Unintended consequences in demarketing anti-social behaviour:
Project *Bernie*

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Abstract.

This case study uses an intervention tackling deliberate grassfires to explore the application of social marketing in a novel context, its potential effectiveness in demarketing anti-social behaviours, and the potential of such interventions to generate positive and negative unintended consequences. The intervention's evaluation confirms social marketing's potential value in tackling ingrained anti-social behaviours within communities. It also revealed unexpected benefits accruing from changes within the target community, within the sponsoring fire service and in the relationship between the two. The paper concludes by discussing the implications of potential unexpected and unplanned consequences for intervention planning, conduct and evaluation.

Keywords: Social marketing, anti-social behaviour, unintended consequences, evaluation.

Statement of contribution: This paper contributes insights into several aspects of social marketing. Contextually it considers a relatively novel arena for interventions, fire-related behaviours, and contributes to knowledge about community-based interventions aiming to de-market anti-social behaviours. It furthers our understanding of unintended consequences in social marketing and their implications for intervention planning and evaluation.

Introduction

Social marketing's influence has progressively extended beyond health into a range of behaviours linked to safety and injury prevention issues such as seat belt use or tackling domestic violence; to environmental issues such as recycling, energy saving or car sharing; and to social/community issues such as adult literacy or voter participation (Kotler & Lee, 2008). It has also increasingly extended beyond addressing individuals' behaviour to consider the social and community context for behaviour. One such extension is 'Community Based Social Marketing', a pragmatic approach to social change within specific geographic communities with an emphasis on direct contact with community members (McKenzie-Mohr, 2000).

This paper presents a novel community-based social marketing application by South Wales Fire and Rescue Services (SWFRS) in the UK, tackling an unusual and challenging behavioural issue, the prevention of deliberate grassland fire-setting around communities in South Wales. The project was conducted in partnership with social marketing academics, providing opportunities to derive wider lessons from the resulting intervention, some of which inform this paper. The background, conduct and evaluation of the intervention are detailed in another paper (Peattie, Peattie & Thomas, 2012), developed for a policy audience with an analytical focus on social marketing's public sector management implications. This paper presents an alternative analysis for a marketing audience, with a focus on social marketing implications relating to its use in tackling anti-social behaviours (ASBs) within communities and the potential for interventions to generate unintended consequences. A greater awareness of the scope for unintended consequences should aid both academics and practitioners in planning, managing and evaluating future interventions.

Unintended consequences in social marketing

Vernon's (1979) review of the phenomenon of unintended consequences frames them as somewhat paradoxical. A recognition that they tend to flow from our actions borders on the obvious, yet down the ages they have intrigued writers and philosophers including Hegel, Hume, Marx and Sartre, producing a wide range of inferences and conclusions about their causes and implications. Vernon highlights a range of factors, beyond simple ignorance or a lack of forethought, that can generate unintended consequences. They can arise from: the cumulative impact of many peoples' similar actions crossing causal thresholds; interactions between many diverse individual decisions; the sequencing or co-incidence of dissimilar activities by individuals or groups; the accidental triggering of some process that intervenes between intentions and outcomes; significant changes in the context in which action takes place; and the sheer complexity of cause-and-effect relationships within social systems defeating our ability to accurately predict outcomes.

In the context of planned social interventions, the sociologist Robert Merton in 1936 first argued that all types of interventions will have unintended consequences, some that can be foreseen and, if undesirable, possibly prevented, and others that cannot. He recommended that all interventions should be routinely evaluated for unintended consequences allowing for intervention modification or even termination should they generate significant problems. Morell (2005) further explains that such consequences vary in the degree to which they are unforeseeable as well as unforeseen, and can also include those that are known but deliberately 'overlooked' for political or ideological reasons. Both Merton and Morell acknowledge that not all unintended consequences are harmful but that these receive the most attention, and most subsequent commercial and social marketing discussion on the subject emphasises the negative. For social marketing this reflects the broader use of contingency planning in public policy

settings, which has been criticized for a tendency to over-emphasise the negative (Bloom & Menefee, 1994).

Commercially there are certain products, such as automobiles or alcohol, and certain target markets, such as children, for which unintended consequences are frequently discussed. However, as Fry and Polonsky (2004a, p.1305) note: 'The majority of products and services are marketed in an environment where the unintended consequences of marketing activities are simply not considered during the corporate strategic decision making process'. Academic discussion of unintended marketing consequences is mostly concentrated within macromarketing (see Layton, 2014), or within occasional conference streams or journal special issues (for example *Journal of Business Research* 57/*11* from which Fry and Polonsky's article comes). To appreciate unintended consequences Fry and Polonsky (2004a) argue for a broadening in marketers' perspective beyond direct consumer-firm exchanges and their outcomes (including traditionally considered externalities) to include the goals, interactions and welfare of all stakeholder groups. This involves interrogating the whole value chain including pre and post-production activities to ask questions like:

> …how might automating production processes impact on employees within an organisation? Or how might the marketing of credit cards to youth (a major target segment in the United States) encourage consumption behaviour well beyond their means. More recently, in Australia, it has become a novelty to place ''scratchies'' (instant lottery-type tickets) in potato crisp packets with prizes that include large sums of money. How might such a marketing strategy encourage gambling among children?
>
> (Fry & Polonsky, 2004a, p. 1305)

Unintended consequences also form a point of intersection between commercial and social marketing partly because the latter, when applied as a form of critical marketing, has the potential

to help understand the unintended consequences of the former (Gordon, Carrigan & Hastings, 2011). Hoek (2004) illustrates that one result of tighter tobacco promotion regulation has been to make tobacco marketers more innovative, but another unintended (and ironic) outcome is that social marketers have then started adopting the effective new marketing tactics developed by tobacco marketers to fight back against them.

Since social marketers specifically seeks to generate purposive social change, one might expect them to be more concerned than their commercially-minded peers about the nature and role of unintended consequences. The topic has periodically been discussed within the social marketing literature (e.g. Brace-Govan, 2015; Dholakia, 1984; Spotswood, French, Tapp & Stead, 2011; Knerr, 2011; Pechmann & Slater, 2005) and leading texts highlight the potential for negative unintended consequences as an ethical risk within interventions, and the need to consider and guard against them (e.g. Donovan & Henley, 2010, p. 211-214; Kotler & Lee, 2008, p. 261 & 336). Some commentators have even proposed that social marketing has the potential to reduce the incidence of negative unintended consequences for social change programmes compared to more traditional approaches (Kotler & Lee, 2009; McDonald, Slavin, Bailie & Schobben, 2011). Others argue that a failure to consider interventions' unintended consequences is a shortcoming of the social marketing discipline (Kleinman, 2010; Langford & Panter-Brick, 2013; Pechmann & Slater, 2005). Brace-Govan (2015, p.107) argues that this failure has led to:

> …a dearth of critical, published social marketing that reviews its own performance as a social actor and influencer of social norms with the intention of improving its contribution to our quality of life. Especially lacking is critically derived research that aims to support social marketing in avoiding inadvertent uncalculated effects that result in reluctance, counternormative uptake, stigma or discrimination.

There are three notable points about the social marketing literature concerning unintended consequences. Firstly although many marketing processes are acknowledged as generating them, including innovation, product development, promotional incentives and relationship management (Fry & Polonsky, 2004b), the focus is largely on communication efforts and adverse or 'boomerang' effects of messages (Pechmann & Slater, 2005). Pechmann and Slater (2005) identify three groups of unintended responses to social marketing messages:

(a) c*ounterinformative effects*, that unintentionally reduce perceived risks or perceived benefits of a behaviour, or alienate the audience by 'stating the obvious'. Stroud (2015) for example suggests that the popularity of social marketing in health, and its reliance on communication initiatives, has acted to desensitise people through 'message fatigue';

(b) *backlash effects*, in response to an authoritarian, non-credible spokesperson or an over-reliance on fear appeals (see also Hastings, Stead & Webb, 2004). Bird and Tapp (2008) observe that attempts to engage teenage audiences via social marketing messages intended as 'cool' frequently achieve the opposite;

(c) *inherent problems with social marketing messages*, caused by implying a behaviour is prevalent and therefore 'normal' by focussing a campaign on it, or promoting offsetting behaviours, such as car drivers having been persuaded to wear seatbelts tending to then drive faster because they feel safer.

