which is explained below under the final theme (Self-Preservation). In contrast, for their non-criminalised counterparts, repeated 'boosts' to self-esteem result in a stable and healthy level of self-esteem and, thus, it is discussed in chapter three as a long-term way of being. This is explained in more detail in chapter six.

For many criminalised participants, interacting with fire serves to *enhance* self-esteem by providing a sense of togetherness, cooperation and belongingness, and this applies to examples of non-criminalised fire use as well as the predominant criminalised experiences in

this sample. This sense of solidarity is conveyed by Nelly, for example, who speaks here of cooperation within her family when preparing a fire: *"We're all there together as a family. We all collect all the bits of wood from around the back of the farm and things. Or me and my brothers carry big logs together"* (lines 250 – 253). Similarly a sense of solidarity with others is conveyed by Clarissa who attended bonfires at her care home as a child and reflects that at those times she felt *"part of something"* (lines 396 - 397). Self-esteem enhancing experiences of solidarity are not only confined to non-criminalised examples of fire use. Tyrone, set fire to a house along with his brother and described this as an opportunity to 'bond': *"I wanted to be with [my brother]. A brotherly little thing; it was brothers being brothers"* (lines 1484 - 1486).

There is a sense that many participants gain kudos through criminalised fire use, which also has a positive impact on their self-esteem. For example, both Tony and Zane speak of jumping into fires in the presence of their friends as adolescents: *"it's something that is between you and your friends; 'who got the closest [to the fire]'. Bragging rights"* (Tony, lines 810 - 811) and *"a male bravado thing. 'I've got bigger balls than him', you know. And people were jumping through [the fire]"* (Zane, lines 812 – 813). Similarly, Tyrone recalls setting fires as an adolescent because it could *"make [him] look cool"* (line 1614).

The positive impact of status and reputation amongst our contemporaries is supported by psychological literature, although much of this is written from the specific perspective of gang membership (for examples see, Klein 1996; Klein & Maxson, 2006). Since definitions of the word 'gang' vary greatly, however, (Esbensen, Winfree, He, & Taylor, 2001; Spergel, 1995) it is reasonable to assume that research findings could be extrapolated to apply broadly to anti-social groups of young people and, thus, to the experiences of the criminalised fire users referred to above. The use of fire in order to gain status from peers is relevant to the 'Relatedness' primary human good as outlined in the Good Lives Model (GLM; Ward & Brown, 2004). For participants, it was a way to build social bonds in adolescence but from a

GLM perspective, criminalised fire use would be considered a maladaptive route through which to pursue this primary human good (Purvis, Ward & Willis, 2011). Therapeutically, therefore, those whose criminalised use of fire is underpinned by a desire for 'relatedness' could be supported to seek alternative, pro-social routes through which to achieve this. Treatment and intervention strategies are discussed in section three of this thesis.

Participants not only gain self-esteem through 'impressing' their peers with fire use, but also through feeling that they have 'done a good job'. Milly and Sherry, for instance, reflect on *non*-criminalised examples of where they built and maintained fires in the family home as adolescents: *"I were chuffed because it would give me warmth and light in the room"* (Milly, lines 354 – 355) and *"[it] felt good cause I liked to help; I felt appreciated"* (Sherry, lines 964 – 966). Similarly, two participants allude to the pride they feel because they prevented a fire-related accident from occurring in the past: Sherry recalls an instance in the prison kitchen in this way: *"I actually stopped a fire from happening; stopped someone from getting hurt by a hot pan"* (lines 644 – 646) and Zane reflects on a time he extinguished a fire which had been lit by a toddler at a friend's home: *"I felt like a proper hero"* (line 968). Rory, on the other hand, conveys a sense of pride about *criminalised* fire use through boasting that he was the mastermind behind an idea to set fire to the homes of those who were in drug debt to his group of associates:*" setting fires and that to people's houses; I've seen it from someone else. I [introduced] it into the group I was in"* (lines 1713 – 1715). Likewise, when reflecting on a field fire which she set in her teens, Nelly says: *"I couldn't wait to tell [my peers]"* (line 1460).

Through 'doing a good job', both in terms of criminalised and non-criminalised fire use, participants in this sample found a sense of mastery. This relates to another of the primary human goods in the GLM (Ward & Brown, 2004) - Excellence in Work and Play (p. 356). There are parallels here with the non-criminalised sample in that they also allude to mastery/ excellence (as described in chapter three). However, the route through which excellence is

achieved is different between the two samples. The non-criminalised group have chosen solely *adaptive* fire-related behavior in order to succeed and gain this sense of mastery, whereas the criminalised group follow both adaptive *and* maladaptive trajectories to achieve it. This has implications for the treatment of arsonists/ fire setters and also for early intervention strategies and is discussed further in section three of this thesis.

The sub-theme discussed above (Self-Esteem), and more specifically its maintenance, is directly relevant to the final core theme applicable to the criminalised fire user data - *Self-Preservation*.

3.   Self-Preservation.

The sample under review in this chapter are predominantly criminalised fire users. However, as discussed earlier, the two themes analysed above (Immediate Gratification and Self-Concept) capture the heterogeneity of participants' fire-related experiences because there are examples of fire use spanning the full breadth of the CoFU. In contrast, the final theme relates solely to extensive *criminalised* use. For 11 of the participants this is in the form of arson offences and for Morris this relates to non-convicted institutional fire setting. As already described, participants in this sample delineate between fire use generally (including their criminalised and non-criminalised past experiences) and their most serious forms of criminalised fire use specifically (i.e. their arson offence/s and institutional fire setting). In other words, there is a sense that participants view these as two separate entities.

According to my interpretation of the data, the subjective consequence of participants' criminalised fire use presents a 'threat' to self-esteem by making them 'feel bad' and so they implement strategies to help mitigate this threat. These strategies are *cognitive* in nature meaning that they relate to the type of beliefs participants hold about their behaviour. The final theme in this data set (Self-Preservation) captures the cognitive efforts made by participants to

'protect' their own self-esteem in the short-term. The cognitive self-preservation strategies employed by participants in order to protect self-esteem may also form part of a process through which the individual experiences a change in their identity in the longer-term. Crucially, according to criminological literature, a change in identity or self-perception is an important factor in understanding desistance (Maruna, 2001; Stone, 2016; Rocque et al., 2016).

Maruna (2001) has written extensively about desistance as a function of identity change. He writes about the process of *narrative repair* whereby those who have committed crimes attempt to 're-write' their personal narratives as a way of shifting their identity from one which has been stigmatised to one which is pro-social. On this basis, ideas about a change of identity and the tenets of labelling theory work hand-in-hand. According to Maruna, these *redemptive narratives* are a means of 'correcting' the stigmatisation suffered on account of having committed a crime. In turn, the re-biographing of one's identity from anti-social to pro-social means the individual is more likely to behave in a pro-social way in the future, i.e. to desist from crime (Rocque et al., 2016). In reporting on the Liverpool Desistance Study Maruna (2001) identifies five types of redemptive narrative, a number of which are reminiscent of what my own participants shared in the current study (expounded below).

. The Self-Preservation theme is unique to the criminalised sample in this study because it relates specifically to how participants feel about having an arson conviction or, in Morris' case, how he feels about being viewed as an 'institutional fire setter'. All participants in this sample emphasise the severity of arson as a crime in general. For example, Tia is of the view that arson is 'worse' than murder:

If you murder someone, if you go and you think 'I'm gonna murder these two, three

people, five, six, seven [people]', you know, you're gonna murder them seven people. But

if an arsonist wants to set fire to, say a big shopping centre, it can spread and kill

thousands (lines 878 – 881).

Similarly, participants acknowledge the severity of an arson *conviction*: *"it's a stigma - who's gonna trust a person if they [have been convicted of arson]"* (Sherry, lines 138 – 144).

According to my interpretation of the data, being a convicted arsonist or, in Morris' case an institutional fire setter, is difficult to accept for them. This leads to a phenomenon called *Cognitive Dissonance*, which is defined as "the existence of non-fitting relations among cognitions" (Festlinger, 1957, p. 3). In other words, acknowledging oneself as a criminalised fire user conflicts with how participants would like to view themselves and, thus, this presents a threat to self-esteem. In response to the threat, self-preservation strategies are employed which act as a buffer to restore and maintain self-esteem. This is a cyclical process in that, over time, participants' 'criminalised status' repeatedly threatens self-esteem and so they have to repeatedly call upon strategies to preserve it.

It is important to explain that Self-Preservation essentially represents a cluster of post-offence/ post reprimand cognitive strategies. I conceptualise these strategies as beliefs which have formed *as a result* of participants' convictions and/ or reprimands. They are, in essence, a relatively 'surface-level' cognitive form of coping mechanism. They are not synonymous with *changes in self-perception* because this is a longer-term process which requires more than just a shift in the way someone thinks. That being said, in my view, over time, positive changes in cognition might influence and improve one's self-perception. I have identified two specific self-preservation strategies in the data, which correspond to the two sub-themes discussed below.

Validation.

This sub-theme represents the process through which participants convince themselves that they no longer pose any risk of criminalised fire use. It is so-called because the end result of this process serves as internal self-validation for participants that they are 'good' and law-abiding people. I have identified two interrelated mechanisms in the data within this sub-theme.

Firstly, participants self-affirm that fire *setting* holds no residual temptation. For example, Milly says: *"[arson is] something that I won't be doing again"* (line 151), Zane says: *"I will never ever - whether people believe it or not - I will never ever set fire to anything ever again"* (lines 1461 – 1462) and Morris says: *"as time's got on I've, I lost interest [in fire setting]"* (line 600). Similarly, Tony says *"if I see a car on fire I wouldn't give it two thoughts. I'd walk past it; I wouldn't even give it a second glance"* (lines 660 – 661).

Secondly, participants state their dislike, hatred and mistrust of fire in general, thus affirming that they have no desire to be near to it again. For example, Rory says: *"Fire is the enemy [laughs]. That's what I've come to think on now"* (lines 621 – 622), which is echoed by Tia: *"fire, is evil in disguise; it's like the devil. It comes in many forms, like evil"* (lines 632 - 634). Some participants, such as Tia, personify fire in order to emphasise the extent of their hatred towards it: *"[A candle flame] just looks really innocent, doesn't it? It's, like, really innocent on its little candle; all cute and smelling nice. If that knocked over [it] could just burn down a full house"* (lines 625 - 627). Similarly Milly says: *"it does look beautiful. And you wouldn't think it could be so destructive and it's so dangerous. So it's really deceiving"* (lines 326 – 328). Sherry speaks more directly about the dangers of fire: *"[it] can kill people. Or leave them badly scarred. It can destroy families[and] friendships. Get life in prison"* (lines 352 – 356), as does Zane: *"it's a killer. It can kill people"* (line 164). Interestingly, there are similarities between the way in which participants think of fire here and one of the redemptive scripts identified in the Liverpool Desistance Study (LDS; Maruna, 2001). Participants in the

LDS spoke of a bad 'it', i.e. something external to themselves which might be responsible for their past criminal behaviour. In this case, the bad 'it' is fire.

Participants' conviction that they have no residual interest in setting a fire, along with their hatred of it as an entity, serves as self-validation that they are no longer a risk. This is a mitigating factor in their eyes which enables them to make amends for past behaviour by not repeating it in the future. In turn, this serves to protect self-esteem and might contribute to a longer-term change in identity. This validation is one form of self-preservation. The other, captured by the second sub-theme, is *Distance.*

Distance.

This sub-theme pertains to the process of mentally 'distancing' oneself from one's fire-related convictions and/ or reprimands, which protects participants from feelings of shame, thus, helping to maintain self-esteem. Three types of distance-based cognition appear in the data, which I have termed: (a) denial/ excuse making, (b) arson hierarchy, and (c) advocation. These are expounded below.

Some participants deny and/ or seek to excuse aspects of their criminalised fire use. For example, Sherry minimises her motivation for committing arson: *"I really didn't do it intending to harm someone"* and Rory adopts a victim stance*: "what did I get for my troubles [committing an arson offence]? Like, that's what I think of. It's led me into a life of being in prison"* (lines 1633 – 1635), as does Tony who remarks on the fact that being in prison has separated him from his son: *"just heart-breaking that this has happened and he's losing his dad for a fucking four [or] five year sentence"* (lines 335 – 336).

I have termed another of the self-preservation cognitions arson hierarchy. This is where participants make moral judgements about the severity of arson and arsonists so that, comparatively, they present more favourably. This process involves retaining a mental

hierarchy about the severity of different 'types' of arson. For example, Zane indicates that to be a 'proper' arsonist, one must be aroused by fire which he claims is not relevant in his case: *"I'm gonna be labelled now as an arsonist. Yes, I've committed an arson attack but I'm not an arsonist. I didn't get no excitement from it. I wasn't happy about it"* (lines 198 – 200). Similarly, participants hold views about what is acceptable and not acceptable in regards to fire use as explained by Tyrone here: *it's like having your own, safe level of arson. My cut off point's endangering lives"* (lines 1855 – 1864). Clarissa says: *"I've never actually set a house on fire. I wouldn't because that's going over the top"* (lines 743 - 744). In a similar vein, Ellen identifies that if the perpetrator of an arson offence *"did it just to scare someone, then, it's not a big deal"* (line 221).

Advocation is another form of cognition employed by participants in order to distance themselves from their criminalised behaviour. Here, participants adopt the role of advocate for fire safety and arsonists, which detracts from their own criminalised behaviour. Rory, for example, says that fire-related deaths are *"something that the government needs to look at"* (line 952) and he also makes reference to fire safety in prison: *"I bet if there was a fire inspector; I bet if they looked at the paperwork it's all just been ticked off and they'd find that ['policy and procedure' has] not actually been followed"* (lines 1097 – 1099). Sherry speaks here of the importance of education relating to fire safety: *"when you're lighting a fire you're not thinking about the fact of where the smoke's going. And how it's gonna affect other people. It's lack of education"* (lines 277 – 281). Likewise, Zane comments that there is only *"one day"* of fire education for school children, adding *"I think [the danger of arson/ fire setting] needs to be hit home"* (line 445). The notion of adopting an advocacy role is reminiscent of another of the redemptive scripts highlighted in the LDS (Maruna, 2001). Maruna's participants spoke of positive futures through making a commitment to developing others. The

way in which my participants speak 'on behalf' of arsonists could be an example of their wanting to improve the situation for others on the basis of their own experiences.

According to this data set cognitive self-preservation strategies in the form of (a) denial/ excuse making, (b) arson hierachy and (c) advocation are employed by participants to mitigate a 'threat to self'. This type of strategy features very widely in existing literature but there are a variety of terms used to describe it. *"Mechanisms of defence"* are referred to in the psychanalytic literature to describe "the ego's struggle against painful or unendurable ideas or affects" (Freud, 2018, p. 42), with the ego being the part of one's consciousness which is 'in touch' with reality and which regulates the demands of the impulsive id and the moralistic super-ego. A review of Freud's work on the mind and its constituent parts is beyond the scope of this thesis but it is important to highlight that the self-preservation concept applied in relation to the current data set features in different forms across many disciplines and sub-disciplines, which adds weight to the idea.

In Criminology, the notion of 'protecting' oneself from psychological harm is referred to as *neutralisation* (Sykes & Matza, 1957). This refers to techniques involving "justifications" or "rationalisations" (p. 666). Interestingly, Sykes and Matza assert that the techniques not only occur post-offence, in order to protect the offender from self-blame and the blame of others, but they can also *enable* the commission of an offence. They cite five neutralisation techniques including 'denial of responsibility' and 'denial of victim', which overlap with the self-preservation strategies discussed above in relation to the current data.

In forensic psychology, the self-preservation strategies referred to here could be likened to what is termed *Cognitive Distortions,* loosely defined as "offence supportive attitudes or beliefs" (Ward et al., 1997; p. 498). Cognitive distortions have received a great deal of research attention, particularly in the field of sexual offending (for examples, see Blumenthal, Gudjonsson & Burns, 1999; Howitt & Sheldon (2007; Pervan & Hunter, 2007), however, a

precise definition is lacking and we know little about their underlying functions/ mechanisms (Ward et al., 1997; Maruna & Mann, 2006; Blake & Gannon, 2008). There is some disagreement about the relevance of cognitive distortions at different points in an offence chain (i.e. pre-offence, during the offence and post-offence; Blake & Gannon, 2008). Ward et al., (1997) and Ward (2000) suggest that they exist *prior* to an offence, and, thus, drive the offence, whereas others argue they develop *afterwards* (Abel et al., 1984; Maruna and Mann, 2006).

In relation to the current data I conceptualise the relationship between self-preservation techniques and criminalised fire use to be circular, at least in the short to medium term. Fire use might initially provide a 'boost' to self-esteem but, later, the consequences of this behaviour poses a threat. In order to manage this threat, self-preservation strategies are implemented, which might then restore self-esteem whilst also enabling the individual to engage in further criminalised behaviour. This process is depicted in figure 5 below. Whether pre-offence cognitions supportive of fire use were present from the inception of participants' criminalised behaviour is impossible to establish from the current data set. This would have required a longitudinal prospective approach in which cognitions were 'measured' before the offence took place and then again afterwards.
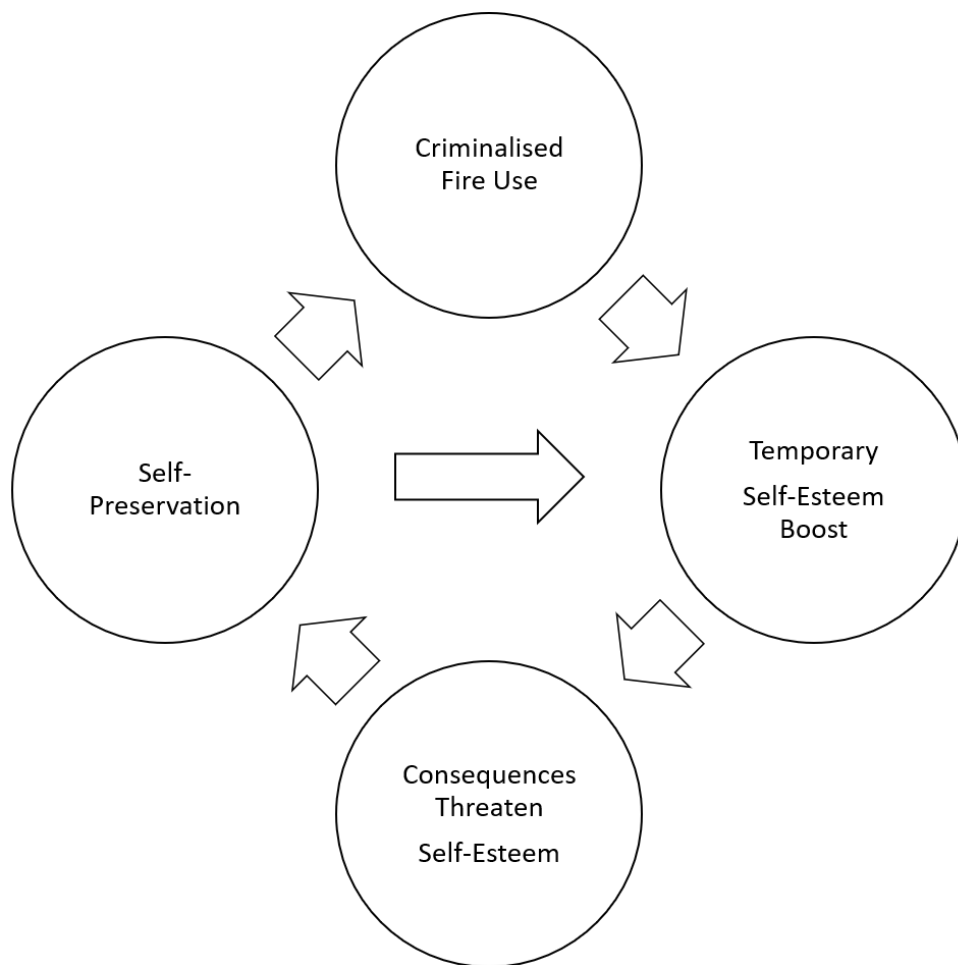
Figure 5 The Fire Use – Self-Esteem Cycle

Owing to the volume of literature addressing the use of cognitive strategies to ease the psychological impact of one's criminalised behaviour, I had a number of options when considering what to entitle this theme. The decision to employ the term 'Self-Preservation' was made for a number of reasons. The Freudian term 'Defence Mechanism' is very specific, in that it relates solely to Freud's conceptualisation of the id, ego and super-ego and so it would have been too narrow to use as the title for this theme. I also discounted the other terms referred to above. In my view, neutralisation strategies implies that a neutral emotional state is the end result, but I do not consider this to be the case for my participants because the process of threat to self and self-preservation is cyclical. I also discounted the term cognitive distortion because

I consider that this implies a conscious 'faulty' process. I am not convinced that the strategies employed by my participants are *conscious.* Furthermore, I agree with Maruna and Mann (2006) who suggest that "excuse making" (p. 156) is a normal mechanism which is, perhaps unfairly pathologised in offenders. In other words, I do not see the self-preservation strategies identified in the current data set as a wholly dysfunctional process. They offer some benefits for my participants in helping them to 'feel better'.

To reiterate, whilst the self-preservation strategies highlighted above act as a buffer for participants' self-esteem, over time, it is possible that they could become increasingly engrained and, therefore, contribute to a *gradual shift in self-perception*, i.e. personal identity and, thus, desistance from crime. This, however, is a longer-term process. Desistance cannot be 'measured' in my current sample because participants were serving prison sentences at the time of the interviews. In order to do so would require a longitudinal follow-up of the sample which is beyond the scope of this thesis. That being said, Rocque et al., (2016) undertook a novel quantitative study and found that positive changes in identity are, "a strong and robust predictor of desistance from crime" (p. 45)**.** On this basis, alongside the work of Maruna (2001), it is possible that the cognitive strategies discussed above will form part of the process of desistance for my participants.

Conclusion

In this chapter data from interviews with 12 predominantly criminalised fire users has been analysed and discussed. I have developed a preliminary theoretical framework (figure 4) which presents the data in diagrammatic format in order to show how themes and sub-themes are related to one-another and how fire use is reinforcing. Three overarching themes were identified in the data from the criminalised sample, which capture a mixture of the positive and negative outcomes of fire use. Immediate Gratification captures the transient benefits on

emotional state. Self-Concept covers both the short and longer-term impact of fire use on participants' identity and self-esteem. Self-Preservation relates to the cognitive techniques used to protect the self from the psychologically damaging, long-term impact of criminalised fire use. Overall, for criminalised participants fire use has a mixture of positive and negative effects in the short term. Conversely, the longer-term effects are solely negative. Each theme, along with the sub-themes were outlined above and interpreted alongside existing research.

