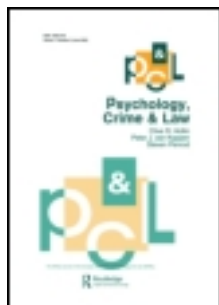


This article was downloaded by: [University of Kent]

On: 01 July 2013, At: 00:32

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Psychology, Crime & Law

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/gpcl20>

A new conceptual framework for revenge firesetting

Magali Barnoux^a & Theresa A. Gannon^a

^a Centre of Research and Education in Forensic Psychology (CORE-FP), Keynes College, University of Kent, Canterbury, UK

Published online: 22 May 2013.

To cite this article: Magali Barnoux & Theresa A. Gannon (2013): A new conceptual framework for revenge firesetting, Psychology, Crime & Law, DOI:10.1080/1068316X.2013.793769

To link to this article: <http://dx.doi.org/10.1080/1068316X.2013.793769>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

A new conceptual framework for revenge firesetting

Magali Barnoux* and Theresa A. Gannon

*Centre of Research and Education in Forensic Psychology (CORE-FP), Keynes College,
University of Kent, Canterbury, UK*

(Received 23 April 2012; final version received 27 November 2012)

Revenge has frequently been acknowledged to account for a relatively large proportion of motives in deliberate firesetting. However, very little is actually known about the aetiology of revenge firesetting. Theoretical approaches to revenge-seeking behaviour are discussed. A brief review of how revenge is accounted for in existing theoretical explanations of deliberate firesetting and the known characteristics of revenge firesetters are provided. On this basis, the authors suggest, as a motive, revenge firesetting has to date been mis-conceptualised. A new conceptual framework is thus proposed, paying particular attention to the contextual, affective, cognitive, volitional and behavioural factors which may influence and generate a single episode of revenge firesetting. Treatment implications and suggestions for future research are also provided.

Keywords: revenge; anger; firesetting; arson; motive

Introduction

The latest figures available for the UK indicate there were 35,900 deliberate fires in 2010–2011, representing 32.2% of all fires for that year. These were responsible for 72 fatalities and 1,700 non-fatal casualties (Department for Communities and Local Government, 2011a). The latest available figures for the economic cost of arson in England estimate arson costs £2.3 bn, accounting for 27% of the total cost of fire (Department for Communities and Local Government, 2011b).

These well-documented harmful consequences of arson have led to a growing body of research in this area. To date, intentionality and motivation have played a significant role in existing research and theoretical explanations of deliberate firesetting (Dickens, 2012). Differences in these areas are considered to inform investigation and detection, management approaches, risk assessment and intervention strategies as well as aiding the development of more comprehensive theories of deliberate firesetting (Byrne & Roberts, 2007; Dickens, 2012; Gannon & Pina, 2010). Revenge has been cited as the most prominent motive in deliberate firesetting (Doley, Fineman, Fritzson, Dolan, & McEwan, 2011; Inciardi, 1970; Lewis & Yarnell, 1951). Despite its prominence, to date, there is only one study which has sought to examine revenge firesetting in isolation. Pettiway (1987) examined the historical records from Houston Fire Department for revenge firesetters ($N=338$). Statistical analyses of demographic (age, sex and race) and environmental (residential locations) variables suggested there was an increased likelihood of using fire as a retaliatory weapon for

*Corresponding author. Email: mlb25@kent.ac.uk

adult, white males from low socio-economic backgrounds. Curiously, no further studies were ever developed in this area and revenge is yet to be examined exclusively from a social, affective and cognitive perspective. The main aim of this paper is to provide a new conceptual framework for revenge firesetting. Initially, terminology and theoretical explanations of revenge will be addressed. Subsequently a brief review of how revenge is accounted for in the current theoretical explanations of deliberate firesetting will be outlined in addition to literature examining the characteristics of revenge firesetters. This review is not intended to be exhaustive; rather, only elements pertinent for the development of a new conceptual framework of revenge firesetting are highlighted. Based on this review, we then describe and evaluate a preliminary model of revenge firesetting. Our overall aim, in constructing this preliminary model, is to provide psychiatrists and psychologists with an overarching theoretical framework with which to guide assessment and treatment of this poorly understood – yet complex – group of individuals.

Terminology

Pyromania, arson and firesetting are often used interchangeably in the literature to refer to deliberate firesetting perpetrated by adults. Pyromania refers to a clinical diagnosis within DSM-IV-TR (American Psychiatric Association [APA], 2000) defined as, *a psychiatric impulse-control disorder not otherwise specified (312:33)*. Certain criteria are necessary for a diagnosis of Pyromania: (1) deliberate and repeated firesetting, (2) tension/arousal prior to firesetting, (3) fascination with fire, fire paraphernalia and the consequences of fire and (4) enjoyment or gratification when setting fires or participating in the aftermath (APA, 2000; Gannon & Pina, 2010). Other possible motives must also be ruled out including economic gain, anger or revenge, or any form of judgement impairment such as mental illness. The firesetting should also not be accounted for by any other psychiatric diagnoses of conduct disorder or anti-social personality disorder. A diagnosis is rarely used by consulting professionals (APA, 2000) and individuals who set fires in order to gain revenge would be ruled out from diagnosis. Consequently, pyromania is not an adequate term for use in the context of revenge firesetting.

Legally, deliberate firesetting is referred to as Arson. Arson is generally defined as the deliberate destruction of property, by fire, for unlawful purposes, with or without the intent to endanger life and falls under the Criminal Damage Act (1971) in England and Wales (The National Archives, 2011). However, the legal definition of arson may vary across jurisdictions and countries in its definition and only includes those individuals who have been convicted of this particular offence (Gannon & Pina, 2010). Thus, it may not encapsulate all individuals with a history of firesetting, particularly those who may not have received a conviction for their offence. Consequently, the broader term of ‘firesetting’ is used in this paper to refer to all intentional acts of setting a fire.

Revenge in deliberate firesetting has largely been attributed to adult offending (Dickens, 2012; Pettitway, 1987) and the research literature examining male individuals who set fires is substantially more developed than that focusing on females (Barnett & Spitzer, 1994; Gannon, Tyer, Barnoux, & Pina, 2012b). Thus, for the purpose of clarity and focus, we will concentrate our discussions on adult male

firesetting. Readers interested more generally in child or adult female firesetting should consult Lambie and Randell (2011) and Gannon (2011), respectively.

Theoretical explanations of revenge

Revenge, from a layperson's perspective, is generally defined as 'the action of hurting or harming someone in return for an injury or wrong suffered at their hands; retribution' (Oxford Dictionaries, 2010). It is equated with achieving some sort of 'payback' or 'getting even' and is generally understood as a personal response to unfair treatment (Gollwitzer & Denzler, 2009). Psychologists have theorised that revenge implies a retributive principle: 'the quantity and quality of the revenge should be approximately proportional to the amount of harm implied in the original offence' (Gollwitzer & Denzler, 2009, p. 840). In other words, the goal of revenge is to restore equity (Bies & Tripp, 1996; Crombag, Rassin, & Horselenberg, 2003; McLean Parks, 1997; Skarlicki & Folger, 1997; Stillwell, Baumeister, & Del Priore, 2008; Tripp & Bies, 1997; Tripp, Bies, & Aquino, 2002).

