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FIXED ODDS BETTING TERMINALS AND GAMBLING RELATED HARM

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Abstract

This thesis explores links between fixed odds betting terminals (FOBTs) and 'gambling related harm'(GRH). FOBTs are a particular type of electronic gambling machine (EGM) which was introduced in the UK in 1999. Gambling related harm is a term which relates to the adverse impacts from gambling on the health and wellbeing of individuals, families, communities and society.

The thesis brings together information from a variety of sources to provide a more comprehensive picture of harms which link to FOBT use. A mixed methods approach was used. The main primary research which generated new knowledge involved qualitative research with gamblers using ethnographic methods. This was complemented by a review of a wide range of sources of empirical data about the links between FOBTs and harm, and a consideration of government policy towards gambling machines since they were first introduced, including FOBTs over the past two decades. The focus of the study is on harms to individuals, although the wider impacts are also considered at a number of points throughout the study.

The theoretical framework provided by actor network theory (ANT) was used as a means of examining the interactions between individuals, gambling machines, gambling environments, the gambling industry and gambling regulators. This framework was also used to help make sense of how interactions between individual problem gamblers and mutual help groups (one of the most available forms of help for problem gamblers in the UK) can facilitate recovery from gambling related harm. The ANT perspective is also useful in illustrating how the widespread

availability of FOBTs gained legitimacy at a certain period, which was then weakened as a result of increasing evidence of harm.

The thesis provides, for all stakeholders involved in gambling research and the development of gambling policy, a deeper understanding of the nature and scope of the harms which can result from FOBT use, how these might develop, and how they might be mitigated. In particular, the research highlights that key harms in relation to FOBT use include: violence towards machines and people; suicidal ideation; and debt. It shows that there is heterogeneity in the typology of machine gamblers. It also suggests that FOBT gambling is often a mid-point in a gambling 'career' which starts with machine gambling in childhood and ends with internet gambling. These findings provide lessons for the development of policy, research and treatment in relation to all forms of gambling.

The thesis also contributes to practice. It does this by providing knowledge to those involved in helping problem gamblers about a number of specific harms that are linked to use of FOBTs, and by showing the particular benefits of Gamblers Anonymous (and to a lesser degree other sources of help) in helping people recover from gambling related harms.

Finally, the thesis also makes a contribution to the academic literature by showing the application and relevance of actor network theory (ANT) for a study of machine gambling, in a more detailed manner than any previous studies of this nature. This example also suggests the usefulness of the approach for other studies of gambling. In the way that the study has melded a study of the evolution of policy with other sets of relevant data and applied ANT to the whole, this study makes a contribution by suggesting the utility of the ANT approach for policy studies.

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List of abbreviations

ABB	Association of British Bookmakers
ANT	Actor network Theory
APPG	All Party Parliamentary Group
BACTA	British Amusement Catering Trade Association
BAMOS	British Automatic Machine Operators Society
BGPS	British Gambling Prevalence Survey
DCMS	Department for Culture Media and Sport
DSM-IV	Diagnostic and Statistical Manual (4 th edition)
EGM	Electronic Gambling Machine
FOBT	Fixed Odds Betting Terminal
GA	Gamblers Anonymous
GMA	Gordon Moody Association
GRH	Gambling Related Harm
NDPB	Non Departmental Public Body
RGSB	Responsible Gambling Strategy Board
RGT	Responsible Gambling Trust
RNG	Random Number Generator
SOGS	South Oaks Gambling Screen

Chapter One: Introduction and overview

The primary aim of the research presented in this thesis was to assess links between fixed odds betting terminals (FOBTs) and gambling related harm. FOBTs are a particular type of electronic gambling machine (EGM) which was introduced in the UK in 1999. Gambling related harm has been defined as '*the adverse impacts from gambling on the health and wellbeing of individuals, families, communities and society*' (Wardle et al., 2018: 7). The focus of the study is on harms to individuals, although the wider impacts are also considered at a number of points throughout the study.

A secondary aim was to explore the role of helping agencies, particularly the mutual help group Gamblers Anonymous, in mitigating, reducing or promoting recovery from gambling related harm.

A mixed methods approach was used. The main primary research which generated new knowledge involved qualitative research with gamblers using ethnographic methods, including participant and non participant observation and interviews. This was complemented by a desk based review of a wide range of sources of empirical data about the links between FOBTs and harm, and a review of government policy towards gambling machines since they were first introduced, with a particular focus on the development of policy around FOBTs.

The theoretical framework provided by actor network theory (ANT) was used as a

means of examining the interactions between individuals, gambling machines, gambling environments, the gambling industry and gambling regulators. This framework was also used to help make sense of how interactions between individual problem gamblers and mutual help groups (one of the most available forms of help for problem gamblers in the UK) can facilitate recovery from gambling related harm. The ANT perspective was also useful in illustrating how the widespread availability of FOBTs gained legitimacy at a certain period which was then weakened as a result of increasing evidence of harm.

1.1 Context

Gambling has been a feature of most societies throughout the historical record (Binde, 2001), but the commercialisation of gambling in a major way was a phenomenon of the latter half of the twentieth century (Clapson, 1992). More recently, the UK, like many other countries, has seen a rapid change in the regulation of and availability of commercial gambling activities in the early 21st century (Orford, 2011); this liberalisation of regulation has been such that the UK now has one of the most diverse and accessible gambling environments in the world (Wardle, 2015).

Throughout history, gambling has been accompanied by reports of concerns about the effects of excessive gambling. There is a consensus that most people gamble in a way that is not problematic, but that some people develop problems relating to gambling (Griffiths, 2014). However, the nature of the harm and problems that ensue, and how to measure them, remain contested. Widely used screening tools suggest that between 0.5 and 2 per cent of populations in European countries are

'problem gamblers', and up to 3% in the USA, Australia and a few other countries (Griffiths, 2014). Furthermore, because of their scores on screening tools, a larger number of people are thought to be 'at risk' of developing problem gambling. The latest data for the UK suggests that the total number of those who are problem gamblers, or are at risk of becoming so, is over two million, which equates to about 3% of the population (Connolly et al., 2017). A number of researchers have begun to recognise that measures of problem gambling have significant limitations since they are screens which have an amalgam of items relating to a limited numbers of individual behaviours and individual harms. There is a growing consensus that 'gambling related harm' (GRH) is a more useful idea when trying to address the impact of gambling across society, but also a recognition that there is little consensus on the definition of GRH, and also little comprehensive evidence about the nature and extent of it (Wardle et al., 2018). In this thesis, the notion of GRH is prioritised because the interest is in 'harm' in a broad sense. I am interested in the lived experience of harm, which includes a range of different elements, only some of which are captured in standardised screening measures which list a few key symptoms of problem gambling. However, given that most existing research uses other terms, 'problem', 'compulsive', and 'pathological' gambling will be used where relevant in relation to analysis of existing research.

When millions of citizens might be at risk from an activity there are those who think that there should be much tighter regulation of that activity (Orford, 2012). Two particular aspects of the current gambling landscape in the UK merit careful attention in relation to the questions of risk and harm and how the activity should be regulated. One is that there is broad agreement that certain groups within the population are at higher risk of developing gambling problems, including children,

those with mental health problems and those with substance misuse problems (Fong, 2005). The second is that certain types of gambling do have much greater potential to lead to problems. In particular, research worldwide shows that electronic gambling machines (EGMs) are clearly associated with higher levels of harm in a number of respects. This is true across Europe as a whole (Binde, 2011), Australia (Bendat, 2014; Livingstone and Woolley, 2008), New Zealand, and Canada (Responsible Gambling Council, 2006). One of the acknowledged UK experts, Griffiths, found in a review for the UK Gambling Commission, that much research in other jurisdictions (including prevalence surveys) suggests that there are associations between machines and problem gambling. In addition, data from many countries (including Britain) show that machine players are most likely to contact national telephone help lines (Griffiths, 2008: 8). Another UK researcher noted:

Availability of gambling and type of game are features that are strongly associated with problem gambling. These features come together in non-casino EGMs which, worldwide, show the highest association with gambling problems (Reith, 2006: 40).

There is a tendency for the industry, and to some degree for regulators, to focus on the first of those aspects (i.e. people), and in particular on identifying those who are at greatest risk of becoming problem gamblers. On the other hand, there is a tendency for campaigners to focus on the second aspect, and to target particular products and to call for the banning or stricter regulation of certain types of gambling. In the UK, the fixed odds betting terminal (FOBT) has become a focus for campaigners, with repeated claims to the effect that these machines constitute the 'crack cocaine' of gambling (Dowling et al., 2005). Because it is already known that EGMs are the general form of gambling with the most potential for harm worldwide, and because of the concerns about FOBTs, which are a relatively

recent type of EGM, there is a need for sound and up-to-date research and evidence about these machines and those who play them.

To develop and maintain the most useful and appropriate regulatory framework, it is important that policy makers have the evidence to make clear judgements about the relative contributions of the behaviours of people, and the role of products and environments, in the genesis and maintenance of social problems such as gambling related harm (Alemanno and Spina, 2014; Wardle et al., 2018). The quantity and types of evidence which are available and are relevant is the subject of much debate, but it is clear that numerical data from prevalence surveys and about patterns of individual play have tended to dominate research agendas (Wardle, 2015). Sociological analysis of the issue is minimal (Cosgrave, 2006), and recent debates in the gambling studies literature suggest that the role of socio-economic, cultural and political factors in relation to gambling and gambling problems is poorly understood by many of those working in gambling research (Livingstone et al., 2017).

The field of gambling studies is a relatively new one. In the more mature field of general addiction research there is recognition that to understand dependence on alcohol or drugs, for example, it is important to address the interaction between person and product, and the contribution of contexts and social factors, as well as factors intrinsic to the person or the substance (Reinarman and Granfield, 2015). One respected academic researcher who has been studying gambling issues for several decades takes the perspective that *'the potential for addiction emerges when repeated interaction with a specific object or array of objects (a drug, a game of chance, a computer) reliably produces a subjective shift'* (Shaffer et al., 2004: 9).

He therefore directs researchers to focus on that interaction and relationship rather than only on the attributes of the person who subjectively feels that they are addicted or only on the attributes of the object of addiction. Understanding the lived experiences of gamblers and problem gamblers and their perceptions of interactions as they develop more or less addictive relationships with gambling products is therefore a crucial element in gambling studies (Miller, 2017). Such evidence can provide an important and currently largely absent element in the portfolio of evidence that policy makers need when reviewing and making decisions about future policy, and also about treatment options. This thesis therefore critically assesses the existing evidence about FOBTs and harm, but also complements this by developing and assessing evidence about the lived experience of gamblers who use FOBTs and those who seek help to recover from harm linked to that use.

1.2 Background and evolution of the study.

I became interested in the subject of gambling problems during a decade of working as a psychiatric nurse in several drug and alcohol treatment services in hospital and community settings from the mid-1980s to mid-1990s. I became aware of gambling being a problem for service users in both of those settings. I observed a number of residents in a hospital-based alcohol detox unit who seemed to have gambling problems alongside their substance misuse. I was struck by the fact that there was a well-developed infrastructure of service provision for individuals who identified as having a problem with alcohol (and to a more limited extent at that time for those identifying as problem drug users), but little for those who identified as problem gamblers.

To quantify this, in 1986, Alcohol Concern listed in their directory some 29 inpatient units in the UK, together with some 80 'councils on alcohol' and 147 other helping projects (Alcohol Concern, 1986). In relation to illicit drugs, widespread maintenance prescribing by General Practitioners was replaced in the 1970s by regional drug dependence clinics, led by psychiatrists and also based in hospitals. In addition, some 14 drug free rehabilitation houses provided residential treatment in the UK by the 1980's (European Monitoring Centre for Drugs and Drug Addiction, 2014).

In comparison, The Gordon Moody Association (a charitable organisation) had been operating a single residential treatment programme in London since the 1970s for problem gamblers. The only other real source of help at that time for those facing gambling related problems was the mutual help organisation, 'Gamblers Anonymous'.

In terms of state provision of help in relation to official measurements of the scale of the problem, this imbalance has largely continued to this day in the UK. As noted earlier, some 2 million people in the UK are now thought to be problem gamblers or at risk of becoming so. Whilst somewhat less than the numbers who are at risk of problems with alcohol use, this is significantly more than the number who use opiates and/or crack cocaine – which are the drugs most associated with harm, according to the National Treatment Agency (Hay et al, 2013). Yet, in the UK there were 288,000 individuals in contact with drug and alcohol treatment services in 2015-16 according to official statistics (Public Health England, 2016). In contrast,

the sole problem gambling clinic within the British NHS sees some 800 people per year.

This apparent imbalance led to my first research interest: the reasons for very different policy, funding and service provision in relation to help for problem gamblers, compared to that for those with drug or alcohol problems.

I began working in mental health services at the peak of the community care policy in the 1980s, as a result of which large numbers of residents were being moved out of psychiatric hospitals and into community-based facilities. In one particular example, a significant number were moved from the institution at which I had worked on several different wards as a student, to live in a housing association hostel, whose rules insisted that residents left the building in the day time. Many of them were seen in the streets of the local city, and I often saw individuals that I recognised as members of this group going in and out of betting shops and amusement arcades. Staff that I knew who worked with these individuals gave examples of individuals spending all of their available welfare benefits on gambling. This stirred an interest in the theme of vulnerable adults and gambling problems.

On moving into an educational role with student social workers, the interest in vulnerable adults and gambling increased as I focused on issues of mental health and addictions in relation to the profession. I noted the repeated calls of researchers such as Galvani (2009, 2013) for greater awareness raising and training for social workers on the subject of substance misuse. I extended this analysis and argued for a similar awareness raising in relation to gambling problems, predicated on the fact that the kinds of issues and problems that lead to people being seen by social workers may be similar to the ones which lead to

people being at a higher risk of developing a gambling problem (Rogers, 2013).

A thorough perusal of the gambling literature, and particularly the historical aspects of that literature, led to a clear understanding that there has been a general cultural shift in views of gambling. We have moved from a widely held view that gambling is inherently and morally wrong to a view that sees gambling *per se* as morally and culturally acceptable, with the focus of concern only on problem gambling and its consequences (Kingma, 2010). The experiences described above led me to want to focus on those with gambling related problems, and in particular, the experiences of those vulnerable groups who seem more likely to experience gambling related harm.

There is no doubt that individuals may have certain characteristics which make them more vulnerable to developing addictive behaviours. For example, co-existing mental health problems, a history of abuse, living in situations of poverty and deprivation, and certain personality characteristics, are known to correlate very clearly with addiction (Bertrand et al., 2013; Chen and Gueta, 2016; Mills et al., 2017; Taylor et al., 2005; Quednow et al., 2017).

However, focusing entirely on the person can obscure the role of products and triggers and the degree to which certain substances and activities may be more or less inherently addictive. It can also obscure the role of broader cultural factors, including marketing, legitimising and valorising the role of products and activities in daily life.

Another aspect of my experience in substance misuse treatment services led to an

interest in these cultural aspects of addiction. I worked in alcohol treatment services at a period when there was significant concern about a relatively new development in drinking among young people, 'alcopops'. Flavoured drinks such as Bacardi Breezer, introduced in 1993, became popular and notorious fairly quickly. The media picked up on the issue of the deliberate marketing of such products to young people. At the time, the chief executive of Alcohol Concern said:

We think that the creation of alcopops was a pretty cynical attempt to recruit young drinkers who don't naturally like the taste of alcohol by tempting them with flavours more likely to be found in soft drinks (BBC, 2013: 5).

The treatment agency that I worked in at that time was commissioned to provide some very small-scale educational work in local schools. It was evident from contact with young people that the use of alcopops was widespread, and that effective marketing had created a culture in which whole peer groups amplified the efforts of the marketing departments by validating and encouraging use of these products among large numbers of their peers. Public and media concern led to industry codes being drawn up to regulate marketing of the products.

The most effective interventions for reducing alcohol related harm, including controls on availability and price were thoroughly examined in the seminal text 'Alcohol Policy and the Public Good' (Edwards, 1994).

Reducing the affordability of alcohol, by increasing its price, is the most effective strategy for controlling alcohol consumption and reducing harm. This is a widely replicated finding (Sharma et al., 2017). It is likely then that a greater impact on alcopop use followed the 40% increase in tax on the products which was levied by the Chancellor in 1996.

The example of 'alcopops' suggested that different forms of alcohol, together with how those forms are promoted, legitimised, and taxed, can lead to different levels

of use, with varying consequences and more or less potential for harm. Reading the literature on gambling, including historical and international comparative aspects, it became clear that the same may be true for different forms of gambling. I read repeated claims that, because of their 'structural characteristics', gambling machines seem to be frequently linked to greater levels of dependence and greater levels of gambling related harm. The international literature was clear that electronic gambling machines of various types could clearly be singled out as being more associated with gambling related harms in a number of countries (Binde, 2011; Blaszczynski, 2013).

In my educational role, I have been responsible for developing and teaching modules on policy for social work and health and social care students.

Researching and discussing aspects of policy in relation to mental health, addictions and related aspects of health and social care, led to a greater interest in both the impacts of policy on the lives of people and also a focus on how policies come to exist and to change, and the methods and complexities involved in measuring the impact of any policy or policy change.

The above observations indicate some of the factors that led to a particular interest in the influence of policy. That includes policy in relation to how substances and activities are made available or restricted and also policy in relation to services for those who have problems.

In terms of gambling policy, the most significant change in fifty years occurred with the passage of the 2005 Gambling Act in the UK. Many observers agree that this marked a dramatic liberalisation of policy which had major implications (Orford,

2011).

I initially planned to investigate the impact of the 2005 Act on rates of problem gambling and in terms of the experiences of those who may be particularly vulnerable. A first perusal of the research literature suggested that, despite some caveats about methodology, the large-scale and repeated national gambling prevalence surveys were not picking up any significant increases in problem gambling as a whole in the ten years after this important legislation, although there were significant changes in the volume and types of gambling activities available and the way in which they were advertised (Seabury and Wardle, 2014).

A particular new form of gambling activity emerged in the UK just before the Gambling Act. Bookmakers introduced into high street betting shops a terminal which looked similar to a traditional fruit machine. These terminals were, however, different, in that they were linked to a central computer and they offered casino games, including blackjack and roulette. They came to be known as 'fixed odds betting terminals' (FOBTs) because the odds on the various outcomes of any of the available games are fixed in advance.

Many countries have some form of electronic machine gambling available, although this takes a variety of different forms. As a result, there was a developing international literature and evidence base about electronic gambling machines (EGMs), but a lack of literature and data about the specific form of EGM that was becoming a focus of public concerns in the UK, namely these fixed odds betting terminal (FOBTs). The debate about FOBTs seemed reminiscent in some ways of the debates about alcopops. There was the heightened media scrutiny, the

concern that young people and vulnerable groups were being targeted with a particular product which had heightened potential for harm, and the debate among researchers about whether the product led to specific and lasting harm or whether the concern over the use of one specific product was misplaced, with questions such as whether the focus on one product risked obscuring the broader problem of overall consumption levels and of dangers from other examples of the product.

The above account highlights some of the key experiences that led me to settle on an investigation which focused on two key areas. Firstly, the links between FOBT use, gambling related harm and people who are particularly vulnerable to such harm. And secondly, the place of different forms of help in promoting recovery from gambling related harms.

In the remainder of this chapter, an outline of each of the ensuing chapters is laid out to provide an overview, signposts and a sense of the structure and content of each element.

1.3 Overview and structure of the thesis

Chapter Two explains the choice of methodology. Overall, a mixed methods approach was adopted. Specifically, this means that 1. existing data in relation to FOBTs and harm from a range of sources was systematically collated, reviewed and analysed; and 2. primary qualitative data was generated from observations and interviews and then thematically analysed. Having settled on the need for qualitative methods to generate and analyse new data, the nature and relevance of ethnography is explained. It became clear early on in the research that the internet

provides rich sources of relevant data to complement face to face interviews and observations. The relevance of what has come to be known as the method of 'Netnography' (Kozinets, 2015) is therefore also elaborated on here, as well as the methods of non-participant observation and semi structured interviews.

These methods enabled the gathering of a good amount of data on the twin issues of the development of FOBT gambling related harm and ways that some people recover from that harm.

There remains intensive debate about what constitutes 'recovery' (Neale et al., 2014). Nonetheless, for most people, problematic substance use or other behaviours which can seem addictive occur during a shorter or longer period of their life, but do end with some kind of 'recovery' from that problem behaviour (Klingemann and Sobell, 2010). It is certainly clear that problematic gambling, like other problem behaviours, is not a static condition. The pathways model of problem gambling (Blaszczynski and Nower, 2002), and the stages of change literature (Prochaska et al., 1992), show clearly how difficulties with gambling fluctuate and often resolve over time for a range of reasons. However, there can be many years of problem gambling or gambling related harm before recovery takes place. For that reason, it seemed important to explore sources of help which can aid problem gamblers on their journey towards recovery. Chapter Two also explains the rationale for focusing on Gamblers Anonymous (GA) in this regard.

The main method used to analyse the data was thematic analysis. This method was applied to both the existing data about FOBTs and harm which was systematically collated in the literature review, and then also to the qualitative data which was gathered via the interviews, observations and websites. The details of,

and rationale for this approach are explained.

Chapter Three provides a more detailed account of actor network theory (ANT), a theoretical framework which was chosen as a relevant way of making sense of a number of different elements of the data and the study components. It is argued, from the purview of ANT, that behaviour and identity are co-produced through interaction between person and object. Problem gambling is co-produced via interaction between players, machines which 'inscript' behaviour, and a network of actors – a network which also includes government, gambling industry, peer groups and others.

Chapter Four offers a substantive discourse on the history of gambling regulation in the UK. History provides lessons for dealing with contemporary problems and policy, by providing instructive parallels as a means to challenge existing paradigms, or in helping to understand political narratives (Haddon et al., 2015). Researchers have also found that there is a strong appetite for history and intercultural learning among UK policy makers, and that '*history is seen to add value, providing context and a conceptual toolkit for policy issues*' (Haddon et al., 2015: 2). Controversies and issues which have recurred throughout the twentieth century are considered in relation to the regulation of gambling in general, and machine gambling in particular. This provides a basis for understanding the constraints and debates which led, right at the end of the century, to both a major review of UK gambling regulation and the introduction of FOBTs. The historical lens helps to illustrate networks and relationships between gambling machines,

regulation and gambling related harm at different time points, but also how earlier networks of influence continue to have impact.

The key changes ushered in by the watershed Gambling Act 2005 are outlined and official reviews of the impact of the 2005 Act by government and regulatory bodies are assessed. The increased focus on social responsibility and harm prevention across the gambling industry, and the development of programmes of research into machine gambling and harm are also scrutinised here, since these have particular relevance to the debates about FOBTs and the development of evidence which could help to answer questions about their link with gambling related harms.

Chapter Five provides a review and analysis of existing empirical data about FOBTs. Given that the focus of the thesis is on the links between FOBTs and harm, it is important to assess the existing evidence thoroughly. The review covers evidence about the range of structural characteristics which make high stakes electronic gambling machines more immersive or addictive, as well as evidence about other relevant factors, such as the geographical locations of machines.

Chapter Six presents and analyses the primary and secondary qualitative data which were collected and collated for the purpose of this study about links between FOBTs and gambling related harm. Primary data includes observations from GA meetings over a two-year period, and interviews with problem gamblers and other stakeholders. Secondary data includes that available from online treatment providers: Gamcare, GA and Gordon Moody. The findings here support the thesis

that FOBTs are linked to gambling related harm in unique ways. Participants consistently report spending much greater amounts of time and money on FOBTs than other forms of gambling, and typically report puzzlement at how they frequently become enmeshed more deeply in this form of gambling despite intentions and interventions. The place of ANT in offering a way of understanding this interaction is discussed. The data also points to links between FOBTs, suicide, and violence. Additionally, FOBT gambling emerges as frequently the midpoint in a gambling 'career' which starts with childhood machine gambling and ends with excessive online gambling.

Chapter Seven addresses the nature and effectiveness of the help offered to those who seek it or are referred because of problems with gambling. There is a particular focus on those who experience problems relating to FOBTs and on the source of one form of help, namely Gamblers Anonymous. The point is made that just as problem gambling can be co-produced via interactions with gambling products, so too recovery can be co-produced via interaction between the problem gambler and a therapeutic pathway which leads to the inscription of a new identity. GA is assessed as a valuable social network which can promote recovery and a new identity.

Chapter Eight then provides a summary of the whole study and makes recommendations based on the findings for a range of stakeholders, including policy makers, regulators and treatment providers.

Chapter Two: Methodology

This chapter provides a detailed account of methodology and methods used to address the question and aims of the thesis. An explanation is given for choosing these methods as the most suitable for assessing links between FOBTs and gambling related harms, and for assessing some of the ways in which individuals (and some groups/communities) respond to and overcome those harms.

The account covers the approach to the primary research which was conducted for the study, including the ways in which data was collected, how access to the field and to subjects was negotiated, and the detail of the methods and tools used to gather, collate, analyse and synthesise data. In terms of methodology, the theoretical ideas which underpin the methods of data gathering used are outlined. The final part of the chapter expands on the theories and ideas which inform the analysis of the data.

Binde (2011) suggests that, when judging the harmfulness of particular forms of gambling, conjectures drawn from prevalence studies should be complemented by information from other sources. He suggests that

two such sources are statistics on the forms of gambling preferred by those who seek help for PG and qualitative studies of problem gambling. The reality check provided by such sources close to problem gamblers may reveal imperfections in quantitative analyses of prevalence data (Binde, 2011:22).

The next section describes my approach to developing and conducting a study to gather information from these two sources and others. Qualitative data from direct reports from problem gamblers is supplemented by data regarding the extent to which FOBTs are the preferred form of gambling for those seeking help and a

range of other data about FOBT use and GRH relating to that use.

In order to develop a more detailed understanding of FOBT play, I initially hoped to interview a range of individuals who used FOBTs: a range both in terms of demographics but also in terms of patterns of play. That was because the account of a person is crucial to understanding their interpretation of the world and can help in understanding the persistence of behaviours which have repeatedly harmful consequences and seem to others to be irrational (Hammer et al., 2012).