All participants in this sample speak, not only of their criminalised experiences but also of non-criminalised experiences of fire use. Their narrative is predominantly retrospective (often reflections on childhood/ adolescence) owing to the fact that the opportunity to light fires is restricted in secure settings where they were all located at the time of interview. That said, many participants also made reference in our discussion to more recent experiences and to the views they currently hold about fire.

There is far less of a positive emphasis to the themes in the criminalised fire user data set when compared to the non-criminalised participants' data. In the latter, there are many parallels between work by Maslow (1943) and Kekes (1994) on their conceptualisation of 'good life' and there are examples of behaviour which could be interpreted as an adaptive means through which to achieve primary human goods according to the GLM (Ward & Brown, 2004). There are less parallels to draw on from the criminalised fire users' data because they are in prison and, thus, have arguably not yet achieved a complete and healthy life.

In section two of this thesis, data from the two samples, and the resultant theoretical frameworks was analysed. In order to develop a complete picture of the CoFU, the data must be synthesised, which is the focus of chapter five in the final section of this thesis.

Section Three:

Analysis, Applications and Implications

In the following section of this thesis, further analysis of the data is presented. In chapter five, data from the non-criminalised and criminalised samples is combined in order to present an overarching theory, which is entitled the *continuum of fire use theory (CoFUT)*. Each of the themes within the CoFUT are reviewed and analysed from an interdisciplinary perspective. Chapter six considers the potential application of the research findings in the criminal justice system (CJS), with an emphasis on arson reduction and prevention.

Chapter Five:

The Continuum of Fire Use Theory (CoFUT)

Introduction

In section two of this thesis analysis of the data from interviews with criminalised and non-criminalised fire users was presented. I have argued so far that fire use is best represented from a dimensional perspective, i.e. one which depicts non-criminalised and criminalised use as sitting at two ends of the *same* continuum. This means that they must be viewed as one whole entity, rather than two separate categories. As such, data from the two samples must be synthesised in order to form one overarching explanatory theory of fire use.

Within this chapter I will present an overarching theory, which is grounded in the data from this research, entitled the *continuum of fire use theory (CoFUT)*. The CoFUT contributes to an explanation of repeated fire use by citing three key psychological factors which underpin it, according to the data from this study. The CoFUT was derived from a process of synthesising data from the participant samples discussed in section two of this thesis. This involved identification of the following across the themes and sub-themes from the two samples: (a) similarities in *content*, such as the immediately gratifying qualities of fire, which are referred to by both samples; (b) similarities in *processes*, for example, the process of reinforcement which is common to both samples, and finally; (c) areas of *contrast*, for example, the nature of the long-term effects of fire use (these are positive for non-criminalised fire users but negative for the criminalised users). It is important to highlight that the CoFUT is predicated on the idea that human interaction with fire is a *process* rather than an event. Rather than focussing solely on the act of lighting a fire, the theory represents a set of stages which we go through when interacting with fire. These stages are expounded in chapter six.

In developing the CoFUT I have considered what has been written about psychological theories, in general. Three *levels* of theory have been noted. According to Ward, Polaschek & Beech (2006)*, level I* theories are multi-faceted in that they draw on multiple perspectives/ constructs, which typically might include biological, cognitive, social and psychological factors. *Level II* theories focus on a single factor and, *level III* theories, focus on a single instance of behaviour, such as a particular criminal offence. The CoFUT best fits the description of a *single factor* (level II) theory in that it focuses, solely, on the *psychological* aspects of fire use. It is not a level I theory because it only considers *one* type of factor (psychological) and it is not a level III theory because participants' experiences across the lifespan are captured, rather than only one instance of behaviour.

Although multi-factor (level I) theories are often considered the most comprehensive, Ward, Polaschek and Beech (2006) state that there is little to be gained from comparing the different levels of theory in attempt to decide which is most favourable because they are each very different. In judging the contribution of the CoFUT, specifically, much hinges upon how we assess what makes a theory 'valuable'. The CoFUT is the first to address both non-criminalised *and* criminalised fire use as a dimensional construct. As such, it offers a novel perspective. I will go on, in chapter six, to discuss how the CoFUT can be applied in forensic practice, and, thus, why it is of value. That said, it must be emphasised that the CoFUT represents only the first stage of theory building in this area. It should be explored, modified and added to as and when new data becomes available (see chapter six).

It is important to note that the development of the CoFUT has been informed by my critical realist philosophical stance. In other words, the key psychological mechanisms underpinning fire use highlighted within this theory were identified through my *interpretation* of the data. In this chapter I will present an analysis of the CoFUT themes, alongside existing literature. There is a difference between the analysis of themes offered in section two of this

thesis and the analysis below. In section two, the analysis is based on data from each sample individually and, thus, sample-specific themes are discussed. The analysis in section two draws on specific empirical research and psychological frameworks. In this chapter the analysis is based on the CoFUT as a whole. It reflects a broader interpretation of the findings based on sociological and psychological perspectives. That said, I will still make reference to specific empirical research where it is relevant and necessary to do so. The broader perspective offered in this chapter lays the foundations for chapter six where implications and applications of the findings from this research are considered.

The CoFUT consists of three core themes: (a) *Transitory Emotional State*, (b) *Self-Concept* and, (c) *Psychological Wellbeing*, each of which are discussed below, along with their respective sub-themes. I posit that these themes are the three psychological mechanisms which underpin repeated fire use and that they can explain fire use spanning the whole CoFUT, or at least that which extends towards the two poles. As with the provisional theoretical frameworks presented in section two of this thesis I have chosen to present the CoFUT diagrammatically (see figure 6) in order to depict the linkages between themes and sub-themes. Each element of the theory (i.e. each theme) is analysed below.
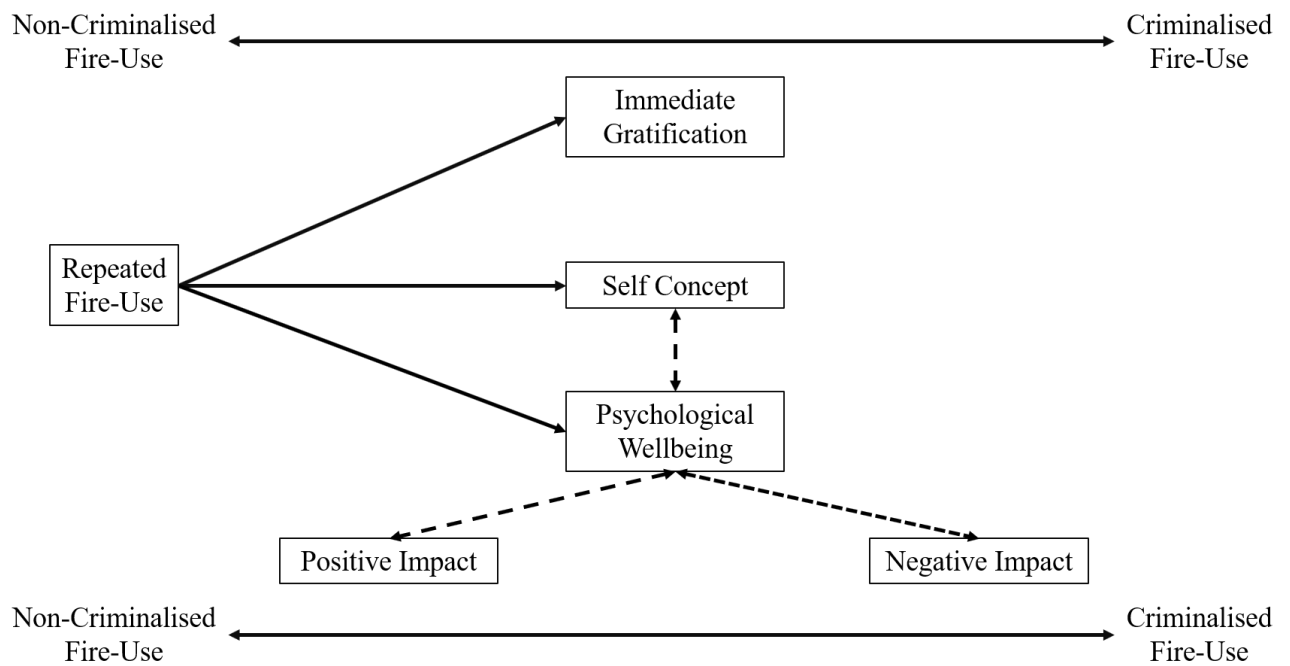
Figure 6: CoFUT

1.   Transitory Emotional State.

This CoFUT theme is based on the Immediate Gratification theme identified in both data sets (i.e. from the non-criminalised and criminalised samples). As described in section two of this thesis, the original Immediate Gratification themes both refer to the short-term effects of fire use on participants' emotional state. Therefore, this is also the case for the Transitory Emotional State theme which is being discussed here. It is separated into two sub-themes: *Direct* and *Indirect* which reflect nuanced differences in the nature of the pathway between fire use and the resultant emotional changes.

Direct.

This sub-theme is so called because it describes the way in which fire use *directly* and *immediately* affects participants' physiological state. For example, through engaging with fire, participants report an immediate physiological change, such as an *"adrenaline rush"* (Connor, non-criminalised sample, line 120). The use of the term 'direct' here is not to be equated with how drugs directly impact on the body through being consumed as I referred to in section two. Rather, it means that there is a clear relationship between an interaction with fire and physiological changes and that nothing mediates this relationship. This sub-theme combines the Medicinal and Arousal sub-themes from the non-criminalised and criminalised samples respectively and is concerned with stimulating and sedating qualities of fire.

Although Medicinal and Arousal both relate to a changing physiological state, they were named differently in the original theoretical frameworks (outlined in section two) to account for the subtle variation in how participants in the two samples describe physiological changes. Non-criminalised participants describe, explicitly, the *therapeutic benefits* of the shift in their physiological state. For example, Harry, a fire entertainer, insightfully speaks of the *"flow"* state he enters into when fire spinning[20]: *"I have experienced different states; like being in 'the zone'"* (lines 1025 – 1029). In contrast, criminalised participants speak in more concrete terms about how their physiology alters when engaging with fire, without necessarily recognising how or why the changes are of benefit to them. For example, Clarissa says: *"my heart just races and my stomach's full on giddy"* (line 615).

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[20] **Fire spinning:** A form of entertainment where the individual holds two short chains (usually one in each hand) which are alight. The individual spins the chains in the air in order to move the flames around, which creates a spectacle.

It is possible that differences in the way that participants from the two samples describe changes in physiological state could be reflective of differences in intellectual functioning. Historically, research has indicated that intellectual disability (ID)[21] in fire setters is over-represented (Lewis & Yarnell, 1950; Rix, 1994; Lindberg et al., 2005). Difficulties in communicating are associated with ID and, thus, one could reasonably surmise that fire setters might have communication difficulties. This could explain why the criminalised participants in this study speak in concrete terms when describing their physiological state. Having said this, Chaplin and Henry (2016) argue that there is insufficient evidence on which to draw any conclusion about rates of ID in fire setters and they suggest that the picture is complex. For example, they cite a study by Barron, Hassiotis and Banes (2004) which found that only just over 21% of offenders with an IQ[22] below 80 have a history of fire setting and, of those who do, most also have other offences on record.

Owing to the lack of clarity from research into ID and fire setting, it would be premature to conclude that the criminalised participants in this study are less able to communicate verbally when compared to their non-criminalised counterparts because of intellectual functioning deficits. That said, even though there is disagreement about ID diagnoses in fire setters, there is a consensus in the academic literature that offenders, in general, achieve less educationally than do non-offenders (Vacca, 2008). This may apply to the criminalised sample in this study who are all offenders (i.e. convicted of criminal offences). Therefore, even if we cannot trust

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[21] **Intellectual Disability**: Characterised by deficits in general mental abilities, such as reasoning, problem solving, planning, abstract thinking, judgement, academic learning, and learning from experience. These deficits result in impairments of adaptive functioning, such as a lack of independence and social responsibility, including interpersonal communication (APA, 2013, p. 31).

[22] **Intelligence Quotient (IQ)**: A score designed to reflect human intelligence.

the veracity of findings linking ID and fire setting, educational level might offer some explanation for the differences in the way concepts are described by the two samples. There is, however, an important caveat to consider here. I did not collect data on the educational achievements of my participants, nor on whether they have ever been diagnosed with ID. It cannot be assumed that research findings on offenders or, specifically, arsonists/ fire setters are necessarily applicable to the 12 criminalised fire users in this study.

As discussed above, differences in how immediate physiological changes are articulated by non-criminalised and criminalised fire users are evident in the data. Nevertheless, the commonality is that these changes all come about because of sensory stimulation. More specifically, the properties of fire, such as light, warmth and a 'crackling' sound appear to interact with the senses. There is an absence of literature specifically addressing why we are drawn to fire from a sensory point of view but exploring evolutionary perspectives more generally could provide answers. Within the evolutionary literature, the term *aesthetic pleasure* refers to our compulsion to look at art, sculptures and landscapes (Matthen, 2014). Matthen highlights that, ostensibly, it makes little evolutionary sense to immerse ourselves in aesthetic pleasure by looking at something for an extended period of time because it might distract us from potential danger. However, Tooby and Cosmides (2001) argue that it does have some benefit. They write about the importance of *internal adaptions*, meaning the development, calibration and fine-tuning of our neuro-cognitive system, i.e. the brain (p. 15). According to Tooby and Cosmides, and others (for example, Hekkert, 2006) engaging in behaviour which activates our senses, such as aesthetic pleasure, can sharpen neural networks, which is vital for survival. I argue that all of this applies just as well to fire as it does to the art, sculptures and landscapes which Matthen wrote about. This is because fire has a similar, if not a more pronounced, impact on our senses and so it surely activates our neural networks in the same way.

To summarise, the work of Tooby and Comides (2001) highlights a potential survival benefit of looking at visually interesting stimuli, such as fire, for an extended period of time. According to Tooby and Cosmides this type of stimuli maintains and sharpens vital neural networks in the brain. Furthermore, the same authors argue that we are primed to pay attention to anything that helps us survive. I argue that this also applies well to fire. As discussed in chapter one, its role in the evolution of our species is manifold, including the cooking of food (Wrangham et al., 1999; Wrangham, 2010; Wrangham & Carmody, 2010), warding off danger (Clarke & Harris, 1985; Goudsblom, 1992) and the crafting of tools (Pyne, 1998; Fessler, 2006). It therefore makes sense that the sensory stimulation provided by fire should be appealing to us because it not only develops neural networks but it offers a range of other life sustaining benefits.

I believe there are also other, non-evolutionary, explanations for why participants find the sensory stimulation of fire appealing. The sociological concept of *edgework* is applicable to aspects of the data, namely that which are concerned with the stimulating (rather than relaxing) properties of fire. This concept compliments, rather than refutes, the evolutionary point of view, as expounded below. According to Lyng's seminal work published in 1990 edgework is concerned with "voluntary risk-taking behaviour" (p. 852). He defines "edgework activities" as those which feature a "clearly observable threat to one's physical or mental well-being or one's sense of an ordered existence" (p. 857). This can include any 'risky' activity with which an individual chooses to engage, such as diving or rock climbing. Interestingly, it can also include professions such as firefighting or combat soldiering. Edgework is concerned with the exploration of boundaries, such as those between order and chaos, sanity and insanity or consciousness and unconsciousness. I would assert that the former certainly relates to fire use, albeit to varying degrees. The unpredictable nature of fire (which many participants refer to) means there is a fine line between order and chaos in any instance of fire use, irrespective

of where that sits on the CoFU. It is this fine line which many participants allude to as being a source of stimulation. This is represented within the Transient Emotional State theme of the CoFUT.

Lyng is intrigued by the appeal of risk taking, particularly in societies which tend to discourage it. He suggests that edgework might be a response to "institutional constraints" (2005, p. 5). Thus the motivation for risk-taking is the experience of *risk* per se and the emotions which it evokes, such as exhilaration. This is in contrast to some psychological perspectives which view risk-taking as being motivated by an 'end goal' (Lyng, 1990, 2005). Lyng's ideas apply to at least some participants in this study. For them, the emotional experience of taking fire-related risks, such as feelings of excitement and adrenaline is a central motivation. Participants in both samples allude to 'pushing the boundaries' when describing some of their experiences. Whilst data from the current study is evocative of Lyng's work, risk taking does not appear to be the *only* motivation for my participants. Other factors also play a part and this varies from person to person. There is likely to be variation in how one interprets 'the edge' and in what is considered an 'acceptable' level of risk – these are both highly subjective concepts. The diversity in fire use amongst participants in this study might reflect this subjectivity, along with the degree to which one is willing to 'push' one's own limits.

It is important to highlight that the concept of edgework is not without criticism, although a comprehensive review is beyond the scope of this thesis. In brief, some have noted that Lyng's work is primarily concerned with activities which are most common amongst white, middle class men (Newmahr, 2011) and, thus that edgework is a masculinised concept. In attempt to circumvent this issue researchers have specifically explored *women's* experiences of edgework activities (for example see Laurendeau & Sharara, 2008). However, Newmahr suggests that this approach does not address the fundamental issue which is that edgework might apply entirely differently to women. She argues for a reconsideration of the types of

boundaries we discuss in relation to women, as well as the exploration of less masculinised forms of risk taking. Notwithstanding the critiques, the concept of edgework is a useful framework through which to view the Transient Emotional State theme within the CoFUT. The definition of edgework certainly resonates with fire use, i.e. it is a universally 'risky' behaviour to varying extents (perhaps dependent on where it sits on the CoFUT).

Not only do participants find sensory stimulation from fire appealing but also, more specifically, they like the fact that the stimulation is *immediate*. An evolutionary perspective might also explain this, particularly for criminalised forms of fire use. A lack of patience and a preference for immediate gains had benefits for our hunter-gatherer ancestors because they had to consume food whenever it was available owing to uncertainty about when they would next be able to eat (van den Bos & de Ridder, 2006). Our species has therefore been primed to find instant rewards attractive. Over time, of course, our brains have evolved to become much more complex and we are now better able to balance the appeal of immediate gratification with longer-term consequences. At least this is true if our cognitive functions operate as they should, which is not always the case (discussed in more detail below).

It is clear from the data that all participants enjoy the physiological changes associated with fire. Interpreting these benefits from an evolutionary perspective, alongside the concept of edgework, as summarised above helps to explain why these changes are cited by *all* participants in this study and are not sample-specific. It is possible that the impact of fire on emotional state is universal because we are inherently programmed to be attracted to it but also because we each have a desire to 'explore our edge' in certain situations. If this really is universal then it has implications for the treatment of arsonists, which is expounded in the following chapter.

As presented in the CoFUT, stimulation of the senses is one mode through which fire use impacts *directly* on all participants' emotional state. Another mode is relevant only to the

criminalised sample in this study. As discussed in chapter four criminalised participants view fire use as a way to *release* pent up negative emotions, namely anger. This release results in a physiological change which means that the tension immediately dissipates and participants feel 'better'. Within the CoFUT I conceptualise this as a *short-term* (i.e. transitory) shift because it is likely that the anger stems from deep-rooted issues, which may well re-emerge at some point. Furthermore, as discussed in the previous chapter, using fire as a means through which to release emotions has not proven to be helpful for my participants in the long-term. Rather, it has led to imprisonment and/ or reprimands.

The idea that criminalised fire users experience unresolved anger has support in the general offending literature. All participants in the criminalised sample have used fire aggressively in the past (evidenced by the damage it causes to property and/ or people). According to Sell (2011) aggression is often underpinned by anger. The potential origins of deep-rooted anger are manifold but may be related to factors such as mental illness and trauma, which are common in offenders (Coid, Kahtan, Gault, Cook & Jarman, 2001; Fazel & Danesh, 2002; Brugha et al., 2005; Payne et al., 2008; Slade & Forrester, 2013). Multiple theoretical perspectives on anger have been offered in the academic literature but a detailed review is beyond the scope of this thesis. One perspective draws on evolutionary work. The *recalibrational theory (RT)*, for example, posits that anger has survival value because it can change the way others (i.e. those on the receiving end) behave towards us. This happens because anger acts as a prompt to the other person to consider our interests more favourably (Sell, 2011). Despite its potential value, as outlined in chapter four, a 'build up' of anger can lead to emotional/ psychological difficulties (Breuer & Freud, 1893 – 1895/1955; as cited in Bushman, 2002), which arguably explains why criminalised participants have eventually sought outlets for this through the maladaptive use of fire in the past. This is conceptualised as a short-term solution, which is why it features as part of the Transient Emotional State theme

in the CoFUT. There was no mention of an accumulation of negative emotions by the non-criminalised sample in this study. Nor did they speak of expressing any such feelings through the use of fire. Crucially, this highlights a nuanced difference between the two samples, i.e. criminalised fire use in the form of arson/ fire setting is associated with an anger release, whereas non-criminalised forms of fire use are not. One interpretation of this is that the non-criminalised participants are more psychologically healthy, and, thus, are less likely to hold onto anger than their criminalised counterparts. This is explicated further below.

Thus far, the Transient Emotional State theme within the CoFUT has been introduced, along with its first sub-theme (Direct). Fire use also has indirect effects on participants' emotional state and this is represented through the second sub-theme – *Indirect.*

Indirect.

The data discussed in section two of this thesis demonstrates that the way in which fire impacts *indirectly* on participants' transitory emotional state differs between the predominantly non-criminalised and criminalised fire users. These differences are captured within the CoFUT. For the non-criminalised users, engaging with fire provides escapism in the form of a temporary change of identity into someone powerful and 'in-control'. This is a transitory shift to the 'ideal self' and has a positive impact on emotional state, which lasts for as long as they are engaging with fire. In this instance, fire has an *indirect* impact on emotional state because the connection is mediated by a temporary identity change, as depicted in figure 7 below:
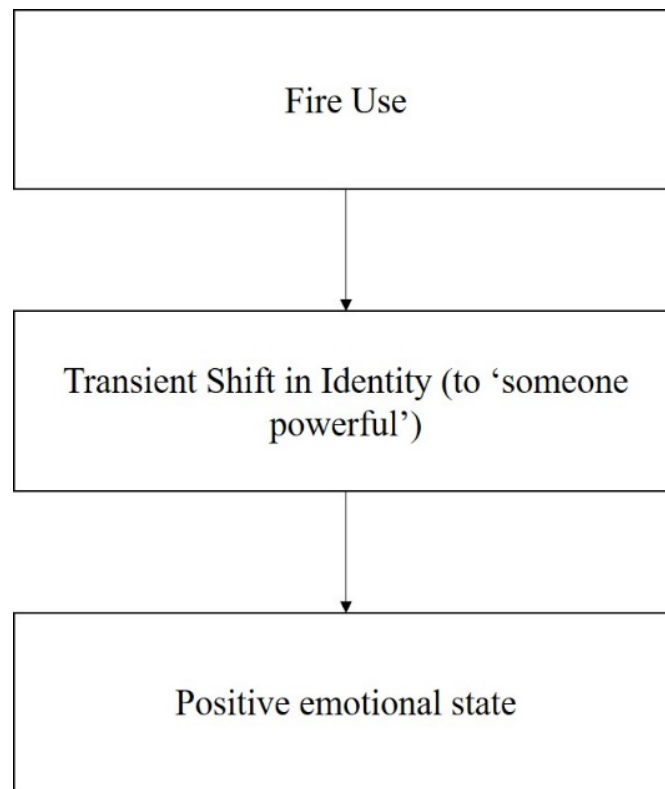
Figure 7 Non Criminalised Fire Use and Positive Emotional State.