Equity is either restored through what has been termed comparative suffering (Frijda, 1994) or through enforced understanding (French, 2001). The *Comparative Suffering Hypothesis* proposed by Frijda (1994) stipulates that it is the amount of suffering that needs to be calibrated between the avenger and the perceived or real 'wrongdoer'. Revenge will only be satisfied if the wrongdoer is perceived to suffer at least to an equal degree as the person on whom the original injustice was afflicted. It makes no difference whether this suffering is afflicted by the avenger, by a third party, or by accident (Gollwitzer & Denzler, 2009). Conversely, the *Understanding Hypothesis* proposed by French (2001) suggests that revenge aims at delivering a message to make the wrongdoer understand that their behaviour was morally unacceptable (Gollwitzer & Denzler, 2009). Revenge is only satisfied if the wrongdoer acknowledges that revenge was taken against them because of their reproachable behaviour (Gollwitzer & Denzler, 2009; Miller, 2001; Vidmar, 2001).

A key concept in understanding the process of revenge is proportionality (Gollwitzer & Denzler, 2009). An interpersonal conflict could be resolved by a precisely balanced act of revenge in which the magnitude of the revenge act would be commensurable to the magnitude of the original offence or injustice (Stillwell et al., 2008). However, research suggests calculating such magnitudes can be subject to personal biases, particularly role-based biases, thus rendering the means or method of the revenge act less than desirable and an equitable outcome improbable (Stillwell et al., 2008). This has been referred to as the *Magnitude Gap* (Baumeister, 1997; Stillwell et al., 2008). Essentially, the avenger may afflict a level of harm perceived as equalling their original suffering, but this is likely to appear unnecessarily severe to the original perpetrator (Stillwell et al., 2008). Research suggests individuals are more sensitive to the injustices they suffer than the ones they perpetrate (Stillwell et al., 2008). In other words, avengers are likely to portray the revenge as equitable, whereas recipients portray it as excessive (i.e. both avenger and victims portray themselves as victims; Gollwitzer & Denzler, 2009; Stillwell et al., 2008).

Equally important to understanding the process of revenge is the avenger's perception of morality and justice. If revenge is satisfied, either through comparative suffering or enforced understanding, then there is the belief that justice has been served. The legitimacy of punishment for a perceived transgression is a

well-established concept in the criminal justice system, where retribution is the expression of the community's disapproval of crime (Pettitway, 1987). Revenge as a justification for punishment is thus inherent to human experience (Black, 1983). However, there is evidence to suggest the process of revenge should meet certain criteria to be deemed morally acceptable and justice served. Tripp and Bies (1997) studied what features are perceived to make an act of revenge morally good or bad. Their data revealed avengers judged their acts of revenge as morally bad when an innocent party was harmed or the act invited a counter-retaliation from the original wrongdoer. Conversely, avengers judged their act as morally good if the act restored the avenger's status or corrected the wrongdoer's behaviour in a proportionate manner. In a further study, Tripp et al., (2002) found the act of revenge was deemed acceptable when the avenger acted altruistically (e.g. where the avenger seeks justice not only for themselves, but for the greater good of the community) and when the revenge act was different in quality but directly proportional in quantity to the harm inflicted.

Revenge firesetting: existing theoretical explanations

Three main aetiological theories of deliberate firesetting currently exist: unilateral classificatory systems (taxonomies and crime scene classifications), single- and multifactor theories (see Gannon & Pina, 2010 for a review).

Unilateral classificatory systems

Revenge is highly prevalent in unilateral classificatory systems of deliberate firesetting. Since taxonomies and crime scene classifications subtype heterogeneous offender groups based upon offence, crime scene characteristics and hypothesised motivational factors underlying firesetting, it is no surprise revenge – the most prominent known motive in deliberate firesetting – features as a popular category. Here, revenge accounts for 13–58% of all motives in deliberate firesetting, with the majority of estimates from studies appearing to fall around the 30% mark (Barker, 1994; Bradford, 1982; Denet, 1980; Faulk, 1988; Hill et al., 1982; Hurley & Monahan, 1969; Icove & Estep, 1987; Inciardi, 1970; Koson & Dvoskin, 1982; Lewis & Yarnell, 1951; Muckley, 1997; Murphy & Clare, 1996; O'Sullivan & Kelleher, 1987; Pettitway, 1987; Prins, 1994; Prins, Tennent, & Trick, 1985; Rautahaimo, 1989; Rice & Harris, 1991, 1995; Rider, 1980; Ritchie & Huff, 1999; Rix, 1994; Sapp, Huff, Gary, Icove, & Horbert, 1996; Scott, 1974; Swaffer & Hollin, 1995; Vreeland & Levin, 1980; Wood, 2000).

Revenge firesetters have been characterised as choosing two targets in their offence: the person and/or institutional target and the property or building they choose to set the fire in as a means of attacking their person target. Studies have found victims to include partners, rival partners, landladies, relatives, neighbours, employers, institutions and figures of authority (Canter & Fritzon, 1998; Lewis & Yarnell, 1951; O'Sullivan & Kelleher, 1987; Prins, 1994). Revenge firesetters have been found most likely to attack properties they had an association with and as such tend to be well acquainted with property location, access routes and routines of the occupants (Wood, 2000). The most common properties targeted by revenge firesetters are suggested to be residential properties (Icove & Estep, 1987; Kocsis

& Cooksey, 2002; Lewis & Yarnell, 1951; Wood, 2000). Revenge firesetters are considered generally solitary and their attack is characterised by setting a single, rather than multiple fires (Lewis & Yarnell, 1951; Wood, 2000), repeatedly targeting others with deliberate fires as a form of revenge (Canter & Fritzon, 1998). Such individuals are likely to offend near their own home, plan their attack and use accelerants (Icove & Estepp, 1987; Lewis & Yarnell, 1951; Wood, 2000). Animosity, rage and the intent to inflict personal harm on their victim underpin this type of firesetter (Kocsis & Cooksey, 2002).

Single- and multifactor theories

Single- and multifactor theories cite revenge as a motive, one of several factors contributing to a wider aetiological account of deliberate firesetting.

Single-factor theories focus on explaining a solitary factor and its causal relationship to offending. There are three known single-factor theories on deliberate firesetting as outlined by Gannon and Pina (2010): *psychoanalytical theory* (Freud, 1932), *theories of biological disorders* (Virkkunen, Nuutila, Goodwin, & Linnoila, 1987; Virkkunen et al., 1994) and *social learning theory* (Bandura, 1976; Kolko & Kazdin, 1986; Macht & Mack, 1968; Singer & Hensley, 2004; Vreeland & Levin, 1980). Only *social learning theory* appears to provide an account of revenge or anger-related firesetting from a developmental and social context. Here, firesetting is viewed as resulting from key formative learning (e.g. via modelling or imitation) and reinforcement contingencies (Bandura, 1976; Kolko & Kazdin, 1986; Vreeland & Levin, 1980). The theory predicts poor childhood socialisation characterised by exposure to negative developmental experiences (i.e. perceived failure), and negative role models may result in aggression, poor coping skills and lack of assertiveness, and it is these traits which are likely to increase an individual's propensity to light fires in an attempt to gain positive environmental control (Vreeland & Levin, 1980). For example, a child may experience key sensory reinforcement from firesetting, or positive attention from otherwise neglectful caregivers (see Gannon, Ó Ciardha, Doley, & Alleyne, 2012a; Vreeland & Levin, 1980).