An initial literature review revealed that the majority of studies of EGM players, and the few that have been conducted in relation to FOBTs, are largely laboratory based (see Chapter Five). Authors of some of those studies have called for more research in 'real' gambling settings (Parke et al., 2016). Another reason for wishing to observe gamblers in natural settings in real time, i.e. in situations of real play, was that clinical experience and knowledge of substance misuse led me to believe that people's recollections, and their own explanations of addictive behaviour are not always accurate and consistent with the facts. Whilst important in helping understand their interpretation and recollection, recall bias, memory bias and denial are common in a person's own accounts, and may mean that interview accounts do not present accurate information. This is confirmed by a number of authors (Klein et al., 2013; Ye et al., 2013). The aim, then, was to compare and combine individual accounts of experience with external observation to build a broader understanding of gambling behaviour.

2.1 Ethnography

To develop qualitative data about FOBT gambling I chose to conduct interviews but also to use some ethnographic methods. For the reasons outlined above, participant observation was chosen for this part of the study. Ethnography is located within a corpus of qualitative research methods. It is an approach which privileges 'naturalism', which means an emphasis on the study of real social situations rather than artificial ones such as experimental designs or survey methods (Hammersley and Atkinson, 2019). An extensive literature exists which assesses the contrasting paradigms of naturalism and positivism (Craig, 1998). It is often claimed that these approaches are incompatible since they rest on different, and in some respects contradictory, assumptions about the social world. Positivist approaches assume that there is an underlying fixed and objective reality which is amenable to being discovered given sufficient rigour and the application of the correct methods by the researcher (Guba and Lincoln, 1996). The naturalist approach, in contrast, studies social phenomena in their natural settings.

Qualitative researchers who take a naturalist approach tend not to assume that there is an eternally fixed objective social reality waiting to be discovered. Rather, the assumption is that individuals interpret and make sense of their world in changing and individual ways, and that the introduction of a researcher can influence the social world and the way that people experience and report their experience of that world. Hammersley and Atkinson (1983) take a more pragmatic approach, and suggest that it is more a case of finding the method or methods which are most suitable to the questions being posed. They suggest that both approaches do maintain a distinction between social science and its object (1983:3). They do, however, make a strong case for ethnography, suggesting that it is an approach '*whose virtues have been seriously underestimated by many*

social researchers owing to the influence of positivism' (ibid:23).

Ethnography emerged as an approach which uses a range of methods to achieve an understanding of the lived experience of individuals and groups within society.

Fetterman (1998:1) suggests that ethnography is '*the art and science of describing a group or culture*'. Madden, (2010:1) suggests that

Ethnographers are 'social scientists who undertake research and writing about groups of people by systematically observing and participating (to a greater or lesser degree) in the lives of the people they study

As Pink et al. (2015:2) attest, ethnography is a way of practicing research which is '*not a very meaningful practice by itself*'. Instead, it is only useful when engaged through a particular disciplinary or interdisciplinary paradigm and used in relation to other practices and ideas within a research process. In other words, the ethnographer needs one or more theoretical ideas or paradigms to inform the process and to offer frameworks for making sense of the material which is gathered through extended time spent with a group. There seem to be a spectrum of views on the extent to which it is permissible, necessary and appropriate to use any framework of interpretation or analysis of people's own understanding of their worlds, or whether the ethnographer should merely present the unvarnished accounts of lived experience as they are seen, heard and recorded (Charmaz and Mitchell, 2001). As discussed at the start of this chapter, there are clear reasons for both understanding and presenting individuals' own accounts and understanding of their experience, and at the same time acknowledging that there may be gaps, inaccuracies and reasons to question some aspects of those accounts. It can therefore be useful to use frameworks of interpretation and explanation to understand the accounts of lived experience and to critically interrogate them. The

key framework chosen to use for this purpose was actor network theory. This is explained later in this chapter and particularly the Chapter Three.

In terms of generating ethnographic material, it can be gathered through a number of methods, which may include: observing activities as a non-participant, recording field notes, transcribing and interpreting field notes, taking part in activities whilst observing them (participant observation), and interviewing individuals in an informal or a semi-structured way. O'Reilly (2005:3) puts it this way, ethnography is:

iterative-inductive research (that evolves in design through the study) drawing on a family of methods, that acknowledges the role of theory as well as the researchers own role and that views humans as part object/part subject.

Turning to the particular relevance of these approaches to studying a particular group within contemporary society, such as machine gamblers, Hammersley and Atkinson (1986:9) note that, there are:

many different layers or circles of cultural knowledge within any society... indeed this is particularly true of modern industrial societies with their complex divisions of labour, multifarious life styles ethnic diversity and deviant communities.

Ethnography might provide a way of uncovering the very different types of cultural knowledge held by different individuals and groups, and providing summaries for academics, policy makers, and other members of society who would not otherwise have access to that knowledge.

Ethnography has been applied to studies of individuals and groups for whom risky behaviour with the potential for addiction is a major focus. Anthropologists and ethnographers have demonstrated the cultural determination of distinctions

between normal and pathological consumption (Room,1984; Schull, 2012).

Reviews of anthropological and ethnographic approaches to addictions have acknowledged how these perspectives have increased our understanding of the socially constructed purpose and meanings of various form of consumption, including those which seem addictive (Singer, 2012). However, such reviews have also highlighted some gaps and limitations in such approaches and the literature that has resulted from them. It is suggested, for example, that anthropologists were late in turning their attention to these issues (Bennett et al., 1996; Cosgrave, 2006), and that they have largely pursued narrow studies of particular substances or behaviours rather than broader studies of consumption that might elucidate more general themes (Hunt and Barker, 2001).

It has also been suggested, at least in relation to drug use, that the social contexts which foster drug use have been overlooked as ethnographers focus on the lived experience within the drug using culture, rather than what might be called the wider fields of force which can be key factors pertinent to how such use starts and is sustained (Wolf,1982; Singer,2012).

Some ethnographers have addressed how socio economic disadvantage, race, and other social and cultural factors intersect with regulation and availability to influence particular patterns of drug use and harm in different times and places (Bourgois, 2003).

In relation to the particular study of gambling, these issues of a lateness in addressing the subject and the lack of broader and contextualising perspectives can be seen. Certain influential studies of individual gambling practices are well known, such as those of Goffman (1969), a detailed account of working as a

blackjack dealer. However, it was not until the late twentieth century that McMillen (1996) produced a collection of sociological accounts of gambling which attempted to situate individual studies within wider perspectives, and to assess the role of factors such as globalisation and the development of technology in the evolution of actual gambling practices. This has been followed only much more recently by ethnographic and sociological studies which specifically look at machine gambling (Kingma, 2010; Schull, 2012).

There has been criticism that some ethnographers have been naïve about, or too dismissive of the real consequences of excess consumption. In particular, Room (1984) castigated ethnographers for systematically underestimating the health and social problems associated with excess alcohol consumption and noted that anthropologists generally downgraded the severity of the problem. He suggested that this might be due to most of those researchers being part of a 'wet' generation who were socialised to see high alcohol consumption as normal. Whilst the understanding of the lived experience of addiction has become more sophisticated and realistic in the 35 years since that statement the work of Room resonates for me. As someone who worked as a clinician with a large number of individuals dealing with the real consequences of excessive alcohol use, I am very aware of the tension between the interventionist instincts of a clinician towards championing the needs of those who experience adverse consequences of excessive consumption, and the role of an ethnographer or other academic who will aim to gain insight and understanding of experiences of excessive consumption without having the background knowledge of the full range of harms which might follow from that consumption and without any responsibility towards intervention.

The aim here was therefore to develop a study which balanced detailed accounts of the lived gambling experience with objective evidence of gambling related harm, and the use of relevant theories and frameworks to understand the whole range of factors that might be involved in generating, maintaining and reducing such harms.

2.2 Observing gamblers in 'action' and in 'recovery'

The initial plan involved a balance of observations covering both gamblers at play in real settings and also gamblers who had developed problems and were seeking/receiving assistance. However, the idea of observing gamblers at play came up against problems in relation to access and permissions. I wrote to each of the major bookmakers in 2015/16 formally requesting permission to speak to players who were using their FOBT machines in typical venues, namely high street betting shops. I did not get any response from them.

My experience confirmed the findings of Cassidy et al. (2013:9), who suggested that the difficulty of gaining access to gambling environments and data is one of the biggest obstacles to producing high-quality research. Cassidy notes that the industry has the most useful data, but has limited incentives to share it with researchers. Most requests for access to data are denied or ignored. The industry reserves the exclusive right to determine what is and is not 'commercially sensitive'. In order to have their requests for access considered, researchers are encouraged to 'seduce' the operator and to prove their trustworthiness by producing research that is uncritical, or commercially valuable.

Similarly, Fisher, in seeking first hand observations of fruit machine gambling in arcades, states that most operators ignored her requests, and one threatened to throw her out if she was seen anywhere on his premises (Fisher, 1992).

Having had no response to official requests for access, I began to consider the options. One would be to act as another player, and then overtly reveal to players my research status. Betting shops are open to the public, and I initially spent some time in betting shops in different locations across different geographical areas. I tried out the strategy of starting conversations with FOBT players at opportunistic moments as they were in play or finishing play and leaving a betting shop. I briefly explained my status and asked them to consider allowing me to observe them at play and/or to be interviewed at a later time. I had little success with this strategy on a number of occasions at different betting shops. I showed ID, but was often met with suspicion about my status and motives.

Cassidy, when studying betting shops in London, was overt about her researcher status and reports that she was able to engage with other players (Cassidy, 2014). One possible explanation for the different experiences is the gambling activities which were the focus, since a major focus for Cassidy's research was betting on horse racing, rather than FOBT use.

Schull (2012) and others have noted the solitary nature of machine gambling, suggesting that in this regard it is perhaps different to other types of gambling. As will be shown later, I did not find that this was always the case with those who played FOBTs, and certain groups seemed more inclined to participate in small groups. However, the majority of players were solitary and engaged in little conversation with any other person during sessions of play. My later interviews with individual problem gamblers confirmed this balance – that most played in an individual and isolated way, with a minority playing in a more 'social' way,

maintaining conversations with other players engaged in games on nearby machines (see Chapter Six). This did contrast with the more traditional betting shop customer who places bets on dogs or horses and watches the races on the screens in the shop. As an occasional user of betting shops in this way myself, I had little difficulty in developing conversations about horse racing, and fellow punters were often keen to talk about form chances, speed ratings, the merits or failings of particular jockeys and trainers and many other aspects of the whole business of racing. In the end I conducted over thirty hours of observations in betting shops in a range of locations.

Few other studies have been conducted inside betting shops in the UK. One example is provided by Neal (1998), who reports on observations in a number of English betting shops. These were conducted in the years before FOBTs were introduced to high street betting shops. He describes himself as a regular 'punter' in relation to horse racing, and familiar with the rituals and rites of betting shops. He also suggests that he was able to 'pass the time of day' with punters and that they openly discussed their many and various approaches to selecting horses to back.

Given the limited amount of data about FOBTs that it seemed possible to collect from overt observation, I next considered covert observation. This is seen by some as a problematic method in terms of ethics, although it has been used in social science, and by ethnographers, in a range of settings and studies.

One other approach to gathering data in betting shops was considered. That was to gain employment as a 'way in'. There have been examples of researchers

gaining employment as a means of securing an official way into the establishment in order to have a platform for interaction and observation. For example, Cassidy secured employment in a betting shop in London in a period from 2006 to 2009 (Cassidy, 2014). She supplemented her discussions and observations from the perspective of a member of the public with observations made as a cashier, employed in the shop.

Researchers who have studied gambling on fruit machines in amusement arcades in the UK have adopted a similar strategy. In her detailed study, Fisher (1992) supplemented survey data with observations conducted from the cashiers' box after she was able to secure employment. Griffiths also adopted a similar strategy in amusement arcades (Griffiths, 1991).

I quickly decided against this strategy for two reasons. The first was simply that I could not commit the time to do this. As a full-time member of staff trying to complete a doctorate in a limited and sporadic part-time way, I could not see a way to having a period of time as a betting shop employee, even for a limited period. Secondly, I thought that having to be committed to all of the tasks required of an employee behind the counter in the shop would actually limit significantly the chance to observe FOBT play. The layout of a typical shop means that machines are often well away from the shop counter, and in some cases the individual machines are enclosed in a booth, making the opportunity to observe or hear conversations from the counter even more limited.

2.3 Ethics

Ethical issues need to be considered in any research study. Particular ethical issues arise in relation to the observation of people and groups, and this was touched on above. As remaining elements of this chapter explain, the methods finally chosen included some observations of gamblers in betting shops, interviews with individual gamblers, observations of Gamblers Anonymous meetings, and analysis of material posted in publicly available web forums.

Each of these elements was included in the applications for ethical approval and the study was granted that ethical approval by the University of Lincoln College of Social Science ethics committee. This approval was given after the committee viewed a range of documents, including participant information sheets, and ethics forms for completion by participants. Copies of these documents can be found in Appendices 1 and 2.

In relation to the observation of gamblers in betting shops, this took place to a limited degree. Covert observation can be viewed as ethically problematic, and in many forms it seems to transgress the codes of ethics of a number of relevant professional bodies, including both the British and American Sociological Associations (British Sociological Association, 2017). One of the key reasons for this is that it is widely felt that research participants should be fully informed about the nature and purpose of research before agreeing to and actually taking part. Covert research does not allow for informed consent. It is therefore often labelled as deceitful. This can and has been the case where, for example, people adopt an identity to get close to a group and hide their 'other' identity as a researcher (Norris, 1993). Given the ethical issues associated with covert observations, I decided to look to other methods for gathering of detailed data about individuals. I

did make some observations in betting shops, however, which helped to inform one specific aspect of analysis relating to patterns of play, that is the extent to which people play entirely alone, or as part of a group, and the extent to which they interact with others whilst playing FOBTs. It was agreed that such general observations which did not involve any information which might identify an individual, were acceptable.

In relation to Gamblers Anonymous (GA), I was careful to briefly explain my research and the reason for my attendance at the start of each separate meeting that I attended. The chair had given permission for me to attend, but I also gave attendees the opportunity to ask me to leave or sit out particular parts of the meeting each time. This did not happen on any of the occasions that I attended. As will become evident in Chapters Six and Seven, I protected the identity and confidentiality of participants by not naming the town/city in which the GA meeting took place; by using pseudonyms rather than real names from any quotes; and by being careful to remove any aspects of the direct quotes or general descriptions which might identify a participant. The same precautions were taken in relation to the detailed one-to-one interviews.

Online ethnography (netnography) poses some particular and additional ethical challenges. A report from an Association of Internet Researchers Ethics working group (2012) found that no official guidelines or answers regarding internet research ethics have been adopted at any national or international level. In searching for relevant guidance for UK researchers, I found that this international perspective seemed to overlook guidance produced by the British Psychological Society. Their guidance on Internet Mediated Research (IMR), published in 2007

and recently updated (2017), suggests that

it is important to note that analysis of online discussions or other activities is not precluded, but it should be carefully considered in light of the ethics concerns highlighted here. A discussion group moderator or list owner may often provide a good point of contact for advice on the best ways to research existing online groups (British Psychological Society, 2017: 7).

The guidelines go on to state that strong justifications should be provided for what is often called 'lurking', i.e. any covert non-participant observation, and that consent should be sought unless the environment is such that people would reasonably expect to be observed by strangers. This leaves open various questions in relation to who is a stranger in any given context, and what expectations any web user might have of being observed. It could be argued that moderators, and even the majority of other forum users, are strangers to the person posting at any given time. Certainly, in the case of the forums that I observed, most user names were associated with one or only a few posts, and relatively few were regular posters who entered into debate or responded to other posts. In that sense, a minority might see themselves as part of a community with some relationship to other posters, but the majority were strangers in any meaningful sense of the word.

In practice, the seeking of consent in relation to the use of archived rather than ongoing conversations raises several pragmatic problems. My aim in using the website data was to use it as an archive from which some useful data might emerge about the proportion of users who mentioned FOBT use and about trends over time. As noted above, initial perusal of the data made it clear that the majority of posts were from people who posted only once or twice. This does not necessarily mean that these individuals were not still observing other forum posts,

but there could be no certainty that any significant percentage of posters were still forum users. A practical problem thus arose in relation to seeking consent. Any request for consent to use data from this archive would likely only be seen by a relatively small proportion of users, and most of those who had posted over the period of years in question would not see any requests for permission.

Others have argued that the study of public messages in forums is akin in many ways to naturalistic observation in real public spaces (Flintham, 2011). It is certainly the case that public message boards and many forums are open to anyone with Internet access. Some argue that this means issues of privacy do not arise, although this position is contested (British Psychological Society, 2013). To make the process as transparent as possible I did request permission to use web based material but often had no response (as expected). In all cases I was careful to ensure that no data was included that might identify individuals.

Perhaps ethical issues might be even more foregrounded when studying illicit behaviours and the 'dark net', where illegal online transactions take place.

Ferguson (2017) describes a study of drug transactions on the darknet. She makes a robust case for the value and justification of lurking as a method for gathering useful data which might not be available elsewhere, which supports the case made above.

A number of other UK based researchers have written explicitly about the practical and ethical issues involved in researching online communities (for example, Germain et al., 2018). In particular, these researchers note that although ethical guidance does exist, it does not always help in the real world when the boundaries between the public and the private are not always clear to participants or

researchers. They also found, as I did, that published studies using online methods rarely report ethical procedure in detail (Germain et al., 2018:1656).

There remains uncertainty about how to deal with some of the ethical issues surrounding lurking, covert observations, privacy, anonymity and use of online data. However, it is somewhat reassuring to find that the Association of Internet Research (Markham and Buchanan, 2012) recognises that online research involves tensions, which are often best resolved through a case-based approach as they arise.

2.4 Gamblers Anonymous

At the same time as developing my observation strategy in relation to FOBT players, I was pursuing lines of enquiry with self-identified problem gamblers in treatment. A contact with a regular attender of a local Gamblers Anonymous (GA) meeting led to an invitation to attend one of their meetings as a guest. At this first meeting, three of the sixteen attenders mentioned use of FOBTs, and so this seemed like a fruitful avenue for data collection. It soon also became clear that this particular meeting was somewhat unusual in comparison to most British GA meetings, in that guests were allowed to attend on a regular basis. A widely held view within GA is that non-compulsive gamblers will not be able to understand the gambler's experience in the same way as a member with such experience, and that the presence of such non-addicts at meetings will inhibit members from being as free and forthcoming as they might otherwise be. The national GA organisation have not generally allowed regular attendance of guests. This has been one of the barriers to access for researchers wishing to study GA. The fact that my nearest GA meeting had a weekly open meeting gave me a rare opportunity to meet with

and observe GA at work, and to collect data in relation to FOBT use among those who decide to use GA. Given my desire to focus on gambling related harm, it made sense to focus on individuals who were seeking help in this way because of their experience of problems relating to gambling.

The major traditionally 'ethnographic' part of this study thus became an extended period of observation of one Gamblers Anonymous group over an eighteen-month period. I observed a weekly meeting in one city in the North of England on twenty-three separate dates over a period of eighteen months. In this city there are twice weekly meetings, with one of the meetings being 'closed' and the other 'open'. The number of participants ranged from 8 to 17 (the mean was 12). In total, there were 278 attendances over the course of twenty-three meetings. Of these, some 10% were female (28), but these were mainly partners and family members of problem gamblers.

The construction and alteration of identities and self in treatment programmes is another area of analysis which has been of interest to anthropologists and ethnographers, and their insights have provided useful additions to the usual more narrow debates which tend to focus on whether or not treatment programmes lead to successful outcomes. Studies of twelve step programmes, such as Alcoholics Anonymous (Denzin, 1987; Hoffman, 2006; Valverde and White Mair, 1999), Narcotics Anonymous (Snyder and Fessler, 2014) and Gamblers Anonymous (Ferentzy et al., 2006; Larusson, 2009; Schull, 2002), have illustrated how following this pathway of help leads to complex new narratives of self and identity. This literature helped to inform my approach to observing the GA process.

In terms of actually gathering the data, I made hand written notes whilst attending

the GA meetings. In each case I wrote up the notes either immediately after the meeting, or within 24 hours, adding additional thoughts and observations whilst the experience was fresh in the memory. Within my final typed notes, I clearly distinguished direct reports of participant speech from my observations of interactions and my interpretations of things.

2.5 Individual interviews

As the study of GA progressed, I also sought to recruit more participants to interview and to find ways of obtaining the views and experiences of a greater number of individuals in relation to FOBT use. I was developing a rich data set from the GA meeting observations, but the references to FOBT machines during meeting discussions were often brief. One-to-one interviews provided opportunities to probe and explore FOBT use in more depth. I recruited eight individuals from the GA meeting who agreed to take part in detailed semi-structured interviews. I recruited a further eight individuals via adverts placed in the University, in local Citizens Advice Bureaux, and in a local paper. Each of these individuals was furnished with a detailed participant information sheet and signed a form agreeing to the terms of their participation.

I conducted semi-structured interviews with participants, each of which lasted between one hour and two hours. Semi-structured interviews include a set of fixed questions, but few or no response codes, and are designed to ensure that all participants are asked the same things, but also to allow room for the interviewer to probe and ask additional questions, and for the interviewee to raise additional issues (Bowling and Ebrahim, 2005).

In all cases, I began with some general questions designed to elicit basic demographic data (age, gender, occupation) which also, as straightforward and non-challenging questions, helped to build rapport. I then asked individuals to tell me in their own words about their gambling behaviour, including when they first started to gamble, when it became problematic, and if and when they sought help. I asked them what their own understanding was of the factors that led them to gamble more and to cut down or stop. After that, other questions were asked which were relevant based on the initial responses.

There are strengths and weaknesses in using data from such interviews.

Using the structured part of any questionnaire rests on an assumption that the questions can be worded in ways which will be understood by all participants, but this is not necessarily the case, as we all have different understandings of words and concepts, and have different perspectives and frames of reference. A number of forms of bias can also affect responses to interview questions. In addition to issues of recall bias as discussed earlier, there can also be interviewer bias – tone of voice, intonation and body language on the part of the interviewer may lead respondents towards certain responses (Kreuter, 2008). Individuals may censor their thought responses and their verbal responses may be moderated by a whole range of expectations and social and cultural norms (Kreuter, 2008).

These limitations again highlight the value of and need for comparing the data that people provide in their own accounts and responses to questions with other sources. Triangulating data from what people say in interviews, group meetings, and online forums, with direct observations, and empirical data from studies of

actual behaviour, can help to illuminate consistencies and differences.

The interviews complemented the observational data from GA in a number of ways. First, the additional data provided balanced and contrasting perspectives, with eight individuals who had used GA and eight who had not. Secondly, for those who had used GA the interviews provided a chance to be more honest and more in-depth about their use of and views of the GA programme, compared to what they might say in the group space of a GA meeting.

2.6 Netnography

I have previously researched and written about the use of digital technology (Rogers and Watling, 2012). One aspect of this was a summary of the ways in which the internet is being used to provide help, therapy and 'recovery' from problem behaviours. I was well aware of the fact that organisations such as Gamblers Anonymous have websites and forums which are used by larger numbers of people than those who attend face to face meetings. I was also aware from my reading of the ethnographic literature that 'netnography' was emerging as a legitimate form of scholarship, one involving the study of online behaviour (Kozinets, 2015). Some have gone so far as to suggest that the Internet is now the major laboratory for the social sciences (Eynoen et al., 2008). It became clear that the two major organisations which provide help to problem gamblers in the UK (namely GA and Gamcare) each had large amounts of publicly available data on their websites. My observations of one GA meeting, together with interviews with ten former FOBT users, were therefore supplemented with detailed data from users of the two websites.

I considered these debates carefully, and proceeded to make myself known to the forum moderators. I placed a forum message seeking consent for use of selected comments which would be edited and used where they might illustrate a point effectively. A few gave explicit permission, but in most cases there was no response, as I had anticipated. I was then careful to adapt any statements and change names so as to protect identities as far as possible.

2.7 Data Analysis

The data that I gathered from observations at GA meetings, interviews with GA members and other stakeholders, and analysis of posts to websites was entered into a database and then analysed using NVIVO software. The analysis of this qualitative data is presented in Chapters Six and Seven. In terms of a methodology for analysing the qualitative data gathered via observations, interviews and the 'netnography', I opted to use thematic analysis. Thematic analysis is suited to questions relating to people's experiences and to the ways in which people construct meaning from their experiences. Its purpose is to identify patterns of meaning across a data set (Braun and Clarke, 2006)

One important distinction to note at this point is that between ethnography and other qualitative approaches to analysis, such as thematic analysis or grounded theory. Essentially, ethnographers aim to understand the cultural meaning that human beings use to organise and interpret their experiences, but do not aim to generate theories about those (Charmaz and Mitchell, 2001). As my study progressed, it became clear that there were some frames of meaning used by

some FOBT players which helped them to explain their own behaviour, and in particular helped them to reduce or stop gambling when the activity had become problematic. This was particularly true for those who used the Gamblers Anonymous framework for understanding their gambling as 'compulsive' and an 'incurable illness'. But for a greater number there remained a sense of puzzlement and incomprehension at their own behaviour and their apparent inability to control it despite repeated efforts. In the preceding chapter, the case was made for a multi-factorial approach to understanding gambling, and one which gives due attention to elements within the individual psyche and experience but also those which inhere in gambling products and activities, and within gambling environments, as well as factors such as policy frameworks which permit or restrict the activities to different degrees. Above all, a framework is required which includes some reference to how all of these factors interact.

Whilst ethnography was well suited as a method for gathering data, analytical frameworks were required which could account for the experiences of people in a way which also took into consideration factors within the social structure in which they live. actor network theory (ANT) provided this framework, offering a way of taking into account a range of objects and people that influence actual gambling behaviour, and of highlighting the role of technology.

The decision to use thematic analysis was made after carefully considering and then rejecting other widely used qualitative methods. At the outset, a grounded theory approach seemed like a useful way forward. Whilst this approach has now developed into a number of competing approaches which vary in certain regards, the key element is that this is an inductive approach which is about building theory

from data.

One way in which a grounded theory methodology differs from other qualitative methods is in relation to the place and timing of a literature review. Glaser (1992) was clear that literature which relates to the research topic should not be reviewed until the researcher has thoroughly reviewed their own data and begun to develop their own emergent theory through the methods of coding and constant comparison. The point is to ensure that existing ideas from literature do not overly influence the researcher and that their emerging themes are based only on what they see in their own data. Although Charmaz (2003) argues for a version of grounded theory which allows for some early perusal of literature, the general point is valid for all forms of grounded theory.