Criminalised participants do not refer to fire use as a form of emotional escapism, but they do report a different type of *indirect* effect, namely the temporary resolution of interpersonal problems. In this case, fire use has an indirect impact on emotional state because the mediating factor is resolution of a problem, as depicted in figure 8 below. As discussed in chapter four, I assert that this resolution is short-lived. Even in cases where the initial problem was subjectively solved, the use of fire created other problems for the criminalised participants in this study, such as involvement with the criminal justice system.

As discussed in chapter four, the idea that the criminalised participants employ maladaptive problem solving skills (i.e. fire setting in this case) is consistent with psychological research which has drawn links between social problem solving deficits and crime (Ross & Fabiano, 1985, as cited in Antonowicz & Ross, 2005; McMurran et al., 2001; Nezu et al.,

2003). More specifically, research indicates that arsonists and fire setters are socially inept (Vreeland & Levin, 1980; Jackson et al., 1987; Noblett & Nelson, 2001). It makes sense, therefore, that the criminalised fire users in this study have opted for a maladaptive problem solving strategy which they have been previously primed to use, in the absence of more advanced interpersonal skills. Interestingly, there is no indication that the non-criminalised participants have used fire as a problem solving strategy. This could reflect the fact that they have fewer problems or, perhaps more likely, that they deal with them more efficiently.
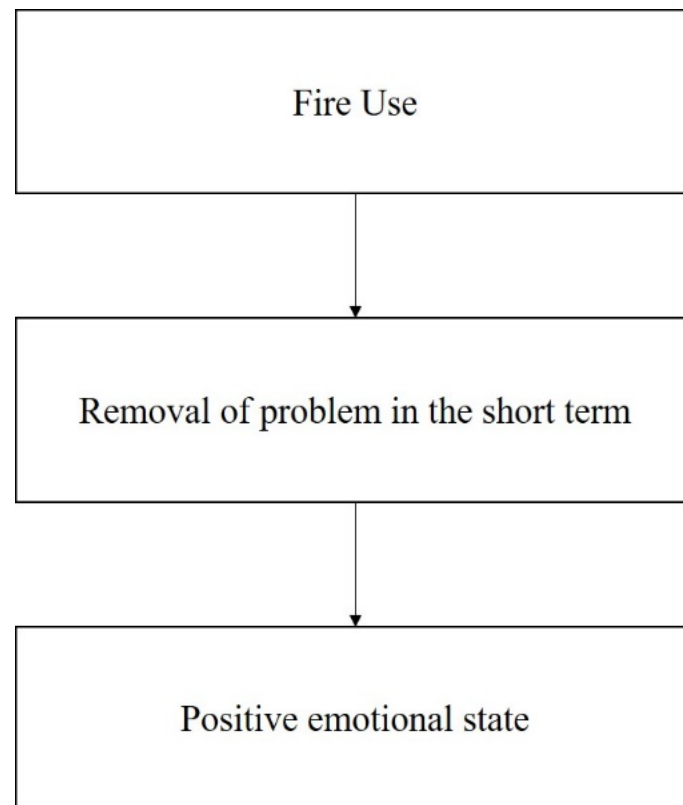
Figure 8 Criminalised Fire Use and Positive Emotional State

Whether via a direct or indirect route, fire use has an immediate but transient physiological effect on participants' emotional state as captured within the first theme in the CoFUT. These effects are appraised as positive by participants. In turn, this positive appraisal

serves to reinforce the behaviour (fire use), thus, meaning it is likely to be repeated. The concept of reinforcement features in theoretical work on arson and fire setting. For example, Vreeland and Levin (1980; as cited by Gannon et al., 2012) suggest that fire holds instantly reinforcing consequences in the form of sensory stimulation (pp. 112 – 113). Furthermore, Jackson et al. (1987) suggest that the positive and negative consequences of "fire play" and "fire setting" (p. 181) have two possible reinforcing outcomes. An *intrinsic* outcome relates to the "arousing properties of fire" (p. 182), whereas an *extrinsic* outcome is an external consequence, for instance, gaining attention from others. This work can be applied to the CoFUT; the Direct sub-theme in the Transient Emotional State theme is akin to the intrinsic rewards referred to by Jackson et al., whereas the Indirect sub-theme relates to extrinsic outcomes. Overall, the fact that the concept of reinforcement features in existing literature offers support for its role in the CoFUT.

Summary of the Transient Emotional State theme.

The Transient Emotional State theme in the CoFUT combines data from both samples and elucidates how fire impacts on users' emotional state *temporarily*, both *directly and indirectly*. The result is appraised as positive in that it helps them to feel better, albeit in the short-term. The reinforcing effect of feeling good could be a perpetuating factor in extensive and repeated fire use in that users are driven to seek out further positive feelings in similar ways as before. Transitory Emotional State relates to the short-term impact of fire use on participants, whereas the remaining features of the CoFUT concern longer-lasting effects. These are discussed below.

2.   Self-Concept.

The second CoFUT theme, *Self-Concept,* is based on the themes of the same name from the two separate samples. Universal to all participants is the sense that fire forms part of who they are. The fact that this is *non-sample specific* supports the continuum conceptualisation and indicates that self-concept may be one of the core psychological mechanisms underpinning all fire use.

It is important to highlight that the participants in this study are all *extensive* fire users. It is possible that they feel connected to fire because they engage (or have engaged) with it on a frequent basis. It could be argued, therefore, that this theme will not necessarily apply to those using fire less frequently who might not have the same relationship with it. However, to counter this argument, a recent study which I supervised into 'moderate' fire users, i.e. those using fire infrequently also identified Self-Concept as a theme (Lee, 2019). This adds weight to the possibility that it is, in fact, a universal factor underpinning human interaction with fire. That said, more research is needed in this area because infrequent fire use still comes in many forms (spanning the CoFU)

In the CoFUT, the Self-Concept theme is separated into two sub-themes. The first of these refers to how participants define themselves; in other words, their *Identity* and the second is *Self-Esteem.* The two sub-themes are intrinsically linked because how we define ourselves and how we appraise ourselves both contribute to an overall impression of who we are. Each of these is discussed below.

Identity.

As discussed in chapters three and four there are some nuanced differences between how fire forms part of the identity of predominantly non-criminalised and criminalised fire users. For the former, fire contributes to their *perceived social identity* through helping them

to understand their roots and their role/s within society. For example Mary says of fire: *"it's in my bones"* (line 768). Conversely, for the criminalised users, fire has a more visceral impact through forming part of participants' memory structure, which is elucidated by one of Sherry's recollections here: *"when I was a kid, I used to fall asleep looking at the flames, watching the flames dance"* (lines 442 – 443). In other words, non-criminalised participants speak of the link between their identity and fire use on a more abstract level than do the criminalised group. That is not to say that fire does not form part of the non-criminalised users' memories too. I believe that it does. However, they speak of it on a 'deeper' level than do criminalised users. These differences might, again, be a manifestation of the variations in participants' ability to express themselves verbally. As discussed in relation to the previous CoFUT theme, this might be due to a disparity in intellectual functioning, or, at least, educational level across the two samples.

The integration of fire into participants' identity is important in understanding their repeated use. Within *self-verification theory* (SVT; Swann, 2012) it is postulated that we strive for stable, accurate beliefs about the self because such beliefs give us a sense of coherence and make us more predictable to ourselves and others. If fire was a 'normal' feature of participants' lives from an early age it makes sense, through the lens of SVT, why it has become part of their identity. This could explain why people who use fire frequently/ extensively are motivated to continue to do so. If fire is already part of who they are and, according to SVT they strive to maintain a stable identity over time, then they will be motivated to continue to engage with it.

Interestingly, the issue of cultural background has been raised with respect to identity. Some have suggested that identity consistency is not as fundamental a need in collectivist East Asian cultures where context plays more of a role (Suh, 2002) and flexibility and adaptability is valued (Church et al., 2008). For example, Choi & Choi (2002) highlight that East Asians are more tolerant of contradiction and uncertainty than Americans, including the way in which

they view the self (p. 1508). In disciplines such as sociology there is significant debate about identity and culture, which is beyond the scope of this thesis, but it is important to note that these interlinking topics are complex. The individual cultural background of my participants was not a focus in the current study and so I did not seek diversity in my samples on this basis. This is a limitation and is discussed in chapter six. It is possible that if this research was repeated to take account of ethnicity and the cultural background of participants, different findings might emerge with respect to fire use and identity. Also I need to be mindful that my own cultural background, social class, age and gender may have impacted upon how participants in the study expressed their thoughts to me. Furthermore, it is also quite possible that these factors influenced how I interpreted the data. The second of the self-concept sub-themes within the CoFUT, which is related to identity, is entitled *Self-Esteem.*

Self-Esteem.

This sub-theme reflects a parity across the two sub-themes of the same name from the non-criminalised and criminalised samples. Both samples speak of improved self-esteem as a result of engaging with fire. The definition of self-esteem is manifold and multi-layered. I subscribe to that offered by Gilovich, Keltner and Nisbett (2010) which is "the positive or negative overall evaluation we have of ourselves" (p. 91). Self-esteem is an umbrella term and has a number of sub-types, including *state* and *trait* self-esteem (Gilvoch et al., 2010), which is pertinent to the interpretation of the current findings. According to my data, participants experience a 'boost' to self-esteem each time they engage with fire. This 'boost', does not necessarily result in long-term self-esteem and so it might be more appropriate to describe it as *state* self-esteem, i.e. a temporary inflation which occurs whilst the individual engages with fire. Having said this, inflation of self-esteem on a *repeated* basis might lead to a healthy *trait* level of self-esteem (i.e. a permanent way of being) and this applies to non-criminalised fire

users. Conversely, for the criminalised participants, self-esteem is constantly threatened by the cognitive dissonance described in chapter four which means it is less stable over time and, thus, it likely remains a state.

The work of Crocker and Wolfe (2001) adds credence to the notion that fire use is connected to participants' self-esteem. Crocker and Wolfe write about *contingencies of self-worth,* in which they suggest that self-esteem is dependent on how we perceive ourselves to perform in the domains of life which we most value. There are multiple life-domains, but it is specifically those which are important to *us* which have the greatest impact on our self-esteem. Crocker and Wolfe discuss domains such as family and religion, however it is plausible to assume that domains could vary from person to person and might include fire use if this is something which is subjectively important to a person. Participants in this study were specifically selected because of their interest in, and extensive use of, fire. It stands to reason, therefore, that fire might feature within a domain which they particularly value in their lives. If that is the case then it might explain why fire use is connected to self-esteem, according to Crocker and Wolfe's ideas. This raises the question of whether fire would be so influential to self-esteem in the case of people who place less value on it. Interestingly, in the study by Lee (2019) into moderate fire users, self-esteem is still highlighted as a factor even in those who use fire less extensively. This indicates that it might be universal to human fire use, irrespective of frequency. Lee's work, however, is only one preliminary study. More research is needed to explore the broad phenomenon of moderate fire use (see chapter six).

Non-criminalised and criminalised fire users recognise when they have 'done a good job' in relation to starting, maintaining, controlling, and / or using fire, as well as when they have been praised by and/ or have impressed others. All of this relates to self-esteem. There are some nuanced differences in narratives, however. The non-criminalised participants speak of receiving praise for forms of non-criminalised fire use only. This is despite the fact that

many of them have experiences of fire use which is approaching the criminalised end of the CoFU, as discussed previously. In contrast, the sample of criminalised fire users in this study refer to praise relating to the full spectrum of fire use, ranging from non-criminalised right through to criminalised on the CoFU.

The differences in the emphasis placed on different forms of praise across the two samples, might indicate that participants prioritise different life domains. This could be explained through the lens of the primary human goods set out in the good lives model (GLM; Ward & Brown, 2004). For instance, non-criminalised fire users might place most value on *excellence in leisure/ a hobby,* of which fire use plays a part. In contrast, criminalised users might be most concerned with how fire use impacts on *social group/ status.*

Common to all participants is the view that they can, in some way, control fire and this impacts favourably on their self-esteem. For the non-criminalised group, this control is predicated on safe handling and management of fire, including the use of strict safety procedures. For example, Mary says this:

We have tonnes of control [over fire] if we keep in mind the things that we talked about. Where we light it, how we light it, how we monitor it once it's lit. We have an open fire in the house in which I live and we have one of those big Mothercare square fire guards. I have a grandson now and it just means that he can play in the room and it's relatively safe, not absolutely, but relatively safe (lines 62 – 68).

Likewise, some of the criminalised group also gain self-esteem through safely managing fire, or at least a perception that they can do so. For example, Rory, who was a chef in the past said this: *"I've been kitchen* manager *in places and I've tried to put measures in place so fires don't happen"* (lines 729 – 730). In my view, Rory gives the impression of

complacency here by implying that the "measures" he implemented were 'fail-safe' in preventing a fire. This type of belief, i.e. that fire can be *fully* controlled is supported by the work of Ó'Ciardha and Gannon (2012) who identify *fire is controllable* as one of the implicit theories held by fire setters. The desire to control fire makes sense from an evolutionary perspective because of its essential role in the survival of our ancestors (Clarke & Harris, 1985; Goudsblom, 1992; Pyne, 1998; Wrangham, 2010; Wrangham & Carmody, 2010), as discussed in chapter one.

In the current study I assert that the notion of control over fire is subjective as exemplified by Rory, above. Lyng (1990) refers to the "the illusion of control" (p. 873) and I argue that it is this (rather than *true* control) which impacts positively on participants' self-esteem. This includes one's own sense of control but also how one is perceived by others. The notion of control marks another parallel between fire use and the concept of edgework discussed previously (Lyng, 1990, 2005). This is predicated on the idea of maintaining control in situations where there is potential for complete chaos to erupt (Lyng, 1990; Anderson, 2006; Cronin, McCarthy & Collins, 2014). Central to edgework is physical skill but also an ability to overcome emotions such as fear and nervousness. Edgeworkers are on the 'brink' of control and chaos (Lyng, 1990, p. 871) but, crucially, they manage to remain in control (or, at least, they believe they do). This sentiment applies particularly well to certain participants in the current study. For instances, fire performers (in the non-criminalised group) demonstrate a high degree of skill in remaining in control of an object which could easily cause them significant harm. The potential for this harm is captured here, by Connor, who speaks of the dangers involved: *"a female fire performer had a costume related accident and her costume melted to her and she died"* (lines 4 – 9). He goes on to say:

We [fire performers] tend to be quite blasé and like 'it won't hurt me, I'm used to it'. But it's a big of a shock to the system when something like that happens that someone who's so experienced and so well-known has a fatal accident. I've had friends who've set themselves on fire before; I've set myself on fire before. I know a girl who had a nasty accident while fire breathing and nearly died. Her lungs started to fill with fluid and she nearly drowned, which is ironic; fire can make you drown (lines 14 – 21).

It is important to note that, so far in this chapter, only the positive effects of fire use on self-esteem have been outlined. As already explained, the repeated 'boosts' to self-esteem through the use of fire explains why the behaviour is repeated. This is a relatively straight forward process of reinforcement for the non-criminalised participants. The process is more complex for the criminalised users, however. Fire also poses a *threat* to self-esteem, which was introduced in chapter four. More specifically, the consequences of criminalised fire use (i.e. the reprimands received) lead to negative feelings. This is an intriguing pattern when considered alongside existing academic literature on arson and fire setting. It raises interesting questions about causality. Some studies suggest that arsonists have lower self-esteem than other types of offender (Duggan & Shine, 2001; Gannon et al., 2013), whereas others have found no difference (Day, 2001). More work is required to unpick this, primarily because of the stark variations in methodology across the existing studies. Notwithstanding this point, it is fair to say that if there is a relationship between fire use and self-esteem, the *direction* of that relationship is yet to be proven. Put very simply, it is possible that a low *baseline* level of self-esteem *'causes'* arson/ fire setting, but it is equally possible that engaging with fire in a criminalised manner somehow *causes* low self-esteem. There is also a third possibility, of course, that this relationship is bi-directional, which data from this study partially supports. Criminalised participants' first experiences of fire (in childhood/ adolescence) appear to have

triggered a cyclical process, as depicted in figure 9 below (shown previously as figure 5 in chapter four). Criminalised fire use may 'boost' self-esteem in the short-term but the consequences of this, including the emotional impact of reprimands and being labelled, poses a threat in the longer-term. At this point, self-preservation strategies are activated (see below), which restore self-esteem. These protective mechanisms allow for the continuation of criminalised fire use by guarding against the harmful psychological effects. This pattern relates directly to the final theme in the CoFUT, entitled Psychological Wellbeing.
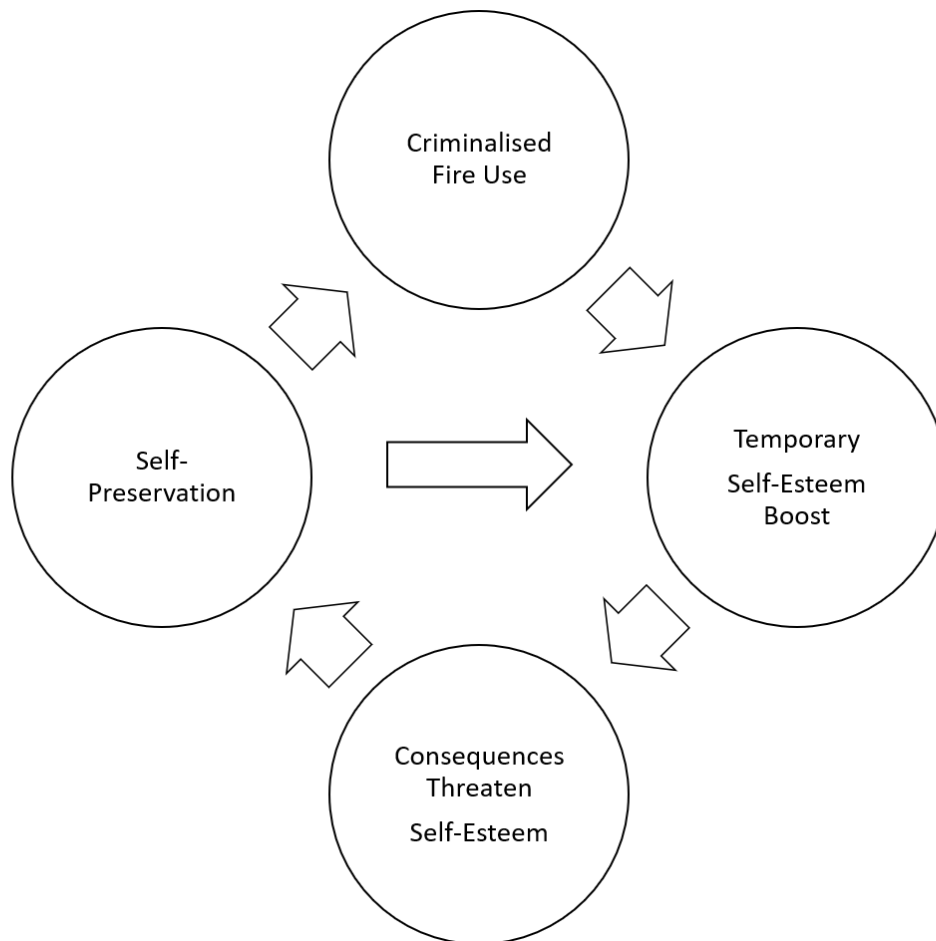
Figure 9 The Fire Use – Self-Esteem Cycle

Summary of the Self-Concept theme.

The Self-Concept theme combines data from both samples and exemplifies commonalities across all participants. For both non-criminalised and criminalised users, fire contributes to who they are on account of the experiences they have had in the past and the way these are interpreted. It also has a bearing on self-appraisal. There are nuanced differences across the two samples, however. For example, non-criminalised use has a wholly positive affect on self-esteem, whereas criminalised use has a bi-lateral impact. The less positive effects of criminalised fire use are elucidated in the final CAFUT theme – Psychological Wellbeing.

3.   Psychological Wellbeing.

This theme relates to the long-term impact of fire use on participants' psychological wellbeing. It is a core component of the CoFUT because it applies to both samples. It differs from the first CoFUT theme (Transient Emotional State) because it reflects participants' long-standing psychological and mental health, whereas the former is concerned only with short-term and fluid emotional state. In fact, the two themes (Transient Emotional State and Psychological Wellbeing) can be mutually exclusive. For example, it is possible for someone who is psychologically healthy to be in a temporary state of sadness and, likewise, it is possible for someone who is psychologically unwell to feel happy in some situations.

In the CoFUT, the Psychological Wellbeing theme is comprised of both positive and negative long-term factors. More specifically, it includes the themes Motivation and Emotional Security taken from the non-criminalised sample and Self-Preservation from the criminalised sample. Psychological Wellbeing epitomises the most significant difference between the predominantly non-criminalised and criminalised fire users in this research. For the former, fire use *enhances* psychological wellbeing in the long-term, whereas for the latter, it is *detrimental* in the long-term.

Before discussing the Psychological Wellbeing theme in more detail, a number of caveats must be noted, which relate to the current study. Firstly, participants' global psychological wellbeing at the point of involvement in the research was not measured. As such, it is not possible to determine whether the non-criminalised group are more psychologically healthy in general, when compared to their criminalised counterparts. That said, this could be reasonably surmised because much research has indicated high rates of mental disorder in arsonist populations which relates to the criminalised sample (Bradford, 1982; Bradford & Dimock, 1986; Virkunnen et al., 1989; Richie & Huff, 1999; Enayati et al., 2008; Anwar et al., 2009; Ó'Ciardha et al., 2015).