Thus well-intentioned messages risk being at least partially counterproductive if they desensitize their audience, generate either fatalism or exaggerated levels of anxiety, negatively impact non-target audiences or normalise or glamorise the target behaviour (Cho & Salmon, 2007; Donovan & Henley, 2010; Henley & Donovan, 1999). Intervention segmentation and targeting decisions can also result in unintended exclusions, an over-emphasis on the target's lifestyle, a neglect of social context's importance, 'victim blaming' behaviours and potential

stigmatizing effects from labelling groups as needing to change (Brenkert, 2002; Bloom & Novelli, 1981; Donovan & Henley, 2010; Grier & Bryant, 2005; and Gurrieri, Previte & Brace-Govan, 2012). Even a successful message may have undesirable side-effects, for example by shifting social norms in ways that stigmatize those who face barriers to joining in with the promoted behaviour change (Langford & Panter-Brick, 2013).

Secondly, most salutary examples of unintended negative consequences come from conventional health communication, not social marketing per se. The 15 studies of 'social marketing messages' categorised by Pechmann and Slater (2005) to illustrate their framework are all health communication campaigns reported within health journals, not social marketing campaigns as defined by Stead, Gordon, Angus & Dermott's (2007) systematic review criteria, or the National Social Marketing Centre's Benchmark Criteria, (French & Blair-Stevens, 2007).

Finally, existing social marketing studies on unintended consequences are restricted in scale and relatively narrow in scope (Smith, 2006), focusing on negative unintended consequences for the intervention's targets and on their behaviour and wellbeing. Smith (2001) highlights that interventions may reach an audience beyond the intended one, resulting in unintended consequences, for example creating anxiety amongst the relatives of smokers targeted by a 'fear appeal' message (Donovan & Henley, 2010). As Fry and Polonsky (2004a) argue, unintended marketing consequences cannot be fully understood by just considering the dyadic and exchange focussed marketer/customer relationship. In social marketing a key step towards considering a broader range of stakeholders comes through a growing focus on 'upstream' social marketing influences, those (often institutional) stakeholders whose behaviours can influence those of the 'downstream' consumers targeted by interventions (Donovan & Henley, 2010; Kotler & Lee, 2008). However, as Newton, Newton & Rep (2016) detail, the analysis of upstream stakeholder impact has often also been myopic, ignoring the potential for

interdependence and interaction between upstream actors and the potential for them to be influenced in turn by downstream actors, both forms of interaction that could generate unintended consequences.

Much of the wider literature considering unintended consequences position them as symptomatic of complex systems featuring multiple stakeholders, multiple interacting processes, nonlinear interactions and rich cross-linkages, and for which specifying all relevant variables may be impossible (Dorner, 1996; Morell, 2005; Tenner, 1996). These are exactly the types of challenging context that social marketers work within, as explored in the context of obesity by Duane, Domegan, McHugh and Devaney (2016) and Venturini (2016). Over time a number of authors have argued for the need for social marketers to apply more holistic perspectives in understanding, managing and evaluating interventions. Dholakia (1984) stresses the need to complement traditional micro-social marketing with a more macro-social marketing approach that considers the collective consequences of interventions, partly in order to anticipate and respond to unintended consequences (see also Brace-Govan, 2015). Cherrier and Gurrieri (2014) argue for conceiving social marketing interventions as dynamic systems of interaction between the downstream targets, the upstream institutional stakeholders and the 'midstream' social influences of family and friends. More recently Duane et al. (2016) and Newton et al. (2016) have proposed new ways of envisaging interventions in terms of systems thinking approaches, actor-network theory or webs, chains and networks of influence to better appreciate the full range of stakeholders potentially influencing, and impacted by, an intervention.

Overall the social marketing literature speaks about the importance of considering and guarding against unintended consequences arising from interventions, whilst saying relatively little about the nature of such consequences and how management processes might approach them. Several reasons may underpin this. It could reflect narrowness in evaluation processes and

a failure to seek out unintended outcomes, or journal editors being unwilling to publish null results (Pechmann & Slater, 2005). It may represent a desire for accounts of interventions in journal papers or project reports to portray them as successful, with things 'going as planned' viewed as one measure of their success. Even observed positive unintended outcomes could be excluded from accounts of interventions, due to concerns about journal space restrictions or editor and reviewer reactions to descriptions of 'side-effects' that might be poorly understood or viewed as a 'distraction' from the core narrative. This paper therefore seeks to present a detailed exploration of the unintended consequences of an intervention, and to consider their broader implications for social marketing.

The intervention context: The social demarketing of an anti-social behaviour

The literature on social marketing interventions addressing social/community behaviours mostly emphasises the promotion of pro-social behaviours (like voter participation or community volunteering). However, social marketing can also demarket behaviours such as smoking or substance abuse (Bloom & Novelli, 1981) through 'strategies attempting to influence individuals and/or organizations to decrease or stop doing behaviours that harm themselves, others, or the environment' (Woodside, 2008 p. 459). ASB is a significant area in which demarketing strategies can be applied. ASB, for the purposes of law, is defined by the UK Government in the Crime and Disorder Act 1998 as 'Acting in a manner that caused or was likely to cause harassment, alarm or distress to one or more persons not of the same household'. Such behaviours create public concern and a significant social cost. A one day snapshot of ASB in England and Wales revealed 66,000 reported incidents with direct costs to English and Welsh agencies of at least £14m, equating to around £3.4 billion a year (Harradine, Kodz, Lemetti & Jones, 2004). These figures

also exclude the wider 'social' costs of ASB suffered by victims, communities and the environment.

The Home Office (Harradine, et al., 2004) provide a typology of more specific acts to guide practitioners under the headings of *Misuse of Public Space* (e.g. street drinking), *Disregard for Community/Personal Wellbeing* (e.g. noise), *Acts Directed at People* (e.g. verbal abuse) and *Environmental Damage* (e.g. vandalism). ASBs that harm others within the community are potential candidates for social demarketing efforts, and past campaigns have targeted graffiti, bullying, street drinking, littering and aggressive driving (Donovan & Henley, 2010; Kotler & Lee, 2008; Lloyd, Tafoya & Merritt, 2015; Woodside, 2008). The practical potential of social marketing to tackle ASBs however appears to be under-appreciated by policy-makers compared to its use in health. Social marketing goes unmentioned in the UK Government's Committee of Public Accounts report on 'Tackling Anti-Social Behaviours' (CPA, 2007), in practitioner guides to tackling ASB (Armitage, 2002: Martin, Hart, MacLeod & Kinder, 2010; Nixon & Hunter, 2006) and in studies of the UK government's progress in addressing ASB (Hodgkinson, 2011).

A perusal of the social marketing literature suggests that, compared to studies of demarketing campaigns for negative health behaviours, campaigns to demarket ASBs are also under-represented. They are not explicitly recognized in Truong's (2014) systematic review of the literature, and amongst the Home Office's more than 60 types of ASB across 17 categories, relatively few, such as street drinking (e.g. Bellis & Hughes, 2011; Lloyd , Tafoya & Merritt, 2015; Russell-Bennet, Rundle-Thiele, Leo & Dietrich, 2013), have been the subject of reported social marketing interventions. ASBs impacting others are more commonly referred to as a side-effect of other socially undesirable behaviours impacting the individual or family (such as drinking or other substance abuse), than as the focus of interventions in themselves (see for example Bellis & Hughes, 2011 or Hastings & Angus, 2011). This might be partly explained by

the fact that most ASBs are also illegal, prompting policy makers to address them through regulation and enforcement, and deterring those involved in the behaviour from engaging with social marketing programmes that identify them as perpetrators. The UK policy response to ASB relies heavily on enforcement strategies such as anti-social behaviour orders (ASBOs), parenting orders and dispersal orders supplemented by some support network initiatives such as Family Intervention Projects. Hodgkinson (2011) notes that there has been little governmental attempt to evaluate the effectiveness of enforcement based ASB strategies, and in her own evaluation study of the effectiveness of ASB 'taskforces' found that 'the increasingly enforcement-led approach of these teams failed to deliver any significant reductions in neighbourhood levels of anti-social behaviour' (p.289). This study concerns the demarketing of a particular anti-social and illegal behaviour within a community, and so contributes to our knowledge about the potential of such interventions.