I was clear that I wanted to take an inductive approach to the qualitative data which I was gathering from interviews and observations. However, before this data was gathered, I was already well into a review of literature in relation to EGMs and I had completed a literature review in relation to GA – this was done with a colleague for other purposes. This meant that I could not conduct a pure grounded theory process, since I was already influenced by a detailed reading of relevant literatures and also had some ideas and hypotheses about the data. In particular, and as noted right from the outset, a key rationale for the thesis was to test the idea that FOBT's have particular links to gambling related harm.

I also decided against grounded theory for other reasons. Whilst there are a number of variants, all versions of the method include certain key steps and stages. These include: three different types of coding, constant comparison of

coding with data, the seeking of new sources of data until data saturation occurs and then the development of new theory which is fully grounded in and emerges from the data. This makes a proper grounded theory very time consuming. I decided that I might not have the time and resources to complete all of the necessary steps, and that some of the time I had available might be best spent on other aspects of the study. I did also have some hypotheses that I wanted to explore in relation to the overall subject. I wanted to explore whether or not FOBTs are linked to greater harm than other forms of gambling and in what ways, and to explore the factors which influence policy development in relation to the subject. In that sense, the overall study combined elements of inductive development of ideas, with some general hypothesis testing.

Thematic analysis is, to some degree, based on similar interpretivist ideas to a purely grounded theory approach, particularly in the methods of constant comparison and theoretical sampling (Aronson, 1995). Initial themes and codes are developed from the variety of participant accounts, and then all data is checked against the emerging themes. In this process, the power and capacity of a computer programme such as Nvivo proves useful. I was able to combine data from many hours of observation, from 16 interviews, and from over 59,000 posts on websites, and used coding facilities within Nvivo to develop and refine key themes. It is suggested that one of the advantages of the thematic analysis approach is that it enables researchers to use a wide variety of types of information in a systematic manner, due to the theoretical flexibility it entails, and is therefore very useful in synthesising data from different sources (Boyatzis, 1998).

It is also important to acknowledge that there are a number of weaknesses of this

approach to analysis (Braun and Clarke,2013). In particular, and contrary to the way that it is presented as a coherent approach in many published studies, there is a lack of agreement on what is meant by a ‘theme’ and to what extent these represent discoverable underlying realities which can be uncovered in a way which is in any sense objective or, whether things which evolve in an organic way and via an iterative and reflexive process as the researcher constantly interacts with the many elements of data (Braun and Clarke, 2016). This latter approach is focused on the relevance to the research question, rather than a more quantitative logic which determines themes by, for example, simply the frequency with which something is mentioned (Fugard and Potts, 2015).

I followed the more qualitative approach and understanding of thematic analysis, and aimed to develop themes in relation to the research question, rather than being primarily guided by metrics such as the frequency with which something was mentioned by participants.

The results of the thematic analysis are presented in detail in Chapters Six and Seven, and are complemented with additional analysis and observations based on actor network theory (ANT).

Conclusions

This chapter has provided a narrative account of the evolution of the study, the range of methods and theoretical frameworks which were considered and problems which arose during this development phase, leading to a clear rationale for the methods which were finally chosen.

The ethical and practical issues which arose in relation to the issues under consideration and the chosen methods were considered, and ethical approval and justification for the research was explained.

The key question and area of interest was the link between FOBTs and gambling related harm. The chapter has explained why policy analysis; literature reviews; compilation of empirical data; and ethnographic methods including detailed observations and interviews, were chosen as the most appropriate means to amass and analyse relevant data.

Returning to the quote from Binde placed at the start of this chapter he suggested looking at statistics on the forms of gambling preferred by those who seek help for PG and qualitative studies of problem gambling because *'the reality check provided by such sources close to problem gamblers may reveal imperfections in quantitative analyses of prevalence data'*. That illustrates why the architecture for this thesis involves a number of different and specific design elements which have been melded together. Prevalence data is supplemented with the information from problem gamblers themselves and from places where they seek help.

In relation to data from problem gamblers themselves, certain forms of direct observation became closed off, as discussed in this chapter, whilst others offered unfettered access. More emphasis was therefore placed on direct observation of Gamblers Anonymous than on direct observations of FOBT users.

The limitations of the chosen methods were addressed and acknowledged, whilst highlighting the strengths and advantages for the subject of the study. The focus on GA is arguably a limitation, since it is only one a number of forms of help used

by problem gamblers. However, to balance this I was careful to seek information from other sources, and that is why particular emphasis was placed on using 'netnography' to gather data from several different agencies providing help to problem gamblers. Also, myself and others have made the case that Gamblers Anonymous has been overlooked (George,2014 : Rogers, 2019) and I therefore wanted to redress that balance by revealing more about how it operates to provide support.

The chapter has introduced ANT as a framework for linking a heterogeneous mix of different elements of data, and for showing links and influences between these different elements at different time points. Also, how thematic analysis was used as a means of analysing different types and sets of data.

ANT is relevant to a number of aspects of the study. Chapter three goes on to elaborate on the nature and applicability of ANT as a suitable theoretical framework for understanding machine gambling. The data analysis chapters then show how ANT was applied to understand both the networks of interaction between players and gambling machines, and also networks of recovery as people interact with other recovering gambling addicts.

Chapter Three: Actor Network Theory

The previous chapter explained the choice of methodology and methods for the whole study, noting that actor network theory would be used as a significant framework. The purpose of this chapter is to explain in more detail and to justify the choice of ANT as that theoretical framework. The particular relevance of ANT for understanding interactions between people and gambling machines is explained, and also the way in which this theoretical approach links to and supports the different parts of the study and the different methods used.

3.1 What is actor network theory?

Debates about forms of what have been called 'risky consumption' (Schatzki, 2001), which include gambling, have a tendency to polarise between those who focus on the agency of the individual consumer, and particular individual tendencies which might lead that person to consume excessively; and those who focus on social structures and features of the product which might encourage excessive consumption. One theoretical avenue which has been posited as bridging the traditional divides between theories about individual agency and theories about social structure is the 'Practices' approach, which incorporates features of both. Schatzki (2001) has suggested that there are four types of Practices theorists, including philosophers, social theorists, cultural theorists and theorists of science and technology. One example of the approach, developed in relation to science and technology, is 'actor network theory' (ANT). Latour, who developed this, has talked about the ways in which technology is designed to 'inscribe' certain modes of use into products, thus shaping user behaviour by ensuring that the consumer is faced with a certain script which invites or demands

certain actions and discourages others (Latour, 1996). This approach, which has been applied to a number of areas which involve the interaction of humans and technology (Cresswell et al., 2010; Latour, 2005), appeared to offer a useful framework in relation to the study of how people interact with FOBTs. The key focus of this thesis is the connection between the use of FOBTs and gambling related harm. As such, this is a question exactly about interactions between persons and machines and the consequences which flow from those interactions. As discussed in Chapter One, existing evidence points to EGMs generally as powerful scripting devices which shape the behaviour of users, and ANT therefore seems eminently well-suited as a framework for understanding this issue. ANT has also been applied in a number of studies in related areas looking at excessive consumption or addiction to alcohol and/or other drugs (Nielsen and Houborg, 2015).

Latour (1996) suggested that ANT is not so much a theory which explains why or how networks operate, rather it is a method of how to understand relationships in a pragmatic manner. One of the major ideas is that actions/behaviours are best understood as arising from interactions as actors influence each other and struggle for power. What is particularly different and useful about ANT is that non-human entities can also be understood as 'actors', or in the parlance of ANT, 'actants', if they influence behaviour. Indeed, some have argued that ANT is best known as the technique which opened up social science to non-humans (Callon, 1998), meaning that previously social scientists largely studied human interactions, and did not generally study the non-human objects in society that might influence humans. Technology, in many forms, can have this property of 'acting' or having an influence on behaviour. However, ANT recognises that such influence is not a one

way deterministic thing which happens simply because of the properties of a piece of technology. Rather there is recognition that technology emerges from and is part of social and economic interests (Cresswell et al., 2010).

ANT is relatively opaque. The original author of the approach admits that it is difficult to articulate and best described via examples (Latour, 1996). The example of traffic has been used to illustrate the way of understanding networks that ANT points to (Jessen and Jessen, 2017). When a person drives a car they are acting, but their actions are heavily influenced by technology, the material world (the layout of the roads, traffic lights, etc.), the immaterial and social rules, and their own habits. You are the driver, but you feel the force of other actors (other drivers) and the forces of the road layout. In order to get to your destination you are forced into following a pattern which is inscribed by the road designers. You could choose to go a different route but will tend towards that indicated by the signs. To get there quickly and efficiently you have to 'give in' to the network and allow the forces of design and movements of other road users to guide you. Similarly, actors in any network accept rules and roles via what Callon calls 'delegation' (1986). If we think also of the introduction into society of the personal computer or the mobile phone, few would argue that these objects have transformed how individuals interact with them, and that in changing the way that people live their lives, objects have a significant impact on what ANT scholars might not like to call 'society'. This seems a useful approach to think about the ways that individuals interact with gambling machines and appear to be influenced by them. Indeed, a number of scholars and commentators are now drawing parallels between the ways that people interact with their mobile devices (particularly in their use of social media) and the way that people interact with gambling machines (Meshi et al., 2019). ANT is not concerned

with theories about the essence of the various actors in a network, but suggests that what is important is what can be empirically observed about the interactions between them. ANT scholars tend towards the view that interaction is all that there is (Law, 1992: 380).

The theory assumes that any element of the material or social world can be an 'actor' in the sense of doing things which affect human beings. Agency is viewed as residing in a combination of the human, the social and the technological; this helps to overcome dichotomous debates about where agency, and thus responsibility for actions, should be located. Emphasising the point that, from the ANT perspective, agency is never only located in an individual person, Latour says that '*An 'actor' in the hyphenated expression actor-network is not the source of action but the moving target of a vast array of entities swarming toward it*' (Latour, 2005: 46).

The projects which use ANT as a framework for understanding tend to be about exploration of how human and non-human elements are brought together in heterogeneous but more or less stable networks which adhere over time because of interests which are more or less aligned (Latour, 2005). The network metaphor in ANT is used as a means of focusing attention on the relationships between actors. As well as looking at what brings a degree of coherence and stability to a network, the interest is always in dynamic change and what might undermine the coherence of the network. In another key idea, ANT assumes that social structure is not a noun but a verb (Law, 1992), pointing to the ever evolving and changing nature of actor networks.

The non-human entities, as well as being machines or pieces of technology, can

also be ideas and documents. In this sense it has been described as a material-semiotic method which looks at relationships and networks which are simultaneously material (links between things) and semiotic (links between ideas). For an example in relation to documents, Rooke et al. (2012) used ANT to assess the regulation of nicotine products, finding utility in viewing regulations as socio-legal objects which could usefully be seen as actors in the ANT sense. In paradigm examples of ANT, the concepts of problematisation, interestment, enrolment and translation are utilised (Callon, 1986). These are defined by Callon as follows (see Figure 1). Problematisation names and identifies things, including the most important actors, human and non-human and also the nature of the problems that actors face. Prime actors seek to lock other actors into the roles proposed for them. interestment is about how the different actors are then locked into those relationships and networks. Devices of interestment are required for this to happen, and these can take the form of various types of technology, texts, political drivers, and so on. Enrolment and translation are about enrolling new actors into a network and making them part of it by translating their interests so that they are aligned with those of the existing actors. For enrolment to be successful, it requires one set of actors seeking to impose their will on others, but also requires the yielding of other actors to that will (Singleton and Michael, 1993). In the process of translation supporting elements and actants need to be reinforced and competing elements need to be deleted or elided. Many of the non human actants, such as documents, legal statuses and financial resources are sometimes referred to as intermediaries. These material objects can preserve power and order may also be used to destabilise the network. In order to trace networks, processes, and the elements described above, Latour (1996) has suggested that a wide range of documents and sources may be needed.

Actor network theory

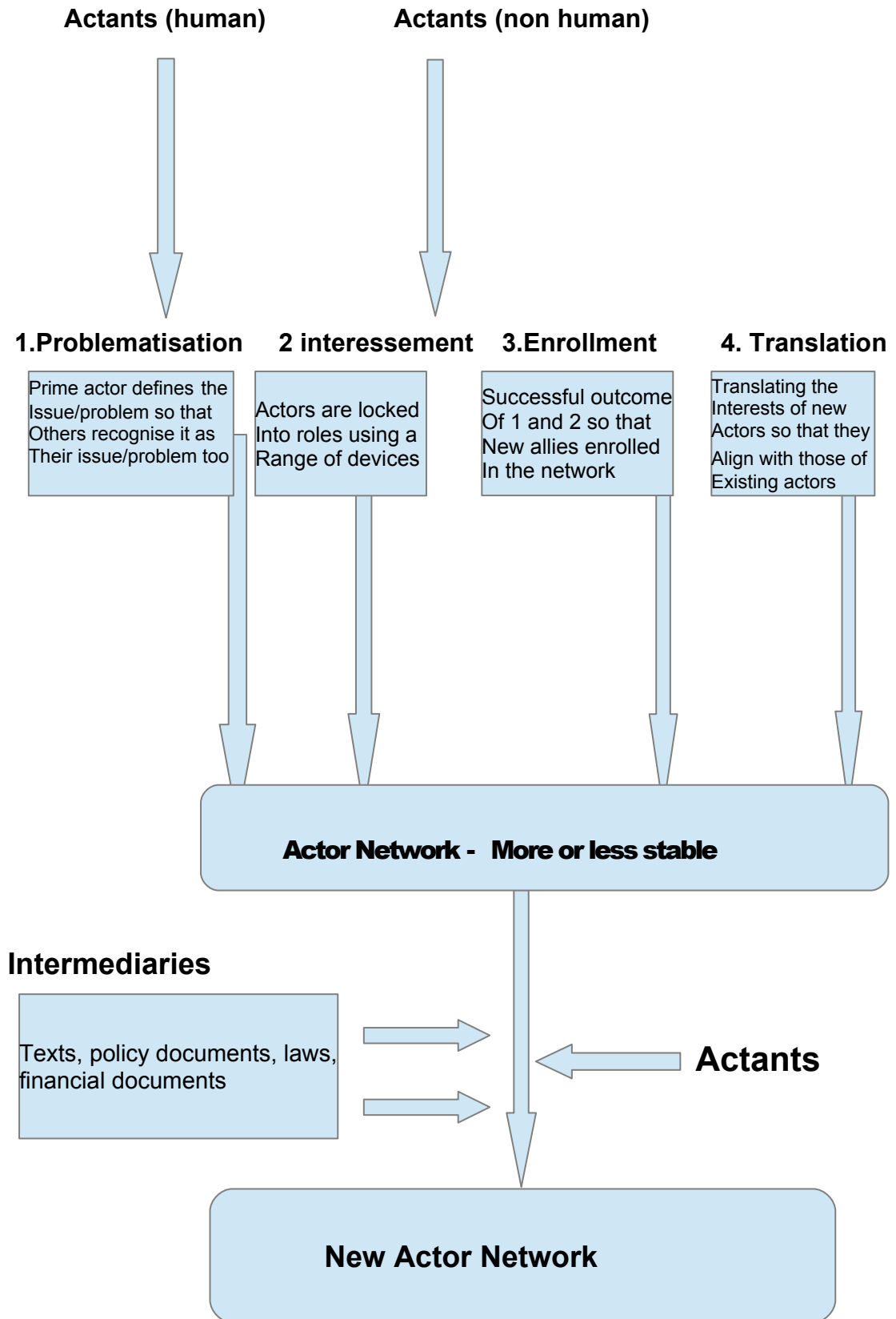


Figure 1 actor network theory

Pointing to the particular applicability to studies of human-machine interactions, Hamilton (2011:57) suggests that '*ANT has always had a particular interest in the role of intelligent machines as hybrid beings that embody human intentions, acting on, amplifying and substituting for their activity*'.

ANT has been applied across a range of disciplines to studies of the ways in which people interact with technology, and recommended as '*useful for the study of the..... consequences of technology projects*' (Greenhalgh and Stones, 2010). Material presented in this thesis applies ANT to some of the consequences of the introduction of FOBT betting machines, intended and unintended.

It is also the case that ANT fits well with and provides a number of examples of fine-grained use of ethnographic methods to study detailed interactions, and Hamilton (2011) suggests that ANT's preferred method is ethnographic. Latour wanted to overcome what he saw as the limitations of much sociology and social theory. He thought that the fixed and binary categories used in much theory were unhelpful. Latour (1999: 194) states that '*it (ANT) was never meant to be a theory of what the social is made of [but] simply another way of being faithful to the insights of ethnomethodology*'. What he meant by this appears to be the indifference of ethnomethodologists to prior theory, and instead the focus on the ways that people make sense of things in the moment and as they interact with others and with objects. In this sense, the aims of actor network theorists are similar to the aims of ethnographers in terms of wanting to understand and privilege the perspectives of the actors themselves rather than the perspective of a particular theory.

3.2 Applying ANT to the study of interactions with gambling machines.

Mills (2018) suggests that the ethnographic precision of ANT can strengthen sociological theory and practice. Key ANT scholars, including Latour and Callon, have pointed to the utility of disrupting taken for granted understandings through the provision of rich or thick description. ANT therefore seemed eminently well-suited to a study of humans and machines which aimed to use ethnographic methods and to be informed by sociological theory. It also seemed suited to a project looking at how the various elements of a network emerged and stayed relatively stable over time, despite a number of challenges to legitimacy. Other scholars have already noted the utility of the approach in relation to studying gambling machines, and Woolley and Livingstone (2010) have applied some aspects of the approach to a study of the development of EGMs in Australia. They showed how innovations in the design of EGMs are intimately connected to changes in gambling behaviour. As noted in the literature reviewed in this thesis, many structural features of machines appear to encourage repeated play. The authors refer to a concept introduced by Thrift (2004) to suggest that the increasing sophistication and numbers of features of EGMs make the commodity more 'sticky', particularly the way that the machines register in multiple sensory registers simultaneously. The 'stickiness' of an encounter with technology for a user may be driven by what Thrift calls the 'technological unconscious', a set of correlations, expectations and 'therefore unconsidered anticipations' (Thrift, 2004: 177). Livingstone and Woolley refer to the processes of 'inscription' and 'translation', which are developed in the ANT literature. Such processes lead to the unconscious expectations and drives to continue interacting with the technology.

One further instance of the application of ANT to gambling appears in the work of Cassidy (2013). She explores the often uneasy but increasingly close relationship between traditional gambling industries and the newer 'social gaming' industries. She discusses the partial convergence between gambling and gaming and the way in which products and consumer preferences evolve in an iterative process. Showing that we should avoid the notion of technological determinism in which fixed products lead to fixed responses from players, Cassidy also uses the ideas of Thrift (2004) to show how knowledge about and expectations of gambling products are co-produced or co-evolve, and so *'refuse a neat distinction between organic and inorganic life or person and environment'* (79).

Scholars of the interface between humans and technology, such as Callon and Thrift, seem to suggest that the process of co-production leads to an evolution of technology which is responsive to the wants of consumers, and that there is some kind of balance between the power of consumers and the power of the technology developers. It might be argued that there is key role for regulators in helping to maintain this balance, and I focus on this in Chapter Four.

In relation to gambling machines specifically, other scholars are less sanguine about the process. Schull (2013: 103) suggests that the attunement which has emerged between gambling machines and gamblers

does not appear to be a process of symmetrical co-creation but a strategic venture, articulated and executed by the gambling industry, to shift customers motivations, preferences and habits.

She quotes an industry executive who is clear that *'what you are doing is establishing player habits... we get our machines there, and the players start becoming familiar with them and they like them, and you keep those players'* (103).

Here is a clear statement that the aim of industry is enrolment in a network and that once enrolled players tend to stay. It might be argued that businesses of all kinds have used marketing and advertising for many decades to promote their products, and that this process of shaping consumer preferences is a legitimate one.

However, as the literatures on the advertising of tobacco (e.g. Rabin and Sugarman, 2001) and alcohol (e.g. Bruijn et al., 2016) illustrate, there has been significant debate about both the impact of advertising and the ethics of it in cases when something is being promoted which leads to harm for at least some of those who respond.

The discussion above suggests that ANT can provide a valuable perspective on interactions between humans and machines, and one which can overcome reductive binaries which focus on either just the person or just the machine. It also fits well with an ethnographic approach. In the chapters which follow, the application of this approach to the experiences of players of FOBT's is made clear, and the utility of the approach in framing data from ethnographic observations is explained.

3.3 Strengths and limitations of ANT

Having introduced the idea of ANT as a useful framework which will be used at various points in the study, it is important to note some limitations of the approach which suggest that other additional frameworks may also be useful and necessary for analysis. A number of sociologists have suggested that ANT is too value neutral and descriptive, and from a critical sociology perspective is weak in that it does not permit any critique of aspects of society as they are (Mills, 2018). It has been

criticised for disavowing traditional sociological concepts such as power, and treating all actors and interactions as of equal interest or value – the notion of ‘generalised symmetry’ (Latour, 1996). It might also be argued that, given the nature of the approach, almost anything (human and non-human) could be counted as part of a network. Strathern (1996: 522) made that point, suggesting that the network metaphor has ‘*properties of autolimitlessness*’. If that were the case, researchers might simply cherry pick elements to illustrate their preconceived ideas and the approach would then have little value. A key tenet though, of ANT is to follow the traces of evidence (Latour, 2007). Key elements of a network are identified, in an ANT approach, via a rich account of the evidence that they leave of their impact and what they make other actors do (Boerboom, 2014). This provides clear criteria for selecting (and verifying) which elements are most influential and therefore relevant in any network. In this study, key actors and intermediaries in relation to machine gambling are selected in relation to evidence of impact as the following chapters show.

Despite the criticisms of ANT, I am following the view of Mills (2018) that

ANT’s great strength is its retention of something like a realist ontology, which has meant that ANT scholars, and those influenced by ANT, have produced some accomplished empirical work which has avoided the customary binaries of conventional social science (Mills 2018: 294).

When attempting to develop sociological perspectives, this element of realism may be a useful counterbalance to some of the ways in which ‘big ideas’ like power and society are often used rather vaguely and the tendency to reification (i.e. making one thing into some other thing which it really is not) of some social theorists. However, whilst I wanted to develop some of the thick description which this approach would allow, I also wanted to include some degree of criticality, to go

beyond mere description of networks, and to examine aspects of power, but in a way that is justifiable and rooted in observable facts.

In the case of gambling, it is clear that some actors or 'actants' have more power in any obvious sense of the word. A multi-billion dollar, global gambling industry with the ability to spend many millions of pounds on advertising, further millions on research and development to engineer gaming machines which entice people to spend maximum 'time on device', unknown amounts of money on lobbying at the highest level (Monbiot, 2018), and to be able to have their products easily accessible on the high street of every town, clearly has more power than an unemployed person with next to no personal or social capital, who is introduced to gambling machines in their local high street. Clearly, individual gamblers have some power in terms of individual agency, but these different types of power cannot be seen to have equivalence. Noting this limitation of ANT, I decided that the theory may provide a useful and perhaps a necessary but not sufficient perspective for framing and linking some of the different data sources. What follows in the remainder of the thesis follows the evidence which was found and uses ANT to frame it, but also includes some more critical perspectives to make sense of some of the evidence.

An example which clearly illustrates and emphasises both the relevance of this kind of approach to the study of machine gambling, and also issues relating to power and the sense of lack of agency felt by gamblers, is provided by Schull in her study of machine gamblers in Las Vegas (Schull, 2012). She describes a map which was drawn for her by a research participant, Mollie. This map included six physical locations connected by roads, in a continuous loop. The loop featured no

exits and inside the circuit '*her figure floated, anchored only to a gambling machine*' (Schull, 2012: 26). The locations included a gas station, a casino and a supermarket; all locations at which Mollie regularly gambles. Also included were the location of a Gamblers Anonymous meeting and the pharmacy where she regularly picked up medications to treat her anxiety. In reflecting on her experiences, Mollie suggests that it was not about the money or the enjoyment but about being trapped: '*you are involved in a series of entrapments that you can't fully appreciate from inside them*' (Schull, 2012: 24).

Schull refers to ANT, and notes how

the idea of addiction as a co-production greater than the sum of the parts from which it emerges resonates with scientific understanding of addiction... and is especially fitting for a study of an addiction to interactive gambling technology (Schull, 2012: 20).

She takes the human-machine encounter at the centre of Mollie's map as the primary unit of analysis and works out from there to illustrate the many actors involved in the gambling networks into which gamblers are enrolled and often remain for considerable periods of time.

My study is ordered differently but covers similar elements. I begin with the history of regulation and explore how the networks in which gambling is situated in the UK have evolved. I look at the evidence about machine gambling and harm and how the gambling networks have shaped that evidence. I then look at the individual human-machine encounters which sit within the networks. Like Schull, I also examine the place of Gamblers Anonymous in the network of a person who has come to think that their interaction with gambling machines has become problematic.

Conclusions

As a framework which avoids binary debates about whether the gambler or the gambling product is primarily responsible for gambling related harm, ANT seems well suited to assessing a wide range of factors which might be involved in the generation and maintenance of gambling related harm. The framework seems particularly well suited to assessing interactions between humans and gambling machines since ANT has already been widely used to study interactions between people and technology. It has been noted that ANT fits well with ethnographic approaches as it also focusses on the lived experience of interactions and relationships.

The limitations of the approach have been assessed. However, the benefits are clear of an approach which acknowledges the wide range of heterogeneous factors which influence a behaviour such as gambling but which is also able to highlight and hone in on those factors which take on the most importance in influencing behaviour and interactions in specific times and places.

ANT perspectives are located throughout the following chapters, providing a thread and perspective which links chapters on the historical evolution and current regulations of gambling machines; the various sources of empirical evidence about harm; and the qualitative data chapters which show how people become enmeshed in networks of gambling but also how they can escape such meshes. In each case, this perspective illustrates relationships and influences between a variety of people and groups, and between technology and people.