Secondly, there is no way of establishing a *baseline* measure of wellbeing, i.e. the nature and degree of participants' psychological health *before* they started to engage with fire. This means that the specific contribution of fire use to psychological wellbeing cannot be isolated from manifold other characteristics, behaviours and circumstances in participants' lives, such as personality, social status, relationships and other hobbies/ interests. In other words, it is possible that fire use is only one of many contributors to (or threats to) psychological wellbeing. A third caveat is that it is not possible to confirm the *direction* of the link between psychological wellbeing and fire use. Just as one's fire use impacts on psychological wellbeing according to the CoFUT, it might also be the case that one's overall level of wellbeing determines whether they are more likely to engage in predominantly non-criminalised or criminalised forms of fire use. In other words, whilst the data in this study indicates a uni-directional relationship (i.e. fire use affects psychological wellbeing), the possibility of this being bi-directional should not be discounted.

In order to partly address the aforementioned caveats, future research could employ quantitative methodology to better quantify the overall psychological wellbeing of individuals whose fire use sits at various points along the continuum. However, any attempt to

quantitatively 'measure' psychological wellbeing as a function of different forms of fire use would have to use continuous rather than categorical data in order to be consistent with the continuum conceptualisation. Establishing a baseline and determining the direction of any correlation between the two variables (type of fire use and wellbeing) will always be difficult because there are likely so many other relevant factors impacting on a person's life.

In the CoFUT, Psychological Wellbeing comprises two sub-themes which depict where the two samples of fire users depart. The first sub-theme is entitled *Motivation and Security*.

Motivation and Security.

This sub-theme is a combination of the Inspiration and Emotional Security themes which were both identified from the non-criminalised fire user data (see chapter three). Thus, this sub-theme relates specifically to fire use which sits towards the non-criminalised end of the CoFU. This theme represents the hope, optimism, stability, reassurance and psychological safety which non-criminalised participants gain through engaging with fire. As already highlighted in chapter three, when interpreted alongside psychological literature addressing what is considered to be a 'good' and 'complete' life, this sub-theme represents the highest echelon. The theme epitomises the ultimate fulfilment which Maslow (1943) refers to in his *hierarchy of needs*. When related to forensic literature more specifically, this theme could be thought of as representing the culmination of all of the primary human needs referred to by Ward and Brown (2004) in the GLM.

It is important to note that the Motivation and Security sub-theme must be considered in light of the caveats referred to above. The *overall* psychological wellbeing of predominantly non-criminalised participants cannot be established. However, for this group, the data suggests that the abundant benefits of repeated fire use culminate in a stable and healthy psychological

way of being. This is aptly conveyed by George who summarises the many positive characteristics of fire:

Nurture and warmth and protection. It's in that simplest form that [fire] warms you and it cooks you food and it makes you tools. So it's at the heart of what keeps you safe and what keeps you alive in a way that most modern people probably don't realise or see, you know (George, lines 660 – 666).

These positive factors contrast sharply with the second sub-theme – *Constraint,* which represents the impact of criminalised fire use in the form of arson or fire setting on participants' wellbeing.

Constraint.

As described above, and in chapter four, criminalised fire users experience an internal conflict between the way in which they would like to view themselves (i.e. as a 'good' person) and the fact that they have committed arson and/ or are seen as an arsonist/ fire setter. Individuals struggle to reconcile the two, which results in cognitive dissonance. To reiterate, this is a psychological concept defined as "the existence of non-fitting relations among cognitions" (Festinger, 1957, p. 3). The role of cognitive dissonance in the CoFUT is complex and so the underlying mechanisms, which were outlined in chapter four are repeated below.

Acknowledging oneself to be an arsonist or fire setter poses a threat to self-esteem, as does the reaction of others. For example, Nelly told me that her grandmother, to whom she used to be very close, has not spoken to her since she was convicted of arson out of disappointment about her behaviour: *"I couldn't even imagine speaking to her now. She hasn't spoke to me, I've sent her letter after letter and she hasn't spoke to me once"* (lines 958 – 959).

Cognitive dissonance is the result of this threat to self-esteem. It is a source of psychological discomfort (Festinger, 1957) and thus has a negative impact on criminalised fire users' general underlying psychological and emotional wellbeing. It is constraining in that it serves as a blockage to achieving long-term psychological contentment and health.

The threat posed by the consequences of criminalised fire use might, initially, just result in damage to one's self-esteem *state,* however repeated threats over time are likely to impact in a longer-term manner on how one appraises oneself. According to the data, as represented in the CoFUT, these longer-term effects influence overall psychological wellbeing. As a result of cognitive dissonance and a direct threat to self-esteem, criminalised fire users employ self-preservation strategies and this relates to the final theme for the criminalised sample (first introduced in chapter three). Self-preservation strategies are forms of coping which help to re-establish the equilibrium and act as a 'buffer' against further damage to self-esteem. However, as described earlier, this is a cyclical process and the effort required to employ such strategies repeatedly can erode psychological wellbeing. This is the reason why I have chosen to place self-preservation under the Constraint sub-theme within the CoFUT.

In isolation, the aforementioned psychological threat posed by the consequences of criminalised fire use and the effort required to manage it (i.e. self-preservation) is inconsistent with the notion of *repeated* fire use. Intuitively, one would think that if something makes us feel bad we would cease that behaviour. However, the CoFUT can account for the fact that criminalised fire users continue to engage in the behaviour *despite* the emotional discomfort associated with it, which is expounded in the following two paragraphs.

As already outlined, I assert that criminalised participants implement self-preservation strategies which partly enables them to overcome the threat to self-esteem. However, this is not a sufficient explanation for repeated fire use alone and so there must be other mechanisms involved. I also argue that the *immediate* benefits offered by fire (as depicted in the first theme

of the CoFUT – Transitory Emotional State), supersede the discomfort of cognitive dissonance because criminalised participants (i.e. offenders) place more emphasis on immediacy, rather than the long-term outcomes.

As discussed earlier, immediate gratification (for example, immediately consuming a food source upon acquiring it) was of value to our ancestors. However, our brains have now evolved to the point where we are able to carry out high-level cognitive functions, which usually enables us to resist the urge for immediate gratification. In the psychological literature such cognitive abilities are discussed under the umbrella rubric of *executive functioning (EF)*. This has been broadly defined as "the control and coordination of cognitive operations" (Salthouse, 2005, p. 532). There is a large body of evidence which suggests that offenders have EF deficits (for examples see Stone & Thompson, 2001; Hoaken, Allaby & Earle, 2007; Syngelaki, Moore, Savage, Fairchild & Van Goozen, 2009), which might explain why they are heavily influenced by immediate gratification. If this is the case, it makes sense that the criminalised sample in this study (who are all convicted offenders, of course) focus more heavily on the immediate benefits of fire use than their non-criminalised counterparts. If immediate gains are of the upmost importance to criminalised fire users (owing to EF deficits), longer-term consequences may be less of a concern.

The notion of EF deficits in the criminalised group and a proneness to focussing on immediate gains could be interpreted alongside the concept of edgework (Lyng, 1990, 2005), introduced earlier. As already discussed, this relates to one's willingness to negotiate the delicate balance between control and chaos (including harm) and the exhilaration which this provides. EF deficits might explain a greater willingness on the part of offenders (i.e. the criminalised sample) to 'push' the boundaries when using fire in order to enjoy the benefits of feeling stimulated and 'alive'.

I propose that the appeal of the aforementioned immediate benefits could explain why participants continue to use fire in a criminalised manner, despite the discomfort of the 'threat' to self-esteem. In other words, in a weigh up of the pros and cons, criminalised participants' preference for immediate gratification overrides the longer-term drawbacks of fire use as a result of EF deficits. According to the data, the offenders might prioritise short-term gains but non-offenders (i.e. the non-criminalised group) also consider longer-term consequences, i.e. overall psychological wellbeing because their EF is intact.

There are two important points to note when drawing on offender literature to make comparisons between the two samples in this study, as I have done throughout this chapter. As outlined in chapter two, two participants in the non-criminalised group have criminal records. Harry has two or three convictions for breach of the peace and Laura once received a caution for the possession of cannabis. Therefore, strictly speaking, they should not be classed as non-offenders. That said, these are relatively minor offences, are historical in nature and do not appear to have a bearing on how either participant lives their life now. It is therefore reasonable to deduce that, overall, they might share more in common with non-offenders than offenders with respect to self-control and other characteristics. It is also important to emphasise that the hypothesis relating to EF in the two samples above cannot be proven or disproven from the current data. It is not necessarily the case that *all* of the criminalised participants have EF deficits and, thus, the relevance of this principle cannot be established. Ultimately, in applying general offender literature to the criminalised sample I do so cautiously. It runs the risk of drawing too many generalisations in the analysis of the data. Indeed, we must also be cognisant that although the criminalised sample in this study are all convicted offenders, this will not always be the case. In line with the continuum conceptualisation, criminalised fire use is a heterogenous construct and, thus, many criminalised users may not have any criminal convictions. Notwithstanding these caveats, the idea that there could be a difference in EF

between the two groups is interesting and could prompt further research in the future. Indeed, if we wish to continue to explore factors which underpin the type of fire use people engage in, examining neurological contributors would be very valuable because this could inform treatment and early intervention strategies. Again, however, if quantitative research were to be employed, variables would need to be continuous to remain consistent with the continuum conceptualisation.

Summary of the Psychological Wellbeing theme.

The Psychological Wellbeing theme is concerned with the long-term psychological health of participants, which is impacted on by fire use. According to the data, non-criminalised fire use has a multitude of long-lasting benefits, whereas criminalised use is detrimental to wellbeing on account of the 'threat' to self-esteem. This is countered by self-preservation strategies, discussed in chapter four and expounded above. This, along with a preference for the immediate benefits of fire, can explain why criminalised users continue to engage with it.

Summary and Conclusion

Grounded in the data from the two samples, the CoFUT offers an explanation into why adults engage in repeated fire use, the nature of which spans the whole CoFU. The CoFUT is a single factor theory. It identifies three psychological mechanisms which are of relevance in explaining why individuals are motivated to repeated interact with fire, along with the psychological factors connecting them.

Of crucial importance to this thesis is the finding that there are many commonalities in the mechanisms underlying predominantly non-criminalised and predominantly criminalised fire use. The core factors common across all fire use in this research are: (a) Transient Emotional State, (b) Self-Concept, and (c) Psychological Wellbeing. These similarities are

fundamental because they support my dimensional argument, i.e. that different forms of fire use sit along the *same* continuum. In other words, the finding that there are three core mechanisms which underpin fire use in its entirety adds credence to my argument that this is one behaviour which varies along the same dimension. If I had found very distinct mechanisms in data from the two samples, this would refute my argument and would point towards a categorical conceptualisation (i.e. two distinct groups of non-criminalised and criminalised fire use/ users).

Whilst the core features of fire use are the same, there are some nuanced differences between those who are predominantly non-criminalised and predominantly criminalised fire users. According to the data, as represented in the CoFUT, the factor that best discriminates between the two groups is Psychological Wellbeing. Non-criminalised fire use provides emotional stability, a sense of psychological safety and a positive, optimistic mindset. Through a process of gradual reinforcement, it is clear why these effects lead to repeated fire use. The process for criminalised users is more complex, however. For this group the long-term effects of fire use on psychological health are negative, which one might expect would act as a deterrent. I have argued in this chapter, however, that the immediate benefits of fire use (as captured in the Transient Emotional State theme) override this deterrent. Furthermore, the criminalised group of participants employ self-preservation strategies which serve to protect against threats to self-esteem and, thus, perpetuate criminalised fire use.

The CoFUT advances existing knowledge through offering a different insight into fire use. Firstly, I have argued that fire use should be conceptualised as sitting on a continuum and is underpinned by the same core mechanisms, which the data supports. Secondly, I have indicated how slight variations in these mechanisms could explain behaviour which sits towards the opposing poles of this continuum (i.e. predominantly non-criminalised and predominantly criminalised fire use). I argue that understanding fire use in this way, alongside

a broader consideration of its importance in the evolution and survival of our species, is of crucial importance in advancing treatment options for arsonists and in developing much needed early intervention programmes. This is the focus of the following chapter, chapter six.

Chapter Six:

A New Theory and its Applications

Introduction

In the previous chapter the *continuum of fire use theory (CoFUT)* was presented. This theory is grounded in the data from the study. I posit that three psychological mechanisms are of relevance in understanding repeated fire use and that these could apply to the full *continuum of fire use (CoFU)*. There are also certain factors and processes which connect the mechanisms, all of which were outlined in the previous chapter. It is important to underline here that the CoFUT is a preliminary theory, based only on the data from this one study. More research is required to add to it and, indeed, to 'test' its utility. This chapter will consider the wider implications of the current research findings, in terms of their contribution to the academic literature, to my applied discipline of forensic psychology and more widely in the criminal justice system (CJS). I argue that the CoFUT offers a much needed holistic way of thinking about fire use.

The CoFUT challenges existing theoretical foundations. I argue that considering the full spectrum of fire use from a dimensional perspective can ultimately improve our understanding of criminalised fire use in the form of arson. The CoFUT can inform the assessment of arsonists, in addition to rehabilitative treatment approaches. Furthermore, it can inform the development of standardised early intervention programmes. I will argue in this chapter that it is early intervention programmes which could hold the key to reducing the rate of arson in the United Kingdom (UK). This might also be the case in other countries, at least those in the Global North. However, my research is based in the UK and, thus, I will focus most of the following discussion on this country.

Throughout this thesis I have presented a number of arguments about the way in which human interactions with fire should be conceptualised and explored. Firstly, I have asserted that fire-related behaviour is best understood as a *process* rather than an *event*. I therefore propose that the term 'fire *use*' is more appropriate than 'fire *setting*'. All 24 participants in this research have shared experiences relating to the context surrounding their interactions with fire, the preparation of fires, being in the presence of fire during the active phase and the aftermath of a fire. This supports the idea of a fire use *process*. I assert that the stages of fire use as identified in the data are as follows: (a) *instigation* which includes experiencing initial thoughts about lighting a fire and considering where and when this might take place; (b) *planning* which involves taking practical steps in order to organise the fire, namely purchasing and/ or collecting materials and building it; (c) *ignition* is the act of lighting the fire; (d) the *active* phase occurs while the fire is burning – this can include what the person does to maintain it and their subjective experience of being in the presence of a fire; (e) *aftermath* which involves any post-active phase activity which might include extinguishing the fire and cleaning the area. In the case of forms of criminalised fire use this also involves behaviours such as leaving the area in attempt to avoid apprehension.
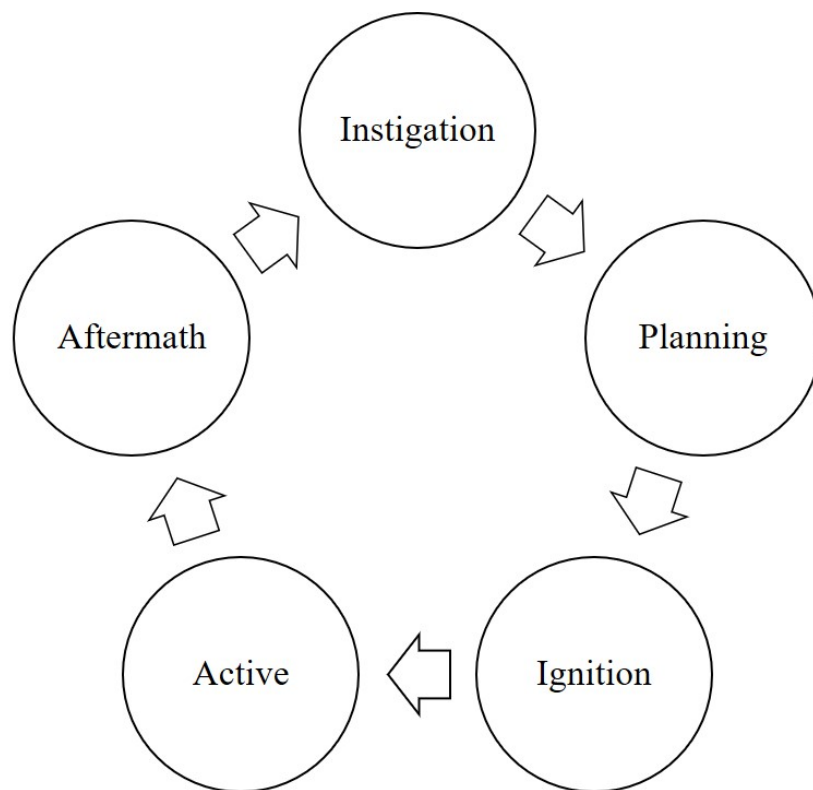
Figure 10 The process of Fire Use

The findings of this research offer an entirely novel alternative to the way we think about a single instance of fire use. Previously, studies have focused solely on the act of *lighting* a fire, whereas the current data demonstrates that there is a *process* involved. The process conceptualisation presented above contributes to our understanding of why people engage with fire in a criminalised manner. It could provide a helpful aid-memoire for psychologists who assess arsonists in order to ensure that every aspect of the offender's behaviour is addressed. One of the roles of a forensic psychologist when assessing an offender is to develop a case formulation to explain their behaviour. In brief, formulation is "a provisional explanation or hypothesis of how an individual comes to present with a certain disorder or circumstance at a particular point in time" (Weerasekera, 1996; as cited in Dallos, Stedmon & Johnstone, 2014, p. 181). In forensic assessment, this circumstance is usually the offence. In developing a formulation of an individual's case, forensic psychologists might include reference to

predisposing (i.e. background) factors and precipitants (i.e. triggers) to the offence (Dudley & Kuyken, 2014). In the case of arson, this might include consideration of factors in the individual's childhood and environment which increased their vulnerability to fire setting followed by the immediate triggers to the offence, such as an argument with a loved one or the consumption of substances which affected their ability to think clearly. The practitioner will then explore the offence itself, i.e. the lighting of the fire in this case.

Applying a generic formulation framework to arsonists, however, could mean that important aspects of fire use are missed, such as the active and aftermath stages. I assert, therefore, that systematic consideration of the five stages listed above facilitates a more thorough assessment and formulation of arsonists. It provides a framework for formulation to help the clinician consider psychological factors which are of relevance at *each stage* of the individual's fire use. For instance, exploring their experiences in the aftermath stage could be highly informative through revealing their post-offence thoughts and feelings. This means that the final formulation will be offence-specific and tailored, more precisely, to the individual case.

Another of my key arguments throughout this thesis is that our interactions with fire should be conceptualised as sitting on a continuum (the CoFU). At one end of this sits non-criminalised fire use and at the other is criminalised use. It is important to note that the two samples broadly represent the two poles of the CoFU but all of the criminalised sample also have experiences of non-criminalised fire use and some of the non-criminalised group have past criminalised experiences. This supports the continuum perspective. More specifically, it indicates that dichotomous categorisation of fire users (i.e. either as one or the other) is unhelpful and, I would argue, artificial. Existing psychological research has typically adopted this categorical approach, highlighting the need for a change in direction in that respect. In reality, our interactions with fire are likely to span the CoFU (or at least a substantial part of

it), even though our predominant use might be closer to one end of the CoFU than the other. Crucially, I assert that fire use is fluid and so the way in which a person engages with it can fluctuate throughout their life.

Data from this study indicates that *any* previous experience of fire use can influence later behaviour. This means that when working with arsonists, practitioners should not only be focussing on the arson offence, nor should they only be focussing on other criminalised forms of fire use. Rather, they should be seeking to understand the nature of *all* of the individual's previous fire-related experiences (i.e. those which sit at any point of the CoFU). In other words, in their work with arsonists practitioners should devote adequate time to exploring non-criminalised fire use which the individual may have engaged in at points in their life. As argued in chapter one, current research and theory is based solely on convicted/ problematic fire setting (for examples see, Hurley & Monahan, 1969; Prins et al., 1985; Jackson et al., 1987; Rix, 1994; Lindberg et al., 2005). This is not conducive to the a continuum-wide approach which I am arguing for. This study, therefore, has offered a different direction.

I argue that the continuum approach of classification which I have proposed in this thesis is compellingly related to the sociological concept of edgework (Lyng, 1990, 2005). This is concerned with taking risks and, specifically, the stimulation gained through 'pushing the boundary' between control and chaos. Any form of fire use arguably carries some degree of risk because of its potential to damage and harm but I assert that the appraisal of risk is subjective. This might explain, at least in part, the heterogeneity in fire use both across different people and even across one person's lifespan.

As discussed in previous chapters, the notion of control over fire (or, at least, perceived control) was alluded to by many of my participants and this is of central importance in edgework. Furthermore, I argue that skill, which is another characteristic of edgework, is of relevance to the current data. Owing to the inherently threatening nature of fire, such as its heat

and unpredictability, any instance of fire use, irrespective of where it is positioned on the continuum, requires a level of skill. This is so that the fire can be manipulated into behaving the way we intend. All participants in this study have demonstrated skill when using fire, which has likely proved to be reinforcing for them. It is important to note that skill, as a concept, applies equally well to criminalised fire use in the form of arson as to non-criminalised forms because it is concerned with the manipulation of fire, irrespective of motivation or context.

If we accept the parallels between edgework and fire use, it is important to consider the possibility that fire provides an exhilarating opportunity to 'push the boundaries', which can be very appealing. Therefore, if we wish to prevent arsonists from interacting with fire in the future it must be important to identify and encourage alternative channels through which to achieve the same exhilaration. As referred to in previous chapters, the good lives model (GLM; Ward & Brown, 2004) could be used as a framework for this. More specifically, it could facilitate the identification of other domains in a person's life which are of value to them and, thus, which could be bolstered in order to 'replace' criminalised fire use. It is noteworthy that, in some cases, it might be appropriate to encourage *non*-criminalised fire use as an alternative to criminalised use, i.e. through helping the individual to 'move down' the CoFU. However, this has risk implications because there might be a temptation, on the part of the fire user, to revert to criminalised use. This is returned to below.

The basis of the continuum perspective which I am proposing has support from prominent fields such as clinical psychology and psychiatry. For instance, the diagnosis of mental disorder employs a dimensional approach, which involves assessing clinical presentations in terms of the *number* and *range* of symptoms, rather than assigning them to categories (Kraemer, Noda & O'Hara, 2004). Indeed, Kraemer et al suggest that the dimensional approach works best in describing any phenomena that are distributed continuously and do not have clear boundaries. This applies very well to the construct of fire

use because it is difficult to disentangle what is viewed as non-criminalised and criminalised fire-related behaviour (Hope, 2018).

The dimensional (i.e. continuum) perspective is also advantageous for quantitative researchers in this field of study. The categorisation of data, for example, through *comparing* one group of people with another group on a range of variables, leads to a loss of statistical power. Conversely, measuring the same variables on a *continuum* allows for more robust data analysis (Kraemer et al., 2004). This is an important consideration because later in this chapter I highlight the need for further research, some of which should employ quantitative methodology.