Multifactor theories unite single-factor theories into an overview of the offending behaviour and provide an account of how each of the factors interact to produce conditions likely to result in offending. There are three known multifactor theories of deliberate firesetting: *Functional Analysis Theory* (Jackson, Glass, & Hope, 1987), *Dynamic Behaviour Theory* (Fineman, 1980, 1995) and the *Multi-Trajectory Theory of Adult Firesetting (M-TTAF)* (Gannon et al., 2012a). Although revenge is not explicitly documented within *Functional Analysis Theory* (Jackson et al., 1987), it features as a possible motive underpinning the Delinquent/Anti-Social Firesetter Type in *Dynamic Behaviour Theory* (Fineman, 1980, 1995). These offenders are characterised by anti-social behaviour, an interest in vandalism and hate crimes, a lack of empathy and the intent to inflict harm on their victims (Fineman, 1980, 1995). In the *M-TTAF*, revenge also features as a possible motive underpinning the Anti-social and Grievance trajectories as outlined in the second tier of the model (Gannon et al., 2012a). These firesetters are suggested to hold problems in the areas of anger and aggression and are likely to be characterised by offence supportive attitudes, anti-social behaviour, impulsivity, self-regulation issues, poor communication skills, inappropriate scripts and/or schemas surrounding fire, low assertiveness

and rumination (Gannon et al., 2012a). Thus, professionals typically conceptualise revenge-motivated firesetting as stemming either from some general overall anti-sociality (i.e. antisocial values, antisocial personality disorder; Fineman, 1980, 1995; Gannon et al., 2012a), or from self-regulation deficits specially linked to anger, hostility and poor communication style (Gannon et al., 2012a).

Re-defining revenge firesetting

While revenge appears to be regularly accounted for in the literature, findings are scattered across the unilateral classificatory systems, *social learning theory*, *Dynamic Behaviour Theory* and the *M-TAFF*, thus rendering a comprehensive understanding of the aetiology of revenge firesetting difficult. Furthermore, the majority of findings are drawn from unilateral classificatory systems which have generally received poor reviews in terms of empirical adequacy, reliability and validity, external consistency, unifying power, clinical fertility and explanatory depth (for detailed reviews see Dickens, 2012; Gannon & Pina, 2010). Of particular relevance, descriptive detail about the firesetters represented in the revenge categories is non-existent in some studies (Kocsis, 2002), and unextensive in others (Inciardi, 1970). Furthermore, the revenge category subtypes in existing research often lack mutual exclusivity, where individuals meet membership criteria for more than one category (for example Denet, 1980; Geller & Bertsch, 1985; Geller, Fisher, & Bertsch, 1992; Icove & Estepp, 1987; Inciardi, 1970; Lewis & Yarnell, 1951; Levin, 1976; Prins, 1994; Rix, 1994). Developing an adequate definition and conceptual framework of revenge firesetting would address these problems and allow for future systematic empirical research of revenge in deliberate firesetting.

Within the firesetting literature, revenge is generally viewed as a motivational driver; however, psychological theories of revenge would actually suggest it is a goal-directed behaviour, and this has been touched on in some firesetting classifications (Faulk, 1988; Wood, 2000). Thus, for the purpose of this article, revenge is re-defined as a *sequence or chain of behaviours whereby contextual, affective, cognitive and volitional states drive (motivate) an individual to restore equity through retribution, either by comparative suffering or enforced understanding, in response to perceived unjust treatment*. Thus, it is the contextual, affective, cognitive and volitional states which act as motivational drivers, to fulfil the act and goal of revenge. Identifying these states in terms of needs and intentions is key to understanding how an individual forms the *desire* to seek revenge, and how this desire is translated into *intent* and subsequent *action*.

In order to re-conceptualise revenge firesetting from this perspective, a theory knitting approach was adopted. Theory knitting seeks to integrate the best aspects of a set of given theories with previous research and conceptualisations regarding the domain under investigation to provide a unified explanation of a given problem area (Kalmar & Sternberg, 1988). Thus, a new conceptual framework was developed drawing on theoretical explanations of revenge-seeking behaviour and findings from existing unilateral classificatory systems, *social learning theory*, *Dynamic Behaviour Theory* and the *M-TTAF*. These were combined with popular concepts in model development drawn from social and cognitive psychology (e.g. the *General Aggression Model*; Anderson & Bushman, 2002; Anderson & Dill, 2000), and the psychology of emotion and motivation. As such, the aim of drawing together these

resources was to provide a more useful understanding of the social, affective, volitional and cognitive factors which may contribute to a single episode of revenge firesetting.

Preliminary model of revenge firesetting

Figure 1 depicts our hypothesised chain of behaviour for revenge firesetting, set out in three stages: (1) an interpersonal conflict, (2) the emotional or affective and cognitive response to that conflict in the form of an emotional episode and (3) firesetting as the resulting action. We theorise a real or perceived interpersonal conflict with an individual or social order generates a negative emotional episode, which, combined with influencing psychological and dis-inhibiting factors, produces the desire and subsequent intent to seek revenge. Firesetting is then chosen as the appropriate action to inflict either comparative suffering or enforced understanding to restore equity through retribution.

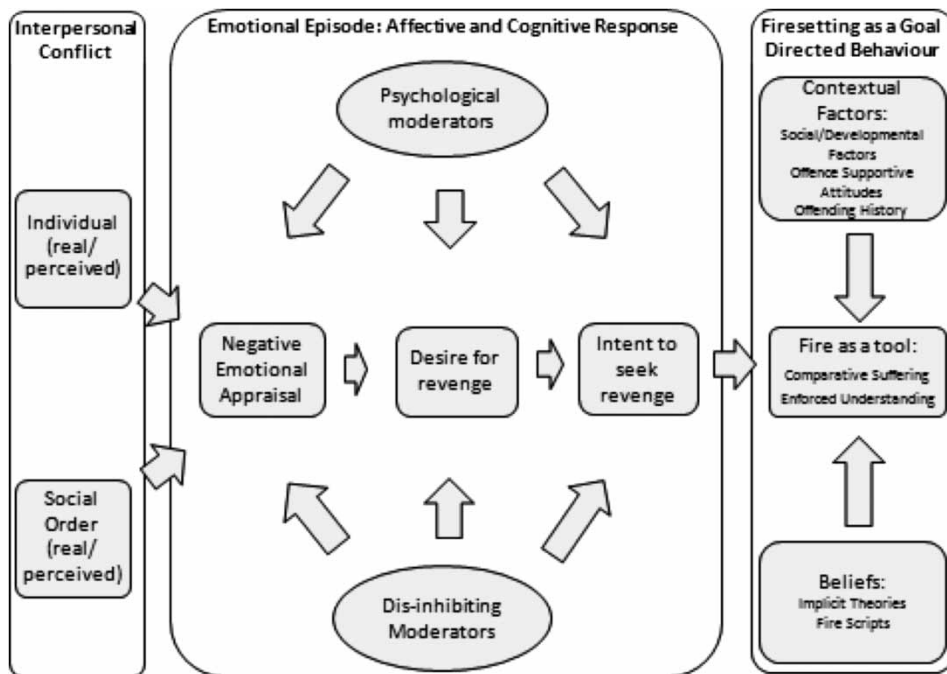


Figure 1. Revenge in deliberate firesetting.

