

Kent Academic Repository

Barnoux, Magali F.L. and Gannon, Theresa A. (2013) *A new conceptual framework for revenge firesetting.* Psychology, Crime & Law, 20 (5). pp. 497-513. ISSN 1068-316X.

Downloaded from https://kar.kent.ac.uk/35089/ The University of Kent's Academic Repository KAR

The version of record is available from https://doi.org/10.1080/1068316X.2013.793769

This document version Pre-print

DOI for this version

Licence for this version UNSPECIFIED

Additional information

Versions of research works

Versions of Record

If this version is the version of record, it is the same as the published version available on the publisher's web site. Cite as the published version.

Author Accepted Manuscripts

If this document is identified as the Author Accepted Manuscript it is the version after peer review but before type setting, copy editing or publisher branding. Cite as Surname, Initial. (Year) 'Title of article'. To be published in *Title of Journal*, Volume and issue numbers [peer-reviewed accepted version]. Available at: DOI or URL (Accessed: date).

Enquiries

If you have questions about this document contact <u>ResearchSupport@kent.ac.uk</u>. Please include the URL of the record in KAR. If you believe that your, or a third party's rights have been compromised through this document please see our <u>Take Down policy</u> (available from <u>https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies</u>).

Running Head: REVENGE FIRESETTING

A New Conceptual Framework for Revenge Firesetting

Magali Barnoux^

&

Theresa A. Gannon[^]

University of Kent, UK

[^] Magali Barnoux is a PhD Candidate at the Centre of Research and Education in Forensic Psychology (CORE-FP), University of Kent, UK. [^] Theresa A. Gannon is a Chartered Forensic Psychologist and Reader at the Centre of Research and Education

in Forensic Psychology (CORE-FP), University of Kent, UK.

Address all manuscript correspondence to Magali Barnoux, Centre of Research and Education in Forensic Psychology (CORE-FP), Keynes College, University of Kent, Canterbury, Kent, CT2 7NP.

Abstract

Revenge has frequently been acknowledged to account for a relatively large proportion of motives in deliberate firesetting (Lewis & Yarnell, 1951; Wood, 2000). 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 revenge firesetting. Treatment implications and suggestions for future research are also provided.

Keywords: revenge, anger, firesetting, arson, motive

Introduction

Intentionality and motivation have played a significant role in existing research and theoretical explanations of deliberate firesetting (Dickens & Sugarman, in press). 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 & Sugarman, in press; Gannon & Pina, 2010). Revenge has been cited as the most prominent motive in deliberate firesetting, (Doley, Fineman, Fritzon, Dolan, & McEwan, 2011; Inciardi, 1970; Lewis & Yarnell, 1951). Revenge is, however, 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 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 (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 (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. Furthermore, unless otherwise stated, 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 lay person'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 Dictionnairies, 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 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 offense or injustice (Stillwell, Baumeister & Del Priore, 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, Baumeister & Del Priore, 2008). This has been referred to as the *Magnitude Gap* (Baumeister, 1997; Stillwell, Baumeister & Del Priore, 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, Baumeister & Del Priore, 2008). Research suggests individuals are more sensitive to the injustices they suffer than the ones they perpetrate (Stillwell, Baumeister & Del Priore, 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, Baumeister & Del Priore, 2008).

Revenge Firesetting: Existing Theoretical Explanations

Three main aetiological theories of deliberate firesetting currently exist: unilateral classificatory systems (taxonomies and crime scene classifications), single factor and multi-factor 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% to 58% of all motives in deliberate firesetting, with the majority of estimates from studies appearing to fall around the 30% mark (Bradford, 1982; Dennet, 1980; Hill, et al., 1982; Hurley & Monahan, 1969; Icove & Estepp, 1987; Inciardi, 1970; Koson & Dvoskin, 1982; Lewis & Yarnell, 1951; Murphy & Clare, 1996; O'Sullivan & Kelleher, 1987; Prins, 1994; Prins, Tennent, & Trick, 1985; Rautaheimo, 1989; Rider, 1980; Rice & Harris, 1995; Ritchie & Huff, 1999; 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 (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 & Estepp, 1987; Lewis & Yarnell, 1951; Wood, 2000). Revenge firesetters are considered generally solitary and their attack is characterised by setting 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 Multi-Factor Theories

Single-factor and multi-factor theories cite revenge as a motive, one of several factors located within 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 socialization characterized 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, 2011; Vreeland & Levin, 1980).