Chapter Four: Gambling machines – evolution, regulation and controversies

This chapter outlines the general development of gambling machines and their regulation in the UK through the 20th century before focusing on more recent developments and policy changes which are pertinent to FOBTs. These include the Gambling Review Body report (2001), changes in taxation rules which led to the emergence of FOBTs, the Gambling Act 2005, and the most recent (2018) changes to policy in relation to FOBTs. The aim is to assess links between gambling machines, gambling policy and gambling related harm at different stages in the evolution of the machines and the evolution of policy over the last 100 years. The first part of the chapter considers a number of developments in both regulation and technology which occurred before FOBTs were introduced. Whilst not directly about FOBTs, this section is important in providing context and explaining the conditions which made it possible for FOBTs to appear and to become linked with particular forms of harm.

ANT was explained in detail in the previous chapter. The ANT perspective suggests that a range of documents and other sources need to be considered when considering how networks develop, cohere, and evolve. This chapter illustrates how technological developments and changes in machine design, as well as policy documents and policy changes, and the lobbying power of industry, are all crucial elements in understanding the evolution of networks involving gambling machines, the gambling industry, gamblers, their families and communities. Relevant actor networks at two different points in the 20th century are shown to illustrate key elements in the actor network and changes over time.

This perspective, which incorporates multiple elements and agents, and a historical

dimension, provides a clearer and more nuanced sense of how gambling related harm evolves than one which only considers single elements, such as the psychological profile of gamblers or a single change in gambling law or policy. There are many other approaches to analysing policy development and change and the effects and implications. Some have similarities with ANT – Policy Network Analysis, for example, an approach which also recognises that human actors are limited by systems and technologies that constrain human actions and may even act to some degree in their own right (Manning,2002). However, ANT posits a much stronger and active role for non-human elements and this is perhaps where philosophically and ontologically it is different. Also, in most other approaches, power is taken as a given in the existing social and political system. ANT makes a different claim, suggesting that '*power is something to be analysed as a social accomplishment and a property generated in the course of social and technical interaction*' (Manning,2002: 664). This allows for more focus on how the development of the technology of gambling machines has facilitated greater influence over gamblers, and how this has been in part constrained and in part facilitated by policy changes.

In the chapter, evidence about gambling machine technology, regulations, and gambling related harm across the twentieth century are considered, to show how these elements cohered in particular networks and changed over time. The historical lens shows how some elements which developed at key points in the 20th century have continued to have influence today, and also how the relevant actor networks have shifted and changed in key ways.

It is argued that the recommendations of the Gambling Review Body report, which

were adopted in the Gambling Act 2005, contained competing imperatives which created 'antinomies' of law, which almost inevitably led to an increase in gambling related harm which links to FOBTs. This discussion of the emergence of the current legislative and policy framework provides the context for the more detailed examination of evidence about machine gambling and harm which follows, and then the evidence from lived experience of those who play machines and those who seek help when their gambling becomes problematic which are assessed in later chapters.

4.1 A brief history of machine gambling

It is perhaps surprising to learn that coin-operated machines existed some two thousand years ago. Indeed, the Greek mathematician and inventor Hero (or Heron) is credited with inventing the vending machine (Humphrey et al., 1998).

The industrial revolution led to a quantum leap in relation to the design and production of machines of all kinds. Reith (2006) suggests that the introduction of gaming machines was one of the most significant developments of the nineteenth century in relation to gambling. The fifteen years after 1867 saw 15 patent applications for what were known as 'coin freed devices', but by the 1890s there were over 1000 applications to the UK patent office (Costa, 2013).

The focus in this thesis is on the UK. However, certain developments in the USA are drawn upon as the USA became the world leader in gambling machine development in the late nineteenth and twentieth century. In 1887, an important gambling machine was invented in New York which involved five rotating drums. A decade later, Fey reduced the number of reels from five to three, thus reducing the

number of winning combinations and also developed the mechanism to allow automatic payouts based on these combinations. After tweaking his original design, he produced what is now often seen as the prototype for modern mechanical slot machines. This was later modified to produce one of the most famous machines – the Liberty Bell.

In retrospect, it can be seen that one of the modifications made to Fey's design had particular significance. On Fey's machine only three symbols were visible at any one time. The new machine featured a larger window with the now familiar set up of the lines both above and below the central win line being made visible, offering the repeated visual suggestion to players that they were close to a winning combination of symbols. It is now well established that the near miss or near win is a powerful reinforcer of repeat play in gambling activities. Since Skinner (1953) wrote about the subject, many researchers have confirmed and sought to explain the reasons for the near miss seeming to motivate continued gambling despite it actually constituting a loss (Cote et al., 2003; Dymond et al., 2012; Foxall and Sigursson, 2012). The evolution of gambling machine design since the Liberty Bell has been strongly influenced by this knowledge about the power of anything that is perceived as a near miss being a strong driver for continued play. Evidence about the links between this feature of gambling machine design and gambling related harm is analysed in more detail in the literature review in Chapter Five.

Concern about the changing nature of gambling experiences which various technologies have enabled is not new. The first echoes of concerns were heard from anti-gambling groups at the time that modern machines first appeared. Miers (2004: 91) suggests that such groups soon recognised the structural

characteristics of the new machines, and the potential for harm that these might lead to. These anti-gambling groups were a key actor at this period – see figure two as well as discussion below (4.1 and 4.2)

As gambling machines gained a foothold in many sites in the UK after 1900, the Home Office (the department of government which regulated gambling in the UK for most of the 20th century) sought to limit or ban them. The first few years of the twentieth century saw a spate of prosecutions using existing anti-gambling laws. The industry then began to organise collectively and respond. Using a tactic seen again a century later when tougher regulation of FOBT machines was threatened, they referred to job losses, suggesting at one time that 5000 workmen had been thrown out of work as result of actions by the commissioner of police. This cut little ice, and a year later, in 1903, a test case, *Fielding v Turner*, resulted in a sweetshop owner being charged and found guilty under S4 of the Gaming House Act of 1854, of illegally using a game of chance. Following this, payouts on machines in public places were kept deliberately low, often offering no more than money back for winning, in order to avoid the attentions of the police.

A significant development in the USA after World War One was the 'prohibition' era. The Volsted Prohibition act (1920) was aimed at abolishing the manufacture, sale and consumption of alcohol. The immediate effect was the closure of all bars, the site of most gambling machines. The companies who made and operated the machines then looked for an export market to maintain business. Given the common language, existing ties and the relatively more liberal regulatory position at the time, Britain seemed to be a natural market. Large numbers of machines were then imported into Britain from the USA in the 1920s (Miers, 2002) Whilst

there remained uncertainties in regulatory terms, a 'three reeler' 'fruit machine' of the type being shipped from the USA to Britain had been declared legal by a Canadian court. As decisions in British courts were held binding in the commonwealth country of Canada, it was hoped that the Canadian judgement about such machines would be upheld in Britain.

These machines became very successful for operators and very widely used. Inevitably this led to more attention from the authorities. It is estimated that in London numbers increased from 140 to over 8000 in 1926. By the 1920s and 1930s, amusement arcades were firmly established as a core component of the seaside holiday, in Brighton and many other resorts (Chapman, 2013). They featured a broad range of fully automated machines that included the well-known cranes (also known as 'grabbers'), and the first form of automated gambling machine, commonly known as 'one-armed bandits'. The arcades were often in very modern buildings such as the 'Wonderland' complex in Cleethorpes. Such venues would have offered '*extraordinary experiences in futuristic settings and in this way the arcades helped to create the atmosphere of excitement, pleasure, escape and the extraordinary at British seaside resorts*' (Chapman, 2013: 324).

It is clear from even this brief historical discussion, that legal regimes in both the UK and the US, and cultural and economic factors, are crucial in understanding the development of a gambling machine actor network in the UK in that period. As noted in chapter three the elements of an actor network can be very heterogeneous and numerous. The point is to hone in on those relevant to a particular problem or issue at a given time. Figure 2 (below) shows the prime actors and other key actants in the relevant actor network which pertains to the

development of gambling machines in the first half of the twentieth century (later in the chapter a comparison is offered showing how the actor network pertinent to gambling machines had morphed and changed at the end of the twentieth century).

Gambling Machine actor network

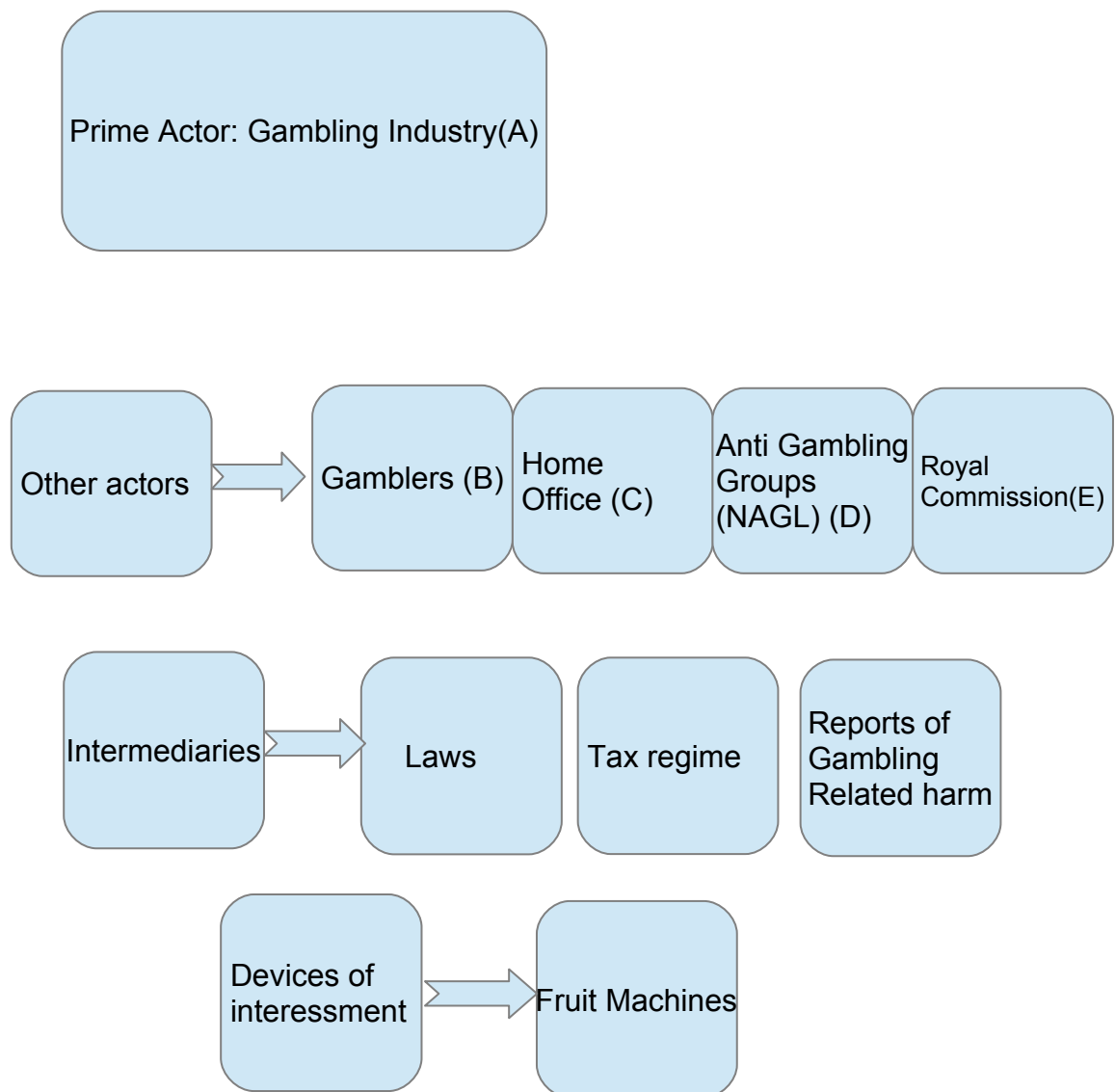


Figure 2 : Gambling Machine actor network

The period between the wars was the heyday of seaside resorts, and the resulting machine business was too lucrative for operators to go down without a fight against regulation which would reduce their business. A trade body, the British Automatic Machine Operators Society (BAMOS), was formed in 1926. They aimed to take collective action on behalf of operators of different machines to challenge legal actions. The role of such trade bodies is important. BAMOS morphed into BACTA (British Amusement Catering Trade Association), and this organisation has played a high-profile role in the campaign against FOBTs (see discussion of this campaign later in this chapter).

The gambling industry can be seen as the Prime Actor in this period and in relation to gambling machines. Here the 'gambling industry' is taken to include owners and operators of arcades and their trade body, BAMOS, and also machine manufacturers and vendors. The machines are the 'devices of interestment', and the carefully designed games which the machines offer provide the mechanisms and 'scripts' which persuade gamblers to continue interacting with them. As noted above the structural features which encourage repeat play, such as the 'near miss' were already a feature of games in this period. Actors that need to be persuaded of the legitimacy of the continued development and operation of the machines included the government department responsible for regulation of gambling (at that time the Home Office), and the Royal Commissions which periodically assessed gambling regulation (in this case the Commission that sat from 1932-33). Other actors who are important in this period include anti-gambling groups, of which the NAGL was the most prominent and influential (Dixon, 1991). The NAGL was spearheaded by the social reformer Seebohm Rowntree and also had the support of a number of labour MP's, and in particular the support of Ramsay MacDonald,

who was Prime Minister for several periods in the 1920s and 1930s.

As figure 2 shows, the process of interessement involves strengthening certain links and relationships whilst weakening links between other actors. In this case the industry aims to strengthen links with gamblers whilst reducing the influence of the Home Office, MP's and anti-gambling campaigners on those same gamblers. Widespread use of the machines continued alongside legal challenges through the 1920s. By 1932, the metropolitan police chief suggested again that the most troublesome form of gaming at the time was the 'automatic machine of the fruit variety' (Clapson, 1992: 85). This was the year in which one of the periodic Royal Commissions heard a large amount of evidence in relation to the various forms of gambling in the UK. This Commission faced the same problem that others before and after have done: the amount and reliability of the evidence presented to them about gambling-related harm was variable and often poor. Their report in 1933 indicated that they were not convinced that gambling overall was hugely harmful to society, but they did clearly state that machines were undesirable and wished to see the law strengthened in order to ensure that any machines offering prizes for playing games should be banned in shops, fairs and other public places (Royal Commission, 1933).

There was then a crisis of legitimacy for gambling machines in both the USA and the UK in the 1930s. After continuing concerns and difficulties with enforcement, it has been suggested that the Metropolitan Police, perhaps emboldened by the Royal Commission, conducted a 'war on fruit machines' in 1935 and 1936 (Miers, 2004: 110). This was the same decade in which, in the USA, there were high profile displays of regulators' disapproval of these kinds of machines. In 1934, the

mayor of New York organised an expose at which he invited members of the public to examine 50 such machines. He recruited academics to help explain his message, distributed leaflets entitled, 'you can't win in the slot machine racket', and was happy to be pictured laying into the guts of a machine with the effective end of a sledgehammer. Perhaps following this example, the Metropolitan police seized and destroyed 57 machines at the 1937 World's Fair at the Royal Agricultural Hall in London. However, despite their legitimacy being undermined by a new public perception, and by clear disapproval from the criminal justice system, they survived because regulators continued to, if not support, then at least not censure the use of the machines.

Miers has stated that in relation to the UK, *'it is abundantly clear, with hindsight, that the Home Office had little inkling either of the attractiveness of these machines to the player or of the profitability to their operators'* (Miers, 2004: 121). They had many reports from Chief Constables, and others of the potential harms of these machines, but their position on gambling machines was initially hesitant and indecisive.

4.2 Machine gambling after World War Two

The Second World War adversely affected the gambling machine industry. Many amusement arcades had to close because of bombing, in London and elsewhere, although those that remained did well, and it is suggested that *'what was lost on the swings was got back on the roundabouts'* (Coin machine journal, 1947: 48).

Business increased again in the post war period, particularly for the seaside arcades. Kynaston (2010: 214) notes that for day trips and holidays there was, 'by

the early 1950s an inexorably growing demand'. A 1951, Betting in Britain report (Kemsley and Ginsburg, 1951), noted that betting was '*almost a universal habit*', and was foremost among working class men. This population were also the most likely to be taking the trips and holidays to the seaside with their families and to be betting in the arcades when doing so.

A Royal Commission on betting, lotteries and gaming, assessing the situation between 1949-51, heard typically strident claims from the anti-gambling lobby about the harm that gambling machines could wreak, particularly on the young. Equally typically, they heard evidence from industry bodies that the machines provided '*inexpensive and wholesome entertainment that is perfectly innocuous*' (Royal Commission, 1951). Detailed evidence on which to assess the validity of the two sets of views was lacking at the time. In the end, based on the evidence presented, the Commission concluded unequivocally that '*gambling is of no significance as a direct cause of serious crime*' (Royal Commission, 1951: 437), and on the questions of personal and moral harm thought that only a small proportion of those who gambled might be harmed at all. However, it is notable that the Commission did recognise unique risks in relation to the structural features of gambling machines:

the particular danger we see in this type of machine is that, since it does not require the intervention of an attendant in order to give the prize, (the machine) is capable of a rapidity of turnover which would render the element of gambling, even within the strict limits, which we set, no longer trivial (Royal Commission, 1951: 434)

As a result, they did recommend that purely chance-based gambling machines should not be permitted by law, though this was not enforced (Miers, 2004: 119). Perhaps the lack of evidence and the lack of real concern about machines by the Home Office at that time was based in part on the way

in which one of the biggest sources of recent evidence had been constructed. A Mass Observation (MO) study, which was funded and supported by the devoted anti-gambling campaigner Seebohm Rowntree, surveyed 20,000 people in 1947 (Mass Observation, 1948). Participants were asked about six types of gambling (pools, dogs, horses, card games, raffles, crosswords, etc.). There was no mention of one-armed bandits, or fruit machines, and there is no reference to them in the conclusions or recommendations of the report. Despite this, in examining all of the responses I found a number of references to gambling related harm which participants specifically related to machine gambling. For example, one miner in a working mens' club related very large monetary losses to gambling. The interviewer asked whether this related to horses or dogs, to which he replied that the loss of all of his money (he estimated £500 over a number of years) was entirely related to slot machines present in the club (Mass Observation, 1948). Because it was not asked about, evidence of harm relating to machines in that period may be largely hidden. However, following the traces with careful examination of contemporary sources highlights that, when given the opportunity, a number of individuals talked about experiencing more problems with machines than with other forms of gambling, suggesting that a particular link between gambling machines and gambling related harm existed.

4.3 1960s – A decade of new freedoms?

We have noted some concerns expressed at various points through the twentieth century about gambling machines. However, before 1960 their presence in the UK was almost entirely confined to amusement arcades and certain social clubs. From that year, after more permissive legislation, local authorities had licensing functions

for a number of types of machine, including those termed 'amusements with prizes'. Foreshadowing issues in the current era, the 1960 Betting Act was vague on the licensing criteria that local authorities could use, and industry much sharper, so that there was an expansion of machines into many premises. In fact, although the 1960 Act was significant in many ways, it had little to say about gaming machines. Miers (2002) suggests that the Act was wholly ineffective in preventing the massive commercial exploitation of gaming, and that the absence of controls restricting the availability of gaming facilities encouraged excessive participation, leading to consumer indebtedness, personal bankruptcy and criminality (Miers, 2002: 31). The situation in which such gambling related harms followed from much wider availability of gambling machines foreshadows the situation which occurred forty years later with FOBTs.

Local authorities subsequently lobbied for clarity and greater powers. However, it was not until the 1968 Gaming Act that significant changes were made to regulation in relation to gambling machines. Architects of the 1960 legislation and of the 1963 Act perhaps could not have foreseen the technological advances which led to significant changes to machine design in the 1960s. In particular, the introduction of the electro-mechanical design in 1963 enabled electrical control of the payout mechanisms, allowing for payouts of up to 500 coins (rather than the limit of 20 from the previous mechanical mechanisms), although the reels were still mechanical (Ethier, 2010: 457). The Bally company, which introduced this design, were able to dominate the market for the next 20 years. Other innovations enabled by the new technology included multiple payout lines and increased payouts and jackpots, as the payout could now be linked to the number of coins played. We now know, from literature reviews of a number of studies, that the size of stakes and prizes, and multiple contemporaneous games or lines of play, can all be

factors in increased play and have been linked with problem gambling (Livingstone and Woolley, 2008) (see also further analysis of these factors in Chapter Five).

One other point which is relevant in relation to the 1960s is the continuing popularity of seaside arcades. As noted above, the 1960 Act allowed and led to a proliferation of gambling machines. The general decline during the 1960s of seaside venues as holiday resorts led to many of the grand theatres, concert halls, pavilions and ballrooms being closed due to reduced patronage. In many cases, these buildings were swiftly transformed into amusement arcades, which was a relatively simple task as the arcades did not require the buildings to be extensively refurbished. People were not visiting seaside towns for holidays in the same manner as in the past, but profits continued in the arcades (Chapman, 2013). This point highlights something which is important to an ANT perspective, but might be ignored in other frames of reference. In this period non-human actants and intermediaries included new electro-mechanical reel machines, large buildings in seaside towns lying empty, and the 1960 and 1968 gambling acts and related regulations. These can be viewed as highly relevant in understanding the networks in which gambling actually took place at the time. Whereas many theorists might point to social factors as important in this period such as the much more liberal and permissive culture which arrived in the 1960s and the decline of religious belief and associated moral condemnation of gambling (Clapson 1992), an ANT perspective reminds us that material and geographical factors, such as the ready availability of cheap, large premises, and the advances in machine design, may be as important. Certainly, these kind of non-human actants left important traces of their influence as described above.

4.4 Technological developments and machine gambling

Machine design has become very sophisticated. The industry has moved towards a world in which the experience of playing on a gambling machine can be very immersive, and for some at least, very consuming of their time, as well as money. The focus of this study, the FOBT, is a result of this process. How did we get to this point? In the mid-1960s, mechanical slot games began to give way to electro-mechanical machines. A bigger step change occurred with the introduction of digital microprocessors bringing computer technology to the gambling machine industry in 1978 (Ernkvist, 2009). This led to the modern machine, which combines a sophisticated computer chip which is programmed with the predetermined house edge, or percentage take for the operator, with particular scoring and payout patterns for the specific game. This is then linked to a random number generator (RNG) which cycles through huge numbers of combinations every second, continuing even whilst there is no one playing the game. The continuously running RNG makes electronic gambling machines perhaps closer to true random chance than any other form of gambling (see Ernkvist, 2009; Turner & Horbay, 2003). Up until the mid-1970s, gambling machines accounted for just over 30% of casino revenues (Ernkvist, 2009). A number of innovations, such as that continuously running RNG (random number generator), virtual reels, multiline games, video gambling games, customer loyalty programs, bill acceptors, wide area progressive jackpots, and bonus features, have emerged in the past 35 years and have established electronic gambling generally as the most profitable form of gambling for operators today (Ernkvist, 2009). In the UK, different types of electronic machines have remained features in amusement arcades, motorway services and pubs and clubs, as well as in casinos. What has been new has been the proliferation of FOBTs. There are now some 33,000 of these machines in the UK,

up from just over 2000 in the year after the 2005 Gambling Act (Webb, 2014). The revenue from FOBTs is in the region of £900 per week per machine, netting some £1.5 billion per year for the industry (Orford and Hancock, 2014).

It is clear then, that advances in technology and design have led to new types of gambling in the form of sophisticated machines which are cleverly engineered and situated to ensure widespread availability, and to entice people to spend longer periods of time gambling. The result has indisputably been increased profits for the gambling industry and many people spending significant amounts of time and money on the machines.

This chapter has so far considered gambling-related harm in relation to earlier types of machine. The level of harm in terms of problem gambling, which relates to the more modern and sophisticated FOBTs is disputed, but a range of harms have been reported by gamblers, MPs, local communities, counselling agencies, researchers and campaign groups (*New Statesman*, 2014). Evidence presented in subsequent chapters will assess the nature and extent of this harm, and whether it differs from harm linked to other forms of gambling.

Technological developments in terms of both gambling machines, and in terms of the internet, clearly transformed the gambling landscape between the 1960s and the 1990s. Given the advances in design, the increased and widespread availability of FOBTs, and their significant profitability to operators, it is clear that the FOBT has become an important 'actant' in the networks of activities and relationships which form the lives of many people who gamble in contemporary society. At the turn of the millennium, another group of key actants in the UK, regulators, recognised the need to look again at the industry. The next section

addresses the major review which took place at the end of the 20th century as a response to these technological developments.

4.5 The Gambling Review Body (2000) and gambling machines

A Gambling Review was commissioned by the UK Home Office in 1999. By the time it reported, responsibility for gambling had moved to a different government department, that for Culture, Media and Sport (DCMS). The Review's brief had been to look at all aspects of gambling in the UK, other than the National Lottery.

The specific terms of reference for the Gambling Review Body were as follows.

Consider the current state of the gambling industry and the ways in which it might change over the next ten years in the light of economic pressures, the growth of e-commerce, technological developments and wider leisure industry and international trends.

Consider the social impact of gambling and the costs and benefits.

Consider, and make recommendations for, the kind and extent of regulation appropriate for gambling activities in Great Britain, having regard to:

their wider social impact;

the need to protect the young and vulnerable from exploitation and to protect all gamblers from unfair practices;

the importance of preventing gambling from being carried out in a way which allows crime, disorder or public nuisance;

the need to keep the industry free from infiltration by organised and other serious crime, and from money laundering risks;

the desirability of creating an environment in which the commercial opportunities for gambling, including its international competitiveness, maximise the UK's economic welfare; and

the implications for the current system of taxation, and the scope for its

further development (Gambling Review Body,2001).

These terms of reference, with instructions to focus on the desirability of creating an environment in which commercial opportunities maximise economic welfare, at the same time as the need to protect the young and vulnerable from exploitation, hint at the antinomies which became enshrined in the Gambling Act.

The resulting Budd report was published in 2001 following a significant review of legislation and practice. The review body held over 20 oral evidence sessions and received over 200 written submissions. Fixed odds betting terminals (FOBTS), which have become such a feature of the gambling debate in the years since, were only introduced into bookmakers in the year that the review body published their report and their impact could not have been foreseen by that body. However, even without FOBTs, concerns about existing machines pepper the debates of the review body.