Social marketing for fire services

Fire services seem an unlikely candidate for social marketing given their associations with emergency response situations providing little scope for 'customer' input. However, the mission of UK Fire Services has gradually focused more on prevention and safety rather than emergency response (Bains, Lyon & Young, 2002). Fire prevention concerns behavioural change relating to the installation and maintenance of smoke detectors and fire extinguishers, promotion of fire safety plans, and safe use of cookers, cigarettes and candles. ASBs are also of interest to fire services related to fire setting, vehicle arson, firework misuse and hoax calls. For SWFRS 70% of their calls were estimated to result from ASB. Therefore a clear potential exists for social marketing's application to fire-related behaviours, something discussed in detail as early as 2001 in the context of New Zealand's fire service (McDermott Miller, 2001). Despite this promising potential, the only documented social marketing intervention (as defined by the criteria used in

Stead et al.'s (2007) systematic review, or the NSMC Benchmark Criteria (French & Blair-Stevens, 2007) found by the authors when scoping this intervention, concerned smoke alarm installation (Camit, 2002). Although there are examples of fire services acting as stakeholders linked to social marketing campaigns for smoke-free homes, safe driving habits or male health, fire-related behaviours remains a comparatively unstudied territory for social marketing.

Social demarketing of rural fire-setting

Deliberate fire-setting of countryside rather than buildings poses a threat to communities in many countries, particularly those subject to drought (Prins, 1994). Such fires represent an increasingly serious problem in the UK and an under-researched phenomenon (McMorrow, 2009). Despite a relatively wet climate, deliberate fire-setting on mountainside and rural-urban fringe grassland poses significant problems for certain South Wales Valleys' communities. From 2003-2009 the region covered by SWFRS suffered an annual average of 3,592 such deliberate grassfires, costing around £7 million annually to deal with (Peattie, et al., 2012).

Evidence from the scenes of these fires show that they are typically started by disposable lighters igniting the previous season's dried bracken and wild grasses. The resulting fires can spread rapidly endangering firefighters and the public (both directly and by tying up SWFRS resources), putting property at risk, endangering livestock, and destroying forestry, wildlife and their habitats (Quinn, 2009). Consequences in recent years have included the destruction of electricity supplies to 30 homes and a fire that only narrowly avoided a requirement to evacuate a local hospital. They also impact the daily quality of life in communities through smoke, the depressing visual impact of burnt countryside, and through perceived risk and fear linked to incidents.

Setting fires (not directed at specific persons or property) is an example of an ASB under the Home Office's 'Typology of ASB' (Harradine, et al., 2004) as a behaviour with 'Disregard

for Community/Personal Wellbeing (subsection: Nuisance)' although in the case of grassfires they also create environmental damage. The pre-existing policy response to fire-setting in the region was focussed on improving equipment and operational procedures to make the emergency response more effective, combined with school-based educational efforts promoting fire safety and discouraging fire-setting. This had not led to a measurable reduction in incidents. Fire-setting was therefore chosen by SWFRS for a pilot social marketing intervention developed in partnership with social marketing academics, and a range of stakeholder organisations.

Methodology

With its emphasis on practical problem solving, working through a structured planning process, researcher involvement in practitioner workgroups and reporting to the sponsoring organisation, this study represents action research, as framed for marketing by Carson, Gilmore, Gronhaug and Perry (2001). It also included the action learning and case research elements of Perry and Gummeson's (2004) concept of 'marketing action research' although the social marketing context makes it less narrowly focused on issues of customers and competitors. The academic partners were centrally involved in the development and implementation of the intervention and its evaluation. The intervention's development is described in detail by Peattie et al. (2012), but key points worth noting here include:

- It was supported by a range of stakeholders beyond SWFRS including an International Advisory Board of social marketing experts and a Project Stakeholder Group representing local organisations including local government, the local Community Safety Partnership (CSP), the Police, the Forestry Commission, Tonypandy Community College and two major local businesses. These stakeholders also assisted in securing research participants;

- It involved a twelve month scoping phase to understand the behaviour through documentary analysis, key respondent semi-structured interviews, 'customer' interviews with local children and their families, and key stakeholder focus groups;
- Five progress reports linked to different project stages and the dialogue with the Advisory Board and Stakeholder Group provided a series of reflections, from which lessons from the action research could be derived;
- Evaluation involved analysis of SWFRS fire data, pre- and post-intervention questionnaires and follow-up stakeholder interviews.

The qualitative research, including interviews and focus groups, provided the bulk of insights on which the intervention was developed and provide most of the insights presented in this paper. Organisational interviewees included a range of local firefighters from the Station Commander through to part-time reserve firefighters, and representatives from the Forestry Commission and Police. CSP members, particularly those already involved in educational and outreach initiatives, including youth workers and others involved with young people and the local community, were also interviewed. All interviews were semi-structured, between 40 and 90 minutes in length, conducted by trained interviewers. The focus groups, involving between seven and twelve participants, were conducted by trained moderators and lasted between 60 and 90 minutes. Sessions involved Tonypandy Community College pupils (aged 12-13 years); junior school children (aged 10-11 years); parents whose children were 7-17 years; Grandparents / parents of older children; members of a local youth group (aged 14-16 years); Young Firefighters (aged 13-17 years); Scouts (aged 11-14 years); Girl Guides (aged 11-14 years); and Staff at the local McDonalds.

Organisational interviewees were informed of the subject of the interview beforehand, but focus group participants were only told that the subject was an important community issue (although in a tight-knit community there was inevitably some 'leakage' so that some participants

in later focus groups knew what to expect). All interview and focus groups were digitally recorded and transcribed, and transcripts were initially reviewed manually by the academic partners to identify and isolate recurring themes and potentially significant insights. Those insights from the qualitative research judged to be potentially significant were presented for scrutiny to the International Advisory Board (via the initial scoping report), the Project Stakeholder Group, and the project's Youth Advisory Panel (whose role is explained below).

Intervention objectives

SWFRS fire incident data showed a strong seasonal effect, with grassfires peaking around the fortnight's Easter school holiday. Partly this reflected optimal burning conditions prior to new season growth, but it also suggested that school-age youngsters were centrally involved. Starting fires was an illegal ASB, but its classification by the Home Office as a type that constituted a 'nuisance' also potentially confused the issue for the agencies involved since that term is usually applied to sub-criminal behaviour (Hodgkinson & Tilley, 2011). Although it represents a 'Fire Crime' for SWFRS, it did not feature in police performance targets and was assigned a low priority, leading to an absence of previous arrests, prosecutions or data. This meant SWFRS had no firm information about perpetrators' identity, characteristics or motivations.

Analysis of data for the previous six years revealed two communities where the problem was most acute, Tonypandy and Aberdare. They had similar numbers of deliberate grassfires year-on-year. The primary intervention goal chosen was to reduce the numbers of deliberate grassfires in the Tonypandy target area by 15% during the fortnight's Easter vacation period (26 March – 12 April 2010), using nearby Aberdare as a control (to account for variations linked to weather or other external factors). This target was selected on the advice of the Advisory Board as one that represented an attainable yet challenging shift in a behaviour ingrained within a community. The subsidiary objectives were (a) to promote socially positive behaviours and limit

or remove opportunities for negative behaviours that could lead to deliberate fire-setting; and (b) to encourage and support key professionals and organisations in adopting a holistic and coordinated approach to combat fire-setting.