Interpersonal conflict: individual and/or social

It is hypothesised an interpersonal conflict, real or perceived, with either an individual or a social order is at the root of revenge-seeking behaviour. Social and cognitive theories tend to posit that offending behaviour is triggered by a social context or results from a social encounter perceived as problematic, for example the *General Aggression Model* (Anderson & Bushman, 2002; Anderson & Dill, 2000), and related research suggests certain types of offences tend to result in

revenge-seeking behaviour, in particular those that involve trust, rule violations or interpersonal derogations (Aquino, Tripp, & Bies, 2006; Bies & Tripp, 1996).

There is direct evidence to suggest interpersonal conflicts serve to explain a large proportion of revenge firesetting. Koson and Dvoskin (1982) reviewed the affective states of their sample of deliberate firesetters and found there appeared to be a preponderance of contextual issues suggesting conflict, revenge, aggressive or retaliative motives. Relationship problems were found to account for 37% of motives for revenge firesetting (Icove & Estepp, 1987). Pettitway (1987) found 59.2% of revenge firesetters retaliated because of an argument or a verbal and/or physical confrontation. Lewis and Yarnell (1951) found the majority of firesetters motivated by revenge held a deep-seated grievance against an authority or social order – the community was often regarded as a hostile environment threatening the individual's integrity. The personal nature of targets would also suggest revenge firesetting results from an interpersonal conflict; victims are likely to be known to the offender (e.g. partners, rival partners, landlords, relatives, neighbours, employers, institutions and figures of authority) and properties attacked (e.g. residential properties) are likely to be of personal significance to the revenge firesetter (Koson & Dvoskin, 1982; Lewis & Yarnell, 1951; O'Sullivan & Kelleher, 1987; Prins, 1994).

Emotional episode: affective and cognitive response

The interpersonal conflict is hypothesised to generate an affective and cognitive response in the form of an emotional episode, defined as a 'series of emotional states extended over time and organised around an underlying theme' (Weiss & Beal, 2005, p. 6). The beginning of an emotional episode includes an evaluative perception of the nature of events known as appraisal (Lazarus, 1991). Emotional appraisal evaluates events or objects as significantly affecting a person's concerns, goals or values in a positive or negative way (Parrott, 2004) and as such contains a cognitive component (Solomon, 1976). It is this response which is influenced by pre-existing psychological and dis-inhibiting factors hypothesised to increase the likelihood of revenge-seeking behaviour.

Psychological and dis-inhibiting factors

Psychological and dis-inhibiting factors function as moderators within the cognitive and affective response to an interpersonal conflict. These variables are hypothesised to affect the direction and/or strength of the relationship between the emotional appraisal of an interpersonal conflict and the generation of the desire and subsequent intent to seek revenge.

High levels of psychological disorders (depression, schizophrenia, mania, borderline and antisocial personality disorders, developmental disorders, bipolar disorder and other psychotic disorders; for a review see Tyler & Gannon, 2012) have been found in firesetters motivated by revenge and have been suggested to increase the propensity towards revenge-seeking behaviour (Lewis & Yarnell, 1951; O'Sullivan & Kelleher, 1987; Prins, 1994; Rautahaimo, 1989). Personality and emotional variables suggested to influence revenge-seeking behaviour in deliberate firesetters include: low assertiveness (Gannon et al., 2012a; Jackson et al., 1987), self-regulation issues (Gannon et al., 2012a), poor communication (Gannon et al., 2012a; Jackson et al.,

1987), low self-esteem (Duggan & Shine, 2001), poor problem solving (Inciardi, 1970; Lewis & Yarnell, 1951), impulsivity (Gannon et al., 2012a), dispositional empathy (Davis, 1983), belief in a just world (Rubin & Peplau, 1975), hostility and aggression (Koson & Dvoskin, 1982), rumination (Prins, 1994), threatened egotism (Bushman & Baumeister, 1998), low agreeableness and high neuroticism (Meier & Robinson, 2004; Skarlicki, Folger, & Tesluk, 1999). In conjunction with these psychological factors, dis-inhibiting factors work to inhibit rational thinking and promote an aggressive response. High levels of substance and alcohol misuse have been found in firesetters motivated by revenge (Prins, 1994; Rautaheimo, 1989) and particularly, the disinhibiting role of alcohol found to influence revenge-seeking behaviour (O'Sullivan & Kelleher, 1987).

Emotional episode

The cognitive and affective response to an interpersonal conflict, influenced by psychological and dis-inhibiting factors, is manifested by an emotional episode.

Negative emotional appraisal. At the start of the emotional episode, the interpersonal conflict is likely to be appraised negatively as it is considered a negative experience, affecting the individual's concerns, goals and values (Parrott, 2004). Such a negative emotional appraisal is likely to generate a range of emotional states extended over time and all linked to the conflict. Specific to revenge firesetters include: jealousy (Hurley & Monahan, 1969; Lewis & Yarnell, 1951), hatred and envy (Rautaheimo, 1989), feelings of protest (Dennet, 1980), anger (Hill et al., 1982), animosity (Kocsis, 2002) and feeling hard done by, harassed or wronged in some way (Prins, 1994). The preponderance of emotional states noted in the literature suggests, in line with the research on emotion, that a negative emotional appraisal of an interpersonal conflict is likely to be at the root of forming the desire and intent to seek revenge.

Desire and intent to seek revenge. Emotional reactions can involve changes in thinking, behaviour, physiology and expression, consequently effecting social interactions and relationships (Parrott, 2004). Emotional states are normally considered acute, erratic, behaviourally disorganised and non-habitual (Reber, 1995). They tend to have motivational properties and the components of a motivational disposition often have a strong emotional element to them (Reber, 1995). O'Sullivan and Kelleher (1987) highlighted the relevance of aggressive behaviour in revenge firesetters and their inability to deal with their affective state, or communicate and express emotions. Thus, an acute emotional response in the revenge firesetter, such as hatred or jealousy, is hypothesised to generate a desire for revenge, and this desire is translated into intent with the influencing role of the psychological and dis-inhibiting moderators inhibiting rational thinking, and instead promoting revenge-seeking behaviour.

Firesetting as a goal-directed behaviour

Once the intent to seek revenge is formulated, firesetting is hypothesised to be chosen as an appropriate goal-directed behaviour. Here, fire is used as a tool to inflict comparative suffering or enforced understanding in order to fulfil the goal of

revenge. A range of contextual factors and embedded beliefs may come into play, resulting in fire being the only viable solution in the commission of the offence in order to exact revenge.