The third central argument which I have made in this thesis is that an inter-disciplinary approach is required in order to understand fire use and, thus, arson holistically. I suggest that by adopting such an approach clinicians will better understand the appeal of fire and, consequently, the challenges involved in reducing rates of arson. For example, it is crucial that we take account of anthropological work about the role of fire in the evolution of our species. More specifically, an appreciation of the longevity and depth of the relationship we have with fire adds important context to the study and understanding of arson. We must also consider fire use from a criminological stance in order to appreciate its meaning in different societies and how it is defined.

In the remainder of this chapter I will argue for the applied value of the CoFUT, which is predicated on the aforementioned arguments.

The CoFUT

The primary finding from this study is that there are more commonalities than differences in the psychological mechanisms which underpin predominantly non-criminalised and predominantly criminalised fire use. This indicates that the underlying drivers for both forms of fire use are similar overall, which supports the continuum perspective. This point, along with what the study unveiled about the variability and fluidity of fire use, holds promise from a risk and rehabilitation perspective. It suggests that, in theory, arsonists have the potential to interact with fire in a more appropriate way by 'moving down' the CoFU, as mentioned above. This might be achieved through helping them to develop a healthier relationship with fire, which could be modelled on the way in which the non-criminalised participants behave. On this basis, I suggest that a cessation approach with arsonists, i.e. preventing any contact with fire, is unhelpful because it prohibits the practical *learning* of more appropriate fire-related behaviour. In reality, however, preventing an arsonist from having contact with fire is often required from a risk management perspective in forensic settings, such as prisons and hospitals. This highlights an important conflict between what makes sense theoretically and what is realistic and feasible in secure environments. Considering both of these factors is a difficult balance to strike and is returned to below.

If the continuum conceptualisation indicates that arsonists can 'become' non-criminalised fire users, then the converse may also be true. In other words, it is possible that non-criminalised users could, in certain circumstances, 'become' arsonists. Indeed, all of the criminalised users in this study started out by interacting with fire in forms which may sit closer to the non-criminalised end of the spectrum. In every case, their usage progressed along the CoFU (albeit with various gradations) and culminated in a conviction for arson or reprimands for institutional fire use. It is important to note, however, that this is clearly not always the case. The non-criminalised participants in this study have not gone on to acquire arson convictions

and this likely applies to many people in society who use fire adaptively. The circumstances in which a person's fire use progresses from one pole of the CoFU to another is an area which could benefit from research in the future. It may be helpful to explore whether we can plot the trajectory of an arsonist's fire use along the CoFU in order to identify factors which may have contributed to the escalation of their behaviour.

The dynamic nature of individuals' fire use and the potential for this to move 'up and down' the CoFU has implications for risk assessment. It supports the point made previously that clinicians working with arsonists should be mindful of *any* interaction with fire, rather than only those, which are distinctly criminal. Furthermore, this also has important implications for practitioners delivering early intervention programmes to young people. It means that they must be mindful of the potential for healthy interactions with fire to precede criminalised use and so to monitor any changes in the type of fire-related behaviour young people present with. It might be possible to intervene before behaviour progresses towards the criminalised end of the spectrum, for instance through increasing the intensity of an intervention if concerning behaviours are observed.

This study has highlighted core commonalities between those who predominantly engage in non-criminalised fire use and those who are predominantly criminalised users. There are also some nuanced differences as outlined in the previous chapters. It is important to explore these because they might explain the variability in fire-related behaviour and, thus, the polarisation of some people on the continuum.

As outlined in the CoFUT (see chapter five), there are three main points of departure between the two samples in this study. Firstly, there is a difference in the way in which the two groups describe how fire plays a part in their identity. Secondly, for the criminalised fire users self-esteem is influenced by a mixture of non-criminalised and criminalised fire use, whereas for the non-criminalised users it is wholly influenced by non-criminalised use. Thirdly, the

impact of fire use on long-term psychological wellbeing differs. For the non-criminalised group it is positive but for the criminalised group it is negative. The wider application of the similarities and differences between samples is discussed below. I have chosen to discuss this on a theme by theme basis for precision and clarity.

Transient Emotional State.

Although the criminalised group place particular emphasis on the immediate and transient benefits, they are cited by *all* participants as an appealing aspect of fire use. A number of reasons for this were discussed in chapters three to five of this thesis. In summary, a preference for immediate reward had evolutionary benefits for our ancestors, in relation to the availability of food (van den Bos & de Ridder, 2006) and thus, we are predisposed to find it appealing. Furthermore, we have also evolved to like experiences which stimulate our senses because this fine-tunes our neuro-cognitive system, which is essential for survival (Tooby & Cosmides, 2001; Hekkert, 2006). All participants in the current study make reference to sensory stimulation which is compatible with the findings from Ó'Ciardha et al. (2012) relating to the mesmerising and beautiful qualities of fire (p. 18).

In addition, according to social psychological theory we have an innate preference for the familiar (e.g. Zajonc, 1968) and so, as discussed previously, having prior experience of fire means that we are more likely to be drawn to it again. The matter of familiarity with fire is complex and is likely dependent on multiple factors, including cultural background. In this research I did not systematically record the ethnicity of my participants, which is a limitation and is returned to later in this chapter and in the conclusion. The majority of participants told me that they were born and raised in the UK, which indicates that the sample are most representative of the Global North as opposed to the Global South. From the interview data it is evident that two participants were not born in the UK. Ellen, in the non-criminalised group,

is Brazilian but has lived in the UK for four years having married a British man. Viv, in the criminalised group, is Malawian. She spent the first two years of her life in her home country but then moved to England. Growing up, Viv was affected by her parents' strict views on fire but she has also been exposed to British views on fire from a very early age. She has, therefore been influenced by a mixture of cultural backgrounds with respect to fire use.

I argue that the significance of cultural background in determining how people interact with fire and the types of views they hold about it is an important theme to explore in future research. More specifically, I argue that the way in which fire is socially constructed in the UK could be a contributory factor in arson. If we could learn more about the influence of culture, particularly in countries where there are lower rates of arson, this could impact on strategy and policy in the UK. This is returned to below.

Within what has been described by some authors as 'western culture' we are most familiar with fire as being a form of entertainment (Fessler, 2006; Winder, 2009) and as a form of symbolism (Winder, 2009). I argue that in some parts of the Global North, such as in the UK, we are less often reminded of the functional significance of fire. Conversely, in some countries in the Global South, fire in its rawest form (i.e. the naked flame), still plays a central role in daily life. The same even applies to some communities in developed countries, such as indigenous people in the United States of America (USA) and Australia. For any rural community, fire is more *overtly* essential and so they become familiar with it as a tool for survival, even from an early age. Indeed, in a paper detailing an ethnographic study of a semi-traditional Bengkulu Malay fishing village on the west coast of Sumatra, Fessler notes that young children are assigned fire-related responsibilities. He also explains that fire is a tool which helps towards the community's survival, such as through enabling the cooking of food. These primitive uses of fire mirror those of our ancestors as noted in the work of Goudsblom (1992), Wrangham et al. (1999), Wrangham (2010), and Wrangham and Carmody (2010)

discussed in chapter one. This, I argue, contrasts with how fire is viewed in the UK. Here, there is an air of mystery and intrigue surrounding fire because of its symbolic importance, its use as a form of entertainment and, perhaps, our fear of it.

On this basis, it is reasonable to assume that in cultures employing fire primarily as a tool, its impact on individuals' senses and overall emotional state might be less pronounced, a point which is alluded to by Ó'Ciardha et al. (2012, p. 18). In other words, it is possible that people living in countries and specific communities where fire is used primarily as a functional tool have been *de-sensitised* to fire, viewing it purely in terms of its functionality. This might mean that its sensory appeal has lessened over time, and so the Transient Emotional State theme in the CoFUT may not apply to the same degree.

I argue that an understanding of how different countries/ cultures view fire is of crucial importance if we are to continue to develop treatment options for arsonists and to design standardised early intervention programmes, which are much-needed. If people from certain cultural backgrounds are less attracted to fire from a magic, mystery and intrigue perspective, we may be able to learn something from them and this could be integrated into treatment and intervention programmes. Exploring fire use across different cultures is one avenue I am keen to pursue as a post-doctoral project. This is returned to below.

Findings from the current study, alongside the existing literature cited above, offer promising avenues for the assessment and treatment of arsonists. In terms of the former, the immediate and transient benefits of fire should be explored and incorporated into formulations to aid understanding of an arsonist's presentation and the 'pull' of the immediate gains should be explored in detail. For example, clinicians who are assessing arsonists may wish to spend time exploring the sensory aspects of fire for that individual and their physiological effects. In terms of treatment, the current findings indicate that, for arsonists, fire has an immediate positive impact on emotional state. This happens through *direct* stimulation of the senses. On

this basis, emotional regulation could be a worthwhile treatment target. For instance, other forms of immediate stimulation, which have a positive effect on emotional state could be explored and introduced to 'replace' criminalised fire use. Similarly, as captured in the CoFUT, fire use also impacts *indirectly* on criminalised users' emotional state by providing a way to address interpersonal problems. Therefore, there might also be value in addressing interpersonal problem solving in treatment. Encouragingly, emotional regulation and problem solving are both covered in existing treatments such as the firesetter intervention programme for mentally disordered offenders (FIP-MO; Tyler et al., 2018), the Northgate fire setters treatment programme (Taylor, Thorne, Robertson & Avery, 2002; Taylor, Thorne & Slavkin, 2004; Taylor, Robertson, Thorne, Belshaw & Watson, 2006) and two programmes developed specifically for women entitled the arson treatment group (ATGP) and arson treatment individual programme (ATIP; Annesley, Davison, Colley, Gilley & Thomson, 2017).

While supporting arsonists to develop emotional management and problem solving skills could be helpful, I argue that the lure of the immediate gains still poses a problem for practitioners seeking to reduce arson recidivism. This is the case particularly in countries where fire is primarily used for entertainment rather than for functional purposes and where it is portrayed as intriguing and mysterious, such as in the UK. Moreover, if we accept that there is some connection between the sensory appeal of fire and natural selection (meaning that we are biologically programmed to be attracted to it) then this really emphasises the extent of the problems to be overcome. Even if fire use did not play a direct role in natural selection, it seems that our species certainly adapted to it and made use of it as we evolved. Again, this elucidates why it is so important to understand arson within the context of humans' long and complex relationship with fire.

Practitioners in the UK are faced with a quandary, which is how to reduce the appeal of fire in those who find it mysterious, intriguing, exciting, stimulating and/ or relaxing.

Likewise, we need to consider how to minimise fire's appeal for those who may use it as a temporary form of solving problems. The task of making fire less appealing is likely to be particularly challenging with offenders whose criminalised fire use has been repeatedly reinforced. This has implications for existing treatment programmes such as those referred to above. I believe that we need to be realistic about how much can be achieved through any intervention, particularly those which are delivered post-offence.

On the basis of the findings from the current study, alongside the aforementioned work of Fessler (2006), I suggest that the transient impact of fire on emotional state could be addressed through a process of gradual desensitisation to fire through an approach called *exposure therapy (ET)*. This is already a core component of cognitive behavioural therapy for anxiety and phobia (Craske et al., 2014; Weisman & Rodebaugh, 2018). ET comes in many forms, including *gradually* exposing a client to a particular stimuli, *imaginal* exposure to the stimuli (Perrin, 2013) or *"intense"* exposure, which is sometimes referred to as "flooding" (Craske et al., 2014, p. 10).

An exploration of the psychological mechanisms underpinning ET is beyond the scope of this thesis. In brief, it draws on principles of conditioning. Its use as an anxiety treatment is based on the premise that repeatedly exposing a client to an anxiety-provoking stimulus and allowing them to observe that no negative consequences (i.e. those that they fear) occur can lead to "re-learning" of the cognitive aspects of their anxiety (Delgado et al., as cited in Schumacher et al., 2015, p. 668). I assert that similar principles could be applied to the treatment of fire setters. More specifically, repeated exposure to different forms of fire in *mundane contexts* could lead to reduced arousal over time and, thus, could lessen its immediate appeal. In other words, the fire setter becomes acclimatised to fire and so it is no longer so exciting or memorising. This is a form of stimulus satiation, which was referred to in chapter three (Berlyne, 1970; Stang, 1973; as cited by Montoya et al., 2017, p. 460). This type of

approach is already touched on in the FIP-MO across two sessions which involve "conditioning work", using "*covert sensitisation*" (Tyler, et al., 2018, p. 391), i.e. the use of imaginary fire-related stimuli. The current findings suggest that there could be value in expanding this particular treatment technique when working with convicted arsonists, for instance by making it more of a core aspect of treatment and, perhaps even exploring intense exposure techniques.

Theoretically, then, I suggest that desensitisation could be achieved through the gradual introduction of relevant stimuli, such as pictures of fire, which later increases to moving images and then exposure to 'real' fire - a technique called in-vivo exposure (Craske et al., 2014). Crucially, all stimuli would need to be presented in a mundane context so that any previous association held between fire and excitement diminishes. This type of exercise might be particularly applicable to those fire setters in the fire interest trajectory within the M-TTAF*,* who view fire as enjoyable and stimulating (Gannon et al., 2012, p. 117). Likewise, those holding the fire is fascinating/ exciting implicit theory, as proposed by Ó'Ciardha and Gannon (2012) could benefit because this represents some sensory connection with fire, such as a view that it is "thrilling" or "soothing" (p. 126).

The intensive application of ET in work with arsonists, as I have outlined above, makes theoretical sense on the basis of the current data, however, there are some significant obstacles to consider. Gradually exposing convicted arsonists to *actual* (rather than imagined) fire carries serious risk implications, particularly against the backdrop of personal characteristics such as impulsivity, emotional dysregulation and mental disorder and where individuals are housed in a secure forensic setting. This is another example of the conflict between what could be effective as a rehabilitative approach in the long-term versus risk management and the constraints of secure settings like prisons and forensic hospitals. The extent of the risks associated with an intensive ET approach are likely to render it infeasible in forensic settings;

this may be why Tyler et al., (2018) briefly discuss the use of imagery which is likely to be considered a safer option.

If real exposure to fire for convicted arsonists is infeasible then an alternative could be a pre-emptive approach. Theoretically, I suggest that a substantial shift in the way that fire is socially constructed in the UK could avoid over-sensitisation to fire in the first place. This is one of the reasons why I advocate an inter-disciplinary approach, taking account of cultural criminological perspectives. Ideally, I argue that if we could replace the mystery, intrigue, symbolism and entertainment value widely associated with fire in the UK with a collective view of fire as a familiar and mundane practical tool, its appeal would likely diminish over time. Realistically, however, this would demand a very significant societal, cultural and philosophical shift, which seems entirely unachievable at present.

A pre-emptive approach may not be entirely futile, however, if adopted on a micro rather than macro-level. Rather than seeking to change the way our whole society views fire, we could try to address this on an individual basis. Education for young people about the significance of fire throughout history, as well as its practical functions could help to reduce the appeal of its immediately gratifying (i.e. arousing) qualities which are highlighted in the current research. In other words, if young people could start to view fire as a mundane everyday tool, rather than as an intriguing and exciting entity, it may be less appealing to them.

Youth educational programmes are already delivered by Fire and Rescue Services (FRSs) nationwide. These often target 'at risk' groups and largely focus on the dangers of fire and fire safety (for examples see Mid and West Wales FRS, n.d.; Suffolk County Council, n.d.; West Midlands Fire Service, n.d.). However, crucially, I propose that such approaches might be detrimental in certain circumstances. I argue that by only educating young people about the *dangers* of fire we might, in some cases, be serving to reinforce the intrigue and mystery surrounding it. In turn, this might actually encourage youths to engage with fire in a

criminalised manner, rather than deterring them. As an alternative, we could learn from those who use fire in a non-criminalised manner, such as the 12 participants in this study. On a larger scale, as already proposed, we could learn from communities and whole countries where fire is used heavily as a functional tool rather than for entertainment.

To my knowledge, the specific content of FRS early intervention programmes is variable across the UK and there is not, as yet, any standardised protocol. I assert that we should aim to introduce a more structured framework for use nationally so that programmes can be developed and rigorously evaluated accordingly. I have already started working with my local FRS. We are in discussions about developing a pilot intervention programme, based on my ideas and the findings of this research. Eventually, if found to be effective, this could be rolled out country-wide.

In order to better inform the type of approach I have outlined above, more research is required which should focus on people of different nationalities and from different communities with a variety of cultural backgrounds. This might include those residing in rural communities in the Global North and the Global South, such as the one which was the focus of Fessler's work, so that we can learn more about how they interact with fire. I have already started to explore the possibility of research, on an international scale, through discussions with a colleague in Australia (see below).

In the section above I discussed the wider applications of what can be learnt from the Transient Emotional State CoFUT theme. Next, I will go on to discuss the same in relation to the second CoFUT theme – Self-Concept.

Self-Concept.

There are many commonalities between the two groups in the current research with respect to self-concept but there is also a nuanced difference. Non-criminalised users describe fire as contributing to their identity by providing a link to their ancestry, offering them a role/ purpose and contributing to a perception of their social standing. Conversely, the criminalised users speak of early experiences and, thus, the memories that they have formed of fire. Notwithstanding these variations, importantly, fire plays some sort of role in the identity of all participants in this study. These findings have implications for treatment and interventions. If fire is an important aspect of arsonists/ fire setters' identity, as suggested by this study, treatment could support them in strengthening other aspects of their identity. This is already a feature of existing treatment programmes such as FIP-MO (Tyler et al., 2018), the Northgate fire setters treatment programme (Taylor et al., 2002; Taylor et al., 2004; Taylor et al., 2006) and ATGP/ ATIP (Annesley et al., 2017), which is encouraging.

That said, early fire-related experiences cannot simply be erased from memory, particularly in cases where these memories are very powerful, for instance, if they are trauma-related or if they have been strongly positively reinforced. Ultimately, once fire-related memories have formed and, thus have become part of one's identity, it is a difficult task to retrospectively disseminate the two. Once again, this illuminates the potential contribution of early intervention strategies. If people can be supported in developing a healthier relationship with fire from an early age it is more likely that their experiences will be positive and non-criminalised, which will be reflected in the memories that they form. This, in turn, could foster a well-balanced identity and a healthy relationship with fire.

It is unsurprising that Self-Esteem (the other Self-Concept sub-theme) has been identified in the current data because it has attracted the attention of arson/ fire setting researchers in the past (for example, Day, 2001; Duggan & Shine, 2001; Gannon et al., 2013)

and is a feature of theoretical work (for example, Jackson et al., 1987; Gannon et al., 2013). In the current research, self-esteem is related to fire use for both the non-criminalised and criminalised groups. It involves a subjective sense of success in lighting, maintaining and/ or interacting with fire. I argue that this might be universal, at least to a UK population where this study is based. The aforementioned existing treatment programmes, namely the FIP-MO (Tyler et al., 2018), the Northgate Firesetters Treatment Programme (Taylor, Thorne, Robertson & Avery, 2002; Taylor, Thorne & Slavkin, 2004; Taylor, Robertson, Thorne, Belshaw & Watson, 2006) and ATGP/ ATIP (Annesley et al., 2017) all incorporate reference to self-esteem, which is encouraging. However, findings from the current research illuminate many mediating factors in the connection between fire use and self-esteem, such as peer influence and status, which should perhaps be explored in more detail (and as separate constructs) in treatment.

Overall, the Self-Concept theme in the CoFUT highlights the importance of addressing identity and self-esteem in rehabilitative interventions with arsonists/ fire setters. Encouragingly, they already form part of existing treatment programmes. However, as suggested above there could be scope to increase the focus on these concepts and to delve into them in more detail, for instance, through exploring facets of self-esteem linked to fire use, such as status amongst one's peers. The final CoFUT theme – Psychological Wellbeing – will now be discussed in relation to its application in forensic practice.

Psychological Wellbeing.

For the non-criminalised sample in this study, fire represents authenticity, security, positivity, optimism and hope. Its use therefore culminates in a sense of emotional security which, in turn, contributes to overall psychological wellbeing. Conversely, for participants in the criminalised sample, having been convicted of arson (or reprimanded for institutional fire

setting in Morris' case) is distressing and is detrimental to overall psychological wellbeing. In order to manage this participants employ self-preservation strategies.

In chapter five I noted that the direction of the relationship between fire use and psychological wellbeing (i.e. uni or bi-directional) cannot be established definitively. Notwithstanding this fact, data from the current study indicates that there is some form of link. For the non-criminalised group, fire use offers a sense of emotional security. From a strengths-based perspective there could be an argument for applying this to the treatment of arsonists. More specifically, arsonists could be supported in striving for emotional security through non-fire-related means, perhaps using the GLM as a framework. In order to make this achievable, it would be helpful to break down the construct of emotional security into its constituent parts to allow for the setting of achievable and realistic treatment goals. As a starting point this process could be informed by the relevant sub-themes in the non-criminalised theoretical framework, namely Authenticity and Reassurance (see chapter three).

From a treatment perspective, whilst it is important to understand what enhances psychological wellbeing in non-criminalised fire users, we also need to know what erodes it in the case of the criminalised group. Data from this research indicates that the criminalised group struggle to accept that they have an arson conviction and/ or that others view them as an arsonist/fire setter. This causes distress and is detrimental to self-esteem, leading them to engage in self-preservation as a form of coping. As discussed in chapter four there are multiple interpretations of these coping mechanisms within the literature, which have also been termed neutralisations (Sykes & Matza, 1957) and cognitive distortions (Ward et al., 1997).

The way in which we conceptualise the aforementioned coping strategies determines whether or not they are considered a necessary treatment target for arsonists. Historically, the externalisation of blame and/ or excuse making by offenders was denounced and deemed by clinicians to be a negative risk indicator, particularly in the field of sexual offending where the

majority of research was conducted. Consequently, many sex-offender treatment programmes included components where offenders were encouraged to develop more objective accounts of their offending with a view to 'fixing' their distorted thinking (Auburn & Lea, 2003, p. 281). However, Maruna and Mann (2006) highlight that these cognitive strategies are also common in the non-offender population and should not necessarily be pathologised. At some point in our lives we have likely all made excuses or minimised our actions in order to present ourselves more favourably. With this in mind and on the basis of the current data, I assert that whilst the self-preservation strategies being employed by criminalised fire users might be socially undesirable, they are actually serving a protective function for the individual. Therefore, these strategies should not necessarily be challenged in treatment. A more worthwhile treatment target, as discussed above, is the strengthening of self-esteem and non-fire-related identity so that the arsonist label poses less of a psychological threat for those whose behaviour has been criminalised. This way of thinking is entirely consistent with the growing emphasis on positive psychology in work with offenders.

Summary of Implications and Applications

The findings of this research offer important insights which can improve the assessment of arsonists, as well as help to develop intervention strategies. From the perspective of academic study, the current findings have also provided a foundation for future research, which could adopt the CoFUT and the conceptualisation of the *process* of fire use as frameworks.