Multi-factor 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 multi-factor 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., 2011). 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 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., 2011). 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., 2011). 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., 2011), or from self-regulation deficits specially linked to anger, hostility and poor communication style (Gannon et al., 2011).

Revenge Firesetting: New Perspectives

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. Further, 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 & Sugarman, in press ; Gannon & Pina, 2010). Of particular relevance, descriptive detail about the firesetters represented in the revenge categories is non-existent in some studies (Kocsis, 2002), unextensive in others (Inciardi, 1970) and not one study offers an adequate conceptual framework of revenge as a motivational driver.

Within the firesetting literature, revenge is currently viewed as a motivational driver; however psychological theories of revenge would actually suggest it to be an end goal (Wood, 2000). Thus, the act of seeking revenge should rather be conceptualised as a sequence or chain of behaviour whereby contextual, affective, cognitive, and volitional states drive an individual to fulfil the goal of revenge by setting a fire. Identifying these states in terms of needs and intentions are 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 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 a goal directed behaviour. 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 goal directed behaviour in order to inflict either comparative suffering or enforced understanding to restore equity through retribution.

1. 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 offenses 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). 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. Further, relationship problems were found to account for 37% of desires for revenge in deliberate firesetting (Icove & Estepp, 1987). 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, landladies, 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).

2. 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 (delusions, paranoia, psychosis, schizophrenia) and mental illness (depression and anxiety) have been found in firesetters motivated by revenge and have been suggested to influence revenge seeking behaviour (Lewis & Yarnell, 1951; O'Sullivan & Kelleher, 1987; Prins, 1994; Rautaheimo, 1989). Personality and emotional variables suggested to influence revenge seeking behaviour in deliberate firesetters include: low assertiveness (Gannon et al., 2011; Jackson et al., 1987), self-regulation issues (Gannon et al., 2011), poor communication (Gannon et al., 2011; Jackson et al., 1987), low self-esteem (Duggan & Shine, 2001), poor problem solving (Inciardi, 1970; Lewis & Yarnell, 1951), impulsivity (Gannon et al., 2011), 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 my revenge (Prins, 1994; Rautaheimo, 1989) and particularly, the disinhibiting role of alcohol found to influcence 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.

a. 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 apparaisal of an interpersonal conflict is likely to be at the root of forming the desire and intent to seek revenge.

b. 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.

3. 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 fulfill the goal of revenge. A range of contextual factors and beliefs may come into play, influencing why an individual may specifically choose fire in their offence.

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) and negative developmental experiences and role models (i.e., poor childhood socialization, abusive family backgrounds) which may contribute to increased aggression, poor coping skills, and a lack of assertiveness and it is these traits which are likely to increase the propensity of firesetting in an attempt to gain positive environmental control (Gannon & Pina, 2010). A history of anti-social behaviour and/or violent offending is also likely to influence the choice of fire (see Gannon et al., 2011).

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, Baumeister & Del Priore, 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 & Fritzon, 1998; Geller, 1992; Wood, 2000).

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,

Baumeister, & Del Priore, 2008). Given the preponderance of low apprehension and conviction rates for arson related offences, it is likely fire is chosen as potential offenders believe the crime will go undetected.

Other more deep seated beliefs around fire may also serve to explain why fire is chosen. It has recently been suggested firesetters motivated my 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 (2011), hypothesised firesetters falling into the Grievance and Anti-Social Trajectories of the *M-TTAF* who may be motivated by revenge, 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 others. 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., 2011). 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. (2011), 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., 2011).