Contextual factors

Contextual factors refer to social and developmental factors whereby firesetting is a form of learned hostility or aggression as explicated by *social learning theory* (Bandura, 1976; Kolko & Kazdin, 1986; Macht & Mack, 1968; Singer & Hensley, 2004; Vreeland & Levin, 1980). The behaviour results from problematic backgrounds (i.e. low socio-economic status, poor education, unemployment, lack of social support and marital ties, a history of anti-social behaviour and/or violent offending) and negative developmental experiences and role models (i.e. poor childhood socialisation, abusive family backgrounds). Whilst these contextual factors may not be unique to firesetters, there is empirical evidence to suggest an increased likelihood of using fire for revenge for adult males of low socio-economic background (Pettitway, 1987). Early social and developmental experiences with fire may also increase the propensity of firesetting in an attempt to gain positive environmental control (Gannon & Pina, 2010). For example, Vreeland and Levin (1980), theorise firesetting may be instantly reinforcing through sensory excitement and the sirens, crowd and noise elicited by fire. Additionally, offenders may learn about fire vicariously through exposures to fires or important models of firesetting behaviour (e.g. a parent employed in the fire and rescue services). There is some evidence to suggest that firesetters may experience early inappropriate exposure to fire (Macht & Mack, 1968), have experienced fire as a form of abuse/punishment (Haines, Lambie, & Seymour, 2006) or have some history of firesetting within their family and/or social environment (Rice & Harris, 1991). Thus, these contextual factors serve to create a strong association with fire for the individual, and fire becomes the immediate preferred tool for their offending behaviour.

Fire as a tool

Fire is hypothesised to be chosen as a tool to satisfy revenge via two main goals. First, firesetting may be chosen to inflict comparative suffering by ensuring maximum destruction and therefore significant loss or pain to the target. Research suggests avengers who approached seeking revenge from an emotional perspective focused on restoring equity – they were hurt and they wanted the perpetrator to feel equally hurt (Stillwell et al., 2008). Here, the fire itself is intended to be destructive (Lewis & Yarnell, 1951). Dickens et al. (2009) found 36% of deliberate firesetters to have caused serious injury, loss of life or extensive damage to property. Via the second goal, firesetting is chosen to inflict enforced understanding by delivering a significantly frightening message to the target in order to restore the offender's own sense of power. Research suggests the use of fire is to assert power and justification for the attack is to institute change, draw attention and relieve frustrations as a means of emotional acting out (Canter & Fritzson, 1998; Geller et al., 1992; Wood, 2000). Setting the fire, in itself, is perceived to achieve the goal of comparative suffering or enforced understanding. Revenge is only satisfied once the fire has been set and the target of the offence is perceived to be affected by the fire in some way

(e.g. seeing the victim's house burning down) and justice deemed to be served. Thus, the consequences of the fire are equally important as the setting of the fire – the scale of the damage caused is directly proportional to the satisfaction felt by the offender. Once justice is experienced, the negative emotional states previously experienced are appeased (Denzler, Forster, & Liberman, 2009; Stillwell et al., 2008), and revenge-seeking behaviour is positively reinforced. Thus, the positive reinforcement of setting the fire may serve to explain future systematic decisions to set fires to exact revenge.

Beliefs

Certain attitudes and beliefs held by the revenge firesetter may equally explain the choice of fire. Retaliatory action is more likely if offence supportive attitudes are held and the individual perceives they will not be sanctioned as a result of the firesetting (Stillwell et al., 2008). The law may be perceived as unavailable for these individuals, believing legal officials are relatively unconcerned with their problems (Black, 1983). Self-help strategies are generated as a result, and punishment is sought for a perceived transgression (Pettitway, 1987). The law is taken into their own hands and criminal responses are justified where transgressors are deemed deserving of punishment. Given the preponderance of low apprehension and conviction rates for arson-related offences compared to other offences, it is likely that fire is chosen as potential offenders believe the crime will go undetected by local authorities, thus the belief in committing a crime without paying for the consequences.

Other more deep-seated beliefs around fire may also serve to explain why fire is chosen. It has recently been suggested firesetters motivated by revenge may hold certain implicit theories. Implicit theories are essentially a number of interconnected beliefs that form a coherent picture of the world, comprised of beliefs concerning the nature of the world, the offender, the victim and values or desires associated with all three (Ward, 2000). Implicit theories can become distorted if the underlying observations are skewed or mis-represented, and these may generate cognitive distortions which then help to facilitate firesetting behaviour. Ó Ciardha and Gannon (2012) hypothesised firesetters falling into the Grievance and Anti-Social Trajectories of the *M-TTAF* who may be motivated by revenge, which are likely to hold three types of implicit theory. First, *Dangerous World*, whereby the world is seen as a hostile and unwelcoming place, grievances against it or specific people/groups are likely to be held and there might be the need to fight back against a perceived threat. Second is the *Normalisation of Violence*, whereby violence is believed to be a normal or acceptable way of dealing with situations or individuals. Third, *Fire as a Powerful Tool*, whereby fire is seen as a powerful tool to send a message and used to enhance the firesetter's own sense of authority.

It has also recently been suggested the choice of fire could also be explained by inappropriate fire scripts, also interconnected to implicit theories (Gannon et al., 2012a). Fire scripts refer to an individual's views about the potential uses and meanings of fire which have become distorted as a result of learning. Gannon et al. (2012a) refer to an *aggression-fire fusion script* held by individuals in the Grievance Trajectory of the *M-TTAF*. In this script, displaced aggression is appraised as a means for delivering revenge or warnings to others. The authors theorise fire becomes linked within the script as a means of communication, allowing the

individual to send an authoritative message via a destructive natural force, while remaining emotionally detached (Gannon et al., 2012a).

Summary and concluding remarks

In this paper, a new preliminary conceptual framework of revenge firesetting was proposed. The aim of the proposed framework was to explore in greater depth and re-conceptualise the most common known motive in deliberate firesetting. The elements of the new framework are theoretically well supported by existing findings in the literature. Furthermore, the framework expands on existing taxonomies and classifications of deliberate firesetting behaviour by developing the concept of revenge beyond that of a categorical label assigned to a group of individuals. Such an expansion may serve to inform the development of more comprehensive and exhaustive micro-theories in deliberate firesetting (e.g. offence process models, Gannon, Rose, & Ward, 2008) which describe the offence process or phenomena as it unfolds across time, based on data provided by offenders themselves (Ward & Hudson, 1998). The theory also ties in with contemporary theories of firesetting (*Dynamic Behaviour Theory*; Fineman, 1980, 1995; *M-TTAF*; Gannon et al., 2012a). Finally, re-conceptualising revenge firesetting into this new framework enables integration with Jackson et al.'s (1987) *Functional Analysis Theory*. The theory argues firesetting is utilised to resolve problems or difficult circumstances that are perceived by the individual to be impossible to solve via alternative methods, which would tie in with the latter two stages of our new framework (affective and cognitive response; firesetting as a goal-directed behaviour).