One of the members of that body has noted that one prediction was easy to make. That gambling via the internet was going to increase significantly, and that much of that activity was going to gravitate to low tax locations. He also suggests that they were *'worried about slot machines, and the possibility that every home or office computer could be transformed into a highly addictive gambling machine'* (Wolff, 2011: 38). Online gambling was not a focus of the present study, though it is worth noting at this point that a key finding of my research was a common pattern of migrating from FOBT use to online gambling (see chapter Six). The point here is that the clear trajectory of growth in internet gambling at the time was something which required a regulatory response, for a variety of reasons, including: ensuring that the profits of an industry which was rapidly moving offshore and promoting

remote internet gambling could be taxed; preventing crime; and preventing harm to the vulnerable. In relation to gambling machines, and reflecting the permissiveness and emphasis on both increased choice and on economic development in the recommendations, the Gambling Review Body recommended that '*betting shops be permitted to have jackpot machines*' (Gambling Review Body, 2001: 1.6). This has proved to be a significant development in relation to machine gambling.

Recognising some of the uncertainties about the impact of the changes, they also suggested that '*It will be a primary task of the Gambling Commission to monitor the scale of problem gambling and to test the effects of new types of gambling, particularly those associated with gaming machines*' (ibid: 1.22).

The body said that they were

uneasy about encouraging children to gamble. Most will come to no harm but some will... if we were creating the regulations for the first time we would certainly recommend that no gaming machines should be played by under 18's (ibid: 23.21)

They went on, *Further, we recommend that the Government formally review the position in five years time to determine whether any such gambling by under 18s should be permitted, or whether Great Britain should come into line with other jurisdictions and ban it* (ibid: 1.25)

Given that one of the basic principles of the Review Body was that gambling should be restricted to people of 18 years and over, and that they were concerned about harm to under 18s, one might wonder why they continued to allow under 18s access to gambling machines. The answer, in the admission of the review body themselves, is that they were subjected to considerable pressure and lobbying by the gambling industry. Such lobbying has intensified in the years since, as the industry has grown significantly and has much bigger revenues to protect. Lobbying by the gambling industry is perhaps not as high profile as that by the

tobacco and alcohol industries, but is well established, and the industry has learned from those other industries (Adams, 2013; Thomas et al., 2016). In the UK in 2011, for example, after three years as Communications Manager for the Tobacco Manufacturer's Association, Dirk Vennix became Chief Executive of the Association of British Bookmakers. Vennix told an interviewer that, *'the move was simple: the two industries share many of the same contacts within government, and both have the same challenge – facing a deluge of regulatory and taxation measures'* (Welbirg, 2012: 18).

The ANT perspective, highlighted in the previous chapter suggests that we should always follow the traces to see connections between various actors and the networks in which they take part (Cresswell et al., 2010). Lobbying typically goes on behind closed doors, but leaves its traces as the above example shows. Lobbyists must be therefore considered important actants since their actions can have significant effects. Other examples of the influence of lobbying follow in the next sections.

It is also of interest here that the author of the Budd report has since said that

FOBTs are not in the spirit of our report. We agreed that betting shops should have gaming machines but not of this type. We also believed that local authorities should have a larger role in licensing premises (All Party Parliamentary Group on fixed odds betting terminals, 2017).

It is clear, then, that the Gambling Review Body had concerns about machine gambling, particularly in relation to young people, and also about the consequences of internet gambling. The remainder of this thesis will show why these remain areas of concern in terms of gambling related harm. The seed which

led to the huge growth in the use of FOBTs was only planted in the year that the Gambling Review Body published their report. The next section addresses the key change which led to that growth.

4.6 The Importance of the Tax Regime

The major regulatory change which led to a significant change in the pattern of machine gambling in the UK in the early 21st century actually occurred in the year of the publication of the Budd report, but well before the new legislation which was the outcome of that report. The change was a move by the Chancellor in 2001 to abolish the long standing tax or duty on individual bets, in favour of a tax on bookmakers' gross profits.

With the abolition of duty on each individual bet, gambling activities which offered a low profit margin on each transaction but a much greater frequency of play, became significantly more attractive to industry. The removal of the 6.75% duty paid by bookmakers to government (and passed on to players as a 9% tax) meant that for the first time in the 40 year history of licensed betting shops there was no tax on any wagers placed in the shops. Researchers noted the significance of this change:

that is the exact moment when the fortunes of the industry changed. The next year William Hill's profits surged from £32m to £170M, a rise of 527 per cent (The Independent, 2005).

The same study predicted a strong rise in spending on fruit machines as well as an increase in problem gamblers. The ABB (Association of British Bookmakers) note that the abolition of the long-standing betting duty

allowed the betting industry to introduce new lower margin products. The roulette game was introduced to 16,000 terminals which became known as fixed odds betting terminals (ABB, 2013).

The legal status of FOBTs was uncertain at first, and contentious issues with regard to their status were resolved by a code of practice agreed in 2003, which provided that Licensed Betting Offices (LBOs) would be able to operate no more than four machines in total (whether conventional gaming machines or FOBTs, or a mix of the two); that the maximum prize would be £500 and the maximum stake £100; that no casino games other than roulette would be allowed on FOBTs; and that their speed of play would be restricted (Joint Committee, 2004: 485-487).

More recent tax changes will be considered later, but the key development which followed chronologically from this significant change in the way betting was taxed was the development and implementation of the Gambling Act, which incorporated many of the recommendations of the review body.

4.7 A White Paper and a draft Bill

A Government White Paper, *A Safe Bet for Success*, was published in March 2002 and paved the way for new legislation (DCMS, 2002). This was based on and was a response to the report of the Gambling Review Body (The Budd report).

Expressed within the White Paper was a belief that confining high stakes machines to premises where gambling is the principal activity was a sufficient barrier to 'harder' gambling, and there was no sense that allowing them into multiple premises on every high street (via betting shops) might be problematic.

In response to concerns of the review body regarding features of gaming machines

which can lead to repetitive and compulsive play (and in particular among children), the White Paper suggested that the proposed new regime would at the same time provide more choice for adult gamblers and new opportunities for business; better protection for children and other vulnerable persons; and more effective controls on the location of different categories of gambling machines and the numbers permitted.

In relation to this, there was some awareness of what was beginning to happen with the development of FOBTs. The problem was noted that under the existing law FOBTs were not classed as Gaming Machines, and therefore there could be no limit on stakes and prizes. There was a clear view expressed that the Government had *'no wish to stifle technological innovations of this kind, and indeed welcomes the application of new technologies right across the industry'* (DCMS, 2002: 17). They went on to note that it would be necessary to ensure that the new legislation was drafted in such a way as to enable the Gambling Commission to bring FOBTs within the relevant controls for gaming machines.

Section 7 of the document referred to *'dealing with the downside: social responsibility'*. The opening paragraph of this section on social responsibility is telling in terms of the language used:

In the Government's view the law should no longer incorporate or reflect any assumption that gambling is an activity which is objectionable and which people should have no encouragement to pursue. It is an important industry in its own right, meeting the legitimate desires of many millions of people and providing many thousands of jobs (ibid: 29).

In other words, despite this being a section about social responsibility, the headline message was that people should be not only allowed to but actively *encouraged* to

gamble, and that the importance of the industry and the jobs it provides are paramount. In this section there were, however, also acknowledgements of the reality of problem gambling, that there were up to 375,000 problem gamblers at that time and that there were '*no grounds for complacency*' in this regard.

The response was to suggest that a parallel process of 'statutory' safeguards on the one hand, and a commitment by operators to conduct their business in a way that is socially responsible on the other, would be sufficient to '*deal with the downside*'. In relation to social responsibility, there was agreement with the review body conclusion that the Gambling Commission should issue formal codes of practice in relation to social responsibility, which in turn should become part of the conditions of receiving an operating license.

The paper rightly points to the tightening of the rules on gaming machines in many public premises, which was proposed for the new gambling legislation. However, in responding to the second part of this recommendation, looking to a ban on all machines available to children in five years' time, the issue is dealt with by a piece of linguistic sophistry:

Under this regime children will continue to be allowed to play any AWP machines. But they will not be allowed to play gaming machines, wherever sited, in any circumstances. This is a clear and simple principle. The Government believes that this will fully address the concerns articulated by the Review Body about access by children to potentially high risk forms of gambling and about the proliferation of gaming machines in premises that are not subject to any kind of systematic licensing or regulation. But it will also avoid unnecessary interference with the ability of a wide range of businesses to provide amusements with prizes, and with the freedom of children to enjoy them (ibdi:31).

Yet what is an 'amusement with prizes' (AWP) machine? Earlier, the White Paper

had noted that '*There is a category of gaming machine—the amusement with prizes (AWP) machine which pays out up to £25 for a 30 pence stake. On any account this is gambling*' (my emphasis). However, under a new definition of AWP, and simply because stakes and prizes are lower (but still exist), it is no longer a gaming machine.

The key reason given for avoiding any action on AWP's was

the serious damage which they believed the recommendation would do to small businesses, and in particular to those in seaside and other resorts where children and their families had enjoyed playing a wide range of low value gaming machines for many years (ibid: 31).

Again, this points to the influence of lobbying. An earlier section noted how the part of the gambling industry which owned AWP's had formed a strong trade body back in the 1930s and this body has continued to influence debates and the direction of regulation.

There has been some focus in the above section on regulation in relation to children and gambling machines, and on AWP's rather than FOBT's. This might seem tangential to discussions of FOBT related harm. However, evidence gathered for this study and presented in chapters six and seven will highlight the links between experience of machine gambling as a child and graduating to FOBT related harm later in life, making this an important and relevant aspect to consider.

Following the White Paper, a draft Bill was published in November 2003, and further draft clauses were published in February and March 2004.

4.8 Legislative Scrutiny

The Gambling Act 2005 was introduced as a bill in 2003. The purpose of the draft Bill was to enable effective pre-legislative scrutiny to take place by a Joint Committee of both Houses. A culture is developing of more detailed deliberation by our law makers of important bills which come before parliament (Kelly, 2011).

The Joint Committee was convened on 16 September 2003, and produced two reports on 7th April 2004 (HL paper 63-1; HC 139-1) and 22nd July 2004 (HL Paper 146-1; HC 843-1). The committee suggest that limiting the risk of increased problem gambling had informed many of the recommendations elsewhere in their report, such as proposals to limit the proliferation of casino slot machines. They refer specifically to FOBTs:

A number of witnesses have, in particular, cited fixed odds betting terminals (FOBTs)... and remote gambling as areas which seem to have had an impact on problem gambling levels since the last study.

The committee said: '*We have recommended that FOBTs are located only in casinos and licensed betting shops to avoid their proliferation and the associated risk of increased problem gambling*' (ibid: 491).

It might be observed that this seems slightly naïve. Allowing FOBTs in licensed betting shops allowed proliferation on quite a scale and evidence in chapters Five, Six and Seven suggests that this recommendation, which was followed, did not in fact prevent the identified risk of an increase in problem gambling.

4.9 The Gambling Act 2005

At this point, it should be noted that there are now some differences across the 'home nations' of the UK in terms of gambling policy. Whilst the Gambling Act 2005 applies to England, Wales, and Scotland, it gave delegated powers to enable Scottish ministers to regulate licensing conditions for Scotland in different ways. The situation in Northern Ireland is also different and somewhat anomalous. There, gambling (other than the National Lottery) is regulated under the Betting, Gaming, Lotteries & Amusements (NI) Order 1985 ('the 1985 Order'). The 1985 Order is in turn modelled on older UK law which was repealed and replaced by the Gambling Act 2005.

Adopting many of the recommendations of the 2000 review body, the Gambling Act 2005 provided a significant new regulatory regime based on three stated overarching principles:

- (a) preventing gambling from being a source of crime or disorder, being associated with crime or disorder or being used to support crime;
- (b) ensuring that gambling is conducted in a fair and open way; and
- (c) protecting children and other vulnerable persons from being harmed or exploited by gambling.

Setting the tone for what was to come in this Act, the Secretary of State said in a speech to industry in 2003:

In the future well informed adults will have greater freedom and choice to spend their leisure money on gambling...the law will, for the first time, treat them like grown ups. Outdated restrictions will be removed (Light, 2003: 634).

A clear sense of the state moving out of the way, and ceasing to be paternalistic or concerned about gambling activity, was evident. A 'permissive' regime was

signalled by government and enshrined in the Act, with the new Gambling Commission being required to permit gambling and Licensing Authorities being required to 'aim to permit the use of premises for gambling' (Gambling Act 2005, chapter 19).

Stated overarching principles of the Gambling Act 2005 relate to the prevention of harm and crime, and the protection of the vulnerable, but the fundamental assumptions and consequences of the Act are permissive in the sense of allowing unfettered expansion of gambling opportunities. The philosophy and value base which underpins this is one of economic liberalism, and follows a precedent set by the parliamentary committee which addressed the issue of gambling as long ago as 1844. That group suggested that *'nobody now disputes the opinion of Adam Smith that governments ought not to pretend to watch over the economy of private people'* (Miers, 2004: 59).

Politically and culturally, Britain has tended to maintain a stance which balances some limited state paternalism whilst generally being committed to individual liberty and individual economic responsibility. As one author puts it, Britain: *'excels in having come to terms with the fact that people in large numbers need both to be conscious of one another and leave one another alone'* (Elton, 1984).

The debates highlighted earlier in both the White Paper and pre-legislative scrutiny, which resulted in favouring business opportunity and declining to put further restrictions on the availability of gambling machines to children, illustrate this thrust.

Because of this permissive focus, many concerns expressed by stakeholders and considered by the Budd Review were set aside in favour of allowing and encouraging the expansion of gambling. In this regard, Light (2007) has noted that the Gambling Act recognised the potential for harm and the distinction between 'harder' more risky forms of gambling (such as gaming machines) and softer less risky ones, but he also suggests that the distinction is blurred in places and that the reforms the Act ushered in *'represent a move towards an increase in harder forms of gambling'* (635).

In relation to 'harder' forms of gambling offered by machines, section 172 provided details of the new licensing regime in relation to different types and categories of machine. 'Family entertainment centres', 'Adult gaming centres' and Casinos were each allowed to have different numbers of machines in various categories. Only the latter two (and licensed betting shops) were allowed to have what were classed as B2 category machines, those offering the highest stakes and highest prizes (Gambling Act 2005, ch 19).

As is often the case with primary legislation, the Gambling Act allowed for secondary legislation to make changes to the primary Act. Thus, the regulation of gaming machines is contained not only in the 2005 Act, but in a plethora of statutory instruments, and also in licence conditions and technical standards documents promulgated by the Gambling Commission (Monkcom, 2009: 25.13). The most important regulations for present purposes were the Categories of Gaming Machine Regulations 2007/2158. These regulations allowed Category B2 gaming machines to offer the highest maximum stake of any gaming machine in Great Britain (up to £100). Further minor amendments to these regulations appeared in 2009 and 2011 before a full review of the legislation. What became

known as FOBTs are machines which can have content and game types in various categories, but generally have B2 category games, the most popular of which is Roulette. As a 2015 briefing for parliament noted, '*B2 machines have proved controversial since they first appeared*' (Woodhouse, 2015: 3).

It is clear then that there was a good deal of scrutiny and debate prior to the Act, and also that there is a detailed and well thought out regulatory architecture within the Act covering all forms of gambling, including machine gambling. One outside observer, who is an expert on gambling law, suggests that '*the Budd report and the subsequent changes in legislation and policy have much to recommend them, noting that the DCMS have made a large number of regulatory modifications without too much fuss.*' (Waugh, 2016: 36). However, he also goes on to say:

Against this, a long list of unresolved regulatory issues suggests flaws in the system. That list includes the long-running saga of high stakes machines in betting shops, concerns over the prevalence of gambling advertising (particularly prior to the watershed)..... claims of misuse of the licensing regimes for bingo clubs and betting shops (to gain superior machine entitlements),..... concerns regarding adequacy of resources to tackle gambling-related harm, and allegations that research into problem gambling lacks independence (Waugh, 2016:37).

The Gambling Act became the key piece of regulatory architecture following 2005. Figure 3 (below) suggests the key elements of the relevant actor network in relation to FOBTs, following this development.

FOBT Actor Network

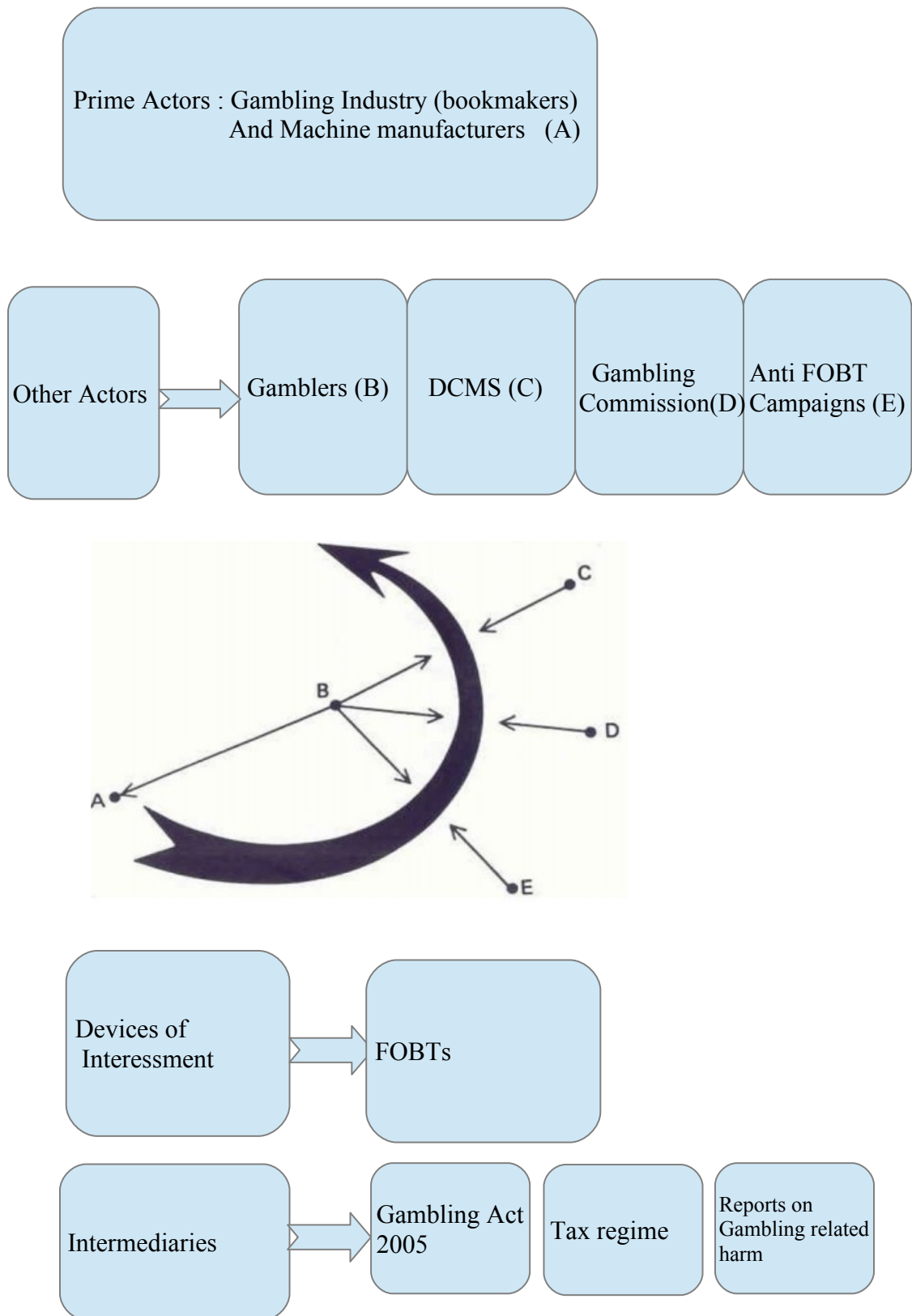


Figure 3. FOBT actor network

Comparison of figure 2 (p72) and figure 3 (above) shows that the gambling industry, and the government department responsible for regulating that industry have remained key actors, but there have been significant changes over time in the roles and relationships of these actors. The DCMS have a very different approach and brief to the Home Office as discussions above show. The Home Office role of preventing crime and disorder and the tendency for caution and social constraint in their approach to gambling can be contrasted with the free market approach and the focus on gambling as leisure of the DCMS.

In terms of the industry, there have always been 'turf wars' between different parts of the gambling industry, as they vie for influence, market share and profits. In the early part of the twentieth century, differences and debates were clear between, for example, bookmakers, pool betting operators (the 'tote'), football pool operators, and lottery promoters (Miers,2004). Gambling machines were a relatively small part of overall gambling revenues in the first half of the twentieth century, and other parts of the gambling industry did not campaign against machines to anything like the degree seen recently in relation to FOBTs.

In relation to FOBTs, they are very profitable for one part of the gambling industry (bookmakers who have been able to operate four of them in each of their many shops) and have been opposed by other parts of the industry who have thought that they were missing out or operating on a playing field which is no longer level. In particular the casino industry, and operators of other gambling machines (represented by BACTA) have noted increasing market share and higher levels of profitability for FOBT operators. To

illustrate, the Gross Gambling Yield, defined as '*the amount retained by operators after the payment of winnings but before the deduction of the costs of the operation*' (Gambling Commission 2015), grew by 8% per year for FOBTs, from 2008 to 2015, an unprecedented level of growth (Reed,2015).

The anti-gambling campaigns of the early twentieth century were largely morally based and were against all gambling as a matter of moral and often religious principle (Dixon,1991). In contrast the recent campaigns against FOBTs are supported by a set of individuals and groups with very heterogenous motives and make up, including parts of the gambling industry, religious groups, local authorities, and MP's.

It was noted in section 4.1 that the process of 'interestment' involves the weakening of certain links. This has been termed a process of 'deletion' that may include a '*discourse of derision*' (Ball,1990:18) aimed at making other framings of the issue appear as '*ethically or rationally unsound*' (Hamilton, 2011:61). The advances in machine technology during the twentieth century were discussed earlier in the chapter. These developments have arguably made FOBTs more powerful '*devices of interestment*' than earlier machines. Figure 3 suggests that the process taking place in relation to machine gambling, since the Budd report and the subsequent Gambling Act (2005) has involved the Bookmakers increasing their influence over gamblers, whilst attempting to limit the discourse and influence of the DCMS, The Gambling Commission and any campaigns against their activities. As Schull (2012) has shown very eloquently, machine manufacturers have also become much more influential as their

now global industry has become significantly larger and their products more powerful in terms of being able to influence player behaviour.

One of those actors, the Gambling Commission, is relatively new one which emerged out of the Gambling Act 2005. It replaced to a large extent the Gaming Board of Great Britain and took on responsibility for the aim of the Gambling Act to 'protect the vulnerable' (Gambling Act, 2005)

4.10 Protecting the vulnerable?

The focus of this thesis is on FOBTs and gambling related harm. Evidence about links between the two is considered in more detail in chapters Five, Six and Seven. In terms of gambling related harm and policy, preventing harm to children and the vulnerable is one of three overarching principles of the Gambling Act. The deliberations of the Gambling Review Body about young people and gambling machines were summarised earlier in this chapter. Whilst there are many debates about children and gambling, at least they are an easily identifiable group. A difficulty emerges at the outset, however, when assessing how other vulnerable individuals and groups are protected by the Gambling Act since there is no definition of vulnerable persons (Bramley et al., 2017). The Gambling Commission, attempting to operationalise a workable definition:

assume that this group includes people who gamble more than they want to, people who gamble beyond their means and people who may not be able to make informed or balanced decisions about gambling due to, for example, mental health, a learning disability or substance misuse relating to alcohol or drugs (Gambling Commission, 2016:5.17).

Wardle (2015) also conducted quick scoping reviews of the research in relation to this issue. She found good evidence that young people, those with substance

use/misuse issues, poorer mental health, those living in deprived areas, from certain ethnic groups, those with 'low IQs', those with certain 'personality traits' (i.e. cognitive impairments/impulsivity), existing problem gamblers (especially those seeking treatment), and those who are unemployed are potentially more vulnerable to harm. There was a smaller but emerging evidence base suggesting that homeless people, those experiencing financial difficulties and debt, prisoners, and younger men with learning difficulties/disabilities may also be vulnerable groups (Wardle, 2015).

As Bramley et al. (2017) have noted, such scoping reviews rely on studies looking at problem and at-risk gambling, and did not include wider purviews of gambling-related harm i.e. *'the adverse impacts from gambling on the health and wellbeing of individuals, families, communities and society'* (Wardle et al., 2018: 7).

Consequently, some groups or characteristics may have failed to be identified.

In the year of the Gambling Act (2005), a review for the Department of Trade and Industry predicted that the relaxation of gambling regulation and increased availability would produce long term social harm, ranking with the problems caused by drug addiction by 2026 (DTI, 2005). Such a perspective suggests that certain government departments, at least, were less than confident about the ability of the new regime to really protect the vulnerable, and suggests that fulfilling this stated aim of the Gambling Act 2005 was unlikely.

The Gambling Act 2005 is not the only example of legislation pertaining to elements of public welfare which contains what might be seen as principles and clauses which may seem to be inherently contradictory. The concept of antinomies of law was used by Martin (2011) to refer to another act passed by

parliament in 2005, namely the Mental Capacity Act (MCA). Antinomies are arguments which are sound in themselves but lead to inconsistent conclusions and to contradictory obligations. Martin suggests that elements within the MCA which promote individual freedoms and autonomy sit alongside elements which are paternalistic in relation to the welfare of the vulnerable. The architects of the legislation do not see the different elements as contradictory; rather they are thought to apply in different circumstances to different people. This concept of 'antinomies of law' may be useful in understanding the Gambling Act. It is assumed that a permissive act is fine for most people in most circumstances. If special arrangements are made to identify and protect the vulnerable who form a small and unique group, then the separation of powers in the sense of parts of a statute encouraging commercial gambling and other parts protecting the vulnerable, can be made to work.

There are a number of problems with this approach, as has become evident since the Gambling Act 2005 came into force. One is that the apparently clear-cut distinction between 'the vulnerable' and everybody else is hard to sustain in reality. Recent official figures indicate that up to 2 million people in the UK are at risk of problem gambling (Connolly et al., 2017). Evidence from longitudinal studies of all age groups suggests that there is quite a churn as people tend to move in and out of problem gambling at different times, contrary to the picture which might be assumed from the many snapshot prevalence surveys which are conducted (Reith and Dobbie, 2013). Thus, at any one time, a significant minority of the population are at risk, and those who are recorded as problem gamblers one year may be a different group to those recorded as such in a different year.