In terms of assessment, the conceptualisation of fire use as a *process* could be helpful in guiding practitioners to explore every aspect of a person's engagement with fire, including their experience during the active stage and in the aftermath, rather than only the factors of relevance to the ignition itself. Furthermore, the continuum perspective serves as a reminder of the fluidity of fire use. It should not be assumed that convicted arsonists have *only* engaged in

criminalised fire use. It is likely that they also have experiences of non-criminalised use, which may have contributed to their memories, beliefs and subsequent behaviour. On the basis of the current data, specific topics for exploration by practitioners who are assessing arsonists could include the appeal of the immediately gratifying aspects of fire, for instance, sensory stimulation, as well as the role of fire use in the person's self-concept.

With respect to treatment implications, encouragingly, the current findings endorse aspects of existing arson treatment programmes. For example, the importance of self-esteem has been highlighted, in addition to emotional regulation and interpersonal problem solving. Owing to the novelty of arson-specific treatment programmes there is a lack of data on their efficacy (Tyler et al., 2018). However, the findings of the current study suggest there are reasons to be, at least somewhat, optimistic in relation to the content of existing treatment.

Having said this, any arson treatment approach in the UK has to contend with some major obstacles which, I argue, could impact on efficacy. To my knowledge, these obstacles have not been explicitly acknowledged in any existing literature. In fact, in my view, until now, they have been overlooked. As discussed above, our species has a long and complex relationship with fire, dating back millions of years. It is essential that this is fully considered in the study, assessment and treatment of arson. Similarly, as demonstrated in this study, there are aspects of human fire use which could be universal, at least in the UK where this research is based. This study emphasises that the immediately gratifying impact of fire is appealing to non-criminalised groups as well as those engaging with fire in a criminalised manner. If, as proposed earlier, this appeal serves an evolutionary function, its eradication as an arson reduction strategy might be futile. Similarly, arson treatment which aims to re-structure fire-related beliefs is likely to be difficult owing to the entrenched nature of the memories and experiences which underpin them. That said, many successful treatments are based on the notion of working on unhelpful beliefs or cognitions including cognitive behavioural therapy

(Dobson & Block, 1988) and schema therapy (Young, Klosko & Weishaar, 2003) and so I am not suggesting it is an impossible task. Irrespective of whether it is theoretically possible though, the technique of changing a person's memories and beliefs is therapeutically intensive and time consuming and so incorporating it into existing treatment programmes may not be feasible, at least not in every case. Another challenge relates to the way in which fire is socially constructed in the UK. As discussed earlier, fire is more often portrayed as a magical, mysterious, intriguing and exciting entity, rather than a mundane and practical tool. Therefore, any attempt to change this portrayal in individuals' minds, still has to contend with the wider cultural and societal perspective. Again, this highlights why it is important to draw on sociological, criminological and anthropological perspectives, alongside psychology.

I am not attempting to paint an overly pessimistic picture in regards to the potential success of treatment for convicted arsonists. However, it is important to be realistic for a number of reasons. Firstly, because of the resources and funds that are invested in developing and delivering treatment programmes for convicted offenders. Secondly, the expectations of treatment facilitators and, moreover, participants must be achievable.

I argue that an alternative approach to reducing arson is early intervention programmes, i.e. those which are delivered pre-emptively to young people, *before* any offence has been committed. As mentioned previously, there is currently no nationally developed early intervention framework in the UK, meaning that different FRSs around the country are delivering different programmes and some are not delivering any at all. As such there has been no wide-scale evaluation of 'what works' in this respect. There is scope for early intervention programmes to be improved, based on the findings from this research. What has been learnt about the healthy use of fire, and the views and attitudes underpinning this from the non-criminalised sample could now be implemented in to programmes delivered to young people. For example, we could focus on building young people's sense of emotional security (shown

to be a benefit of non-criminalised fire use in this study). I propose that the national standardisation of early intervention strategies should be a priority. If all FRSs delivered the same programme/s then a nationwide evaluation could be conducted to ascertain which approaches are most effective.

On the basis of the current findings I strongly argue that *prospective* approaches (delivered to young people) aimed at preventing arson hold more promise than retrospective approaches (in the form of rehabilitative treatment with arsonists). At present, prospective interventions delivered at a local level by FRSs focus heavily on fire safety. They do *not* seek to desensitise young people to fire by portraying it as a functional and mundane tool. Crucially, I argue it is possible that the content being delivered in existing youth programmes could actually be *detrimental* in some cases. By focussing predominantly on fire awareness and fire safety, existing initiatives could simply be serving to reinforce the mystery and intrigue associated with fire in our society and building temptation amongst young people. I assert that a change in focus, towards developing a healthy relationship with fire, (using the non-criminalised sample in this study as a basis) offers a valuable and wholly novel alternative to the existing approach. Also, facilitating a shift to a view of fire amongst young people as nothing more than a mundane tool could potentially be a highly effective preventative strategy.

There are many complexities to a pre-emptive approach, one of these being the decision on who has access to it. I would argue that this should be delivered across the board to school pupils rather than the targeting of 'at risk' communities, which risks discrimination, ostracisation and even the playing out of a self-fulfilling prophecy. Ultimately, however, any treatment programme (whether that be prospective or retrospective) has to contend with the deeply entrenched cultural and societal views of fire in the UK (i.e. the symbolism, mystery and entertainment value associated with it), which are very difficult to counter.

The findings of this study illuminate interesting lines of enquiry for future research. Broadly speaking, I suggest that the way in which existing research has dichotomously categorised fire setters is unhelpful and artificial. I advocate research underpinned by the continuum conceptualisation. The current study points to a number of specific topics in need of further exploration. For example, psychological wellbeing could be explored quantitatively, in order to understand more about the role of fire use in psychological health/ ill-health. Quantitative research could explore the potential relationship between types of fire use and wellbeing, perhaps through the use of psychometric measures. Crucially, though, type of fire use should be measured as a continuous variable (i.e. on a scale), rather than categorically. Another focus of future research could be exploring the trajectory of fire use along the CoFU. More specifically, through psychometric assessment we could explore the psychological factors which make it more likely that someone will progress from one pole of the CoFU to the other. This work offers promise in facilitating early identification of those who may be 'at risk' of criminalised fire use. This means that they may be able to access the appropriate support sooner. Future research could also explore the role of familiarity in fire use. As referred to above in relation to self-verification theory, it is possible that fire use forms part of our identity because it is a familiar stimuli. However, in order to uncover whether this is specific to fire we could study the impact of other, equally familiar, stimuli, such as water (i.e. another of the elements). This would be best achieved through qualitative research, in the first instance, based broadly on the methodology and method employed within the current study.

As noted above, the fact that this study is based in the UK is a limitation because it means that findings cannot be extrapolated to other countries. With this in mind, another very important area for future research is that of country and cultural differences in fire use. I am keen to 'test' the hypothesis proposed in this thesis that fostering a view of fire as a mundane tool, rather than something magical and exciting, could be important in reducing the rate of

arson. I would like to explore the way fire is viewed by people in different countries and to establish whether these views correlate with self-reported rates of fire use (both non-criminalised and criminalised). As part of this study, I would also like to explore the various ceremonial uses of fire and the symbolism attached to it. I have been in contact with an academic colleague, based in Australia, who has indicated an interest in this proposed research. We have, so far, discussed collecting data from a community sample within our respective countries, by way of a survey, and then combining the data. We are also exploring whether a colleague in China would be interested in collaborating. This study will form the basis of my first post-doctoral research study, with the assistance of project students who I supervise in my capacity as lecturer at Newcastle University. I assert that this proposed research is an excellent starting point, however, it will still be focussed in the Global North.

I argue that it is imperative that we learn more about the way in which countries in the Global South manage fire and how their young people learn about it. Furthermore, the same concept could be applied to specific rural communities in Global North countries. A longer-term aim relating to post-doctoral research is to explore countries/ communities where fire is used functionally in a more primitive form, i.e. the naked flame. Knowledge of how other nationalities and communities view and interact with fire could inform intervention strategies employed in the UK, such as those proposed above. This research could take the form of an ethnographic study, similar to that conducted by Fessler (2006) cited above. For example, indigenous communities in Australia and the USA could be observed and interviewed with respect to their use of fire. These people are of interest to me because they use fire for a variety of functional purposes such as agriculture and hunting (Mistry, Bilbao & Berardi, 2016). That said, they also use it for spiritual reasons (Mistry et al., 2016). It would be helpful to compare and contrast the different uses and the beliefs they hold about fire.

The way in which fire is used specifically by *young people* in the Global South and rural communities (within the North and South) would be a valuable area for research. Qualitative research, using interviews, could form part of this proposed ethnographic study. More specifically, members of target communities could be interviewed about fire use and, importantly, the views and attitudes they hold about it. The CoFUT could be used as a framework for these interviews, i.e. the themes could be explored to determine whether they are applicable to those from very different cultural backgrounds. The ethnographic study which I am proposing here is the priority for my post-doctoral research. I have already made contact with professionals connected with museums in North East USA to explore the feasibility of gaining access to indigenous communities in order to conduct this research. It is important to reiterate, however, that this is a longer-term aim with respect to post-doctoral research.

The lack of heterogeneity with respect to nationality and cultural background in this study is a limitation which I have suggested could be addressed by further research. There are also other limitations relating to the sample composition, one of which is the focus on *extensive* fire use, i.e. frequent fire use. The current findings do not offer any insight into those who use fire less frequently. This means that many sub-groups are potentially not represented by the current findings. This has been partially addressed by a study which I supervised by Lee (2019) but there is a need for more research of this nature to explore 'moderate' fire use more thoroughly. Similarly, another issue is that I did not seek to investigate the experiences of those who identify as men and women separately. Currently, there is inadequate evidence from existing research to conclude whether there are gender differences in the characteristics of arsonists (Fritzon & Miller, 2016). Furthermore, there is no research looking at the influence of gender on the CoFU as a whole. During the process of analysing data from the current study I did not observe any stark differences in the experiences of my participants on the basis of gender identity, however, more research to explore this could be useful. Future research could

use the same design as the current study but look specifically at gender identity differences. It is important to explore this to inform treatment with arsonists and early intervention strategies. More specifically, practitioners could tailor different approaches for those identifying with different genders if findings suggest this is necessary.

Another sub-group not fully represented in the current study are those who have suffered severe fire-related trauma, such as people involved in serious accidents who may be permanently injured/ scarred as a result. It is possible that such a group could have very different views of fire and, thus, this warrants qualitative exploration through future research. Again, such a study could inform treatment and early intervention programmes. For example, it is possible that arsonists who have previously been severely traumatised as a result of fire could require a different approach to those who do not have a trauma history. Careful consideration would need to be given to ethical issues in this research, however. It would be important that involvement in the study did not run the risk of re-traumatising participants.

In summary, the current research contributes to the field of research by suggesting a change of direction in how fire use is viewed. I argue for a more holistic approach. I assert that understanding fire use as a *process* is helpful for the assessment of fire setters and arsonists. I also argue that the continuum conceptualisation can facilitate a dramatic change in direction in terms of how we conduct research in the future. Furthermore, it can influence the design and implementation of treatment programmes and, perhaps even more importantly, early intervention initiatives. The fuller value of this research and major findings with their implications for theory building, policy and practice are covered in more detail in the concluding chapter of this thesis.

Conclusion Chapter

In this thesis I have presented a new conceptualisation of fire use predicated on three lines of argument. Firstly, I argue that the way we interact with fire should be viewed as a *process*, comprising a number of stages. This is in contrast to how it has been presented in much of the existing academic literature, i.e. as an isolated act of fire *lighting.* Secondly, I argue that fire use is most coherently conceptualised as a dimensional construct. In other words, it is fluid and its nature can vary both over a single person's lifespan and also between different people. It is best captured, therefore, on a continuum – the continuum of fire use (CoFU). My third argument relates to the approach that I advocate which moves our understanding of fire use away from a uni-disciplinary understanding to a richer and more holistic conceptualisation drawing upon multidisciplinary perspectives. More specifically, the disciplines of sociology, criminology and anthropology offer a great deal of insight, in combination with psychology. It is particularly prudent, in my view, to consider the way in which our species first came to use fire and how our relationship with it has evolved over time. This broader perspective, I argue, provides the necessary context for understanding why and how people engage in criminalised fire use today.

In this thesis I have presented data from a qualitative study of fire users which led to the development of the continuum of fire use theory (CoFUT). The findings of the research support the aforementioned arguments and contribute to a new way of thinking about and explaining fire use. They also have the potential to inform practice in the assessment and treatment of arsonists, along with preventative interventions. Furthermore, their application could be extended even beyond arson and fire setting, which I will highlight below. In this concluding chapter I will summarise the research undertaken for this Ph.D and review its position alongside existing literature. Finally, for expository purposes, I reiterate the value of

this research in terms of practical applications and outline how I intend building upon this work in terms of potential post-doctoral research.

Summary of Context and Research

As discussed in chapter one, historically, the study of arson and fire setting has been much neglected when compared to other areas within forensic psychology. Research attention has grown in recent years and this has resulted in some important, if incomplete, milestones, such as the development of the M-TTAF (Gannon et al., 2012) and the exploration of non-convicted samples of fire setters (Gannon & Barrowcliffe, 2012; Barrowcliffe & Gannon, 2015, 2016). Notwithstanding the valuable developments, a number of issues remain. So far, existing research and theory has focused overwhelmingly on the most problematic and 'extreme' forms of behaviour, i.e. fire use which has resulted in imprisonment/ hospitalisation. At the very least, it has focussed on behaviour, which brings the perpetrator into contact with mental health professionals. There has been a preoccupation, therefore, with 'pathological', risky and dangerous interactions with fire. I have argued throughout this thesis that this is inconsistent with some current directions in forensic psychology, for example, those heavily influenced by positive psychology (Seligman et al., 2005). Positive psychology is outlined in the introductory chapter of this thesis and is referred to throughout. It adopts a 'strengths-based' approach through endorsing a focus on positive aspects of a person and/ or a behaviour. This is in stark contrast to the traditional focus in forensic psychology on what is construed as the deficit school of thought.

I conceptualise fire use as a dimensional construct, which is best represented as sitting along a continuum - the CoFU. The CoFU is important because it facilitates consideration of fire use *across* a person's lifespan, as well as how it varies from person to person. At one end of the CoFU sits non-criminalised fire use and at the other sits criminalised use (including arson

and fire setting). With positive psychology in mind, the two ends of the CoFU reflect not only what is legal and illegal within the eye of the law but also how behaviour is socially constructed. As outlined in the introductory chapter and chapter two, I believe that criminalisation of a particular behaviour (including fire use) represents an interactive process through which the actor has been labelled (see the work of Becker, 1963, 1974).

In conducting this research it has been my intention to explore different forms of fire use with a view to informing what we know of arson. The research questions are as follows: (a) what psychological mechanisms underpin non-criminalised fire use?, and (b) what psychological mechanisms underpin criminalised fire use? It is important to reiterate here that the two samples in this research (non-criminalised and criminalised) are not being treated as distinct groups. Rather, they represent fire use which is broadly clustered around the two ends of the CoFU. As has been demonstrated in sections two and three of this thesis, forms of fire use reported by the participants are highly diverse. This supports the notion that fire use is a dimensional construct.

I interviewed two samples of adults for this research, namely those who are predominantly non-criminalised and predominantly criminalised fire users. There were multiple challenges in the participant recruitment and data collection stages, particularly in relation to the prison-based data collection. Qualitative data was analysed using techniques informed by Grounded Theory (GT). The decision concerning the most appropriate approach was influenced by my own philosophical and epistemological stance. As a critical realist, I endorse the idea of an *interaction* between the researcher and their data. I believe that the researcher plays an active, rather than passive, role in data analysis (Charmaz, 1990, 2000; Braun & Clarke, 2006).

In order to monitor how I interacted with the data I adopted a reflexive approach to data analysis. I engaged in the process of memo writing, which I described in chapter two of this

thesis. To reiterate, this is the practice of note-keeping, which facilitates active involvement from the researcher and the development of ideas (Charmaz, 2006, p. 72). Memo writing enabled me to reflect on both the interview process and my emotional reactions/ thoughts relating to each individual participant. This promoted cognisance of the factors which could be influencing and biasing my judgements[23]. The data was analysed on a sample by sample basis initially (see section two of this thesis). It was then combined which resulted in the overarching theory – the CoFUT (described in chapter five). The findings are summarised below.

Findings

Analysis of data from the non-criminalised and criminalised samples identified four and three core themes respectively (each with sub-themes). All themes across both samples relate to the psychological impact of fire use. I developed a diagrammatic representation of the two sets of themes in order to demonstrate the relationships between them. For the non-criminalised group, the core themes are as follows: (a) Immediate Gratification, (b) Inspiration, (c) Self-Concept and, (d) Emotional Security. The first of these themes captures the short-term, transient impact of fire use and the remaining three are longer-term. Of central importance is that all of the non-criminalised user themes relate to the psychological *benefits* of fire use. In other words, according to the data, fire use which sits towards the non-criminalised end of the CoFU has a positive impact on psychological wellbeing.

Through the analysis of data from the criminalised group, three core themes were identified, namely: (a) Immediate Gratification; (b) Self-Concept, and (c) Self-Preservation.

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[23] In addition, I also engaged in regular discussions with my supervisors throughout the data analysis process. My supervisors were able to scrutinise and, at times, challenge my interpretations, which I believe undoubtedly improved the robustness of the findings.

The themes for this sample capture a mixture of short and longer-term factors and represent both positive *and* negative factors influencing participants' psychological wellbeing. Self-Preservation relates to the cognitive strategies employed by participants in order to manage the psychological threat posed by acknowledging oneself as an arsonist/ fire setter. This theme, therefore, elucidates a drawback relating to forms of fire use which sit towards the criminalised end of the CoFU.

In sections two and three of this thesis I presented the aforementioned themes, along with corresponding data but I also highlighted important caveats. For instance, I made reference to the fact that it was not possible to measure baseline psychological wellbeing for either sample (i.e. overall psychological health before they started to engage with fire). This means that the impact of fire use on psychological health relative to other factors in a person's life, such as relationships, occupation or hobbies, cannot be established.

In the spirit of the dimensional conceptualisation of fire use chapter five of this thesis outlines the process of merging data from the two samples. This gave rise to the overarching theory - the CoFUT - comprising three themes. The themes represent the psychological mechanisms underpinning fire use, according to the data from this study. In addition, I have examined the factors which connect these mechanisms, such as the process of reinforcement. The psychological mechanisms outlined in the CoFUT are: (a) Transient Emotional State, (b) Self-Concept and, (c) Psychological Wellbeing. The CoFUT accounts for a spectrum of non-criminalised and criminalised fire use. It highlights both short and longer-term factors in repeated fire use. Transient Emotional State relates to the immediate and short-term impact of fire use on participants' emotional state and includes its physiological effects, in addition to its positive (temporary) impact on state of mind. The Self-Concept theme is concerned with how fire becomes part of participants' identity and how it influences self-esteem. The final theme,

Psychological Wellbeing, captures the longer-term impact of fire use on participants' psychological health.

The CoFUT demonstrates that more similarities than differences exist across the themes from the two sets of data (i.e. non-criminalised and criminalised fire users). Firstly, there is a degree of heterogeneity in the fire use reported upon in this study. *All* of the criminalised group also speak of experiences approaching the *non*-criminalised end of the CoFU. Likewise, some of the non-criminalised group speak of experiences which could be viewed as criminalised to varying degrees. The key point here is that all participants speak of an *array* of fire-related experiences. This supports my assertion that we cannot neatly delineate between what is non-criminalised and criminalised and, thus, that fire use is a dimensional construct. Secondly, participants make reference to *stages* of fire use, including thinking about lighting a fire, maintaining it and its aftermath. There are also similarities across the samples in terms of the specific CoFUT themes. For instance, all participants speak of the immediately gratifying effects of fire on their sensory system, such as its 'exciting' and 'relaxing' properties. This might suggest that the sensory aspects of fire are universal, at least for those who interact with it extensively. Another similarity at a theme-level relates to Self-Concept, which appears in both samples and comprises the same two sub-themes (i.e. Identity and Self-Esteem).

There are, however, also differences between the two samples. This accounts for the idea that different forms of fire use appear at different points on the CoFU. For instance, the criminalised group speak of fire use as a channel through which to express anger, but this is not a feature of the narrative from non-criminalised participants. The most significant difference between the two samples lies in the third CoFUT theme – Psychological Wellbeing. Whereas non-criminalised fire use has a wholly positive psychological impact on participants, the impact of criminalised use is mixed. More specifically, criminalised users find it difficult to agree that they have committed an arson offence and/ or have set reckless fires. It is also

difficult for them to cope with how they have been labelled by society. This, in turn, poses a threat to self-esteem, which they try to manage through self-preservation. Taken together, the aforementioned similarities and differences between non-criminalised and criminalised fire use, were expounded in sections two and three of this thesis. They are important to acknowledge when considering the wider implications of this research.

Overall, the CoFUT offers a new and original insight. It is the first theory to consider fire use as a *process* and it is the first to address non-criminalised *and* criminalised fire use combined. Furthermore, the CoFUT offers a much-needed multi-disciplinary perspective, drawing on work from sociology, criminology and anthropology, in addition to psychology. The CoFUT has great potential in terms of its application in my own discipline (forensic psychology) and in allied professions This is summarised below.

Implications and Applications

The overarching objective of this Ph.D. was to contribute to a better understanding of arson, through exploring the spectrum of fire use. More specifically, the findings inform how we might assess and treat those convicted of arson and, furthermore, how we seek to reduce and prevent arson.

Exploring fire use, as a broad construct, to include *non*-criminalised forms is important from a positive psychology perspective. The *changing risk climate* in forensic psychology was discussed in the introductory chapter of this thesis. The psychological literature now reflects the importance of exploring positive behaviour, alongside that which is seen as 'risky' or illegal and this is consistent with a strengths-based approach to working with offenders. However, I have reflected that in my professional experience, there is still much more progress to be made in the way that professionals think about crime. More specifically, there is still a heavy focus on risk and risk factors. I argue that the continuum approach should be embedded within the

practice of psychologists and other professionals working with convicted arsonists, and that we can learn from those who interact with fire in a non-criminalised manner, i.e. through exploring the *positives* of fire use.

Adopting a dimensional rather than categorical perspective on fire use is also important because it encourages clinicians to attend to *all* fire-related experiences in an offender's history, rather than only their index offence and/ or previous arson offences. Furthermore, the notion of a continuum allows us to plot the broad trajectory of an offender's fire use, i.e. to determine whether this has been linear or whether there have been deviations and changes of direction along the way. The notion of fluidity in fire use (i.e. the potential to move 'up and down' the continuum) is of central importance and offers promise for offender rehabilitation and prevention strategies. It suggests, in principle, that a criminalised user can progress downwards towards the non-criminalised pole. That said, we also need to be cognisant that the converse might be true, i.e. that non-criminalised users could 'become' criminalised users in certain circumstances.