In terms of utility in clinical practice, the proposed framework provides a conceptually coherent account of revenge firesetting and may even provide a new basis for understanding revenge in offending behaviour more generally. Theoretical work serves to inform the development of treatment initiatives and therapeutic practice (Hollin, 2012). Therapeutic practice is not well developed for adult firesetters (Gannon & Pina, 2010), and this model has the potential to help offenders achieve a greater understanding of the sequence of cognitive, affective, behavioural and volitional factors related to their offending, further enabling both practitioner and offender to identify possible risk factors associated with their offending across time and context. The model provides a clear and detailed framework for practitioners to comprehend and utilise. Each section of the model can be broken down with offenders and problematic areas addressed in isolation, allowing for more opportunities for change and treatment progress. Since the model may be empirically tested, this provides for a more evidence-based approach to treatment, in line with the scientist practitioner model which asserts that clinical practice should be informed by empirical theory and research (Gannon et al., 2008).

Future research should seek to validate, amend and/or refine the model, perhaps using a combination of quantitative and qualitative methods. For example, interviews with revenge firesetters may be collected and subjected to a Grounded Theory analysis (Strauss & Corbin, 1998) in order to validate the sequence of contextual, cognitive, affective, behavioural and volitional factors associated with this type of offending. More traditional quantitative approaches, using psychometric assessments and performing moderation analyses on the data may be used to validate the effects of the psychological and dis-inhibiting factors. Empirical validation of the

model would highlight the uniqueness of revenge firesetters by comparison to other sub-types, providing future studies employed adequate control groups. Other motivational drivers, which in the literature account for an estimated 70% of deliberate firesetting, could also be isolated, reviewed and re-assessed in the same fashion. Doing so would certainly provide an exhaustive review of intentionality and motivation in deliberate firesetting as well as serving to inform and provide explanatory depth for wider multifactor theories of deliberate firesetting. This would also provide further tools for the assessment and treatment of revenge firesetters, thus aiding the development of more targeted intervention programmes which are desperately needed given the scale and consequences of deliberate firesetting behaviour.

References

- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders, DSM-IV-TR*. Washington, DC: American Psychiatric Association.
- Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Annual Review of Psychology*, 53, 27–51. Retrieved from <http://www.annualreviews.org.chain.kent.ac.uk/doi/pdf/10.1146/annurev.psych.53.100901.135231>
- Anderson, C. A., & Dill, K. E. (2000). Video games and aggressive thoughts, feelings, and behaviour in the laboratory and in life. *Journal of Personality and Social Psychology*, 78(4), 772–790. doi:10.1037/0022-3514.78.4.772
- Aquino, K., Tripp, T. M., & Bies, R. J. (2006). Getting even or moving on? Power, procedural justice, and types of offense as predictors of revenge, forgiveness, reconciliation, and avoidance in organizations. *Journal of Applied Psychology*, 91(3), 653–668. doi:10.1037/0021-9010.91.3.653
- Bandura, A. (1976). Self-reinforcement: Theoretical and methodological considerations. *Behaviorism*, 4(2), 135–155. Retrieved from <http://www.uky.edu/~eushe2/Bandura/Bandura1976B.pdf>
- Barker, A. F. (1994). *Arson: A review of the psychiatric literature* (Vol. 35). Oxford: Oxford University Press.
- Barnett, W., & Spitzer, M. (1994). Pathological fire-setting 1951–1991: A review. *Medicine, Science and the Law*, 34, 2–3.
- Baumeister, R. F. (1997). *Evil: Inside human violence and cruelty*. New York: Freeman.
- Bies, R. J., & Tripp, T. M. (1996). Beyond distrust: “Getting even” and the need for revenge. In R. M. Kramer & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 246–260). Thousand Oaks, CA: Sage.
- Black, D. (1983). Crime as social control. *American Sociological Review*, 48(1), 34–45. Retrieved from <http://www.jstor.org/stable/2095143>
- Bradford, J. (1982). Arson: A clinical study. *Canadian Journal of Psychiatry*, 27(3), 188–193.
- Bushman, B. J., & Baumeister, R. F. (1998). Threatened egotism, narcissism, self-esteem, and direct and displaced aggression: Does self-love or self-hate lead to violence?. *Journal of Personality and Social Psychology*, 75(1), 219–229. doi:10.1037/0022-3514.75.1.219
- Byrne, J., & Roberts, A. (2007). New directions in offender typology design, development and implementation: Can we balance risk, treatment and control? *Aggression and Violent Behaviour*, 12(5), 483–492. doi:10.1016/j.avb.2007.02.009
- Canter, D., & Fritzon, K. (1998). Differentiating arsonists: A model of firesetting actions and characteristics. *Legal and Criminological Psychology*, 3(1), 73–96. Retrieved from <http://onlinelibrary.wiley.com.chain.kent.ac.uk/doi/10.1111/j.2044-8333.1998.tb00352.x/pdf>
- Crombag, H., Rassin, E., & Horselenberg, R. (2003). On vengeance. *Psychology, Crime & Law*, 9(4), 333–344. doi:10.1080/1068316031000068647
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multi-dimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113–126. doi:10.1037/0022-3514.44.1.113