Into the unexpected: Scoping insights

A criticism of some social marketing programmes is their focus on individual problematic behaviours within communities (in this case fire-setting) rather than the underlying causes such as boredom, social isolation or low social capital (Spotswood et al., 2011). This can lead to ineffective one-dimensional solutions. The findings of the primary research (reported in more detail in Peattie et al. (2012)) highlighted that fire-setting's causes were multi-dimensional. Unexpectedly it proved to be less a symptom of social disaffection, and was instead seen as a local social norm and tradition stretching back through three generations (although with the behaviour's local roots as a form of protest in response to land governance changes in the 1970s having been largely forgotten). Although technically an ASB, it was unexpectedly revealed to be perceived as joining in with the community rather than reacting against it. It was also more predictably partly a response to boredom and a thirst for (modest) risk-taking and excitement without perceived serious consequences amongst the young, and partly a reflection of misconceptions about the consequences of the behaviour and a sense of disconnection from their local environment. The development of the social marketing intervention therefore needed to be equally multi-dimensional.

The boredom dimension was supported by the skewing of the behaviour towards Sundays and the Easter school holidays. The planned intervention therefore targeted the age groups most involved in the fire-setting behaviour by offering alternative activities, many with an element of

risk and excitement, during the main fire-setting period. This was supported by targeted enforcement as a control measure to raise the perceived 'cost' of involvement in fire-setting and educational efforts to encourage youngsters to value their local environment more. The ultimate aim was to break the traditional annual cycle of fire-setting as a social norm.

Intervention targeting

A firm conclusion from the formative research was that fire-setting mostly involved teenagers and some younger children. The primary target audience chosen was 13-16 year olds living and studying in the Tonypandy area because they were perceived as socially independent from their parents, still subject to peer pressure, and with the potential to be role models (both negative and positive) for younger children. There were also fewer health and safety barriers to overcome with this age group when providing diversionary activities with an element of risk (explained below). The secondary target audience was other youngsters and parents within the Tonypandy area.

Concern about unintended consequences and working with children

The focus on children raised immediate concerns about unintended consequences, since social science research involving children within a community inevitably raises ethical issues relating to access, consent and negative unintended consequences such as stigmatization (for a detailed exploration see Tinson, 2009; and Walsh, Hewson, Shier & Morales, 2008). Such concerns about ethics and consequences were tackled in two ways. Firstly, researching local children's opinions, beliefs and behaviours was undertaken by recruiting and training community youth-workers who were known to, and trusted by, the children. As researchers they were much more likely to solicit an honest and open response than unfamiliar academics or representatives from SWFRS or the

police given the focus on an illegal ASB. Secondly, from the development phase onwards the project sought to co-create the intervention with local children to both pursue effectiveness and avoid unintended consequences linked to stigmatization.

Co-creating the intervention: The Youth Advisory Panel

Involving young people at all stages of an ASB prevention is acknowledged as important (Martin et al., 2010), and therefore a strong element of co-creation was incorporated in the intervention. Although the vocabulary of co-creation wasn't used in the campaign, much of the campaign illustrated the types of co-creation processes and benefits discussed by Domegan, Collins, Stead, McHugh and Hughes (2013). This included establishing a 'Youth Advisory Panel' of eight youngsters (split evenly between the sexes) aged 13 to 16 attending Tonypandy Community College to shape and promote the intervention. Its members were identified by the college as popular and/or influential with their peers and therefore in a position to represent and potentially influence them. They provided a sounding board for all elements of the intervention, from interpretation of the research findings to planning the practicalities of the intervention, to ensure that they resonated with local youngsters. This helped to switch the nature of the research element of the project from being what Powell (2011) describes as research 'on' children to becoming research 'with' children. The intervention also used the insights from youngsters in the pre-intervention questionnaires to select and plan the 'diversionary' activities that formed a key intervention component.

Co-Creating the Bernie brand.

The campaign branding was also created by the local children through a competition held by SWFRS's Print and Design Team. This was given a high profile within the college with attractive prizes and a special awards ceremony, resulting in 63 entries from pupils aged 12 to 17. The Youth Advisory Panel worked with SWFRS graphic designers to judge entries and select the best artwork and slogan (including the need for a suitable Welsh language version, the ability for it to translate into a graphic, and acceptability to all stakeholders). The winning design featuring a sheep was from a group of 4 girls aged 16/17, while the winning slogan was from a girl aged 15 of 'Grass is green Fire is mean'. After much deliberation the Youth Advisory Panel named the sheep mascot '*Bernie'*, partly because its rather subtle word play highlighted the relevance to fire-setting, and *Bernie*'s final form is illustrated in Figure 1.

Bernie became the face and identity for the project and he (or she, there is still an ongoing debate amongst project stakeholders) appeared on posters, the website, Facebook and other marketing materials. The origin of the visuals and campaign slogans, the following of childrens' own suggestions in creating diversionary activities, and the involvement of local firefighters and youth workers in the activities helped to avoid the appearance of an intervention designed and managed by experts rather than by the participants and local community (Domegan et al., 2013; Stead, Arnott & Dempsey, 2013). The co-creation element was continued through a *Bernie* website and Facebook page which received 160 requests to be 'friends' in the first six hours, and allowed a humorous but informative dialogue with local youngsters to be maintained throughout the campaign.

Figure 1: *Bernie* poster.

(Courtesy of SWFRS)

The Intervention

The intervention, designed using SWFRS statistical data, insights from the focus groups and interviews, and co-created with the children, utilised French, Blair-Stevens, McVey & Merritt's (2009) De-CIDES behavior framework to create a 'Strategic Social Marketing Mix' integrating five types of influence (explored in more detail in Peattie, et al., 2012):

Support: A 16 day programme of constructive diversionary activities for youngsters during the Easter school holidays and rewards for involvement (in the shape of a certificate and a customised 'hoodie'), organised with an emphasis on replacing some of the needs that fire-setting addressed like tackling boredom and generating moderate risks;

Control: high visibility SWFRS vehicles patrolled areas of known incidence at peak fire times backed by improved use of local CCTV resources. Closer cooperation with the police led to the first arrests and prosecutions for grassfire setting as a fire crime;

Design: the behavioural environment was changed by encouraging local retailers to refrain from selling disposable lighters or matches to youngsters during the campaign and the Forestry Commission committed to reducing flammable material like woodcuttings on their land;

Education: Many diversionary activities had an educational element linked to communicating the anti-fire-setting message, it provided the theme for a College drama project scripted by students and filmed to create an educational resource for younger children;

Information: Event launches, social media, posters in schools and communities, local media coverage and communication through project partners were all used to raise community awareness of *Bernie*.

This framework differs from the traditional 4P mix model which has many inherent weaknesses (Constantinides, 2006) and may cause problems for social marketers arising from the differences between commercial and social contexts (Peattie & Peattie, 2003). It also had the advantage of greater perceived consonance with existing SWFRS structures, strategies and vocabularies compared to concepts like 'product' or 'price'. It also clearly emphasised to stakeholders (including SWFRS and CSP members) that the intervention was complementary to, and integrated with, existing measures based around education and enforcement, rather than a new, separate and alternative approach that could have unintentionally appeared to be in competition with, or implicitly critical of, pre-existing efforts. This helped to avoid some of the risks of non-cooperation (as an unintended consequence) that can afflict social marketing campaigns being introduced into organisations not used to such approaches (Polit, 2012).

Intervention effectiveness

Evaluation is acknowledged as very important, yet often a weak link, in social marketing interventions (Biroscak et al., 2014; Brace-Govan, 2015; Lister & Merritt, 2013), which may not lend themselves to the 'gold standard' of randomised trials or other experimental designs (Grier & Bryant, 2005). Evaluation is also a perceived weakness in ASB prevention initiatives where

systematic collation of local data and evaluation of outcomes in terms of impact on communities and reduction of ASB have been weak (Hodgkinson & Tilley, 2011).