Summary and Concluding Remarks

In this paper, a new conceptual framework of revenge firesetting was proposed. The elements of the new framework are theoretically well supported by existing findings in the literature and offer a new perspective of the role of motivation, emotion and intentionality in firesetting behaviour. The theory expands on existing taxonomies and classifications of deliberate firestting behaviour by developing the concept of revenge beyond that of a categorical label assigned to a group of individuals. The theory also ties in with contemporary theories of firesetting (*Dynamic Behaviour Theory*; Fineman, 1995; *M-TTAF*; Gannon et al., 2011). 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. Each section of the model can be broken down for the purposes of assessment or treatment of firesetters enabling a more evidence-based approach to practice. However, it is noteworthy this is a hypothetical framework and future research should seek to further validate the model, and make any necessary amendments and refinements. Other motivational drivers could also be isolated, reviewed and re-assessed in the same fashion. Doing so would certainly inform and provide explanatory

depth for wider multi-factor 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.

- 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.
- 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.
- 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.
- 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.
- 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 multidimensional 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.
- Dickens, G., & Sugarman, P. (in press). Differentiating firesetters: lessons from the literature on motivation and dangerousness. In G. Dickens, P. Sugarman, & T. Gannon (Eds.), *Firesetting and mental health: theory, research and practice* (pp. 94-127). RCPsych Pubs
- 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. 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: 10.1080/13218719.2011.559155.
- 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.
- 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. (2011) The Multi-Trajectory Theory of Adult Firesetting (M-TTAF). Aggression and Violent Behavior. 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
- Geller, J., Fisher, W., & Bertsch, G. (1992). Who repeats? A follow-up study of state hospital patients' firesetting behaviour. *Psychiatric Quarterly*, 63, 143-157.
- 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.
- 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.
- Hurley, W., & Monahan, T. (1969). Arson: the criminal and the crime. *British Journal of Criminology*, 9, 4-21.
- Icove, D., & Estepp, 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.
- Kalmar, D.A., & Sternberg, R.J. (1988). Theory knitting: An integrative approach to theory development. *Philosophical Psychology*, 1(2), 1988, 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: 0.1007/BF00917221
- Koson, D., & Dvoskin, J. (1982). Arson: A diagnostic study. Bulletin of the American Academy of Psychiatry and the Law, 10 (1), 39-49.
- 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.

- 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

- Murphy, G., & Clare, I. (1996). Analysis of motivation in people with mild learning disabilities (mental handicap) who set fires. *Psychology, Crime and Law*, 2 (3), 153-164. doi: 10.1080/10683169608409774.
- Ó Ciardha, C., & Gannon, T. A. (2011). *The Implicit Theories of Firesetters*. Manuscript submitted for publication.
- 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 Dictionnairies. (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, *Emotion and Motivation* (pp. 5-21). Oxford: Blackwell Publishing Ltd.
- 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 Edition). Penguin.
- Rice, M., & Harris, G. (1995). Violent recidvism: assessing predictive validity. *Journal of Consulting and Clinical Psychology*, 63 (5), 364-375. doi: 10.1037/0022-006X.73.4.762

- 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.
- 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

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.

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.
- Swaffer, T., & Hollin, C. (1995). Adolescent firesetting: why do they say they do it? *Journal* of Adolescence, 18 (5), 619-623. doi: 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
- 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/ Plenum Publishers.
- 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.
- 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.
- 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
- Weiss, H.M., & Beal, D.J. (2005). Reflections on Affective Events Theory, In Ashkanasy,N.M., Zerbe, W.J., Härtel, C.E.J. (ed.) *The Effect of Affect in Organizational Settings*

(*Research on Emotion in Organizations, Volume 1*), Emerald Group Publishing Limited, pp.1-21. doi: 10.1016/S1746-9791(05)01101-6.

Wood, B. (2000). Arson profiling: A geographical, demographic and motivational perspective. *Fire Engineers Journal*, 29-36.