- Dennet, M. (1980). *Fire investigation*. Oxford: Pergamon Press.
- Denzler, M., Forster, J., & Liberman, N. (2009). How goal-fulfillment decreases aggression. *Journal of Experimental Social Psychology*, 45(1), 90–100. doi:10.1016/j.jesp.2008.08.021
- Department for Communities and Local Government. (2011a). *Fire Statistics: Great Britain, 2010–2011*. London. Retrieved from <http://www.communities.gov.uk/documents/statistics/pdf/568234.pdf>
- Department for Communities and Local Government. (2011b). *The Economic Cost of Fire: Estimates for 2008*. London. Retrieved from <http://www.communities.gov.uk/documents/corporate/pdf/1838338.pdf>
- Dickens, G. L. (2012). *Firesetting and mental health: Theory, research and practice*. RCPsych Publications.
- Dickens, G., Sugarman, P., Edgar, S., Hofberg, K., Tewari, S., & Ahmad, F. (2009). Recidivism and dangerousness in arsonists. *Journal of Forensic Psychiatry & Psychology*, 20(5), 621–639. doi:10.1080/14789940903174006
- Doley, R., Fineman, K., Fritzon, K., Dolan, M., & McEwan, T. (2011). Risk factors for recidivistic arson in adult arson offenders. *Psychology, Psychiatry and Law*, 18, 378–394. doi:10.1080/13218719.2011.559154
- Duggan, L., & Shine, J. (2001). An investigation of the relationship between personality disorder, hostility, neuroticism and self-esteem amongst incarcerated fire-setters. *Prison Service Journal*, Issue 133.
- Faulk, M. (1988). *Basic forensic psychiatry*. Oxford: Blackwell Scientific Publications.
- Fineman, K. R. (1980). Firesetting in childhood and adolescence. *Psychiatric Clinics of North America*, 3, 483–499.
- Fineman, K. R. (1995). A model for the qualitative analysis of child and adult fire deviant behavior. *American Journal of Forensic Psychology*, 13(1), 31–60.
- French, P. A. (2001). *The virtues of vengeance*. Kansas: The University Press of Kansas.
- Freud, S. (1932). The acquisition of power over fire. *International Journal of Psychoanalysis*, 13, 405–410.
- Frijda, N. H. (1994). The lex talionis: On vengeance. In S. H. M. van Goozen, N. E. van der Poll, & J. A. Sergeant (Eds.), *Emotions: Essays on emotion theory* (pp. 263–289). Hillsdale, NJ: Erlbaum.
- Gannon, T. A. (2011). Female arsonists: Key features, psychopathologies, and treatment needs. *Psychiatry: Interpersonal and Biological Processes*, 73(2), 173–189. doi:10.1521/psyc.2010.73.2.173
- Gannon, T. A., Ó Ciardha, C., Doley, R., & Alleyne, E. (2012a). The multi-trajectory theory of adult firesetting (M-TTAF). *Aggression and Violent Behavior*, 17(2), 107–121. doi:10.1016/j.avb.2011.08.001
- Gannon, T. A., & Pina, A. (2010). Firesetting: Psychopathology, theory and treatment. *Aggression and Violent Behaviour*, 15(3), 224–238. doi:10.1016/j.avb.2010.01.001
- Gannon, T. A., Rose, M. R., & Ward, T. (2008). A descriptive model of the offense process for female sexual offenders. *Sexual Abuse: A Journal of Research and Treatment*, 20(3), 352–374. Retrieved from <http://www.mpsym.co.uk/images/A%20descriptive%20model%20of%20%20%20byT%20Gannon%20M%20Rose.pdf>
- Gannon, T. A., Tyler, N., Barnoux, M., & Pina, A. (2012b). Female arsonists and firesetters. In G. Dickens, P. Sugarman, & T. Gannon (Eds.), *Firesetting and mental health: Theory, research and practice* (pp. 126–142). RCPsych Publications.
- Geller, J., & Bertsch, G. (1985). Fire-setting behaviour in the histories of a state hospital population. *American Journal of Psychology*, 142, 464–468.
- Geller, J., Fisher, W., & Bertsch, G. (1992). Who repeats? A follow-up study of state hospital patients' firesetting behaviour. *Psychiatric Quarterly*, 63, 143–157. doi:10.1007/BF01065987
- Gollwitzer, M., & Denzler, M. (2009). What makes revenge sweet: Seeing the offender suffer or delivering a message? *Journal of Experimental Social Psychology*, 45, 840–844. doi:10.1016/j.jesp.2009.03.001
- Haines, S., Lambie, I., & Seymour, F. (2006). *International approaches to reducing deliberately set fires: Statistical data and fire investigation*. UniServices. Retrieved from <http://fire.org.nz/Research/Publishsed-Reports/Documents/6011792098926564c160358da39e9fbb.pdf>

- Hill, R., Langevin, R., Paitich, D., Handy, L., Russon, A., & Wilksinson, L. (1982). Is arson an aggressive act or a property offence? A controlled study of psychiatric referrals. *Canadian Journal of Psychiatry*, 27(8), 648–654.
- Hollin, C. R. (2012). Arson: Treatment and interventions. In G. Dickens, P. Sugarman, & T. Gannon (Eds.), *Firesetting and mental health: Theory, research and practice* (pp. 224–239). RCPsych Publications.
- Hurley, W., & Monahan, T. (1969). Arson: The criminal and the crime. *British Journal of Criminology*, 9, 4–21. Retrieved from <http://bjc.oxfordjournals.org.chain.kent.ac.uk/content/9/1/4.full.pdf+html?sid=6e6a1233-bbfc-4d4e-a8ef-b67e93602567>
- Icove, D., & Estep, M. (1987). Motive-based offender profiles of arson and fire-related crimes. *FBI Law Enforcement Bulletin*, 56(4), 17–23.
- Inciardi, J. (1970). The adult firesetter. *Criminology*, 8, 145–155. doi:10.1111/j.1745-9125.1970.tb00736.x
- Jackson, H., Glass, C., & Hope, S. (1987). A functional analysis of recidivistic arson. *British Journal of Clinical Psychology*, 26(3), 175–185. doi:10.1111/j.2044-8260.1987.tb01345.x
- Kalmar, D. A., & Sternberg, R. J. (1988). Theory knitting: An integrative approach to theory development. *Philosophical Psychology*, 1(2), 153–170. doi:10.1080/09515088808572934
- Kocsis, R. (2002). Arson: Exploring motives and possible solutions. *Australian Institute of Criminology*, 236, 1–6.
- Kocsis, R., & Cooksey, R. W. (2002). Criminal psychological profiling of serial arson crimes. *International Journal of Offender Therapy and Comparative Criminology*, 46, 631–656. doi:10.1177/0306624X02238159
- Kolko, D. J., & Kazdin, A. E. (1986). A conceptualization of firesetting in children and adolescents. *Journal of Abnormal Child Psychology*, 14(1), 49–61. doi:10.1007/BF00917221
- Koson, D., & Dvoskin, J. (1982). Arson: A diagnostic study. *Bulletin of the American Academy of Psychiatry and the Law*, 10(1), 39–49. Retrieved from <http://www.jaapl.org/content/10/1/39.full.pdf+html>
- Lambie, I., & Randell, I. (2011). Creating a firestorm: A review of children who deliberately light fires. *Clinical Psychology Review*, 31(3), 307–327. doi:10.1016/j.cpr.2010.12.010
- Lazarus, R. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Levin, B. (1976). *Psychological characteristics of firesetters*. National Fire Protection Assn.
- Lewis, N., & Yarnell, H. (1951). *Pathological firesetting (pyromania)*. Nervous and Mental Disease Monographs (Number 82). New York: Coolidge Foundation.
- Macht, L. B., & Mack, J. E. (1968). The firesetter syndrome. *Psychiatry*, 31(3), 277–288.
- McLean Parks, J. (1997). The fourth arm of justice: The art and science of revenge. In R. J. Lewicki, R. J. Bies, & B. H. Sheppard (Eds.), *Research on negotiation in organizations* (Vol. VI, pp. 113–144). Greenwich, CT: JAI.
- Meier, B. P., & Robinson, M. D. (2004). Does quick to blame mean quick to anger? The role of agreeableness in dissociating blame and anger. *Personality and Social Psychology Bulletin*, 30(7), 856–867. doi:10.1177/0146167204264764
- Miller, D. T. (2001). Disrespect and the experience of injustice. *Annual Review of Psychology*, 52, 527–553. doi:10.1146/annurev.psych.52.1.527
- Muckley, A. (1997). Burning up the town. *Fire Prevention*, 298, 33–34.
- Murphy, G., & Clare, I. (1996). Analysis of motivation in people with mild learning disabilities (mental handicap) who set fires. *Psychology, Crime & Law*, 2(3), 153–164. doi:10.1080/10683169608409774
- Ó Ciardha, C., & Gannon, T. A. (2012). The implicit theories of firesetters: A preliminary conceptualization. *Aggression and Violent Behaviour*, 17(2), 122–128. doi:10.1016/j.avb.2011.12.001
- O'Sullivan, G., & Kelleher, M. (1987). A study of firesetters in south-west of Ireland. *British Journal of Psychiatry*, 151, 818–823. doi:10.1192/bjp.151.6.818
- Oxford Dictionaries. (2010). *Revenge*. Retrieved from http://oxforddictionaries.com/view/entry/m_en_gb0707100#m_en_gb0707100
- Parrott, W. (2004). The nature of emotion. In M. Brewer & M. Hewstone (Eds.), *Emotion and Motivation* (pp. 5–21). Oxford: Blackwell.
- Pettitway, L. E. (1987). Arson for revenge: The role of environmental situation, age, sex and race. *Journal of Quantitative Criminology*, 3, 169–187. Retrieved from <http://df7sm3xp4s>.