Evaluating the effectiveness of *Bernie* was simplified because details of all fire incidents attended by SWFRS are logged, including their type. However, simply comparing grassfire incidence with previous years would not suffice since weather conditions create annual fluctuations. This was overcome by using Aberdare, the other high incidence community, as a control. It is topographically similar to Tonypandy, geographically close but not adjacent, and has a similar socio-economic profile and social history. The two communities had similar numbers of fires annually (87 on average for Tonypandy 2004-2009 and 92 for Aberdare), and although the absolute numbers varied between years with weather, the two communities followed similar patterns of highs and lows. Using a control allowed for a rigorous evaluation of the fire data during the intervention period, which is presented in Table 1 along with data for the preceding six years for comparison.

Simple inspection of the data suggests that the *Bernie* intervention had a positive impact. Whilst in the fortnight prior to the Easter holidays Tonypandy was running ahead of Aberdare (and the historical trend) in fire incidents (28 compared to 21), once *Bernie*'s Easter holiday activities were underway, Tonypandy dropped to 11 fires compared to Aberdare's 19. In the very dry fortnight after the Easter holiday, Tonypandy increased to 25 compared to a jump in Aberdare to 84. Ratio analysis allows us to quantify this impact. Dividing the ratio of fire incidence during those six weeks in 2010 (64/124) by the historical trend (523/552) produces an adjusted ratio of 0.545. The estimated benefit was calculated using a method developed by Miettinen and Nurminen (1985) for calculating confidence intervals for odds ratios when comparing two data sets. This allowed confidence intervals to be calculated showing that for the entire six week intervention period (2 weeks pre, during and post Easter) the best (i.e. most

likely) estimate of benefit is that Tonypandy had 46% fewer fires during those 6 weeks than would be expected on the basis of fires in Aberdare in 2010 and in both areas during the preceding six years (with 25% and 61% representing the lower and upper limits for probable fire reduction at the 95% confidence level). This was achieved during a 6 week period in which, for the unitary authority as a whole, the number of fires had increased from 429 in 2009 to 633 in 2010. A chi-square hypothesis test yielded $X^2 = 14.96$, $p<0.001$, indicating strong evidence to reject a null hypothesis that the intervention made no difference (see Table 1). Follow-up data also showed that the incidence of fires in the Tonypandy area continued to be significantly reduced by an average of 37% during the six months following the intervention compared to past trends and in comparison to Aberdare. Further cost benefit analysis details are provided in Peattie et al. (2012).

For the secondary behavioural goal of promoting more positive social behaviours amongst youngsters, quantitative research was used. Baseline data was collected on knowledge, attitudes and behaviours of young people in both communities via questionnaires (1517 in total). These were administered to 11 to 15 year olds in Tonypandy Community College, and Aberdare's Girls and Boys Schools. A pre-intervention questionnaire was distributed in early March 2010 and a post-intervention survey was administered in May 2010 to measure changes. In Tonypandy, 1 in 6 youngsters had taken part in at least one *Bernie* activity and 66% of all youngsters agreed that there had been 'more to do this Easter' *(*compared to just under 5% who felt that applied in Aberdare). There was also increased awareness about grassfires as a problem for the community, their impacts, and the need to tackle them. Feedback about the activities involving the firefighters (such as bushcraft skills, abseiling and 'Firefighter for a day') showed that they helped in building links with the youngsters.

After the successful 2010 *Bernie* campaign, it was extended to a further three unitary authorities with an expanded range of stakeholder partners. Data for the 2011 intervention's

impact is less statistically rigorous than for 2010 due to different statistical evaluation methods used across the four authorities and the absence of a control. However, April 2011 was the hottest and driest on record, and the UK as a whole suffered an increase in the number of deliberate grassfires compared to 2010. During the six week *Bernie* period for 2011 SWFRS, by contrast, experienced a 27% reduction in fires compared to 2010. The four (out of ten) Unitary Authorities in which *Bernie* ran contributed 74% of that reduction. *Bernie's* effectiveness was also recognised in the 'Chartered Institute of Public Relations Excellence in Communications Awards' for 2011 by winning the Public Sector category. *Bernie* has continued to run annually since, and by the second and third years the academic involvement had reduced to only follow-up evaluation work, with the practitioners taking over all aspects of managing the ongoing intervention.

Unintended consequences.

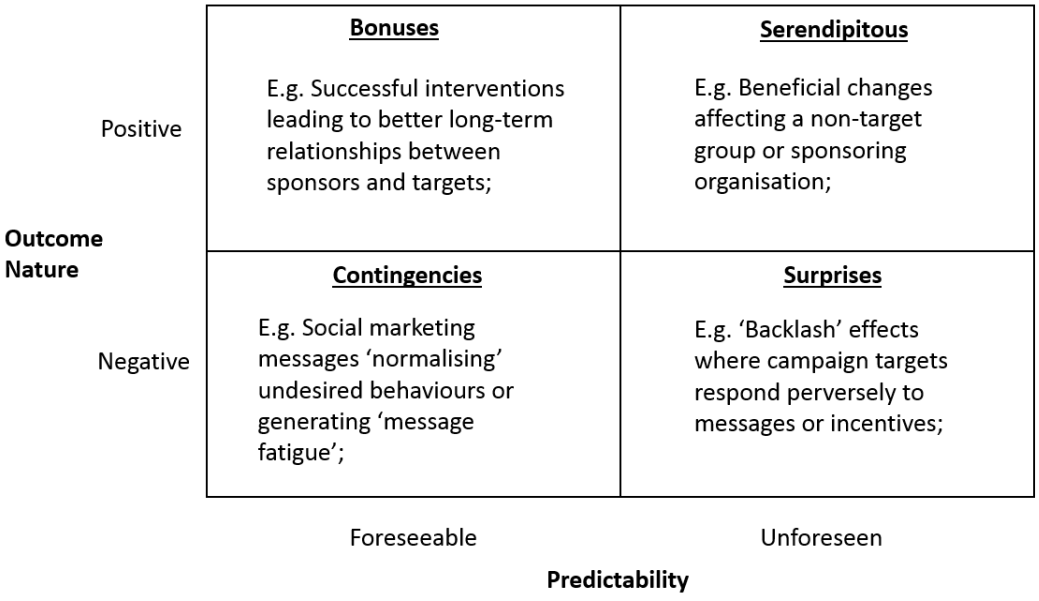
The *Bernie* intervention was perceived as successful in achieving both its primary and subsidiary objectives, but evaluation efforts also revealed additional unintended consequences. There is an argument that social marketing interventions will be prone to unexpected developments and unintended consequences, particularly when they emphasise co-creation, simply because the customer and data-led nature of the interventions is likely to take the 'experts' in the sponsoring organisations out of their familiar comfort zone. As the SWFRS *Bernie* Project Manager commented:

> Nobody at the beginning of this project, nobody would ever have said we would have been producing hoodies and giving them out to people around the valleys and even when we did, everybody said that it isn't going to work, that it's the wrong thing to do but it's

been a great success, in fact one of the biggest successes. And nobody would ever have said we were going to come up with this cartoon character of a sheep (or rather the young people come up with it), and I think that's proved that there are things out there that we don't know.

One reason that unintended consequences may be a challenge for social marketers is the lack of practical tools to draw upon to understand, evaluate and manage them. Both Merton (1936) and Vernon (1979) offer relatively complex lists of the potential sources of unintended consequences, but these don't easily translate into prescriptions for action. An opportunity to develop a simple planning tool comes from the observation that unintended consequences can include both positive and negative developments, and a mixture of the foreseeable and unforeseen (Morell, 2005). This simplifies a reality in which outcomes can be a mixed blessing, and in which predictability is represented by a continuum rather than two 'pure' categories (Morell, 2005), but it allows for the creation of a simple two-by-two matrix (see Figure 2), and a four-way typology, of unintended consequences.