I argue that the continuum conceptualisation discussed within this thesis in relation to fire could be applied more widely in forensic psychology and allied disciplines, in order to understand other behaviours which may or may not be considered criminalised. Like fire use, other concepts are ambiguous and, in some cases, can be equally difficult to categorise as acceptable or unacceptable. For example, this could be applied to the issue of 'consent' in sexual activity. According to Beres (2007) considering whether someone has provided appropriate consent is "complex" and "confusing" (p. 93) and, therefore, I would suggest it is best considered dimensionally. In other words, there are so many grey areas in determining whether someone has consented to engage in sexual activity that it is sometimes very difficult dichotomise into a simple 'yes' or 'no'. This approach could promote new ways of thinking. For instance, in educating young people about sexual behaviour, how to provide consent and

how to interpret whether consent has been given, a continuum framework could be used, which might aid understanding into this complex topic. The same concept might apply to treatment programmes offered to those convicted of certain sexual offences. This point is particularly pertinent given that, recently, there has been an overhaul in sex offender treatment in the England and Wales prison system following a recent Ministry of Justice report (2017).

In addition to the conceptualisation of fire use as sitting on a continuum, the current findings point to the notion of fire use as being a *process* rather than an event. This has applied value because it promotes a more thorough formulation of an arsonist's *interactions* with fire, focussing on more than simply the act of *lighting* a fire. Indeed, since completing this research, I have made adaptations to the way I assess convicted arsonists as a practitioner in private practice. I now explore each of the stages of fire use (outlined in chapter six) in order to develop a formulation, which is specific to the client's arson offence (and other key instances of fire use). This contrasts with my previous approach, in which I employed a generic formulation framework that was not offence specific. In addition, admittedly in the past I focused almost solely on the client's index offence. This, I now realise, on reflection, is unduly reductionist in cases where the individual has a range of fire-related experiences spanning the whole CoFU.

In addition to the potential impact that my findings could have on the assessment of arsonists, I also believe they can dramatically influence treatment and intervention approaches. This was explored in chapter six and is summarised below. It is important to highlight that in considering the application of this Ph.D, I have focused primarily on psychology and, more specifically, forensic psychology because this is my area of expertise, training and knowledge. That being said, I have also considered the wider applications, beyond psychology, below.

Offender rehabilitation.

In terms of rehabilitation, a knowledge of non-criminalised *and* criminalised use of fire could inform treatment targets in programmes which are designed for convicted arsonists. For example, if we understand that *non*-criminalised fire use provides emotional security, we could seek to support arson offenders in pursuing this in their life through (non-fire related) means. Similarly, if we know that self-concept is an important universal mechanism underpinning fire use, it logically follows that this should be addressed in arson interventions. Crucially, many of the findings from this research endorse the content of existing therapeutic approaches, such as the fire setter intervention programme for mentally disordered offenders (FIP-MO; Tyler et al., 2018). This is encouraging and suggests that the implementation of this treatment is worthwhile.

Another contribution to offender rehabilitation offered by this research is through the insight gained in to the sensory appeal of fire. As discussed in sections two and three of this thesis, the data indicates that fire has an influence on physiological state through acting on the senses. The result of this is that it stimulates and/ or relaxes those who are using it. The fact that *all* participants refer to this effect suggests that the sensory appeal of fire is universal, which makes sense from an evolutionary point of view. If this is the case then eradicating the physiological effects of fire is likely to be a very difficult task indeed. We need to be realistic in terms of the extent of progress we expect an offender to make in treatment so that the goals which are set are achievable. In order to counter the appealing physiological effects of fire, I have proposed that techniques such as exposure therapy (ET) might be employed as a treatment strategy. However, there are risk implications as discussed in chapter six and so, realistically, this is probably implausible. Less extreme variations of traditional ET could offer potential and it is encouraging that this already features in the FIP-MO (Tyler et al., 2018), although there is an argument for more of an emphasis on this in arson treatment programmes.

In addition to supporting the efficacy of existing treatment programmes, I have used the current findings to support the change in direction in the underlying philosophy of offender treatment. I subscribe to the positive psychology approach. More specifically, I assert that when working therapeutically with arsonists we should not be focussing solely on their arson offence. We should also focus on their non-criminalised experience of fire use. Furthermore, we should not only be seeking to identify an offender's deficits and the deficits in their behaviour. Rather, we should be building on the positive aspects of their character, behaviour and circumstances. For example, data from the criminalised group highlights the detrimental impact of the arsonist/ fire setter label and the self-preservation strategies employed by participants to manage it. Historically, treatment programmes would have aimed to discourage and 'remove' these cognitive strategies. However, they are protective for my participants. Therefore, rather than seeking to eradicate them, we should be strengthening other aspects of the offender's self-esteem so that they no longer feel the need to employ self-preservation strategies over time.

As discussed in the introductory chapter, although the 'strengths-based' approach is more influential now within the CJS than it was previously, in my clinical experience, I believe we still have some way to go before it becomes genuinely embedded into how clinicians approach work with offenders. For instance, 'psychological risk assessment' is still commonly referred to and, thus, implicit here is the assumption that the primary focus is *risk*. The re-conceptualisation of arson for which I am arguing within this thesis may assist in moving the focus away from solely the *mis*use of fire.

In summary, the findings of this study have application in relation to the rehabilitation of arson offenders. However, the meaning ascribed to fire and its symbolic significance in the UK, against the backdrop of the role of fire in the evolution of our species, means that therapeutic intervention *post*-arson is likely to be an 'uphill battle'. This matter was discussed, in detail, in chapter six. I have suggested that taking *pre-emptive* action in the form of early

intervention/ prevention programmes may be a far more fruitful approach to arson-reduction, as summarised below.

Early intervention.

I have proposed that, theoretically, a seismic shift in the way we understand fire could reduce rates of arson. As outlined in chapter six, it could be beneficial to strip fire of its mystery, intrigue and magic so that it is viewed purely as a mundane and functional tool. This idea is informed by findings from this study alongside the work of Fessler (2006). However, the social construction of fire is so entrenched that any hope to change it on a macro level is likely futile. Alternatively, we could apply this concept on an individual level. For instance, prospective interventions could seek to educate young people about the functional uses of fire, its history and its role in the evolution of our species. This could dispel the fire 'myths', reduce intrigue and encourage a view of fire as a tool, rather than some magical and mysterious entity, with which they may feel inclined to experiment.

Currently, Fire and Rescue Services (FRSs) across the UK offer educational programmes for young people, however, the focus tends to be on fire safety. I argue that raising people's awareness of the dangers of, and risks associated with, fire might only serve to reinforce the mystery and intrigue, at least in some individuals. Therefore, in some cases, the existing approach might actually be increasing the likelihood of future criminalised fire use, rather than reducing it. Much could be learnt from the way in which fire is viewed (and utilised) by non-criminalised users. I strongly believe that future research should explore the primitive and functional use of fire by different communities around the world. I intend for this to be the focus of my own post-doctoral research. For instance, I am interested in exploring the use of fire by indigenous people and/ or those in rural communities where electricity and gas is not

readily available. Learning more about how these individuals view and use fire could inform early intervention programmes in the UK.

I suggest that pre-emptive educational programmes offered to young people could be underpinned by the CoFUT and its constituent parts. Firstly, presenting fire as a mundane tool to young people might, over time, reduce the likelihood of the intense physiological arousal and related effects highlighted within the Transient Emotional State theme. As discussed, this is likely to be more effective than seeking to retrospectively *desensitise* people to these effects. Secondly, the Self-Concept theme in the CoFUT highlights the way in which fire is related to identity and self-esteem. If we were able to shape people's early experiences and perceptions of fire this could, in turn, dictate their subsequent relationship with it. Lastly, the Psychological Wellbeing theme highlights the positive benefits which a *healthy* relationship with fire can offer and this could inform some of the targets of early intervention programmes.

In proposing the utility of pre-emptive approaches to fire setting and arson, it is important to reiterate a central caveat, namely the role of fire in the evolution of our species (Clarke & Harris, 1985; Goudsblom, 1992; Pyne, 1998; Wrangham et al., 1999; Fessler, 2006; Wrangham, 2010; Wrangham & Carmody, 2010). References to the way in which our species has used fire for millions of years appear largely in the anthropological literature which supports my argument for a multi-disciplinary approach to this field of study. If we are programmed to find fire appealing and to seek to control it then this emphasises the extent of the challenge in seeking to re-write individuals' relationship with fire, particularly in those people who may be pre-disposed to criminalised behaviour, impulsivity and risk-taking. There are also other obstacles to pre-emptive interventions which must be considered. Firstly, a nationwide strategy would need to be developed to ensure that the interventions were delivered in a standardised way which would facilitate essential evaluations of the approach. Currently, FRSs across the country appear to develop education programmes 'in-house' and there is little

evidence of joined-up thinking on the matter. Secondly, as part of this strategy, the decision about who to target, and how, would need to be addressed. The implementation of any such national strategy would be best implemented by way of a policy, which would need governmental support and this is a significant undertaking.

I am already taking steps toward my goal of influencing arson reduction strategy through this, and future, research. I have established links with my local FRS. I have been asked to review their existing early intervention programmes, which are delivered to school children, with a view to revising them. We have also discussed running a pilot of a new intervention based on my research, which would be evaluated systematically. This is the first step in influencing arson reduction. If the approach which I propose appears to offer promise, it could be introduced to other FRSs across the UK.

The potential applications of the current findings are manifold. However, this is the only study of its kind and it does have limitations, which I referred to in sections two and three of this thesis. These limitations are summarised below, along with ideas for future directions.

Interdisciplinary Implications

In section one of this thesis I argue that an interdisciplinary understanding of fire use as a broad construct is required if we are to better understand arson and, ultimately, how to prevent it. I have drawn on interdisciplinary work in providing the context for this research and in interpreting my data. Therefore, on this basis, my research has important implications beyond forensic psychology, most notably in anthropology and sociology. These implications are discussed below.

Anthropology.

In chapter one of this thesis I discussed anthropological work on fire use. Most notably, I discussed research exploring the role of fire use in the evolution of our species. The argument that fire use played a role in our specie's evolution through enabling us to cook our food is convincing (Carmody & Wrangham, 2009; Wrangham & Carmody, 2010; Wrangham, 2010). As discussed in chapter one, Sandgathe (2017) refers to the lack of consensus surrounding *when* our ancestors first started to use fire. There is also disagreement on *how*, exactly, we first came to use it. Fessler (2006) suggests this may have resulted from early fire play as our ancestors observed sparks arising from their use of flint to fashion tools. In this thesis I have applied these ideas to consider non-criminalised fire use but this also raises anthropological questions about arson.

It is possible that *criminalised* forms of fire use, specifically, have played a part in our evolution, which is an important conceptual point yet to be explored. For example, if an ability to control fire is admired and provides one with a sense of power (as indicated by data from the current study), then is there any evidence that our ancestors *mis*used it as a means of attracting mates? I have seen no reference to this idea relating to fire in literature from any discipline but it is surely a point which could warrant exploration. Evolutionary perspectives on other forms of offending exist. For example the confluence model of sexual aggression, Malamuth (1996; as cited in Ward et al., 2006) proposes that an important factor in male sexual offending against women is males' desire for reproductive success. Therefore, there is scope to explore a similar perspective in relation to arson.

Anthropology and, indeed, archaeology might hold the key to investigating whether there is evidence of the *mis*use of fire in the history of our species. More widely still, this highlights an important potential contribution of anthropology in the design of arson treatment and youth intervention programmes. In my experience, the development of such programmes

is often uni-disciplinary. Prison Service-run programmes are usually developed by practitioners and researchers with a psychology background and tend to be psycho-social in nature. I have direct experience of facilitating and managing a number of these programmes and I have certainly never seen reference to experts from alternative disciplinary backgrounds being extensively consulted. Even more insular is the current approach to developing youth intervention programmes, with these usually being designed 'in-house' by individual Fire and Rescue Services in England and Wales (Foster, 2019). In my view, therefore, there is vast potential for the consultation of academics and practitioners with an anthropology background in developing arson prevention and reduction interventions and this is an exciting opportunity for future collaboration.

Sociology.

As a discipline, sociology has much to offer in improving our understanding of fire use. In turn, it can contribute to a better understanding of arson and how to reduce it. The importance of culture has been raised in this thesis, and this is an area which I believe requires much more research. From a sociological perspective, there are exciting opportunities for research exploring more about the social construction of fire, from a cross-cultural perspective. Importantly, we could also benefit greatly from research which traces the evolution of fire and fire use as social constructs. This may well involve an appreciation of historical work also. For example, in my wider reading for this Ph.D. I came across work on execution practices in England, which included 'burning at the stake' up until 1790 (Campbell, 1984). Combining what we know of this historically, with a sociological perspective on how and why this was accepted as a necessary form of punishment, could offer more of an insight into the evolution of our relationship with fire.

The wider implication of sociological research of this kind is that, once again, sociologists and criminologists could and *should* be more widely consulted in the development of arson prevention and reduction interventions. Their expertise on topics such as society, communities, gender and ethnicity all hold significant value to this field. As highlighted previously, there remains many *'unknowns'* with regard to fire use, and I believe that sociology as a discipline has a great deal to offer. We must better understand the symbolic significance of fire because, in my opinion, this has influenced the way we use (and *mis*-use) it today. For example, is there a difference in the rates of arson in societies such as that studied by Fessler (2006) where fire is seen as mundane when compared to societies where fire is viewed as magical and mysterious? This relates to my plans for post-doctoral research. We must also explore wider-reaching uses of fire, from different perspectives, such as fire and rescue service personnel.

Ultimately, in my view, fire and fire use are social constructs and, therefore, arson is a *social* problem. It cannot and should not be understood as a problem *within* one individual (this is often the focus of mainstream forensic psychology). Rather, it should be understood as a consequence of the way we, as a society, view fire. This highlights the importance of drawing on sociological work in order to understand it and in order to engage members of the community in early interventions. As discussed in the previous chapter, I believe that developing and standardising a community-wide approach for all young people (rather than only those considered to be 'high risk') could be an important step in reducing arson in this country. This type of approach *must* acknowledge the need for close multi-disciplinary working, for example, collaborations between practitioner psychologists and practitioner social workers. In my opinion, co-working, specifically in reference to the development of interventions targeting anti-social behaviour and crime, does not happen enough. When I have

worked as part of a multi-disciplinary team in healthcare settings, I have observed the benefits both from the professionals' perspective but also the perspective of service users.

Limitations and Future Directions

The current study focuses on extensive (frequent) fire use. It does not account for those who engage with fire on a less frequent or 'moderate' basis. The study by Lee (2019), which I supervised, initiated this work. She explored the views and experiences of those who engage with fire infrequently, rather than those engaged in extensive use. Interestingly, Lee identified parallels with the CoFUT themes, which further supports the dimensional perspective. However, more research of this nature is required in order to support (or refute) this. If we continue to find similarities in the way individuals across the whole continuum experience fire use (irrespective of frequency of use) then this would considerably strengthen the argument that all interactions with fire exist along the *same* dimension/ continuum.

The lack of heterogeneity with respect to nationality and cultural background in this study is another important limitation, as I did not systematically record these details prior to interviewing each participant. On reflection, the central importance of ethnicity and cultural background only became apparent once I analysed my data and considered the implications of the CoFUT. It has become very clear to me now that the use of fire is likely to vary greatly across different countries, cultures, races, ethnicities, societies, religions and many more variables. My current findings draw on a relatively small purposive sample. In future research I will aim to systemically collect demographic data on each participant and to seek breadth in that respect.

As already referred to, I intend to embark on post-doctoral research which will focus on differences in fire use and the way fire is viewed across different countries and cultures. This will be undertaken in collaboration with a colleague in Australia and, hopefully, another

in China. In this research we will survey members of the public about the way they use fire and their views of it. Data will be combined to explore similarities and differences. More specifically, I am interested in exploring whether the way that fire is viewed (i.e. as more or less magical, mysterious and exciting) is related to the type/s of fire use which is self-reported.

As discussed previously, as a longer-term aim I am keen to explore a wider-range of variations across ethnicity, religious diversity and cultural background by studying those in rural communities and, indeed, the Global South. This type of research is important because this could represent countries/ cultures where fire is used in much more primitive forms (i.e. the naked flame), rather than modern uses of fire usually seen in urban areas of the Global North (such as gas central heating). As discussed throughout this chapter and in section three, research which extends the work of Fessler (2006) through studying communities where fire is used heavily as a functional tool could prove integral to the development of effective early intervention programmes. In line with the findings of Fessler, I hypothesise that members of such communities may have a very different view of fire and, thus, may be less interested in misusing it. More specifically, it is possible that these people may be less inclined to admire its magical and mysterious properties and be less attracted to the risk associated with fire.

I have a particular interest in the way fire is used by indigenous communities in countries such as Australia and the United States of America (USA), and this could form the basis of a post-doctoral programme of research. These communities are of interest to me because of their extensive functional use of fire, which could enable me to 'test' the aforementioned hypothesis, at least partially. For example, Mistry, Bilbao and Berardi (2016) noted that indigenous people use fire for a range of reasons including agricultural and pastoral use, hunting, gathering and domestic use. What is particularly intriguing about these communities, however, is that fire also carries some symbolic meaning for them and they use it spiritually (Mistry et al, 2016). Therefore, it could be interesting to contrast the functional

versus spiritual emphasis placed on fire by indigenous people and to explore if this impacts on their underlying view of it. Also of intrigue is the fact that there are some who criticise indigenous use of fire, viewing it as destructive (Mistry, Schmidt, Eloy & Bilbao, 2019), which calls in to question where it might sit on the CoFU. It certainly seems that this is not 'clear-cut'.

Another characteristic of this study which could be considered a limitation is the qualitative design. In my own discipline, psychology, qualitative research has been criticised for lacking rigor (for examples see Carr, 1994; Brown & Lloyd, 2001). It has been suggested that qualitative research is subjective and much has been made of the fact that there is no way of establishing whether results occurred by chance, in the absence of statistical significance-testing (Trafimow, 2014). Despite the criticisms, qualitative research is now more widely accepted both in the UK and USA (Biggerstaff, 2012). I argue that in such a novel field of research it would be unwise and extremely difficult to seek to employ quantitative methods, which would involve hypothesis testing. Until more is known about the psychology underpinning the CoFU it would be premature to attempt to pinpoint variables of interest. I argue that in the immediate future, research should employ ethnographical methods, including observation and qualitative interviews.

Closing Remarks

The arguments I have made within this thesis are based not only on my role as a researcher but also on my 15 years of experience as a clinician, throughout which I have worked with convicted arsonists. I have argued for a re-conceptualisation of fire use from categorical to dimensional. I have developed a new theory – the CoFUT - which is grounded in the data from the study. I have also argued that we should consider fire use as a process, rather than a single event. I have suggested that psychology cannot address all that we need to learn about fire use as a standalone discipline and, thus, an interdisciplinary approach is required. In my view, we are only ever going to have an impoverished and limited understanding of arson/ fire setting unless we change our approach. We must acknowledge that our interaction with fire is a process. We must better understand *non*-criminalised fire use *and* we must better acknowledge historical, evolutionary and sociological perspectives. I argue that the efficacy of any attempt to reduce arson, without adopting a more holistic conceptualisation, will always be limited. The findings reported here, interpreted alongside sociological, criminological and anthropological literature, have the potential to mark a change in direction in forensic psychology and the criminal justice system more widely. To secure such a shift, however, would mean changes at a strategic and policy level. Before this can be achieved I believe that further research is required, predicated on the CoFUT. I have outlined what I view as some of the key priorities above, and in previous chapters.

I understand that the dissemination of my research findings, beyond the narrow field of forensic psychology, is key if I am to influence strategy. Furthermore, it is also crucial in order to prompt interdisciplinary debate and the critical study of fire use within sociology, criminology and anthropology. I intend to embark on post-doctoral research to further explore the CoFUT, but I have also begun to establish links with key stake-holders, namely my local FRS. I am realistic in acknowledging that a change in direction as significant as I am suggesting

will take time and can only come to fruition with more research into the CoFUT, as well as efforts to pilot novel ways of working. Of most pertinence, in my view, is that we must dedicate time and resources to early intervention strategies for young people. I strongly argue that the best opportunity to reduce the rates of arson in the UK is to intervene *before* criminalised views and experiences of fire have formed.

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Appendix 1:

Non-Criminalised Fire Users

Indicative Semi-Structured Interview Schedule (SSI)

Interview questions:

1) Could you start by telling me a bit about yourself?

2) What interested you about taking part in this research?

Say: We're now going to start to talk about fire

3) In your view, how safe is fire?

    a. What makes it more or less safe?

4) If we're lighting a fire, how much control do we have over it?

    a. Does anyone else have control over it?

    b. What makes you say that?

    c. What do you think is a serious fire? Could you give an example?

Explain: Now I'm going to ask you about some of your early memories. PLEASE REMEMBER NOT TO GIVE ME ANY DETAILS (LIKE NAMES, DATES OR LOCATIONS) OF ANY FIRES YOU HAVE SET OR ANY FIRES YOU ARE AWARE OF WHICH WERE SET BY OTHER PEOPLE. Do you have any memories of fire from when you were young?

5) Do you remember seeing any or being around any?

    a. Could you tell me a little bit about it/ them?

    b. How old were you?

    c. Who were you with?

7) Did you ever light fires as a child?

8) Do you have any other memories about fire or fires?

    a. Good or bad?

    b. Seeing them on television, in a newspaper or hearing about a fire from someone else?

9) How do you feel when you think back to those times?

If the participant struggles to recall any, ask:

When do you first remember seeing a fire?

Say: now I'm going to move on to ask you a little bit about the fires you have been around and lit as an adult. PLEASE REMEMBER NOT TO GIVE ME ANY DETAILS (LIKE NAMES, DATES OR LOCATIONS) OF ANY FIRES YOU HAVE SET OR ANY FIRES YOU ARE AWARE OF WHICH WERE SET BY OTHER PEOPLE.

Tell me about times when you have been around fires as an adult? *Allow the participant to talk freely – only add the following prompts if necessary*

     a. What do you notice about the sound?

     b. What do you notice about the smell?

     c. What do you notice about the way it looks?

     d. What do you notice about the way it feels to be close to a fire?

     e. What do you notice the most?