Exposure to gambling opportunities for children can lead to the development of

addiction and related harm in those who are vulnerable in terms of existing impulsivity (Shenassa et al., 2012), and also in those who have no pre-existing vulnerability but experience an early big win or other reinforcers provided by the activity itself (Deverensky and Gupta, 2004). In addition, children in the UK are exposed to gambling adverts which appear in 1.8 billion peak viewing hours for 4-15 year olds (Ofcom, 2013). This means that this age group see multiple adverts for gambling if watching TV during the typical hours at which that age group watches TV. More recently, analysis showed that during the football World Cup in July 2018, TV viewers in the UK were exposed to 90 minutes of gambling (out of 8 hours total advertising) – more than for any other single category of product (*The Guardian*, 2018). Increasingly, then, children are being exposed to adverts valorising and encouraging gambling at an age at which they are most susceptible to developing problems.

All of this suggests that there are more vulnerable persons than the Gambling Act presumed, that the boundaries between the vulnerable and the mass of the population who gamble solely for entertainment are rather fluid, and that structures erected to protect children and the vulnerable may be porous and not sufficiently strong.

The UK has a unique situation in allowing children access to gambling machines from a young age. Might this early exposure, together with repeated exposure to adverts valorising gambling, lead to a greater propensity to use gambling machines as adults, particularly FOBTs? This question will be explored via various sources of data in chapters Five, Six and Seven.

Thinking about vulnerability to gambling related harm in this way fits with a 'public

health' approach to the issue, rather than the dominant mode of discourse. That dominant view takes a 'medical model' type of approach in the sense of pointing to individuals with the 'pathology' of problem gambling and separating them out from both the rest of the population and what might be called the 'gamblogenic' environments in which people live. In contrast, public health interventions aim to reduce harms by shifting the focus from individual problem gamblers, and focusing instead on the context and environment in which gambling is occurring (Adams et al., 2009). Many of the major advances in reducing harms from addictive substances have resulted from public health interventions (such as smoke-free environments, and random breath testing for drivers), and it is reasonable therefore to expect that a similar approach would be effective in addressing gambling-related problems (Adams et al., 2009).

The obligations placed on those tasked with implementing the Gambling Act, and in particular the regulatory body (The Gambling Commission), may then be contradictory or at least antinomial. The requirement to permit gambling and to permit the widespread promotion of gambling will increase exposure to gambling and therefore vulnerability to gambling related harm within the overall population. This risk will be heightened for the vulnerable groups described above. More detailed evidence with regard to these important questions will be reviewed in following chapters.

The next section considers official policy reviews which have taken place since the Gambling Act, noting assessments that have been made about how the line between permitting extensive gambling and protecting the vulnerable has been held, and what the evidence is about gambling related harm.

4.11 Reviewing the situation

In 2012, the House of Commons Culture Media and Sport committee published a review of the impact of the 2005 Act entitled: '*The Gambling Act 2005 A Bet Worth Taking?*' From this we now know something of the government's response to the rapid emergence of the phenomenon of the FOBT. Richard Caborn, minister at the time that FOBTs were introduced noted that

In 2002, we started to see FOBTs being put in—the definition of betting as against gambling created this problem, because the FOBTs were fixed odds betting terminals—and I came back and asked my officials what powers the Gaming Board, as it was before the Gambling Commission, had. They said, “You’ve none, Minister.” I asked what we would do, and was told that we could not do anything. I said “That’s just not good enough,” because FOBTs were starting to emerge. Talking around it, as you do, it was clear that even the most responsible of the companies were saying “If they go down there, it will be a race to the bottom.” That was the danger we were in, three years before we got an Act on to the statute book. We had a problem because of the definition and because of technology coming in, and we could have had wall to-wall FOBTs across the country. We had no laws and no powers to stop that. I called four of the companies together and said, to put it quite crudely, “If you continue to race to the bottom, I shall make sure that that bottom is taken away from you when we bring an Act two or three years down the road. So I think it is a good idea if we all sit round the table and do a deal.” That is how the deal was done. The deal was done for four in a shop, and we did it against the background of stakes and prizes, frequency of operation and numbers... . . . Whether we got it right on allowing four—whether it should have been three or four—I do not know, but that was the discussion at the time. That arrangement was negotiated between the officials and the betting industry and it held, in my view, right up to the Act, then it was confirmed in the Act itself (House of Commons Culture Media and Sport Committee, 2012:101)

Tessa Jowell, Secretary of State for Culture, Media and Sport at the time of the Gambling Act, told the same committee that she had said during the passage of the Act that FOBTs were “on probation”. She was concerned about unintended consequences relating to the machines; about the gambling industry becoming “overly dependent” on growth driven by the machines; and about their role in

problem gambling. On deciding on the number of machines to be permitted in each betting shop, Ms Jowell said:

at the time that four was settled on as the number, there was no certainty that these machines would remain, because we were absolutely clear that we could not know at that stage that their effect was likely to be (House of Commons Culture, Media and Sport Committee 2012: 102).

In summarising the evidence that they heard, the committee noted that

We were told by the Gambling Commission and by DCMS that gambling policy must be evidence-based. It is apparent, however, that the allocation of gaming machines under the 2005 Act is complex and was not made on the basis of solid evidence about the risk of problem gambling (House of Commons Culture, Media and Sport Committee, 2012:17).

This seems to be an acknowledgement that existing evidence about the risk of gambling related harm in relation to machines was ignored. As noted earlier, most review bodies and commissions have remained uneasy about machine gambling and about levels of stakes and prizes. Those concerns, together with the new concerns and uncertainties about FOBTs meant that the Gambling Act 2005 gave powers to the responsible minister at the DCMS to reduce the maximum stake size permitted on FOBTs. One MP, Don Foster, requested just this in 2012, with a reduction from £100 to £2 of the maximum stake allowed at any one time on FOBTs, using the existing powers that the DCMS had (Webb, 2014). This was rejected, but many campaign groups have since coalesced around this specific idea as well as campaigning to have more powers to restrict the number of outlets (betting shops) which have the machines.

Tom Watson, a Labour MP, has suggested that the Labour government of the time failed to hold the gambling industry to account in the Gambling Act 2005.

Perhaps that is because the government was very keen to encourage the industry. Light (2007) suggests that the government at the time appeared to be driven by a '*commercial imperative masquerading as a desire to allow freedom for the sensible majority*', and went on to note that the new regime had become a '*compact between government and the industry each of which stands to benefit considerably from an expanded gambling market*' (Light, 2007: 653).

Almost a decade later, Tom Watson said

There's no doubt that FOBTs are the most addictive form of gambling available. So the government must ensure that the player is protected. That means bringing the maximum stake down to a more responsible £2 per spin. No one wants a nanny state. But this is a public health threat and the industry must be held to account (New Statesman,2014).

More recently, at their party conference, Watson committed the Labour Party to

finally confront problem gambling' and to force gambling companies to pay a levy to fund research and NHS treatment to help problem gamblers deal with their addiction (The Guardian, 2017).

4.12. Reviews of Stakes and Prizes

The previous section highlights how the debate about permitted stake sizes has been central to recent campaigns for reform of FOBT regulation. From the 1980s onwards, it was practice for government to review the stakes and prizes available from various forms of gambling every three years. The aim was largely to ensure that stakes and prizes could be increased in line with inflation (DCMS, 2013). The three-year review pattern was suspended in 2001, and subsequent to that there were some ad hoc changes in 2009. Pressure from industry to be able to increase permitted stakes on the majority of gaming machines in line with their increased costs, together with pressure from both parts of the industry and

campaign groups to reduce permitted stakes on FOBTs (B2 category machines) as noted above, led to repeated requests to reintroduce a more formal review. In 2013, the DCMS consulted on possible changes to stakes and prizes for Category B, C and D machines.

The regulatory landscape since the Gambling Act 2005 has been a tripartite one, with the relevant government department (DCMS) setting policy and, since 2008, being advised by a Responsible Gambling Strategy Board (RGSB), who advise on research, education and treatment. The advice from the RGSB to DCMS is filtered via The Gambling Commission, a Non Departmental Public Body (NDPB) which issues licenses to gambling operators and monitors compliance with the Gambling Act 2005. Both the RGSB and the Gambling Commission provided detailed input into the 2013 consultation, and, as the DCMS noted, these submissions included '*many references to FOBTs*'. The Gambling Commission advised that

it is quite possible for individuals to lose several thousand pounds over an hour within the normal range of behaviour of the B2 machine. The Commission further advised that a small but significant proportion of sessions on B2 machines result in high losses, with approximately 6% of sessions resulting in a loss of more than £1000 (DCMS, 2013:57).

In October 2013, DCMS published a response to the consultation (DCMS, 2013). Whilst expressing concern, they declined to act at that time, citing the need to first see the results of commissioned research: '*There remains a serious case to answer in relation to the potential harm caused by category B2 gaming machines and we consider their future to be unresolved pending further work, which is already underway*' (DCMS, 2013:6). Since then, there have been few actual changes to stakes or prizes. However, in April 2015 the Coalition Government implemented the Gaming Machine (Circumstances of Use) (Amendment)

Regulations 2015. The stated policy objective of these regulations was to assist people who use sub-Category B2 gaming machines (commonly known as FOBTs) to stay in control of their gambling behaviour by requiring that those accessing higher stakes (over £50) load cash via staff interaction or use account based play (DCMS, 2016:2). To meet the commitments given, the next triennial review was expected in late 2016, but was postponed until 2017. In 2017, the government launched a broad government review into issues relating to gaming machines, followed by a twelve week '*Consultation on proposals for changes to Gaming Machines and Social Responsibility Measures*' (DCMS, 2017).

The results of this review and consultation were finally announced in May 2018, and the government moved to the position advocated by many campaigners, of a significant reduction in the maximum stake size permitted on FOBTs. The next section considers some of the factors that facilitated this policy change.

4.13 A precarious legitimacy?

It has been suggested that gambling policy can only be liberalised when legitimacy is achieved (Chambers, 2011). Legitimacy may be precarious and indeed may disappear if, for example, concerns about harm reach a level which prompts regulatory action. Some of the developments discussed above in relation to reactions to FOBTs after 2010 illustrate this process.

This narrative arc in relation to the FOBT debate is not surprising, since very similar processes of legitimisation and de-legitimisation have occurred in other jurisdictions which have allowed widespread use of EGMs. Kingma (2004) has described just such a process in Holland. He notes how the rapid liberalisation of

gambling regulation in that country, including the legalisation of slot machines in 1986, led to something of a backlash as high-profile media attention in the 1990s focused on the extent of problem gambling, particularly among slot machines users. Regulatory responses in the form of more restrictions on markets and operators followed.

Australia, which saw the introduction of gambling machines outside casinos much earlier and on a much more widespread basis than other countries, also experienced a backlash as evidence about consequent problem gambling emerged. Legitimacy weakened as research studies and commissions of enquiry brought to light a number of problems related to widespread EGM use in clubs, hotels, and community settings, which has been typical in most Australian states (Markham et al., 2014).

It seems that the development of policy and the conduct of policy reviews often fail to take into account evidence from other countries which have gone through similar processes. Relevant evidence from Australia has already been mentioned. Parliamentarians have claimed that they did take into account international evidence and in particular the Australian evidence at this stage and when designing the Gambling Act. Greenway (2012:24), in evidence given to the Culture Media and Sport committee review, stated that he went to Australia with another member of the committee and that:

we came away with a very clear message, which is that if machines, high stake and prize machines are a cause of problem gambling at all, the real problem is if they are easily accessible on the corner of the high street.

Clearly the easy accessibility to such machines has subsequently led to problems in the UK, just as the Australian evidence suggested it would. One wonders also

how much credibility Greenway and colleagues gave to the messages from the other side of the world, since in the same evidence session he claimed that

none of the research which has been done, and certainly the most recent review has come up with a concept that they (i.e. FOBTs) are particular more addictive than other forms of gambling (DCMS,2012: 34).

This is simply not the case, as a range of international evidence has shown and evidence reviewed in later chapters will clarify in more detail.

Bowles (1991) has suggested that what might be termed the 'corporation's shadow' (referring to the body of potentially unfavourable information about the organisation that is not available to the public) stands as a constant potential threat to the legitimacy of the organisation. When part of the organisational shadow is revealed, either accidentally or through the activities of an activist group or a journalist, a legitimacy gap may be created (Nasi et al.,1997). The 'shadow' of the gambling industry is gambling related harm, and whilst industry may wish to minimise the nature or scrutiny of this, there are lobby groups who wish to draw maximum attention to it.

McMillen argues that *'underlying any analysis of gambling policy are questions about the relative power of the competing groups and alliances involved and their ability to influence the policy process to satisfy their own needs'* (McMillen,1985:8).

Chambers (2011) notes that those with the most resources are generally more successful in altering the legal status of gambling through legitimisation. Industry tends to have significant influence via lobbying, advertising, and influence over research strategies. Some of the comments and evidence from government ministers which were set out earlier show the influence of lobbying in ensuring

that the Gambling Act continued to favour commercial interests over imperatives to protect the vulnerable and to rein in forms of gambling which have been shown elsewhere to have the most potential for harm.

Some observers have suggested that the world of academic research, which might be expected to provide an external and independent critical lens on the subject, has instead been co-opted in some ways. For example, Cassidy et al. interviewed 109 gambling research stakeholders including researchers, policy makers and members of the industry in the UK, Europe, Australia, North America and Hong Kong/Macau. They concluded that

Gambling research is not an external commentary on the global process of gambling liberalisation and contraction, but an important part of that process... it enables certain ways of thinking about gambling to flourish, and suppresses alternatives (Cassidy et al., 2013: 4)

In the parlance of ANT, the work of the critical scholars discussed above shows that certain actors have been able to enrol others in the gambling actor network. As noted in the earlier discussion of ANT, for enrolment to be successful it requires one set of actors imposing their will on others but also requires the yielding of other actors to that will (Singleton and Michael, 1993). The gambling industry and some academics have arguably been able to translate the interests of gamblers, government and academia so that they fit with the interests of industry.

It may be the case that this process of shaping a network in which the interests and discourse of the gambling industry dominate has allowed for an increase in gambling and also gambling related harm and to deflect proper scrutiny of such harm. However, where such a process occurs, and evidence of harm begins to

mount, the legitimacy of the process begins to be questioned, and this can provide greater influence to groups other than industry, and to provide more oxygen for the campaigns of critical lobby groups.

In the UK, a 'Stop the FOBTs' campaign began in 2013, promoted by the same individuals and groups who had been promoting a 'Campaign for Fairer Gambling' since 2008. Lobby groups such as this have persistently brought to the fore information about FOBTs which focus on their links with a range of gambling related harm and seek to highlight the FOBT as a particularly or uniquely problematic form of gambling. The next chapter (Five) assesses the available evidence in relation to FOBTs. The point here is to note that policy in relation to FOBTs is based on the result of a struggle for legitimacy. From the ANT perspective this is about the way in which the stability of the FOBT 'actor network' became less stable due to the efforts of other actors in a broader network of gambling stakeholders. Figure 3 and the discussion in sections 4.9 – 4.12 (above) show, a relatively stable network in which the liberalisation following the Gambling Act 2005 was accepted by most stakeholders and FOBTs were accepted as part of the new landscape of leisure. As concerns about FOBTs grew a number of actors grew in influence and began to destabilise this network via campaigning to either prohibit or to significantly reduce the amount of money gamblers spent on FOBTs. One key actor in the network was a parliamentary group.

In 2016 an All-Party Parliamentary Group (APPG) on FOBTs was set up by Caroline Harris, MP for Swansea East. Her interest and concern was prompted by her observations of repeat users of local food banks in her constituency who turned out to be frequent FOBT users and problem gamblers. This group heard evidence from a range of stakeholders in 2016 and published a report in early

2017 which echoed the demands of many campaigners in calling for a reduction in the maximum stake size to £2. This APPG has a committee of ten MPs and their work and reports have had a clear influence. However, the legitimacy of this work has arguably been reduced by the apparent support that the group receives from a part of the industry. The trade body BACTA was mentioned earlier. In 2017 the APPG group on FOBTs was censured by the Parliamentary Commission on Standards for being insufficiently transparent over free help it received from the public affairs company Interel, which also works for rival sectors of the gambling industry, including many BACTA members. The group did not disclose on the report's front cover that Interel was a donor. The commissioner said that the breaches were '*at the less serious end of the spectrum*' (Parliamentary Commissioner for Standards, 2017), but as problem gambling agencies have noted, a turf war between rival parts of the gambling industry is not helpful to problem gamblers (Davies, 2017)

Because high stakes gambling machines such as FOBTs provide huge profits for the large bookmakers, those parts of the industry which run other types of gambling machines with lower permitted stakes, complain that there is an unfair playing field. BACTA represents these interests, and has a commercial interest in campaigning against FOBTs. This suggests that the campaign against FOBTs and against one part of the gambling industry was aided by not only by the mounting evidence of FOBT related harm, but at least in part by other parts of the gambling industry.

The bookmaking industry, which operates many of the FOBTs, but also the government Treasury, have had an interest though in maintaining the revenues from FOBTs. Unlike in many countries where the state operates and controls

commercial gambling directly, the UK did not introduce these high stakes gambling machines specifically as a revenue raising exercise. As noted earlier, they emerged as a response to changes to the structural ways in which gambling was taxed. However, once success for operators was established, the resulting tax revenues were also substantial and, this led to stand offs between those in government who recognised the need for tighter regulation, and the Treasury, worried about significant reductions in government income in a time of continuing austerity and uncertain public finances.

When a government review of FOBTs was expected in June of 2017, it was reported that there was a rift between the Treasury and the government department responsible for regulation, DCMS. It was suggested that the minister responsible for the review was frustrated that it had been delayed by some months. Sources suggested that the Treasury was concerned about the impact on tax receipts of any curb on FOBTs, receipts which amount to some £400 million per year (*The Guardian*, 30th June 2017).

There was some surprise when the then Culture Secretary announced in May 2018 that the government had decided to introduce what campaigners had been asking for – a reduction to a maximum stake of £2 per play on FOBTs.

The Secretary of State said:

When faced with the choice of halfway measures or doing everything we can to protect vulnerable people, we have chosen to take a stand. These machines are a social blight and prey on some of the most vulnerable in society, and we are determined to put a stop to it and build a fairer society for all (DCMS,2018).

The Minister for Sport and Civil Society, Tracey Crouch, said:

Problem gambling can devastate individuals' lives, families and communities. It is right that we take decisive action now to ensure a responsible gambling industry that protects the most vulnerable in our society. By reducing FOBT stakes to £2 we can help stop extreme losses by those who can least afford it (DCMS, 2018).

The influence of the Treasury was again evident in the October budget statement in 2018, as the Chancellor announced that the introduction of the reduced £2 stake would take place in October 2019, and not April 2019, as many had expected. This caused a very high-profile backlash, and the resignation of the minister, Tracey Crouch. It was also a political misjudgement. The APPG on FOBTs, allied with a range of MPs, many on the government side, to force a rethink.

At this point it can be seen that a crisis of legitimacy had occurred for FOBTs, with increasing evidence of harm brought to light, and brought to the attention of government by bodies such as the All Party Parliamentary Group. Despite the lobbying from industry and the potential loss of tax revenue, government was compelled to act and to take more seriously the principle in the Gambling Act of reducing gambling related harm and protecting the vulnerable.

Using ANT language, for some years the network involving FOBTs was relatively stable. As Rooke et al. (2012) suggest, regulations play a role in stabilising networks and actors. The regime established first by the tax changes discussed earlier and secondly by the Gambling Act 2005 and linked regulations, led to a relatively stable network for over a decade. However, actor networks constantly evolve and the coherence of the FOBT network has been undermined by actors such as campaign groups, and documents and reports linking FOBTs with harm.

It remains to be seen how the network will evolve, once the reduction in maximum stake size takes effect.

Conclusions

Throughout the twentieth century regulators have shown ambivalence in relation to how to respond to the development of gambling machines, particularly as technology has led to the development of machines which allow increasingly rapid play, and many other features which have been linked with gambling related harm. They have also often been slow to respond to developments, technological or otherwise which increase the availability and accessibility of said machines.

At several points in the 20th century Royal Commissions examined evidence about gambling related harm. Each flagged particular concerns about gambling machines but generally concluded that there was insufficient evidence to draw firm conclusions. My targeted analysis of some of the historical surveys and sources shows that there were a number of pieces of evidence about particular links between gambling machines and gambling related harm as far back as the 1930s. More recently the Gambling Review Body (2001) accepted the evidence about such links, but generally favoured a liberalisation of regulation.

Despite two of the three stated principles of the subsequent Gambling Act 2005 being related to the prevention of harm and crime, and the protection of the vulnerable, the fundamental assumptions and consequences of the act are permissive in the sense of allowing unfettered expansion of gambling opportunities. The evidence and arguments presented in this chapter suggest that these different imperatives may be inherently antinomial and are therefore

pragmatically very difficult for the current regulator, the Gambling Commission, to meaningfully follow.

The ambivalence, hesitation and challenges for regulators are particularly evident in relation to FOBTs and in relation to the accessibility of gambling machines to children and vulnerable adults. Evidence of harm relating to FOBTs has been mounting. The nature and extent of this harm will be detailed in the next chapter. This chapter has shown how concerns about harm led to campaigning and lobbying and a crisis of legitimacy of FOBTs which eventually led the government to take the action called for by campaigners, in terms of a significant reduction in the maximum permissible stake, despite concerns from the treasury about lost tax revenues. However, and as will be shown in later chapters, an agile and global industry, in response to the prospect of this change, was already moving on to focus on products which have not (yet) been the subject of similar restrictions, in particular online gambling products.

In a departure from many typical policy analyses and analyses of gambling issues, the ANT perspective has particularly highlighted the role of non human actants in this development. Machines, premises, and policy documents and changes are shown as having important roles alongside those of the various human stakeholders, in shaping human experience and behaviour. This perspective shows more clearly how power and influence actually operate and develop in the course of social and technological interaction.

Chapter Five: A review and synthesis of literature and data in relation to FOBTs and gambling related harm

The primary purpose of this chapter is to bring together and assess existing evidence in relation to the key question for this thesis, namely the links between FOBTs and gambling related harm. The previous chapter focused largely on policy development, with references where relevant to evidence of gambling related harm at different points in the 20th century and mainly in relation to earlier types of gambling machine. More recent evidence about harm in relation to FOBTs was mentioned briefly in the discussions about policy responses to FOBTs to illustrate the use of that evidence in debates about reform. In contrast, the focus of this chapter is the detail of that evidence which has developed in the period since FOBTs were first introduced. A range of sources of evidence were considered in order to arrive at an assessment which is as comprehensive as possible.

As noted in Chapter Three, in considering evidence from the many written sources, thematic analysis was used, guided by the study theme of FOBTs and gambling related harm, and by the frequency with which themes occur. ANT was again used as a framework to consider the role of many actors and sources of information. From the ANT perspective, the gaps in the evidence and available data, and the questions which have not been asked, are also important in understanding how a fragile equilibrium has been maintained in terms of the continued widespread availability of a form of gambling which is widely perceived as being linked to significant harm.

5.1 Evidence of Gambling Related Harm (GRH) connected to FOBTs.

Fixed odds betting terminals (FOBTs) are a 21st century development, and to date there remain a limited number of sources of data about FOBT gambling in the UK.

The report of the UK Gambling Review Body, referred to in the previous chapter repeatedly referred to a lack of evidence, suggesting that *'the provision of research into problem gambling is woefully inadequate'* (2001: 4). Waugh (2016) has suggested that *'it is difficult to escape the conclusion that not much has changed since the review body's lament'* (146).

What should be added here is that the issue is not simply an absence of evidence, but that the whole process of commissioning research that might provide evidence, of funding that research, of framing research questions and interpretations of evidence, is bound up in particular discourses and ways of understanding gambling. As discussed in the previous chapter, the discourse has been shaped to a significant degree by the gambling industry. That point is made here to emphasise that, as a result, the data available for consideration when investigating gambling related harm and particular forms of gambling is skewed in particular ways which will become evident through this chapter.

It was clear from the outset of this investigation that what is available in the peer reviewed academic literature is very limited, and I therefore started with a more comprehensive search for sources of relevant data which could be synthesised and analysed.

5.2. FOBTs and gambling related harm. Literature Review and synthesis.

There are many different approaches to reviewing literature which vary on spectrums of scale, rigour, and approaches to issues of quality (Grant and Booth, 2009). In many academic disciplines, it has increasingly been recognised that systematic approaches to reviews are necessary to help avoid bias (Aveyard, 2014). Reviews with unspecified criteria, and which are not systematic, have been shown to lead to cherry picking of studies and a range of biases in both selection of studies and interpretation of results. The approach taken here has been systematic in two respects. Firstly, a comprehensive search of sources of information and data was undertaken, with advice from supervisors, librarians, and gambling researchers. The table below summarises the set of sources which offered data about FOBTs and their users, and which were used for the analysis in this chapter, with a rationale for each. Secondly, in relation to the last source listed in the table (i.e. academic databases), a systematic approach to searching was taken (see section 5.13). It was deemed particularly important to assess independent peer reviewed academic literature separately, given the concerns about industry influence and the possible lack of independent scrutiny of some of the other sources.

Table 1. Sources of data useful for analysing links between FOBTs and gambling related harm

Data Source	Usefulness
Gambling Commission Survey 2008 - Impact of high- stake, high-prize gaming machines on problem gambling	The first published review of the evidence in relation to FOBTs by the official UK gambling regulator
The British Gambling Prevalence Survey (BGPS) 1999, 2007, 2010	Three iterations of large scale nationally representative surveys allowed for useful comparisons of the emerging evidence about
Health Surveys for England and Scotland (2012)	changing patterns of gambling These surveys superseded the BPGS and used similar
Data from research commissioned by the Responsible Gambling Trust	methodologies Research commissioned specifically to investigate use of
Published reports from a major UK gambling treatment provider - GAMCARE	FOBTs Useful data about the demographics and relative proportions of clients who report
Reports from the single NHS gambling clinic	FOBT use as the main problem Data on over 3000 individuals who have sought treatment, with specific reference to FOBT use

Gamblers Anonymous (GA)	No formal records are kept by GA. However, their website and associated forums provide a rich source of publicly available data which also offers a picture of the relative place of FOBT use in the lives of those who publicly express views
Gordon Moody Association	The main provider of residential treatment programmes for problem gamblers.
Industry data	The gambling industry is required to report a range of information to the Gambling Commission, and this information gives a useful picture of the scale of FOBT use
Local authority reports	Detailed investigations of the impact of FOBTs at local level
Reports from the All Party Parliamentary Group (APPG) on fixed odds betting terminals	An investigation by this APPG led to the collation of specific evidence about FOBT use from a wide range of stakeholders
Research commissioned by industry	Useful insights into FOBT use, tempered by concerns about industry involvement
Academic databases	A comprehensive summary of peer reviewed independent research relating to FOBTs/EGMs and harm

Reports for think tanks, and public bodies.