Figure 2. A Diagnostic Matrix for Unintended Consequences in Social Marketing



This typology can be illustrated with the following types of unintended consequences considered before, during or after the *Bernie* intervention:

Type 1. Bonuses (Positive/Foreseeable)

These are not the planned benefits against which intervention success will be measured, but are hoped for or logically foreseeable spin-off benefits. *Bernie* used 'distraction' activities for youngsters to discourage fire-setting as a core element of the intervention. The potential for these to distract youngsters from other forms of ASB was a logical and recognised potential outcome of *Bernie*, even if not its aim. Post-intervention liaison with the police later revealed that crime figures for Tonypandy showed a significant reduction in all forms of ASB during the *Bernie* intervention. Across Tonypandy's four police beats the rate of recorded ASB fell by an average (mean) of 18% between March and April (when *Bernie* became active), whereas in the previous two years it had increased (by 33.5% on average). Comparable figures for 2010 for Aberdare were unavailable, but anecdotal evidence suggests they experienced no such reduction and that there were no other local factors were identified that could explain the localised wider drop in ASB within Tonypandy.

Type 2. Serendipitous (Positive/Unforeseen).

The potential of *Bernie* activities to distract youngsters from other forms of ASB was anticipated, but the potential for maintaining reduced levels of other ASB was not. Levels of ASB in Tonypandy in 2010 remained at around 37% lower than the historical average for the previous two years during the two months after the intervention ended. For the 2011 extension of *Bernie* to Caerphilly, one of the additional authorities, the effect on overall crime and ASB in the ward area in which *Bernie* operated are shown in Table 2.

Crime	*Reduction During Bernie Intervention*	*Reduction during following 6 weeks*
Anti-social behaviour	21%	38%
Burglaries	53%	11%
Violent crime	24%	6%
Vehicle theft	18%	6%
Overall crime	14%	11%

Table 2: Caerphilly Crime Statistics During/Post *Bernie* 2011

Bernie activities that promoted the anti-fires message and encouraged youngsters to value their local environment, along with the intention of making fire-setting less of a social norm, were part of the strategy to maintain a reduction in fire-setting post-intervention. The persistent drop of other ASBs once the 'distractions' had ceased suggests a long-term 'spillover effect' from being encouraged to value your local environment that perhaps made youngsters feel more connected to their locality and therefore less likely to engage in ASB and other crimes. Spillover effects in marketing have been investigated for pro-environmental behaviours, producing conflicting evidence that engaging in one 'good' behavior can make individuals both more likely (via spillovers) and less likely (via compensation) to engage in others (see Thøgersen & Ölander, 2003). The claims for such positive spillovers for *Bernie* between ASBs could be argued as paradoxical, since fire-setting was unexpectedly viewed by participants as joining in with the local community through an activity that had become traditional, not reacting against it. Possibly in reducing involvement in an anti-social but widely practiced behaviour, perceived as taking part in the community, it made youngsters less likely to engage in behaviours that would further disconnect them. Exploring the extent to which such an intervention succeeds simply through its distraction value, and the extent to which it shifts long-term attitudes towards the behavior, or creates an improved sense of community cohesion, could be a useful focus for further research.

Improved SWFRS community relationships.

Bernie's goals focused on behaviour within the community and working relationships between stakeholder organisations. An unexpected result was that it also changed the dynamics of the relationship between SWFRS and the wider Tonypandy community (Peattie et al., 2012). It might be assumed that firefighter-community relationships are relatively unproblematic compared with a service like the police. However research suggests that this relationship can be tense for several reasons (Matheson, 2012), including associations with authority figures, a perceived status as 'outsiders' with a presence viewed as intrusive, and even resentment linked to complex sexual and gender politics/roles. *Bernie* built a more positive relationship with the community, partly via the high-visibility anti-grassfire patrols that provided the 'control' aspect of the intervention, which made a positive impact in the community particularly when combined with the firefighters' direct involvement in the youth activities as the following quote illustrates:

> The initial stages (of the patrols) - we were treated with a little bit of suspicion, occasionally swearing was mouthed at you from behind lounge windows ..... then, after a period of days, the hostility started to peter out and in fact we started to get waved at. Then when the youngsters (had) the fortnight of activities at the fire station, we were no longer just getting waved at, it was – 'Hiya Mick, hiya Simon, hiya Mel!' So they got to know names and faces and all the hostile welcomes that we got initially did kind of fade away. We were there to be a presence in the area, (but) then we stopped just being a presence and we started to pull over and stop and say 'Hi' to the kids, 'What you been up to? Been to school? What's school like? ... and you start to engage and talk and then its 'Oh we'd better go', and we'd wave and go, and maybe we gave a handful of key rings out, but we got that dialogue going which went from 'f… off' to 'Hiya Mick how are you?'
>
> (**Senior SWFRS Manager A**).

For local youngsters the firefighters became 'real people' rather than an abstract public sector resource whose number they considerably over-estimated. For the youngsters who attended the 'Firefighter for a Day' activity, they gained an appreciation of the sheer physical effort involved in trying to fight a fire up a mountain in 'full kit':

> It was great fun. It shows what people put firefighters through.
> **(Firefighter for a Day Participant, 15)**

For the local adults in Tonypandy, *Bernie* turned the local firefighters into a welcome and visible presence actively tackling and preventing an ASB previously seen as a nuisance, but which was accepted as virtually unpreventable. The regular community patrols allowed interaction with residents, who were happy to see some action being taken to tackle the fire-setting problem.

The extent to which *Bernie* generated benefits linked, not just to behaviour change, but to improved stakeholder relationships and community dynamics reflects macro-social marketing's quest to shape the context of behaviour change to create societal change (Kennedy, 2015). This also underlines Fry and Polonsky's (2004) point that unintended consequences should be sought beyond the marketer/target market relationship to encompass relationships amongst all relevant stakeholders. It also reinforces the argument that social marketing can benefit from taking more of a relationship marketing and macromarketing perspective (Dholakia, 1984; Hastings, 2003; Peattie & Peattie, 2003) to confront 'wicked' and complex problems of the sort ASBs represent (Kennedy, 2015). As Kennedy (2015) argues in exploring the notion of macro-social marketing, effecting change partly depends on going beyond targeting individuals to achieve community involvement and mobilization and the demonstration of benefits at a community level. A relationship management approach was never formally planned or discussed for *Bernie*, yet much of its success reflected strengthened relationships between SWFRS and the local community, the

local college, the youngsters as the primary target, and the other stakeholder organisations. This reflects Polit's (2012) view that social marketing should go beyond a focus on behaviour change for a particular target group to create mutual understanding amongst all stakeholders, creating opportunities to foster trust between groups that may have previously experienced distrust.

Social media impacts

The social media component of the *Bernie* campaign was intended to communicate with local children about the issue of fire-setting and promote the intervention and the diversionary activities available. It was unexpectedly successful in its scope and nature. By 2012 *Bernie* had gained 2624 Facebook friends and nearly 2000 Twitter followers including parents as well as children. It also became more of a forum for debate and discussion than had originally been envisaged, with broader communications implications:

> During one live *Bernie* chat, two girls made a public apology for having been involved and we went on to re-engage them with the project …..
>
> (***Bernie* Communications Manager**).

Changed SWFRS operational behaviour

Bernie sought to reduce fires through behavioural change amongst local youngsters. However, one insight uncovered was that local firefighter behaviour had been inadvertently encouraging fire-setting. Operational practice was to arrive at grassfires employing fire appliance lights and sirens which were unnecessary in the countryside, and which for youngsters added to the 'excitement' benefits of lighting a fire:

> A fire-engine turning up with lights flashing – that's an added bonus (**Firesetter, 15**)

Operationally it was also common practice to allow local volunteers to employ flails to help control the grassfires. This meant local youths who set a fire and waited for firefighters to arrive

were sometimes rewarded with the excitement of being able to act as volunteer firefighters. These insights resulted in operational practices being changed to approach grassfires without fanfare and to clear the area of youngsters rather than using them to help control the fire.