- scholar.serialssolutions.com/?sid=google&auinit=LE&aulast=Pettway&atitle=Arson+for+revenge:+The+role+of+environmental+situation,+age,+sex,+and+race&id=doi:10.1007/BF01064214&title=Journal+of+quantitative+criminology&volume=3&issue=2&date=1987&page=169&issn=0748-4518
- Prins, H. (1994). *Fire-raising: Its motivation and management*. London: Routledge.
- Prins, H., Tennent, G., & Trick, K. (1985). Motive for arson (fire raising). *Medicine, Science and the Law*, 25(4), 275–278.
- Rautaheimo, J. (1989). Finnish study of 180 arsonists arrested in Helsinki. *Fire Prevention*, 223, 30–34.
- Reber, S. (1995). *Dictionary of psychology* (2nd ed.). London: Penguin.
- Rice, M., & Harris, G. (1991). Firesetters admitted to a maximum security psychiatric institution. *Journal of Interpersonal Violence*, 6, 461–475. doi:10.1177/088626091006004005
- Rice, M., & Harris, G. (1995). Violent recidivism: Assessing predictive validity. *Journal of Consulting and Clinical Psychology*, 63(5), 364–375. doi:10.1037/0022-006X.63.5.737
- Rider, A. (1980). The firesetter: A psychological profile (part 1). *FBI Law Enforcement Bulletin*, 49, 6–13.
- Ritchie, E., & Huff, T. (1999). Psychiatric aspects of arsonists. *Journal of Forensic Science*, 44(4), 733–740.
- Rix, K. J. B. (1994). A psychiatric study of adult arsonists. *Medicine, Science and the Law*, 34, 31–34.
- Rubin, Z., & Peplau, L. A. (1975). Who believes in a just world? *Journal of Social Issues*, 31(3), 65–89. doi:10.1111/j.1540-4560.1975.tb00997.x
- Sapp, A. D., Huff, T. G., Gary, G. P., Icove, D. J., & Horbert, P. (1996). *Essential findings from a study of serial arsonists*. FBI Academy, National Center for the Analysis of Violent Crime.
- Scott, D. (1974). *The psychology of fire*. New York: Charles Scribner's Sons.
- Singer, S. D., & Hensley, C. (2004). Applying Social Learning Theory to childhood and adolescent firesetting: Can it lead to serial murder? *International Journal of Offender Therapy and Comparative Criminology*, 48(4), 461–476. doi:10.1177/0306624X04265087
- Skarlicki, D. P., & Folger, R. (1997). Retaliation in the workplace: The roles of distributive, procedural, and interactional justice. *Journal of Applied Psychology*, 82(3), 434–443. doi:10.1037/0021-9010.82.3.434
- Skarlicki, D., Folger, R., & Tesluk, P. (1999). Personality as a moderator in the relationship between fairness and retaliation. *Academy of Management Journal*, 42(1), 100–108. Retrieved from <http://df7sm3xp4s.scholar.serialssolutions.com/?sid=google&auinit=DP&aulast=Skarlicki&atitle=Personality+as+a+moderator+in+the+relationship+between+fairness+and+retaliation.&id=doi:10.2307/256877&title=Proceedings+-+Academy+of+Management&volume=42&issue=1&date=1999&page=100&issn=0001-4273>
- Solomon, R. (1976). *The Passions*. Notre Dame: University of Notre Dame Press.
- Stillwell, A., Baumeister, R., & Del Priore, R. (2008). We're all victims here: Toward a psychology of revenge. *Basic and Applied Social Psychology*, 30, 253–263. doi:10.1080/01973530802375094
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research*. Thousand Oaks, CA: Sage.
- Swaffer, T., & Hollin, C. (1995). Adolescent firesetting: Why do they say they do it? *Journal of Adolescence*, 18(5), 619–623. doi:10.1006/jado.1995.1043
- The National Archives. (2011). *Criminal Damages Act 1971*. Retrieved from <http://www.legislation.gov.uk/ukpga/1971/48>
- Tripp, T. M., & Bies, R. J. (1997). What's good about revenge? The avenger's perspective. In R. J. Lewicki, R. J. Bies, & B. H. Sheppard (Eds.), *Research on negotiation in organizations* (Vol. 6, pp. 145–160). Greenwich, CT: JAI.
- Tripp, T. M., Bies, R. J., & Aquino, K. (2002). Poetic justice or petty jealousy? The aesthetics of revenge. *Organizational Behavior and Human Decision Processes*, 89(1), 966–984. doi:10.1016/S0749-5978(02)00038-9
- Tyler, N., & Gannon, T. A. (2012). Explanations of firesetting in mentally disordered offenders: A review of the literature. *Psychiatry: Interpersonal and Biological Processes*, 75(2), 150–166. Retrieved from <http://guilfordjournals.com.chain.kent.ac.uk/doi/pdf/10.1521/psyc.2012.75.2.150>

- Vidmar, N. (2001). Retribution and revenge. In J. Sanders & V. L. Hamilton (Eds.), *Handbook of justice research in law* (pp. 31–63). New York: Kluwer Academic.
- Virkkunen, M., Kallio, E., Rawlings, R., Tokola, R., Poland, R. E., Guidotti, A., . . . Linnoila, M. (1994). Personality profiles and state aggressiveness in Finnish violent offenders, impulsive firesetters and healthy volunteers. *Archives of General Psychiatry*, 51(1), 28–33. doi:10.1001/archpsyc.1994.03950010028004
- Virkkunen, M., Nuutila, A., Goodwin, F. K., & Linnoila, M. (1987). Cerebrospinal fluid monoamine metabolite levels in male arsonists. *Archives of General Psychiatry*, 44(3), 241–247. doi:10.1001/archpsyc.1987.01800150053007
- Vreeland, R., & Levin, B. (1980). Psychological aspects of firesetting. In D. Canter (Ed.), *Fires and human behaviour* (pp. 31–46). Chichester, England: Wiley.
- Ward, T. (2000). Sexual offenders' cognitive distortions as implicit theories. *Aggression and Violent Behaviour*, 5(5), 491–507. doi:10.1016/S1359-1789(98)00036-6
- Ward, T., & Hudson, S. M. (1998). A model of relapse process in sexual offenders. *Journal of Interpersonal Violence*, 10(6), 700–725. doi:10.1177/088626098013006003
- Weiss, H. M., & Beal, D. J. (2005). Reflections on affective events theory. In N. M. Ashkanasy, W. J. Zerbe, & C. E. J. Härtel (Eds.), *The Effect of Affect in Organizational Settings (Research on Emotion in Organizations, Volume 1)* (pp. 1–21). Emerald Group.
- Wood, B. (2000). Arson profiling: A geographical, demographic and motivational perspective. *Fire Engineers Journal*, 29–36.