A broader overview which captures some important EGM related harms which are not captured in the other sources in this list

The compilation of evidence from all of the above sources allowed for a more comprehensive and accurate account of FOBT use than anything else that has hitherto been collated.

The next section in this chapter presents and assesses the information available about FOBT use from the first comprehensive British Gambling Prevalence Survey, carried out in 2008, and then assesses the data from more recent surveys. It will become evident that whilst the authors of the BGPS were careful to construct survey instruments which gave as much detail as possible, the data is limited in what it can offer beyond addressing some questions about the demographics of FOBT users. Whilst this can begin to answer the question of who plays on the machines, it tells us little about the why or in what circumstances. As one of the authors of the survey has noted,

the BGPS series has been used to provide 'top-level' description of gambling behaviour. Key statistics have been produced examining rates of overall gambling participation, the prevalence of problem gambling and the profile of problem gamblers. Analysis has not tended to stretch much beyond this basic description (Wardle, 2015: 178).

To provide a fuller picture of FOBT use and users, and links with gambling related harm, later sections in this chapter add data from a number of other sources, including: from industry reports; primary empirical data from interviews and observations; secondary data from the major treatment providers in the UK; evidence presented to enquiries; and research findings published in the academic literature. The aim here is to synthesise this range of data to better understand

the nature and scale of FOBT use, and links with gambling related harm.

5.3. Gambling Commission Survey 2008 – The impact of high- stake, high-prize gaming machines on problem gambling

One of the first assessments of available data about FOBT use, this desktop exercise noted a strong link between gaming machines, particularly B2 (FOBT) machines and gambling related harm. The executive summary states:

Evidence suggests that... gaming machines seem to be particularly attractive to those at risk of problem gambling and to those with a gambling problem... The available research has identified the sort of features that appeal to gamblers (e.g. fast games, multi-stake, high payout ratio, free games) and that are therefore associated with higher levels of both gambling and gambling-related harm (Gambling Commission, 2008: 2)

This first study of modern high stakes gambling machines in the UK corroborates findings from a number of other countries around the world. In particular, the link between problem gambling, gambling related harm and gambling machines seems greater than for other forms of gambling (Reith,2006; Binde,2011; Bendat,2014).

5.4 The British Gambling Prevalence Survey (BGPS) – Data about FOBT use

The British Gambling Prevalence Surveys were large-scale nationally representative surveys of participation in gambling and the prevalence of problem gambling in Great Britain. They were household surveys, and three iterations took place in 1999, 2007 and 2010 respectively. In each case, a random sample of over 7000 respondents was achieved. One of the headline figures in the surveys

is the percentage of the population who participate in a range of different gambling activities. They did not exist at the time of the 1999 survey, but Gambling on FOBTs increased from 3% in 2007 to 4% in 2010. These figures relate to the percentage of the survey population who gave a positive response to a question about use in the past year. As with many forms of gambling, there is quite a gender difference with 7% of men and 2% of women admitting use of FOBTs. There is generally quite a difference between the percentage of the whole population who take part in any specific gambling activity and the percentage of those who are confirmed gamblers who take part in that specific activity. Among past year gamblers, 10% of men and 2% of women had used FOBTs.

A number of limitations of household survey are considered later in this chapter (section 5:6). It will immediately be noted though that although a survey of 7000 people is relatively large scale, the percentages using FOBTs are relatively small meaning that the absolute numbers of users are also small (for example, 2% of women in the survey equates to just 140 individuals). The relatively small numbers that the percentages reflect need to be borne in mind in the following discussion of various aspects of the BGPS data.

The survey used a number of questions to try to assess frequency of gambling as well as the proportion of the population who gamble at all. There were five activities which were undertaken at least once a month by half or more of all participants. In the latest of the surveys, these were bingo played in person (54%), casino games played on line (53%), spread betting (53%), FOBTs (52%), and poker at a pub/club (50%).

Those who gambled once a month or more often were classed as 'regular gamblers' and categorised into the following groups: high-time only gamblers (those who spend a lot of time but not a lot of money gambling); high-spend only gamblers (those who spend a lot money but not a great deal of time gambling); high-time/high-spend gamblers; and non high-time/non high-spend gamblers. High-time/high-spend gamblers, like high-time only gamblers, were more likely to live in areas of greatest deprivation, live in low income households and be unemployed. They also tended to be young, single, and never married. This group showed a relative preference for betting on horse races, FOBTs and playing casino games.

Another measure emerged from the survey in relation to frequency of use and level of gambling involvement. If a respondent had undertaken an activity in the past year, they were also asked whether they had participated in that activity in the past week prior to the survey. A large proportion of lottery players (some 38%) said yes to this. After this, slot machine players were one of the highest groups to declare use in the past week (5% of slot machine players, and 2% specifically of FOBT users).

A measure which aimed to assess the level of 'gambling involvement' among respondents involved questions about the number of different gambling activities. Those who played poker at a pub/club and played on FOBTs had the highest engagement in gambling activities, participating in 7.6 and 7.2 gambling activities respectively in the past year. Among women, the mean number of activities engaged in was highest among those who played on FOBTs (6.4%).

Clearly, the above data from BGPS is about use alone, rather than any harm that might relate to that use. This data provides important context and perspective, though, when considering related harms.

5.4.1 Demographics of FOBT players

Gambling is very much age stratified. Younger people gamble much more than those in older age groups. For FOBTs, the 2010 survey showed that 12% of 16-24 year olds and 9% of 25-34 year olds played FOBTs. In these two age groups, three times as many people were involved as in any of the older age groups.

FOBT players are three times more likely to be never married than to be have married or married and separated. The only other gambling activities which had similar ratios, with much higher levels of play in single, never married men, were casino games and poker at a pub club. These are also the three activities which had the highest levels of engagement. It is perhaps no surprise that single men without commitment to a partner had the highest level of engagement, though it is perhaps also a reflection of the fact that single never marrieds are more likely to be younger.

In terms of ethnicity, the only activity in which participation rates were higher among a non-White British Group was in relation to FOBTs. Here Black British individuals had a rate of 5% participation, compared to 4% in white British. Black British people are known to suffer disadvantage in a range of ways (Williams et al., 2015). A key difference is that the unemployment rate for this group is double

the rate for White British (House of Commons, 2019). As noted in the next section (5.4.2) FOBT players are more likely to be unemployed, and it is also notable that unemployment is the single factor most correlated with gambling related harm (Wardle et al., 2015).

FOBT players were most likely to be educated to A level but not beyond. This may simply reflect the fact that most players are in the 16-24 year age group, rather than saying anything about a connection between education levels and this activity.

5.4.2 Employment and income status

Respondents to the survey were assigned to an NS-SEC category (this refers to socio economic categories used by national statistics authorities in the UK) based on the current or former occupation of the household reference person (HRP). Those from semi-routine and routine employment households had the highest prevalence of participating in scratch cards (30%), bingo (13%) and FOBTs (6%), whereas people from managerial and professional households had the lowest prevalence of participation in these activities (20%, 6% and 3% respectively). It is notable that unemployed and full-time education were the most common categories for FOBTs players (12 and 9% respectively, compared to 4% overall). The prevalence of playing FOBTs was highest among those in the lowest personal income category (7%), a figure which probably reflects their typically unemployed or student status. There was also a measure of participation by index of multiple deprivation. FOBT players were significantly more likely to live in the most deprived rather than least deprived areas (3% in least deprived, against

5% in most deprived).

An obvious indicator of gambling related harm, and one of the questions on the screening tools for problem gambling relates to debt. A separate study showed that playing on FOBTs, roulette, and other slot machines are the activities most participated in by those disclosing gambling and debt, with 45% of respondents specifically mentioning FOBTs (Responsible Gambling Strategy Board, 2015). A previous detailed UK study had shown that gambling debts averaging more than £60,000 were common among gamblers who identified 'unmanageable' debt, a much higher estimate than previously thought (Downs and Woolrych, 2009). Further analysis in that study in relation to forms of gambling participation suggested that those currently living with financial problems as a direct result of gambling were more likely to be engaged in forms of gambling such as the casino, fruit machines, and FOBTs (Downs and Woolrych, 2009).

Given that FOBT users are most likely to have low incomes and that they are more likely to be in the high time and high spend group of gamblers who are more engaged in regular gambling, it is perhaps no surprise that they report higher levels of debt. A more recent survey has suggested that there is a link between problem gambling and payday lending (Glasgow City Council, 2014). The size and impact of debts relating to FOBT use are explored in more detail in the accounts of gamblers in chapters six and seven.

5.4.3. Measures of Problem Gambling

The focus of this study is links between FOBT use and harm. A number of dimensions of gambling related harm are not assessed by the national

prevalence surveys since they used only measures of individual harm. In these surveys two different validated problem measures of individual 'problem gambling' were used – 1. SOGS and 2. DSM -IV.

The South Oaks Gambling Screen (SOGS) is a 20 item scale, introduced in the USA in 1987. Positive answers to five of the 20 items suggest 'probable pathological gambling' (Lesieur and Bume, 1987). It was subsequently widely adopted as a screening instrument in a wide range of studies (Goodie et al., 2013). The DSM-IV screen was based on the diagnostic and statistical manual (4th edition), the standard text for diagnosing conditions published by the American Psychiatric Association (American Psychiatric Association, 2000).

Harm in relation to families, communities and wider society are not really captured in either of these measures, and therefore in the surveys, but are important elements of the actual harms which link to gambling (Gambling Commission, 2018). The shift towards a public health model of gambling (noted in the previous chapter, and see also Figure 4 below), rather than the individual problem gambler model, is leading to greater recognition of the social location and construction of some elements of gambling relating harm, and data considered later in this chapter illustrates this. Whilst some have criticised the validity of applying a model developed in relation to infectious disease to gambling behaviour (Wardle, 2015), a public health model has brought a broader recognition of the range of a wider range of elements within the social environments of gamblers in shaping their gambling behaviour. As Figure 4 also shows, the model highlights relevant parallels between the transmission of communicable diseases and the way that disordered gambling develops. In the same way that the strength and characteristics of a disease agent are important,

in conjunction with the environment, in influencing the host individual, so the characteristics of the game are significant, in conjunction with the environment, in influencing the gambler.

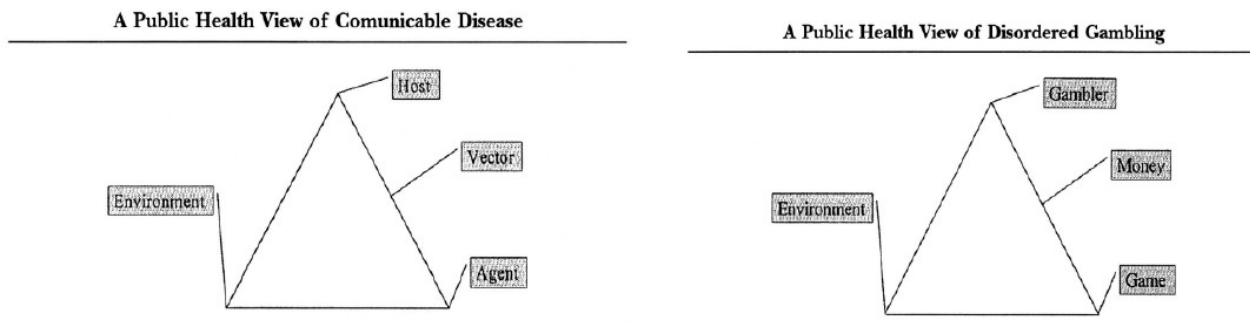


Figure 4. Public health view of communicable diseases and of disordered gambling

from Korn & Shaffer, 1999

What the national surveys do provide is some information about the correlation between FOBT use and harm at the level of individual problem gamblers, as captured in the two screening measures, and as the following section shows.

The BGPS data showed that, among those who had gambled in the past year, problem gambling prevalence was highest among those who had played poker at a pub/club (12.8%) followed by those who had played online slot machine style games (9.1%) and fixed odds betting terminals (8.8%). The survey also shows that problem gamblers are more likely to take part in a range of gambling activities on a regular basis. The authors suggest that further examination of the relationship between participation in individual activities, overall gambling involvement and problem gambling is needed. However, it is clear, given that FOBT use is one of the types of gambling most likely to be undertaken by

problem gamblers, and the data presented earlier about FOBT users being more likely to be high time/high spend gamblers, unemployed, on low incomes, and living in areas of high deprivation, that there should be concerns about FOBT users in relation to problem gambling.

LaPlante et al. (2009) conducted secondary data analysis of the British Gambling Prevalence Survey (2007) and found that when controlling for gambling involvement (the number of types of gambling for which an individual reports being involved in during the previous 12 months) gambling on virtual gaming machines or FOBTs was the only type of gambling that remained positively and significantly associated with disordered gambling. This was the first study that clearly showed that FOBTs are directly linked to problem gambling, irrespective of any other gambling activities that the player also takes part in, providing clear evidence of a particular link between FOBTs and gambling related harm.

Whilst that study showed statistical evidence of a link it was not designed to provide much more detail, and could only show an association based on the limited number of participants in a household survey who met criteria for problem gambling. This thesis builds on that initial evidence with much more detailed exploration of a number of different data and evidence sources in order to demonstrate the nature and strength of those links.

5.5 Health Surveys 2012 – data about FOBT use

The gambling prevalence surveys were superseded by a new approach in 2012. In that year, for the first time, the Scottish Health Survey and the Health Survey

for England included questions about gambling behaviour and problem gambling measurement instruments. The combined achieved sample size of both studies, which use very similar methodologies and have identical gambling questions, was around 12,000 adults. As with the BGPS, the level of detail included in the main survey reports simply described overall patterns of participation and prevalence rates.

Seabury and Wardle (2014) published an overview of gambling behaviour in England and Scotland by combining the data from the Health Survey for England (Wardle, 2012; n=8,291 aged 16 years and over) and Scottish Health Survey (Wardle & Seabury, 2012; n=4,815). To be included in the final data analysis, participants had to have completed at least one of the gambling participation questions. This resulted in a total sample of 11,774 participants. The findings were similar to the previous BGPS reports, and showed that the most popular forms of gambling was playing the National Lottery and that the proportion who played machines in a bookmakers was similar to the level in previous surveys, some 3% (5% male and 1% female). This suggests little change in the proportion of the population using FOBTs in the period 2007 – 2012 but this does not reveal anything about the harms which might occur in those who were playing.

5.6. Limitations of household surveys

The data presented above is useful in that it provides information about the demographics of a proportion of the population. A key point made by the BGPS authors is that the sample design of their survey is a sample of private households. As they note, this excludes a number of sub-groups of the population, such as the homeless or those residing within prisons and other

institutions, and some residing in student halls of residence. Recent evidence has shown that some of these sub-groups are more likely to be problem gamblers (Sharman et al., 2015). Whilst a lot of effort and research money goes into these kinds of national surveys, the problem gambling estimates presented in such surveys may then underestimate the actual prevalence of problem gambling, since they fail to survey any members of a number of groups who are known to have higher levels of problem gambling.

This point warrants attention and suggests the need to look more carefully for other data about those populations outside of households. In addition, it is notable that the BGPS authors clearly show that FOBT gamblers who did respond to the household survey were more likely to be young, single, unemployed and from an ethnic minority. Resident populations in many institutions have high proportions of people who conform to that demographic profile (Young, 2014)

The next section will address the limited data that does exist about gambling in vulnerable populations.

5.7. Problem gambling and vulnerable populations

In terms of prison populations, May, Chahal et al. (2017) conducted a review of 8 studies since 2000, and found a mean rate of 25% in incarcerated populations who exhibit some vulnerability to gambling problems. Inmates who do gamble tend to do so regularly, and problem and pathological gamblers are disproportionately represented among this group (Williams et al., 2005).

Studies in a number of countries show significantly elevated levels of problem gambling among university students compared to the general population. In Australia, for example, a level of 8% was noted, compared to 2% in the general population (Mubarak and Blanksby, 2015). A recent meta-analysis, including studies from a number of countries, put the figure among college students at over 10% (Nowak and Aloe, 2014). The authors of that study suggest that there has been a dramatic rise in the numbers over the last decade or two, using previous meta-analyses as benchmarks. There is not a large amount of relevant data specifically from the UK, but a study of colleges and universities across Scotland indicated found a rate of problem gambling of 4% (Moodie, 2008). It is unclear why this percentage (using similar standardised measures) is much lower than in international studies and this needs further investigation. Students may be particularly vulnerable to developing gambling problems because of age, loneliness, and issues in adapting to new environments (Hum and Carr, 2018).

For present purposes, one of the limitations of most of these studies on prison and student populations is that they do not differentiate between different forms of gambling, and it is not possible to discern the level of FOBT use among them. Given that the BPGS showed that FOBT players are most likely to be either unemployed or in full time education this also warrants further investigation.

One study of a vulnerable population which did report on FOBT use was conducted with a homeless population in the UK. This found that, using the same measures as the BPGS, levels of problem gambling were 11.6%, over ten times higher than in the general population (Sharman et al., 2015). The authors of that study did ask about participation in different forms of gambling. For 106

participants who indicated game preferences, electronic roulette machines (i.e. FOBTs) and horse racing were the most popular gambling activities. As the authors suggest, one possible link between sleeping status, gambling and gambling type may be the shelter offered by high street gambling venues in the UK. They showed that there were 61 such venues in the immediate vicinity of the local outreach centres. Some gambling venues are open 24 hours a day, and high street bookmakers and amusement arcades in big cities may be open from 8 am to 11 pm. These venues also offer very low stake gambling, from as little as 5p per play, and many offer free hot drinks and snacks. Extended exposure to such an environment may increase the risk of problem gambling in the homeless. Consistent with this notion, the most common forms of gambling among the cohort were those offered by bookmakers (FOBTs, sports betting).

The 2005 Gambling Act does not define 'vulnerable persons', nor do the Gambling Commission. The latter do, for regulatory purposes:

assume that this group include people who gamble more than they want to, people who gamble beyond their means and people who may not be able to make informed or balanced decisions about gambling due to, for example, mental health, a learning disability or substance misuse relating to alcohol or drugs (Gambling Commission, 2016: 5.17).

Whilst there is a body of literature which has built up over several decades which confirms comorbidities and links between mental health problems, alcohol and/or drug use and gambling problems (Tackett et al., 2017), there remain almost no studies which have looked at problem gambling in populations of individuals with learning disabilities or those who lack mental capacity to make decisions for a range of reasons (Bramley et al., 2017). However, in terms of known links

between different types of vulnerability and FOBT use, the evidence is clear that FOBT users are more likely to be 'vulnerable' to gambling related harm if they live in areas of deprivation, are unemployed, living in poverty and with high debts, are a member of an ethnic minority group, and/or have a co-occurring mental health problem.

5.8. Data from the Responsible Gambling Trust

The unique tripartite arrangement in the UK has meant that since 2012 the Responsible Gambling Trust (RGT) has been responsible for commissioning research, using a proportion of the voluntary levy which it receives from industry. The strategy for the research agenda is set by the Responsible Gambling Strategy Board (RGSB). Since 2008, this body has been responsible for advising the Gambling Commission, and in turn the Department for Culture, Media and Sport, on research education and treatment programmes.

In 2014, the RGSB developed a programme of 'machines research'. This had a rather narrow focus, in the sense of focusing only on player behaviour whilst on the machines, since they confined their ambit to investigating two questions: can harmful play on machines be identified, and if so, what can be done to reduce it? (RGSB, 2014).

Results of three of the resulting studies provided some new data relating to FOBT use. In one study conducted by NatCen between 2013 and 2014, data from some 4001 people who gambled on B2 gaming machines in bookmakers that held a loyalty card for William Hill, Ladbrokes or Paddy Power was assessed (Wardle,

2016). In terms of the link between FOBT use and gambling related harm, this study was also useful in revealing more than the household surveys were able to do. Higher problem gambling scores were significantly associated with greater frequency of use of the maximum stake. This is particularly relevant in relation to the deliberations about maximum permitted stake size which have been key to recent policy debates. Sixteen per cent of the sample of card holders placed the maximum allowable bet at any one time of £100. This number increased to 30% among those from non-white ethnic groups. It was also found that those who were unemployed were more likely to place a maximum stake bet more often. Some 65-70% of B2 machine losses were attributable to 20% of people.

A significant limitation of this kind of study is that there is no evidence available to assess whether loyalty card holders are representative of the broader population of FOBT users, and it may be that they form a quite different demographic. As the lead author noted, *'Unfortunately, we don't know enough about non-loyalty card holders to be able to weight the estimates back to a population estimate'* (*The Guardian*, 2014: 37).

Nonetheless this evidence is line with the evidence from the prevalence surveys in terms of the over representation of those from non-white ethnic groups and the proportion of profit to the operator and loss to the player that comes from a small group of high frequency gamblers.

A second study, based on the sample of 4001 loyalty card holders, was designed to look at issues of geography in terms of the locations of machines and various factors. It was striking that there was a clear pattern showing that the more FOBTs were located within 400 metres of a player's home, the higher the

percentage of players who scored on a problem gambling measure (the Problem Gambling Severity Index – PGSI) (Wardle and Astbury, 2016). This chimes with published international research which has looked at the locations of EGMs, and also the concerns of local authorities and campaigners about the clustering of betting shops and FOBTs (see sections 5.11 and 5.12 of this chapter for further detail on both of these matters).

5.9. FOBT users and contact with gambling treatment providers.

In seeking to assess any relationship between FOBT use and gambling related harm, one source of relevant data is that compiled by treatment providers. There is a substantial body of evidence to suggest that EGM gambling is the predominant form of gambling displayed by problem gamblers presenting to treatment services. This is true in many countries (Smith and Wynne, 2004). The percentages of problem gamblers accessing treatment services who report electronic gaming as the focus of treatment are up to 80% in Australia (Dowling, Smith and Thomas, 2005), and in Europe levels of 93% are reported in Estonia, 83% in Germany, 72% in Denmark, and 75% in Spain (Gambling Commission, 2008). Available data on this matter from the major UK treatment providers is considered below.

5.9.1 The NHS Problem Gambling Clinic

There is now one gambling treatment facility within the NHS, the problem gambling clinic hosted by the Central and North West London NHS Foundation Trust. After the first data emerged from the clinic in 2009, it was clear that by far the most prevalent single type of gambling reported by users of the clinic was

FOBTs. Some 61% of the clinic users (210 individuals) who identified a single form of gambling as problematic singled out FOBTs (Bowden Jones, 2010). The clinic now has data on over 3000 patients who have passed through their doors, and FOBTs continue to be the most frequently reported problem (Bowden Jones and Smith, 2015).

5.9.2 Gamcare

In the UK, the major formal treatment provider is Gamcare, a national charity which provides direct help to over 5,000 individuals per year, and takes over 27,000 phone calls from people requesting help (Gamcare, 2015). In line with the dominance of EGM use in callers to helping agencies in other countries, Gamcare have been reporting for several years that FOBT use is the first or second most widely reported reason for contacting them for help, and this continues to be the case according to the most recent statistics. In 2015/16, 'machines in betting shops', i.e. FOBTs, were the most frequently referenced activity by callers to the helpline and by those referred to partner counselling agencies. This was 23% of helpline callers (the next most frequent was online gambling at 16%). As with the data from the prevalence survey, the headline facts from Gamcare statistics suggest that FOBT use is at the forefront of the kinds of gambling behaviour that become problematic.

The Gamcare website receives over 1 million unique visits each year. To develop a better understanding of the role that FOBTs played in the gambling careers of those who used Gamcare services, I analysed posts to the forums on the Gamcare website, and in particular the dataset of 248 recovery diaries which were posted by individuals over the ten year period from 2006 to 2016. Chapters

six and seven provide qualitative analysis of this. Here, some of the numbers are relevant. 32 individuals specifically mentioned FOBTs (13%). Gamcare also set up a subsidiary website in 2012 targeted at young people (aged 12-18). This site also has a publicly available data set in the form of over 2000 posts in the 'your say' section of the website. Given that, according to prevalence surveys, more FOBT users are in the 16-24 age group than in any other age group, it might be expected that this issue would feature highly in posts to the site. In the 'your say' forum on this www.bigdeal.org.uk website some 32 out of 70 posters (45%) who identified a particular form referred to gambling machines as a major problem: 17 mentioned FOBTs/roulette machines specifically (16%). There were 98 posts in total, added between 2012 and 2016. Some did not specify the form of gambling at issue, so some of the remainder may also be machine players. This site is aimed at 12-18 year olds. Not all posters were in this age category at the time of posting, but most referred to their gambling whilst in that age group.

5.9.3 Gamblers Anonymous

The organisation which offers the greatest amount of face-to-face help to problem gamblers in the UK is Gamblers Anonymous (GA). Chapter seven provides a more in-depth assessment of the nature and place of GA in responding to current and rapidly changing patterns of gambling, including the prevalence of FOBT use among those admitting to gambling problems. Here, some basic data is summarised based on observation and analysis of the GA website and of one GA group over a period of 18 months.

Where people seek help for problems of which they are ashamed the anonymity of online interaction removes some of the barriers to help seeking which may be

there in relation to face to face encounters (Wilson et al.,2017). In relation to gambling, there are a number of practical difficulties in accessing help in the UK which may also lead to it being more likely that people will seek telephone or online help. Whilst GA provides more face-to-face help than any other organisation in the UK, it does not have a presence everywhere. The number of GA meetings taking place each week in the UK is estimated to be over 150 (Rogers, 2018). There is no accurate assessment of numbers, but personal observations and communications with GA suggest an average of no more than between 5 and 20 people per meeting. In comparison, their website has 3000 registered users. In relation to FOBTs, I examined almost 4000 posts to the GA website, notes from 20 meetings (which involved 178 separate attendances), and interviews with eight GA attendees. Over 10% of the posts to the GA website mentioned machines which could directly be identified as FOBTs (by reference to them being in bookmakers or to the type of games on offer or other identifying features). My own observations suggests that some 15 out of 38 (40%) visitors to one GA meeting over a two year period disclosed that FOBTs were the main or one of the major types of gambling that was problematic for them.