Changes within the sponsoring organisation

The social marketing literature acknowledges that adopting social marketing practices and philosophies can impact sponsoring organisations (Polit, 2012). However the focus is often on negative outcomes, such as the potential for perceived conflicts between social marketing's commercially derived language and techniques and the social mission and culture of the organisation, leading to a backlash amongst staff (Polit, 2012). An unexpected result from the evaluation interviews was that *Bernie* changed the internal working and mindset of SWFRS staff in several ways. Firefighters' attitude towards grassfires changed. Before there was largely acceptance, viewing fire-setting as an intractable community behaviour. Once *Bernie* demonstrated that something *could* be done, the firefighters became increasingly intolerant of the behaviour:

> Previously we used to look at deliberate grassfires as 'Everybody sort of accepted it. It was almost 'Well its grassfire season again, I'm going to be busy ... let's get ready for it' .... I think that has now changed to - 'Oh it's grassfire season, let's do something about this'. (**SWFRS *Bernie* Project Manager**)

The success of *Bernie* in changing the downstream target's behavior led to the type of downstream-to-upstream/target-to-sponsor influence outlined by Newton, Newton & Rep (2016) by changing the sponsor's perceptions and behaviours:

> The way the organisation went was from –'Here we go, another soft engineering process to try and beat this arson', to – 'This is actually working!' So it changed the perception of what Community Fire Safety & Prevention do. (**Senior SWFRS Manager A**).

This then led to a change in the SWFRS mindset about how they approached other types of prevention projects (see Peattie et al., 2012) including directly influencing their strategies for Bonfire Night safety. As one SWFRS Manager commented: '(*Bernie*) has changed the type of questions we ask for any project we tackle'. Such comments almost perfectly echo Polit's (2012, p. 130) observation about social marketing that 'These new organizational practices complicate and change how an organization conducts all aspects of its work'. So although *Bernie* aimed to change a specific ASB within the community, it ultimately also changed the broader thinking and management practices of the fire service working within it (and the wider region). Other changes in management practices are explored in greater detail in (Peattie, et al., 2012). One interesting and unexpected example of how interventions can impact upstream actor interactions (Newton et al., 2016) was revealed by one senior manager (B) expressing that the marketing vocabulary they'd gained from involvement in *Bernie* would make the service more confident in approaching businesses as potential future project partners.

A final unintended organisational consequence of the intervention was the extent to which the *Bernie* 'mascot', designed to appeal to and communicate with youngsters, became a vehicle for internal communication and identification within SWFRS:

> I think it was something that everyone could relate to and certainly locally within the valleys. A sheep is very much Welsh, its non-descript in that it wasn't human …it was like a new member of staff that everybody associated with, I think *Bernie* has become a member of the team. I think it was that everybody had a commonality and *Bernie* became that commonality, and in my opinion *Bernie* has done more than anyone of us could have individually done. *Bernie* is now a member of the Department and reached and spoken to more people than any of us could ever have done. (**SWFRS *Bernie* Project Manager**)

Extending Bernie's reach

Another unintended consequence of the success of the *Bernie* intervention was the extent to which learning from it was adopted in other spheres. Beyond the obvious application of lessons for other fire services and fire-related ASBs *Bernie* was:

- Presented to an audience of Commanders & Chief Officers from the combined Armed Services of UK & USA at the National Defense Academy Shrivenham as an example of best practice in 'Winning Hearts and Minds' in the wake of experiences in Iraq and Afganistan;
- Used as an exemplar of an evidence-based approach in public services by the Equality & Human Rights Commission of Wales;
- Used by the Wales Audit Office as an example of best practise in consultation and engagement for public services;

Type 3. Contingencies (Negative/Foreseeable)

The potential for a backlash 'boomerang' effect (Pechmann & Slater, 2005) where children reacted to the campaign message of not setting fires, by setting more of them, was a concern from the beginning of the project. This concern was particularly related to the control element of the campaign stressing that fire-setting was a crime and highlighting the risk of punishment in posters and via social media. However, this was seen as crucial to communicate that the behavior was not 'harmless fun' or 'risk free' for the individuals involved, both common opinions revealed in the formative research. There is some anecdotal comment from SWFRS staff that some younger children set fires as a defiant response to the *Bernie* campaign (Jollands, Morris & Moffat, 2011), but generally the success in reducing fire-setting overall suggests there was only modest reactance against it.

Two concerns that were foreseen focused on the reactions of both the (predominantly male) firefighters and male local youngsters to the campaign. There were concerns that since the *Bernie* branding was locally known to have been created by a team of girls (via a well-publicised competition), whether it would fail to connect with young males, who were the main group responsible for firesetting. For the firefighters, there were concerns about a potential lack of enthusiasm for a campaign focusing on activities less challenging than fighting fires. These two concerns were addressed by making many of the distraction activities overtly 'macho' with elements of (controlled) risk:

> Well we militarised it …it was SAS bushcraft, that's how it was sold as very macho. The (SWFRS) culture desperately tries to get away from that kind of thing, so we were going against our own developing culture to reintroduce that macho male dominated thing because they are the very ones we know who are setting the fires. We accepted everyone boys and girls alike and it began with map reading. (**Senior SWFRS Manager A**)

Activities like bushcraft, abseiling and 'firefighter for a day' aimed to replace the excitement that fire-setting provided for the youngsters whilst providing the outdoor experience, physical exertion and camaraderie that staff found rewarding about fighting grassfires.

Type 4. Surprises (Negative/Unforeseen)

A major surprise was a type of counter-informative unintended consequence as described by Pechmann and Slater (2005). Although the number of fires experienced in Tonypandy during and post-intervention significantly declined (compared both to immediately prior to the intervention and to previous years), some 15% of local children in the follow up survey reported perceiving an increase in fires. This is reminiscent of the outcome of two environmentally-orientated workplace social marketing interventions reported by Gregory-Smith et al. (2015). Here success in improving behaviour (in saving paper and energy) was paradoxically accompanied by a general

worker perception that their behaviour was poorer than pre-intervention.The most likely explanation may involve sensitising individuals to previously taken-for-granted behaviours and consequences, in *Bernie's* case turning grassfires from an accepted background factor in local life to a focus for attention and concern. This is also suggested by the fact that during the intervention although the number of fires went down, the rate of reporting fires went up. So ironically *Bernie's* success resulted in members of the target group viewing it as a failure in terms of its primary purpose, even if they thought it was successful in highlighting the issue and enlivening their Easter.

The unforeseen extent to which the social media campaign caught the local population's imagination also created one specific surprise:

> ….we had one fire started up behind some houses and we had people logging on to say "There's a fire!" so *Bernie* had become the first point of contact.
>
> (***Bernie* Communications Manager**).

This demonstrates the extent to which the locals had come to associate *Bernie* with the grassfires issue, even if it was unexpected and undesirable from an operational emergency response perspective.

Implications for evaluating unintended consequences

Morell (2005) discusses in detail the challenges that unintended consequences pose for those seeking to evaluate social change interventions. Within social marketing the importance of evaluating such consequences is recognised (Salmon & Cho, 2007), however they 'typically go unmeasured' (Friedman et al., 2016, p.99). This is understandable since evaluation processes usually begin by developing metrics that reflect the objectives of the intervention, which

naturally risks excluding anything unforeseen. To ensure that unintended consequences aren't overlooked, an explicit set of responsibilities to identify them should be included in the intervention design, as was the case with the 'Healthy Together Victoria' anti-obesity campaign described by Venturini (2016). Brace-Govan (2015, p.114) argues that 'The lack of research on the deleterious effects of social marketing is a seriously neglected area' and that higher quality evaluations that encompass unintended consequences are vital to allow greater critical reflection aiding the development of the field.

The unplanned organisational changes observable within SWFRS as the sponsoring organisation, and the beneficial but unforeseen changes to their relationship with the community beyond the intervention's primary target audience, highlight the importance of evaluations exploring impacts beyond the primary goals and target audience. The potential for 'community multiplier effects' and the need to consider a wide range of stakeholders in evaluations is acknowledged within social marketing (Brace-Govan, 2015; Bryant, et al., 2000; Lister & Merritt, 2013). However, such broadenings of the scope of evaluations still tend to be in relation to the intended (singular) behavioural change. Spotswood et al. (2011) highlight the risks of evaluatory myopia whereby interventions with overall positive effects (from a broad social capital perspective) are judged as failures in achieving narrow behaviour change goals. They view this as particularly significant in deprived communities (such as the *Bernie* communities) where public authorities tend to target single behaviours without understanding the role of the underlying social context (Spotswood et al., 2011).