10) So we spoke earlier on about your childhood memories of fire. Could you tell me about why you light fires as an adult please?

     a. Why do you light fires?

     b. Are they usually planned or spur of the moment?

     c. What typically triggers you to light a fire?

     d. Could you describe to me what goes through your mind when you're lighting fires? What are you thinking about the most?

     e. Could you explain how you feel when you light fires?

     f. How do you feel about fire?

     g. What do you like about it the most? E.g. lighting it, watching it or extinguishing it?

11) Can you tell me about what you do whilst the fire is burning?

     a. After you've lit a fire what do you usually do?

     b. When you light a fire how long do you like it to last?

     c. How do your fires usually go out?

12) So thinking back on everything you have told me today, what do you like about fire?

13) Is there anything that you don't like about fire?

Say: that's all I wanted to ask you. Is there anything you'd like to tell me about which we haven't covered?

Thank the participant for taking part. Remind them to keep their copy of the information sheet.

Appendix 2:

Criminalised Fire Users

Indicative Semi-Structured Interview Schedule (SSI)

Interview questions:

1) How are you feeling today?

2) Is there any reason why you should not take part in the interview today?
   a. Do you have physical or mental health problems which might make participating difficult?

3) Say: *I would like to make sure you're as comfortable as possible during the interview. If you feel distressed at any time, please let me know. If you do start to feel distressed, or upset, how would I know? What are the signs?*

4) Could you start by telling me a bit about yourself?

5) What interested you about taking part in this research?

We're now going to start to talk about fire.
PLEASE REMEMBER NOT TO GIVE ME ANY DETAILS (LIKE NAMES, DATES OR LOCATIONS) OF ANY FIRES YOU HAVE SET OR ANY FIRES YOU ARE AWARE OF WHICH WERE SET BY OTHER PEOPLE. IF YOU DO TELL ME ANY DETAILS, I MAY HAVE TO PASS THESE ON TO THE POLICE.

6) What do you think of fire?
   a. What is good about it?
   b. What is bad about it?
   c. What is fun about fire?
   d. What is interesting about fire?

    e.   Does fire remind you of anything?

7) In your view, how safe is fire?

    a.   What makes it more or less safe?

    b.   How much control do we have over fire?

8) Why do you think people light fires? Why do people use fire?

Now I'm going to ask you about some of your early memories about fire. PLEASE REMEMBER NOT TO GIVE ME ANY SPECIFIC DETAILS (LIKE NAMES, DATES OR SPECIFIC LOCATIONS) OF ANY FIRES YOU HAVE LIT OR ANY FIRES YOU ARE AWARE OF WHICH WERE LIT BY OTHER PEOPLE. IT IS OK TO TELL ME IF YOU LIT A FIRE AND HOW IT FELT BUT DON'T TELL ME WHERE AND WHEN.

9) Tell me about any memories of fire from when you were young.

10) Do you remember seeing or being around any fires when you were young?

    a.   Could you tell me a little bit about how it felt to be around it/ them?

    b.   What thoughts went through your mind at that time?

11) If any, what type of fires did you light as a child? *IT IS OK TO ANSWER THIS QUESTION BUT DON'T TELL ME EXACTLY WHERE AND WHEN YOU LIT THE FIRES.*

    a.   For example, did you ever light fires in public places or to other people's property?

    b.   Could you tell me why you did this and how this felt?

8) Do you have any other memories about fire or fires?

    c.   Good or bad?

    d.   Seeing them on television, in a newspaper or hearing about a fire from someone else?

[If the participant struggles to recall any, ask]:

When do you first remember seeing a fire?

Please remember to tell me if you feel upset by anything we are talking about.

Now I'm going to move on to ask you a little bit about the fires you have been around and lit as an adult. PLEASE REMEMBER NOT TO GIVE ME ANY DETAILS (LIKE NAMES, DATES OR LOCATIONS) OF ANY FIRES YOU HAVE SET OR ANY FIRES YOU ARE AWARE OF WHICH WERE SET BY OTHER PEOPLE.

14) Throughout your life, how important has fire been to you?

    a. What role/s has it played in your life?

15) So we spoke earlier on about your childhood memories of fire. I'm now going to ask you about any fires you have lit as an adult. ***PLEASE REMEMBER NOT TO GIVE ME ANY DETAILS (LIKE NAMES, DATES OR LOCATIONS) OF ANY FIRES YOU HAVE SET OR ANY FIRES YOU ARE AWARE OF WHICH WERE SET BY OTHER PEOPLE.***

    a. <u>Generally speaking</u>, what types of fires have you lit or been around?

    b. <u>Why do you light fires?</u>

    c. How does it feel to light fires?

    d. Could you describe to me what goes through your mind when you're lighting fires? What are you thinking about the most?

16) If you're around a fire that is burning, what are you usually doing?

17) Thinking about times you have been around fires as an adult:

    a. What do you notice about the sound?

    b. What do you notice about the smell?

    c. What do you notice about the way it looks?

    d. What do you notice about the way it feels to be close to a fire?

    e. What do you notice the most?

18) If at all, how does being around fire help you?

19) So thinking back on everything you have told me today, what do you like about fire?

20) Is there anything that you don't like about fire?

That's all I wanted to ask you. Is there anything you'd like to tell me about which we haven't covered? REMEMBER NOT TO GIVE ME ANY DETAILS OF CRIMINAL BEHAVIOUR WHICH I MIGHT HAVE TO PASS ON TO THE POLICE.

Thank the participant for taking part. Remind them to keep their copy of the information sheet.

Appendix 3:

Non-Criminalised Fire Users

Participant Information Sheet

Thank you for considering taking part in this research study.

What is the purpose of the study?
Fire and lighting fires is part of our culture and everyday lives. Most of us have attended bonfires or lit a coal fire in our home. In this research we want to find out about why people light fires and what types of views or beliefs underpin this behaviour. The research team would like to ask you about the fires you light or have lit in the past.

Who is conducting the research?
Faye Horsley is a Chartered Forensic Psychologist and a PhD student at Durham University.

Who shouldn't take part?
If you suffer from a mental illness, learning difficulty or any emotional/ psychological difficulties, please do not take part in this study. You are also advised not to take part in this study if you believe the subject matter could cause you emotional distress, for example if you have had a negative/ traumatic experience involving fire in the past.

What's in it for me?
If you take part in this research you will be provided with a payment of £20 as a thank you from the research team.

What does participation involve?
You will be asked a series of questions in an interview which will take around 60 to 90 minutes to complete, or longer if you wish to continue talking about your experiences. First of all you will be asked a few questions about your mental, emotional and physical health. It is important that you disclose any difficulties to the researcher. This is to protect you. If the researcher believes that there is any threat to your physical or mental health, or your psychological/ emotional wellbeing, the full interview will not take place. The research team understand that you may not wish to disclose this type of information. If you do not feel comfortable, there is absolutely no pressure to do so and you are advised not to take part in the study. You will be free to ask questions prior to the interview. If it goes ahead you will be able to take a break if you wish.

What will happen to my data?
Interviews will be recorded using a dictaphone. At the start you will be asked to provide a pseudonym ; your real name will not be included. The interview will then be transcribed into a word document on a computer – this will be password protected and will not include your real name. Audio recordings and written information will be treated with care and professionalism. All information relating to your interview will be stored securely in a locked office inside locked filing cabinets (at the principal researcher's place of work). The principal researcher is the only person who has access to these cabinets. When your information is in transit, i.e. from the place of interview to the principal researcher's office, it will be held as

securely as possible. More specifically, the signed consent form (containing your name) will be transported in a code-protected brief case and the recording will be held separately, in a rucksack.

The information you provide will remain confidential in that the contents of your full interview will not be shared or discussed with people outside of the research team and will remain anonymous. However the outcome of the study as a whole will be included in the researcher's PhD thesis, written into a research paper for publication and may also be used for teaching/ training purposes. In these circumstances, your real name would never be disclosed.

All data must be retained for at least 5 years or as long as it is actively being used by the researcher. It will be destroyed securely when it is no longer required by the researcher, or at your request.

The information you provide during the interview will be discussed with the principal researcher's supervision team. Also, some of the quotes you make during interview may be included in the PhD thesis and/ or published research paper. In this case you will be referred to only by a number, e.g. 'participant 1' so there will be no way of identifying you.

Your responses will otherwise remain private, **<u>unless:</u>**

1) You provide detailed information (for example dates or locations) relating to what could be a criminal offence. You are advised not to disclose <u>any</u> information which relates to anti-social, dangerous, reckless or destructive behaviour which could be considered a criminal offence for which you have not yet been prosecuted. You are also advised not to disclose any information about plans you might have in relation to this type of behaviour. If you provide details of when and how you engaged in such behaviour (or of any plans you may have), the researcher will discuss this with her supervisory team and <u>may make the decision to pass the information on to the police</u>. If this happens, it is possible that your disclosure could be used as evidence in a criminal investigation against you. **If you are in any doubt about whether to inform the researcher of behaviour (either past or plans you may have) which could be considered anti-social and/ or criminal, <u>do not</u> disclose this.**

2) You disclose a clear and imminent plan to seriously harm yourself or take your life. This would be considered an emergency situation and the researcher will offer you assistance in finding the right support. However if you choose not to accept this and leave, the researcher may be obliged to notify the police of the threat to your safety.

Can I change my mind?
You have the right to withdraw your data after the interview. To do so, contact the principal researcher, by email or letter, within two months after the date of your interview. After this point <u>it will not be possible to withdraw your data</u> because it will be analysed and included in the PhD thesis. In addition, after this two month period, your <u>anonymous</u> data, along with that from other participants, will be included in research papers which may be published in academic journals. If you decide to withdraw from the study in the two month period following the interview this will not affect the payment you received for taking part.

Do I have to take part?
Your participation in this study is entirely voluntary. If you choose not to take part the researcher will thank you for your time and will not contact you again. There will be no negative consequence of not taking part.

What if I have questions about the study before taking part?
Please contact the researcher using the details below to ask questions about the study. It is very important that you have asked all of your questions before taking part. If you decide to meet with the researcher, you will be given the opportunity to ask questions again prior to the interview commencing.

Support
If, after taking part, you feel you have been negatively affected you may wish to contact:

The Burn Survivors Association UK *If you or someone you know has been physically injured as a result of fire*
Tel:01277631068
Website: www.burnsurvivorassociation.com

ASSIST trauma care *If you or someone you know suffers psychological symptoms, such as PTSD, as a result of a traumatic event involving fire (or any other traumatic event)*
Tel: 01788 560 800
Website: www.assisttraumacare.org.uk

The Samaritans *If you are in distress and/ or are experiencing mental health problems*
Tel: 08457 90 90 90
Website: www.samaritans.org
Email: jo@samaritans.org

The Police *If you have an immediate urge to harm someone or to commit a criminal offence, including setting a fire.*
Tel: 999 or 101

Researcher contact details
Faye Horsley
Address: [Redacted]
Email: [Redacted]
Phone: [Redacted]

<u>Please retain this information for your records</u>

Consent to take part
I have read the information sheet and have had the opportunity to ask questions.

I am over the age of 18 and consent to take part in this study:
Signature:
Name:
Date:

Signed in the presence of:
Signature:
Name:
Date:

Appendix 4:

Criminalised Fire Users

Participant Information Sheet

Thank you for considering taking part in this research study.

About the researcher and the study
Faye Horsley is a PhD student at Durham University. In this research we want to find out about why people light and use fire, and about how it makes them feel.

Who shouldn't take part?
Please <u>do not take part</u> if:
- You suffer from any mental health problem which might make participating in this study difficult for you.
- You think that the subject matter (fire) might cause you to feel distressed or upset.

Please also <u>do not take part if you know of Faye Horsley or if you think she might know of you</u>.

What's in it for me?
It is hoped that you might find this research interesting. More widely, it is hoped that this research will help develop our understanding of people who light fires and use fire. This may help those convicted of arson progress through their prison sentence.

What do I have to do?
An appointment will be arranged for you to meet with the researcher in a private room within the prison.
The researcher will make sure you understand the study and are happy to take part. She will then ask you questions about your experiences of fire. The discussion will last for between one and two hours.

What will happen to the answers I give in the interview?
Interviews will be audio-recorded using a dictaphone. The interview recording will then be typed on to a computer (this is called *transcribing).*<u>You will remain anonymous in the interview and on the transcript.</u> All data (the audio-recording and typed transcript) will be treated with care. The researcher will make every effort to keep it safe. Once the researcher has interviewed about ten people, she will write about these interviews in her PhD thesis and academic papers. She may also present the findings at conferences and in teaching for university students. Some of the things you say in your interview may be included. However, <u>your real name, the name of your prison and any other information by which you could be identified will never be included. You will be referred to only by a number, e.g. 'participant 1' so there will be no way of identifying you.</u> The researcher must keep your interview on file for at least 5 years or as long as she is using it. It will be destroyed securely when it is no longer required by the researcher, or at your request.

Will what I say in the interview remain anonymous and private?
The researcher intends to protect your identity, unless there is a reason why this cannot happen (see below).
During interview the researcher will refer to you by your first initial only, in order to help protect your identity. For example, if your name is John, she will refer to you as J. Please do not give the researcher any information which could identify you such as place names or other people's names.
There are some important reasons why your responses in interview might not remain private. These are:

1)   If you tell the researcher about a criminal offence which you have not been convicted of or which you intend to commit in the future: Please do not give any detailed information which relates to anti-social, dangerous, reckless or destructive behaviour which could be considered a criminal offence. If you do, this information will be passed to police and could be used in a criminal investigation against you. The interview questions will be about your thoughts and feelings about the fire. You will not be expected to give the researcher any details. If you are in any doubt about whether to inform the researcher of behaviour, please do not.

2)   If you tell the researcher that you plan to harm yourself or take your life: In order to protect you, the researcher would have to pass this information on to prison staff. Also, if the researcher is concerned about your safety, even if you do not disclose a plan to harm yourself, she will have to tell a member of staff.

3)   If you tell the researcher anything that makes her think that you pose a risk to the prison or another prison: The researcher would have to pass this information on to prison staff. In the event that information has to be passed on, the researcher will usually inform you that she is going to do this first.

Can I change my mind?
If you change your mind during interview, please tell the researcher and your responses will be deleted from the dictaphone straight away. You can also change your mind for up to two weeks after being interviewed. To do this, you must contact the researcher. It is absolutely fine to change your mind and nothing bad will happen.

Do I have to take part?
The decision about whether to take part in this research is entirely yours. It has nothing to do with your sentence plan or prison sentence.

Support
Here are some sources of support if you are feeling upset after taking part in this research.

The Listeners Scheme *If you are in distress and/ or are experiencing mental health problems, please call a Listener within your establishment to talk.*

Prison staff *If you have the urge to harm someone, harm yourself or commit a criminal offence, including setting a fire, please tell a member of staff straight away.*

I am having thoughts about lighting a fire; what do I do?
If you are having thoughts about lighting fires it is **<u>very important</u>** that you speak to a member of staff in the prison **<u>straight away</u>** about this. **<u>Remember:</u>** Lighting a fire in a prison cell or on a wing is very dangerous. The smoke can be the most dangerous part of all. Inhaling it can lead to death very quickly, particularly if we are in a small space which we cannot get out of.

Researcher contact details
Faye Horsley
Address: [Redacted]

Consent to take part

I have read the information sheet.

I have had the opportunity to ask questions.

I understand:
- The purpose of the study and what I will be asked to do
- There are certain people who should not take part in this study. I should not take part if I have mental health problems which might make participating more difficult
- The interview will be audio-recorded
- There are certain circumstances where prison staff and the police may be told about what I have said
- I can change my mind either during the interview or up to one month afterward
- What will happen to my responses during interview

I am over the age of 18 and consent to take part in this study:

Signature:
Name:
Date:

Signed in the presence of:

Signature:
Name:
Date:

Appendix 5:

Audit Trail Example[24]

<u>**Theme 1. Identity**</u>

Part of the way in which Harry defines himself is through fire and his use of fire. Or rather, the way he wants to perceive himself.

Axial coding: The fantasy of an ideal self is probably a defence mechanism. I believe Harry is psychologically troubled and probably has low self-esteem but he over-compensates.

(i)   <u>**Role model/ idol**</u>

Harry 'looks up' to fire. He describes it using very human characteristics and this is because he wants to be just like it.

Descriptive codes	Descriptive categories	Analytical categories
Pleasure from looking at fire, like water	Sensory stimulation	Attractive
Noise is appealing	Sensory stimulation	Attractive
Visually attractive	Sensory stimulation	Attractive
Sensory (all)	Sensory stimulation	Attractive
Evolutionary attraction	Sensory stimulation	Attractive
Innate attraction	Sensory stimulation	Attractive
Hypnotic	Sensory stimulation	Attractive

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[24] Based on Harry (a non-criminalised fire user)

Fire is the whole sensory package	Sensory stimulation	Attractive
Fire is unique	Different	Attractive
Novelty of fire	Different	Attractive
There's nothing like it	Different	Attractive
Fire is so powerful it can evoke emotions	Influential	Dominant
Fire is like an animal; it draws us in	Influential	Dominant
Atmospheric	Influential	Emotive
Ambition to solo perform	Inspirational	Admired
His first exposure inspired him	Inspirational	Dominant
Communal fires	Sociable	Outgoing/ extravert
Social events	Sociable	Outgoing/ extravert
Fun	Enjoyable	Outgoing/ extravert
Fire is like a rollercoaster	Charismatic	Outgoing/ extravert
Dangerous	Influential	Formidable
Risky	Influential	Formidable
Powerful	Influential	Formidable
Taboo	Controversial	Formidable
Forbidden	Influential	Formidable
Physiological reaction	Influential	Dominant
Adrenaline	Influential	Dominant

(ii) **Alter-ego**

Fire actually helps Harry to *become* someone else; his *ideal* self or alter-ego.

Descriptive codes	Descriptive categories	Analytical categories
Showman/ entertainer	Popular	Control
Teaching others	Guru	Control
Felt tough at steel works	Untouchable	Control
Reputation/ status	Popular	Control
Felt like a man at steel works	Untouchable	Control
Invincible	Untouchable	Control
Encourages me (interviewer) to try it	Guru	Control
God-like when performing	Untouchable	Control
Self-deprecating	Passing judgment on self	Control
Self-aggrandizing: 'I'm the best'	Grandiose	High self-worth
Fire performers are worshipped	Desirable	High self-worth
Attention/ admiration	Desirable	High self-worth
Female admiration	Desirable	High self-worth
Attention seeking	Desirable	High self-worth
Fire performing connects him with his audience	Sociable	Outgoing/ extravert
Self-esteem boost	Feel good	High self-worth
Judging/ derogatory to novices/ new performers	Grandiose	High self-worth
Hippy stereotypes/ derogatory to hippies	Grandiose	High self-worth

I'm better than you	Grandiose	High self-worth
Fire shows are in demand	Sociable	Popular
Very naughty when playing with fire	Stands out in the crowd	High self-worth
Fire play: a way to rebel	Stands out in the crowd	High self-worth
Self-esteem	Feel good	High self-worth
Passionate about fire	Inspirational	Committed
Wonders if his performing has inspired children	Inspirational	Admired
Enthusiastic	Inspirational	Admired
Risky fire play	Dangerous behaviour	Harry vs. fire = the winner
Mischief through fire play	Dangerous behaviour	Harry vs. fire = the winner
Anti-social fire setting	Dangerous behaviour	Harry vs. fire = the winner
Utilized fire in drug taking	Dangerous behaviour	Harry vs. fire = the winner
Fire and drugs combined	Dangerous behaviour	Harry vs. fire = the winner
Desensitized to dangers	Ignored risk	Control
Tries to rationalise the dangers	Ignored risk	Control
Ignored warnings	Ignored risk	Control
Fire is easy to control	Ignored risk	Control
Just the illusion of danger	Ignored risk	Control
Not dangerous	Ignored risk	Control
Not afraid	Ignored risk	Control

Theme 2. Emotional Healing

(i)   Reassuring

Harry has had a lot of conflict in his life. Fire makes him feel at ease and safe, which helps his emotional recovery.

Descriptive codes	Descriptive categories	Analytical categories
Back in time	Simplicity	Non-threatening
Primitive/ simple	Simplicity	Non-threatening
Comforting	Comforting	Security
Relaxing	Comforting	Security
Lighters were a constant	Consistency	Security
Repetition	Consistency	Security
Fire play was a constant	Consistency	Security
Normality	Consistency	Security
Evokes happy memories of quality time with mum	Comforting	Security

(ii)   Distraction

Fire provides a welcome distraction. He takes his role very seriously, and this gives him something to focus on and aim for. Fire also proves to be a form of mindfulness which helps distract him from his worries about the past or future.

Descriptive codes	Descriptive categories	Analytical categories
Business man	Professional	Process driven
Experimentation	Knowledgeable	Process driven

Committed to mastering the performance	Meticulous	Process driven
Defines terms	Knowledgeable	Process driven
Described fire play games in detail	Meticulous	Process driven
Supervised by adults	Aware of the dangers	Process driven
Used fire to change metal's shape	Functional use	Process driven
Fire as a tool	Functional use	Process driven
Day to day tool	Functional use	Process driven
Authentic cooking	Functional use	Process driven
Utilised fire at work in steelworks	Functional use	Process driven
Obsessed with practice	Meticulous	Process driven
Stupidity makes fire unsafe	Aware of dangers	Realistic
Human error makes fire unsafe	Aware of dangers	Realistic
Misunderstanding fire makes it unsafe	Aware of dangers	Realistic
Scientific knowledge of how it works	Knowledgeable	Realistic
Learnt about fire from books	Knowledgeable	Realistic
Has downsides	Balanced view	Realistic
Contained fire is safe	Safety conscious	Realistic
Controlled fire is safe	Safety conscious	Realistic
Takes very seriously	Professional	Realistic
Follows routine	Meticulous	Realistic

Considers how we could warn children of the dangers	Aware of dangers	Realistic
Understands fire	Knowledgeable	Realistic
Persevered to learn to perform	Meticulous	Realistic
Instinctive	Connection	Mindfulness
Automatic	Connection	Mindfulness
Intuitive	Connection	Mindfulness
Therapeutic	In the moment	Mindfulness
Fire bubble	In the moment	Mindfulness
Meditative	In the moment	Mindfulness
Escapism	In the moment	Mindfulness
'Flow'	In the moment	Mindfulness
At one with fire	Connection	Mindfulness
Emotional outlet	Expression	Emotion regulation
Personal fulfillment	Gave life a meaning	New focus
Personal recovery helped by fire performing	Feel good	New focus
Fire performing was the turning point	Gave life a meaning	New focus
Fire performing: life changing	Gave life a meaning	New focus
Fire performing: life saving	Gave life a meaning	New focus

<u>Inconsistencies to explore:</u>

Descriptive Code
The 'wanky' word for getting in the zone is 'flow'
Body 'exhausted' after performing