If interventions can generate unforeseen social impacts (both positive and negative) that go beyond the aggregation of individual behaviour changes, and impacts that contribute to the agendas of social organisations other than the intervention's sponsor, it all adds to the evaluation challenges for social marketers. These challenges are exacerbated by funding squeezes for

sponsors which may restrict the resources available for evaluation and focus them on metrics linked to cost effectiveness and primary behavioural goals (Polit, 2012).

Evaluation as a topic is gaining increased attention in social marketing, and there are some sophisticated solutions being proposed, such as Biroscak et al.'s (2014) system dynamics modelling based approach for community interventions. Despite the sophistication and apparent comprehensiveness of such approaches, they depend on the underlying systems model accounting for unintended consequences, which is difficult if they are also unforeseen. The risk with modelling approaches is that in the quest to visually represent the complex social processes that generate unintended consequences (Morell, 2005; Vernon, 1979) they simplify and delineate in ways that focus on the known, expected and intended dynamics of the system. A reason that *Bernie* was successful in revealing unintended consequences was its status as an academic action research project as well as a practical intervention. The qualitative methods employed of on-going observation, reflexive dialogue between stakeholders and follow-up interviews with a wide range of stakeholders helped to reveal and understand complex, unexpected and unintended consequences in ways that quantitative evaluative research would not. When applying such methods, the four types of unintended consequence outlined in this paper and the simple diagnostic matrix can be used to consider different stakeholders (e.g. primary audience, sponsoring organisation, community stakeholders, upstream organisations) and the interrelationships between them, as a planning tool to aid the identification, management and evaluation of unintended consequences.

The evolution of the *Bernie* intervention also hinted at a reason why the focus of the (albeit limited) consideration of unintended consequences in social marketing is so strongly on the negative. As an intervention develops and learning occurs, when unintended positive consequences are revealed, they can quickly become incorporated into the intervention, its

rationale and its intentions. So as the unexpected success of the social media elements of the *Bernie* campaign were revealed, so the role and expectations of social media use expanded. As the second year's iteration of *Bernie* to further unitary authorities was developed, the potential for wider ASB improvements was used as part of the case to secure stakeholder support:

> I would certainly go back to the partnership table, (and) that package (of wider benefits) will be taken to the 4 Unitary Authorities with the successes. Do you wish to share as a partner, and it will be a big push towards the Police, a big push towards Youth Services – do you want to be part of our success? (**Senior SWFRS Manager B**)

Therefore positive unintended benefits appear to have a 'half-life' and once identified become absorbed within the logic, conduct and evaluation of an intervention as it evolves and therefore become no longer visible as 'unintended'.

In a systematic review of social marketing literature Truong (2014, p. 26) highlights the need to learn from intervention failures and 'side effects' as a key future research priority. Such research can help social marketers to avoid wasting scare resources, generating negative outcomes for their target markets, providing ammunition for critics through negative publicity, and putting future funding at risk. However, this perhaps also needs to be complemented by further awareness of, and research into, the potential for elements of success that originate as unintended and unplanned and that can bolster the case for social marketing interventions and their effectiveness.

Conclusions

Bernie's success adds to the growing evidence demonstrating social marketing's potential to tackle non-health ASBs, including apparently intractable behaviours linked to ingrained social

norms and traditions. It demonstrates social marketing's potential to address fire-related behaviours and (in this case unintentionally) to change other ASBs within communities. *Bernie* demonstrated the benefits of using social de-marketing for ASBs, and did so by combining the three potentially effective approaches to tackling youth ASBs identified by Martin et al., (2010): 'Communicating with the public about young people, anti-social behaviour and crime', 'Youth-focussed work' *(*including positive and diversionary activities), and 'Bringing young people and adults together'.

Bernie also demonstrates the potential for learning across different types of ASB context. It benefitted from advice from staff behind the successful 'Sub21' anti-teenage drinking campaign (Lloyd, Tafoya & Merritt., 2015) since the behaviours shared similarities, and the final intervention borrowed certain aspects (like the use of hoodies as incentives). Grassfire-setting however is an unusual ASB involving youngsters which, unlike almost all others, takes place outside of the physical communities it affects. ASB enforcement measures (such as dispersal orders) are based on an assumption that ASB nuisances are caused (mostly) by young people congregating in large groups within the community (Hodgkinson & Tilley, 2011). They are also largely geared towards being able to identify 'ring-leaders' and targeting them with measures (such as ASBOs). The fire-setting behaviour was typified by small groups gathering outside of the community in the local countryside, making it less likely for the behaviour to be identified as anti-social at the time it occurs, and making ring-leaders hard to identify and target.

The reflections presented in this paper, relating to both the planned and unplanned social and organisational impacts of *Bernie* as a social marketing intervention, have some significant implications. The demonstrable presence of unplanned benefits, such as spill-over reductions in other ASBs and crimes, raises interesting questions about social marketing evaluations. In commercial marketing, success is judged against an organisation's own agenda on measures such

as sales targets, market penetration, customer satisfaction, profitability or progress in customer relationships. For social marketing the evaluation net must spread wider. The growing emphasis on local coalitions and community-based interventions is resulting in a broadening of the range of stakeholders and impacts being addressed by evaluations. The 'Community-Based Prevention Marketing' approach (Bryant, et al., 2000) represents one example of a more holistic approach. However, as Clark et al. (2010) note for community coalitions' work in health, such holistic evaluations of coalitions' effectiveness in policy, system, and environmental changes have so far been limited, and there is a tendency for them to rely on instruments like computer-assisted questionnaires which may fail to capture unexpected effects. For *Bernie* the involvement of a range of community stakeholders, coupled with the project's dual identity as a practical intervention and the subject of wider academic action research (including a focus on internal organisational impacts), encouraged the adoption of a wide-ranging approach to evaluation and follow-up that helped to reveal and evaluate both intended and unintended consequences.

Finally the experience of *Bernie* underlines the need for a more holistic and relationship-based approach to understanding and evaluating social marketing interventions, which also has implications for their commissioning. Exploring what types of secondary and perhaps unexpected impacts amongst stakeholders might accrue from a campaign, or the ways in which conducting an intervention could change the attitudes and behaviour of the sponsoring organisations as well as the target audience, could inform useful questions to be addressed during initial intervention planning. This would increase the chances of evaluation measures being established within projects that can assess these broader impacts and take a step towards capturing the full value of interventions and the planned and unplanned social changes they create.

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Table 1. Grassfires in Tonypandy and Aberdare in Spring 2010, relative to 2004-2009.

		Fortnight before Easter			Easter fortnight			Fortnight after Easter			Six weeks combined		
Year		Tonypandy	Aberdare	Ratio	Tonypandy	Aberdare	Ratio	Tonypandy	Aberdare	Ratio	Tonypandy	Aberdare	Ratio
2004		30	14		22	21		17	19		69	54	
2005		18	17		7	5		19	7		44	29	
2006		30	27		27	46		33	24		90	97	
2007		22	33		123	143		61	62		206	238	
2008		5	2		20	18		19	17		44	37	
2009		36	55		18	27		16	15		70	97	
2004-2009		141	148	0.953	217	260	0.835	165	144	1.146	523	552	0.947
2010		28	21	1.333	11	19	0.579	25	84	0.298	64	124	0.516
Adjusted ratio				1.400			0.694			0.260			0.545
95% confidence	Lower			0.763			0.328			0.158			0.394
Limits	Upper			2.565			1.469			0.427			0.753
Chi-square				1.17			0.63			30.16			14.96
P-value				0.28			0.43			<0.001			<0.001