5.9.4. The Gordon Moody Association (GMA)

For forty years the Gordon Moody Association has been providing intensive residential treatment for problem gamblers in the UK, the only service of its kind in the country. Over that period of time, a large body of data has been accumulated about users of their services. Their latest annual report (2016-17) showed that, at entry to their residential treatment programme, using machines in bookmakers (i.e. FOBTs) was by a margin the most cited preferred gambling at entry to treatment (GMA, 2017). Analysis of their service user records shows that

FOBTs steadily became the most frequently disclosed form of gambling at admission, up to over 60% in 2015 (Sharman et al., 2019). Admission to the GMA treatment programme is reserved for those with the most severe and intractable gambling related harm, and this data is therefore very telling in terms of links between FOBTs and harm.

5.9.5 Summary of data from treatment providers.

In summary, data from treatment providers suggests that FOBTs are reported as the primary problem by between 10% (GA website), 60% (GMA) and 61% (National Problem Gambling Clinic) of problem gamblers who are seeking help. This can be compared with the lower figure of 8.8% of the problem gamblers identified in the prevalence surveys discussed earlier who identified FOBTs as the main problem. There may be a range of reasons for the differences. As noted earlier, prevalence surveys do overlook some of the more vulnerable populations making them more likely to underestimate these figures.

The national problem gambling clinic and the GMA only see those who have more severe or entrenched gambling problems and the similar findings from these providers suggest that those with the most severe problems are more likely to be largely FOBT users.

5.10. Industry Data and FOBTs

The gambling industry is required to report a range of information to the Gambling Commission, and this information gives a picture of the number of FOBTs and the amount spent on them. In 2014-15, there were 34,890 category B2 machines (FOBTs) in Great Britain (from a total of 171,000 gaming machines). The total

Gross Gambling Yield from all of these machines was £2.6 billion. Category B2 machines provided two thirds of the GGY. In turn, two thirds of the GGY from machines came from the betting sector (i.e. betting shops), where almost all (99.7%) is from B2 machines. Adult gaming centres (12%) and the bingo sector (11.8%) are the other major venues for machines (Gambling Commission 2015).

As many observers have noted, since their introduction to betting shops FOBTs have become more and more dominant. The contribution of these machines to the GGY in betting shops is now more than half (56%), and increased from £1.07 billion to £1.696 billion between 2009 and 2015 (Gambling Data, 2012; Gambling Commission, 2015). It is estimated that each machine makes a profit of over £900 per week for the provider and that, after accounting for different user profiles and for the data from infrequent users, the frequent user of a FOBT typically spends £1200 per annum (Gambling Data, 2012).

More recent data shows that between July 2015 to June 2016, 232,410 gambling sessions in betting shops ended in losses of between £1,000 and £5,000 where the gambler played on FOBTs or a mix of FOBTs and lower-stake machines (Gambling commission, 2016). Given the more typical profiles of FOBT players, as shown in the national surveys and discussed above (a young unemployed male with low income and low social support), it is not difficult to envisage the impact on the player and their family of regular losses of this magnitude.

5.11 Local Authorities and FOBTs.

Concerns about FOBTs have led a number of local authorities to investigate their

use in recent years, including Newham Borough Council in London, and Glasgow City Council (see below). These authorities are tasked with licensing the betting shops that contain FOBTs, but have found that in reality they have very limited powers in terms of refusing any licence to a bookmaker.

A survey for Glasgow City Council in 2014 uncovered a number of examples of harms linked to FOBT use. This followed a wide range of consultations and evidence gathering hearings, looking at problem gambling across the city, with a particular focus on FOBTs. In a thorough investigation, members also visited sites of machines, and observed and took part in play. The survey noted that, in Glasgow alone, gamblers were putting £201 million into betting shop FOBTs annually and losing £31 million. At that time, the popularity of around 800 FOBTs in more than 200 licensed betting shops in Glasgow meant that significant sums were leaving the Glasgow economy each year. Findings from focus groups confirmed that the ability to gamble high stakes quickly is a contributory factor influencing problem gambling for some users.

The council explored the issue of clustering of betting shops in areas of deprivation. They noted that there was significant evidence to show a clustering of betting shops on many local high streets and other retail centres in Glasgow. There was evidence suggesting a correlation between gambling, the location of establishments and lower than average economic activity. This pattern is similar to that in many UK cities. For example, the four cities with the highest number of betting shop licenses and therefore the most FOBTs, are Glasgow, Birmingham, Liverpool and Manchester, and all have higher than average unemployment rates and workless households (ResPublica, 2017). Planning and licensing regulations

limit the scope of councils to rule on over provision of betting shops, and this complaint is repeated by many local authorities. The Glasgow study also noted a correlation between betting shops and non-standard lending, with many examples across the city of shops located next door or in the same row.

Campaigners have pointed to increased levels of violence towards both machines and betting shop staff since the introduction of FOBTs. However, much of the evidence for this remains anecdotal. The Glasgow survey heard from a trade union representative who described violence and verbal abuse of staff as a 'daily occurrence'. The Sounding Board received anecdotal evidence that abuse and vandalism are under-reported and considered normal by many working in the industry. It is considered that some instances of abuse and violence are fuelled by frustration at losses on FOBTs. Both the focus group and the trade union provided anecdotal evidence that betting shop staff had become problem gamblers. The gamblers themselves linked their problem to the use of FOBTs. The evidence collected led to an expression of unanimous and significant concern by council members. This study suggests that harms, including violence towards machines and staff, and a general negative impact on economic activity, are clearly linked to FOBT use, as well as the range of harms experienced by individual gamblers.

As noted in Chapter two, a number of English local authorities, responding to significant local concerns have also collectively attempted to use available legislative mechanisms to achieve a reduction in stake sizes for FOBTs. Their use of the Sustainable Communities Act 2007 was unsuccessful in 2015, but in the course of putting together a challenge, the 93 councils involved amassed a

significant amount of evidence about links between FOBTs and gambling related harm at the community level, as well as to individuals. Much of this evidence was also presented to an evidence session of the APPG (see next section).

5.12. All Party Parliamentary Group (APPG) on FOBTs

The nature and history of this group was discussed in chapter four. Here, evidence collated and published by this group is addressed. The group set up an inquiry in May 2016. Seven evidence sessions followed which were supplemented with 25 written submissions which followed a national call for evidence. Contributors ranged from the Minister for Sport, Tourism and Heritage to academics, campaign groups, problem gamblers and representatives of the Gambling Commission. The evidence presented to the APPG provided what was at the time the most up to date and focused collation of what was known about FOBT use and the harms that may be linked to their use.

As noted above, local authorities across the UK have become aware of significant concerns at local level about betting shops and in particular about FOBTs. The Local Government Association (LGA) describes itself as the national voice of local government, and a body which helps councils to support, promote and improve local government. The LGA presented a clear view to the APPG that they wished to see both a reduction in the number of FOBT machines and a reduction in the stake that can be wagered on them. Their favoured change was a substantial stake reduction to a level around £5. The LGA noted particular

concerns about the knock-on effects of FOBTs which they noted included: anti-social behaviour, domestic violence, money problems, health problems and in some cases the loss of employment and homes as a result of FOBT use (APPG, 2017).

The mayor of Newham council (London) had led the unsuccessful attempt to achieve changes to the regulation of FOBTs via the Sustainable Communities Act 2007. He echoed the LGA concerns about the range of problems which are clearly correlated with areas which have a high density of FOBTs. In particular, he noted that anti-social behaviour and crime were leading to an average of 1.2 calls per day to the police from bookmakers in the borough of Newham.

Current representatives of the bookmaking industry declined to give evidence to the APPG, but a number of former members of the industry did provide relevant evidence. Both the former chairman and the co-founder of one of the larger bookmakers, Paddy Power, were clear in expressing their concerns regarding FOBTs. In addition, former employees of Ladbrokes spoke of concerns particularly in relation to personal safety, both for staff and customers. Both had witnessed first hand the violence which can be associated with FOBTs and increasing levels of crime and anti social behaviour which are also associated with their presence.

The overall conclusion of the APPG was that

from the evidence presented to us (...about gambling related harm), the Government now has a prima facie case for significantly reducing the £100 stake that can be wagered on a fixed odds betting terminal. The Group sees a strong case for the stake being set at £2. This call is supported many Members of Parliament from all political parties and in both Houses of Parliament. It is also, the evidence suggests, supported by a significant majority of the public (APPG, 2017:).

As the previous chapter (Four) showed, the government did act in 2018 and moved to the position advocated by the APPG and many campaigners of a £2 maximum permitted stake on FOBTs. As shown in that chapter, there were a number of social and political factors which influenced that decision, but the data and evidence which was collated and interpreted by a range of campaigners, academics, local authorities and think tanks was clearly a significant factor too.

5.13 Peer reviewed academic research

Whilst the collation and presentation of evidence may have influenced government action on FOBTs in 2018, I could find no existing single systematic review of that evidence. As suggested at the beginning of the chapter, one of my aims was to do just that and to take a systematic approach to reviewing all published studies in the academic literature relating to FOBTs and harm. As a single reviewer, however, I did not have the scope or resources to conduct a fully 'systematic review' (Centre for Reviews and Dissemination (CRD), 2009). Tight and clear definitions of a systematic review are prevalent in health and other fields of study. The CRD guidance which is aimed at reviews in health care but has been widely adopted suggests that there needs to be a review team and possibly an advisory group, as well as a clear written protocol. They suggest that it is good practice to have a minimum of two researchers involved so that measures to minimize bias and error can be implemented at all stages of the review. It is now also recommended that systematic reviews are registered in advance (e.g. with the International prospective register of systematic reviews. (PROSPERO).

Most of those things were not possible for an individual conducting a review for a thesis and I was therefore careful not to claim this as a 'systematic review' in the formal sense that is understood in many disciplines.

Nevertheless, in order to reduce bias and provide clarity I adopted a systematic approach.

The following academic databases were consulted: Medline, Embase, Cinahl, Psycinfo, Scopus. BASIS (Brief Addiction Science Information Scheme).

The following search terms were used: electronic gambling machine, EGM, fixed odds betting terminal, FOBT, gambling problems, gambling related harm, harm.

Searches were completed on June 20th 2018. Searches using the terms 'fixed odds betting terminal' and 'FOBT' yielded very few results: just four papers were accessed this way. Searches using the terms 'electronic gambling machine' or 'EGM' were more productive, and led to over seventy relevant papers. Whilst many of the latter relate to studies conducted in other countries, many are relevant since FOBTs share most of the characteristics of other types of EGM. As noted in Chapter Four, there has been a myopic tendency to ignore relevant research from other parts of the world in UK debates about gambling, and where it is relevant such research should be considered in any debates about FOBTs.

The next two sections assess the studies found in the academic literature which relate to, first, FOBTs in the UK, and second, EGMs more broadly, including non-UK studies. Findings are presented and analysed according to themes which are relevant to gambling related harm.

5.13.1 FOBTs: Peer reviewed studies

Turning first to papers which specifically considered FOBTs, Pepi (2018) considered money laundering risks in relation to FOBTs in bookmakers in the UK. This was an exploratory study, but testimony from a range of stakeholders indicated that money laundering threats within the bookmaker sector are inherently high, with a lack of effective safeguards in place to mitigate the identified vulnerabilities. Harris and Parke (2016) investigated the impact of computer-generated self-appraisal 'pop up' messages which appeared during simulated playing of games similar to those which occur on FOBT's. In experiments with 30 participants, the authors found that pop up messages reduced the speed of betting but only in those who were losing (not those winning), but had no effect on overall betting intensity. They note that more ecologically valid studies are needed (i.e. studies of real play on FOBTs with real money) and that *'to reduce size of maximum stakes may be a more effective means of reducing betting intensity and overall levels of harm'* (615).

Smith et al. (2016), in a study of users of the National Problem Gambling Clinic, explored the links between type of gambling activity and gambling related harm. In a study of 736 treatment seeking individuals, the problem gambling severity index (PGSI) was significantly higher for machine gamblers and specifically for FOBT gamblers. Finally, in relation to FOBTs, Sharman et al. (2019) examined trends and patterns in gamblers seeking help from the Gordon Moody Association (GMA) between 2000 and 2015. As noted above, the latest reports from the GMA show that FOBTs are now the biggest single type of gambling activity for those using their services. The Sharman et al. study shows that this trend steadily developed from 2000 and the authors conclude that FOBTs had become much

more common but also that the mental health of disordered gamblers had worsened, with gamblers more likely to have attempted suicide, to report a co-occurring mental health disorder, and to start treatment having already been prescribed medication.

The very limited published academic research does illustrate clear links, then, between FOBTs and harm in various ways: harm in terms of crime and money laundering; in terms of the limited effectiveness of harm reduction messages in reducing the intensity of betting by high stakes FOBT gamblers; and in terms of a clear trend for those seeking help from UK gambling treatment providers to be particularly users of FOBTs.

5.13.2. Electronic gambling machines (EGMs). Peer reviewed studies

Seventy papers were located which related to EGM use more generally and across the globe (rather than just FOBTs in the UK). Of these, some 24 discussed links between these machines and harm. The next section (5.13) considers the findings reported in this literature.

5.13.3 Measuring harm in relation to EGMs

The key focus of this study is on links between gambling machines and harm, but as discussed in the introductory chapter there remains uncertainty and significant debate about how best to characterise and measure harm. In this context, there are two relevant published papers. Schellink et al. (2015) discussed the development of the FocaL Adult Gambling Screen (FLAGS), a risk measurement

for gambling harm and problem gambling associated specifically with EGM use in Canada. Developed using focus groups with machine players, and further telephone interviews, the authors selected ten constructs from an initial 190 prototype statements, as being particularly associated with gambling harm. In further testing nine of these met tests for reliability and validity, but it was suggested that the tenth construct (preoccupation obsession) required further testing and refinement of wording.

From this work, it is suggested that the following nine constructs may be particularly suited to capturing the range of harms that link to EGM use: Risky Cognitions Beliefs, Risky Cognitions Motives, Preoccupation Desire, Risky Practices Earlier, Risky Practices Later, Impaired Control Continue a Session, Impaired Control Begin a Session, Negative Consequences, and Persistence. One thing that seems notable about these constructs is that they largely focus on characteristics of individual thought and behaviour and make no reference to the ecology of the gambling environment or the characteristics of EGMs. As such they fit more with the 'problem gambler' construct and less with the developing notion of 'gambling related harm' which does consider factors beyond those of the individual psyche and behaviour. Later chapters will assess to what degree these elements are prominent in the lived experience of FOBT players.

A second paper looks at gambling related harm more broadly. Langham et al. (2016) proposed a definition and conceptual framework of that captures the full breadth of harms that gambling can contribute to; they also developed a taxonomy of harms to facilitate the development of more appropriate measures of harm. This taxonomy included: 1. Financial harms 2. Relationship disruption,

conflict or breakdown 3. Emotional or psychological distress 4. Decrements to health 5. Cultural harm 6. Reduced performance at work or study 7. Criminal activity (see Figure 5 below). It is suggested that it is also important to look at each of these dimensions over time (the temporal category in the taxonomy). Harms may accumulate to a point that a person seeks help or has a particular experience such as relationship breakdown, that may be viewed as a crisis. A person may stop gambling but harms which resulted from the gambling period may continue – legacy harms.

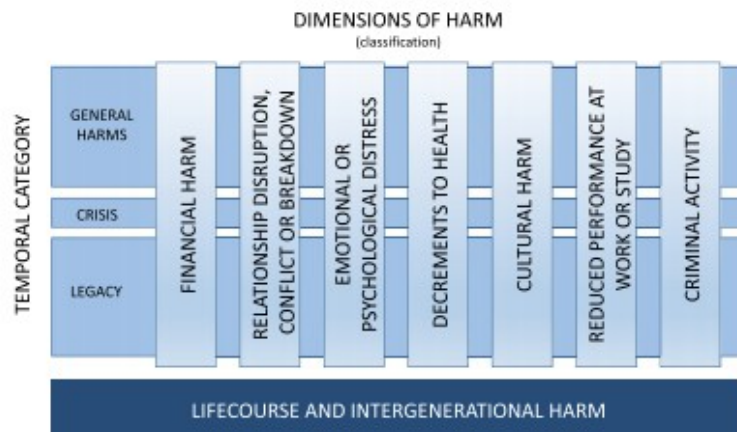


Figure 5. Elements of gambling related harm. Based on scheme proposed by Langham et al., 2016

This model was picked up by the UK Gambling Commission and has informed advice that they have developed for local authorities (Gambling Commission, 2018).

5.13.4. Peer reviewed studies: harm reduction measures

Seven of the 24 studies which considered harm looked at so called ‘harm reduction measures’ such as pop-up messages on machines and other signage.

Palmer du Preez et al. (2016) considered the impact on gambling behaviour of

legally mandated pop up messages in New Zealand. From 1 July 2009 every electronic gaming machine (EGM) in New Zealand, regardless of venue type, was required to include a pop-up message feature. The messages had to interrupt gamblers at irregular intervals not exceeding 30 minutes of continuous gambling, inform the gambler of the duration of the current gambling session, the amount of money spent, and net wins or losses. The authors noted that, among gamblers who reported seeing pop-up messages, half read the message content, and a quarter believed that pop-up messages helped them control the amount of money they spend on gambling. Participants who reported being likely to stop gambling in response to pop-up messages spent significantly less money on gambling when variables that were independently associated with EGM expenditure were controlled for. The conclusion was that the pop-up message feature that has been operating in New Zealand had a 'modest' harm minimisation effect. This is pertinent to the UK situation since similar requirements in terms of in play messages were introduced to FOBTs in a new code of practice in 2014.

Ginley et al. (2017) conducted a systematic review of warning messages in relation to gambling activity and gambling machines. They concluded that messages demonstrated optimal impact when they popped-up on the centre screen, created an interruption in play, and required active removal by the player. Messages were more effective at modifying behaviour when they were brief, easy to read, and direct.

Beyond providing messages to gamblers during play, a range of responsible gambling and harm minimisation policies around the world require, in addition, active measures to support gamblers who signs of problematic gambling. Rintoul

et al. (2017) compared published policies with unannounced observations of 11 venues containing EGMs in Australia, together with interviews and focus groups. They found that the weight of evidence demonstrated that venues often fail to respond to signs of gambling problems and instead encourage continued gambling in contradiction of their code of conduct responsibilities. Again, there are no published studies of this issue in relation to FOBTs in the UK.

A broader perspective on harm reduction is taken by Oakes et al. (2012) who consider a range of factors which 'pull' people away from 'relapsing' into EGM use. These authors found that four strategies were particularly noted as useful in reducing harm in this way: (1) cognitive strategies such as remembering past gambling harms or distraction techniques to avoid thinking about gambling to enable gamblers to manage the urge to gamble (2) positive social support, (3) intervention and (4) managing the urge, specifically related to the 'pull' away from (or reduce the risk) of relapse. Also taking a broader perspective on harm reduction are authors such as Adams et al. (2009) who considered the place of harm reduction in a public health approach to reducing gambling harm. They suggested that 'harm reduction' needs to be balanced with positive health promotion initiatives and also political commitment to change and develop gambling policy in a more public health focused way.

5.13.5 Maximum stake size

It has been shown in earlier parts of this study that the campaign to reduce the maximum stake allowable on FOBTs in the UK gathered pace and was ultimately successful, although this change is yet to take effect. Peer reviewed studies

suggest that this is a single measure which is very likely to reduce gambling related harm.

Detailed Australian research concluded that a reduction in stakes to a similar low level of one dollar would be one of the actions which would have most impact in reducing problem gambling (Blaszczynski et al., 2001). Subsequently, a study involving the use of specially modified EGMs tested modifications including bet reduction to one dollar, reduction in spin rate (the speed at which wagers may be placed), and the denomination of notes accepted by the EGMs. This research did involve the use of machines in naturalistic environments (the clubs and hotels in which participants normally played). The researchers concluded that the bet reduction measure appeared to be effective in reducing the time and money spent by problem gamblers, and did not inconvenience non-problem gamblers (Blaszczynski et al., 2001). Other measures were evaluated as ineffective. This finding was replicated by Sharpe et al. (2005). These authors found that the modified EGM with a one dollar bet limit reduced time spent gambling, number of bets and amounts of losses.

Reviews of evidence in relation to this across a number of studies in both New Zealand and Australia suggest that

there is growing evidence to suggest that pre-commitment, one-dollar maximum bets or other machine design changes may yield significantly more effective harm minimisation effects than in-venue practices such as signage or, indeed, self-exclusion (Livingstone et al., 2014:1).

Similarly, Jackson et al. (2016) reviewing a series of harm minimisation measures and reporting on those which would have least impact on enjoyment by gamblers

whilst having the most impact on reducing problem gambling suggest that

reductions in maximum bet amounts appear to be of little inconvenience to most non-problem gamblers but would likely differentially target moderate/problem gamblers as increases in amount gambled per spin is significantly associated with the risk of problem gambling (821).

There are some differences between EGMs in Australia and New Zealand, and FOBTs in the UK. However, there are many similarities in terms of structural features which have been shown to correlate with gambling related harm, including the rapid speed of play, the sensory enhancements (such as light and sound features), the bonus features, and the types of games available. For that reason, and given the absence at the moment of further research in the UK, it is important to carefully consider the lessons from elsewhere. As noted in Chapter Two, English MPs went, in the early 2000's to visit other jurisdictions and were given clear warnings from Australia about how the similarities of FOBTs to EGMs were likely to lead to significant problems if they were made widely available.

5.13.6 Gambling expenditure and harm.

As some scholars have pointed out, the maximum permitted single stake is not the sole determinant of the amount that a person spends on gambling and considerations of time spent gambling and total amount spent in a session or over time are also key considerations (Parke and Parke, 2007). In relation to this, Markham et al. (2014) explored the link between expenditure and harm in venues which have EGMs in northern Australia. The authors conclude that aggregate

patron electronic gaming machine expenditure predicts the prevalence of gambling-related harm at the venue level. There is no equivalent data from UK venues in relation to FOBT use and harm. Earlier in this chapter, industry data about FOBT expenditure per person was presented, but this has not been carefully analysed in relation to gambling related harm.

5.13.7 EGMs and domestic violence (intimate partner violence)

The framework proposed by Langham et al. (2016), which was discussed in section 5.13.3, points to harms related to EGM use which go beyond the individual gambler. Violence in various forms has been highlighted in a range of reports and studies (see section 5.12). Domestic violence (often referred to as intimate partner violence or IPV) was highlighted in relation to gambling in the UK in the LGA report discussed in that section. The academic literature contains several studies which have looked at specific links between machine gambling and domestic violence. Australian researchers found significant associations between domestic violence and the accessibility of EGMs (Markham et al., 2016). The study involved correlating domestic violence records at individual postcode level with the number of EGMs in that postcode. Postcodes with no electronic gaming machines were associated with 20% fewer family incidents per 10,000 and 30% fewer domestic-violence assaults per 10,000, when compared with postcodes with 75 electronic gaming machines per 10,000. As the authors note, the causal relations underlying these associations are unclear, although a separate systematic review of the links between problem gambling and IPV (Dowling et al., 2016) shed some light on these links. Problem gambling was highly linked to being both a victim and a perpetrator of IPV. Meta-analyses

revealed that over one third of problem gamblers report being victims of physical IPV (38.1%) or perpetrators of physical IPV (36.5%). Analysis showed that less than full employment and clinical anger problems are implicated in the relationship between problem gambling and IPV victimization and that younger age, less than full employment, clinical anger problems, impulsivity, and alcohol and substance use are implicated in the relationship between problem gambling and IPV perpetration.

5.13.8 EGMs and Suicide

As well as violence towards others, violence towards the self has also been highlighted in a number of reports and studies of problem gambling. Self harm and suicide are elevated in problem and pathological gamblers (Wong et al., 2010). It is often suggested that these links are mediated and best explained by comorbidities, particularly concurrent alcohol misuse, or existing mental health problems (Hodgins et al., 2006). However, Bischof et al. (2016) found that type of gambling is also significant in the relationship between problem gambling and suicide. This German study found that gambling on EGMs is associated with suicidal events in pathological gamblers independently of any comorbidity. Other forms of gambling did not show elevated levels of risk for suicide.

Two studies of gambling and suicide in Hong Kong noted that the majority of the gambling related suicides related to casino gambling (Yip, 2007; Wong et al., 2010). Modern casinos are dominated by EGMs, which take up by far the biggest percentage of their floor space and provide the biggest percentage of both revenue and profits (Schull, 2011).

In the UK there are no published studies showing direct links between suicide and FOBTs/EGMs. However, a recent study from the UK National Problem Gambling Clinic found that 28.7% of those who attended the clinic reported suicidal thoughts at their first assessment (Roberts et al., 2017). This is more than ten times the reported rates of suicidal thoughts for the UK population as a whole, where the prevalence has been found to be 2.3% (Gunnell et al., 2004), pointing to the importance of this issue. Moreover, it has already been noted that over 60% of users of that clinic report that FOBTs are their main form of problematic gambling (section 5.9.1). Also, as noted above (5.13.1), suicide was highlighted as a key issue in the only published paper which examined data from the other treatment provider for those with the most severe gambling problems, the Gordon Moody Association. It was noted that between 2000 and 2015, as FOBTs increased in importance and became the biggest single type of gambling activity for those using GMA services, the mental health of the users had become significantly worse, with gamblers much more likely to have attempted suicide. This provides clear evidence of an association between FOBTs and suicide. Elsewhere, suicidal ideation and suicidal attempts have been confirmed particularly in those who have problematic EGM use. For example, research from Australia found that 68 out of 70 gambling related suicides in the state of Victoria in Australia were by EGM users or their partners (Doughney, 2007). Evidence presented in chapters six and seven confirms the links between gambling machines and suicide attempts in the experience of many UK problem gamblers.

5.13.9. Location of machines

In the previous chapter, the concerns of the UK Gambling Review Body about 'ambient gambling' were referred to. This pertains to the availability of gambling

opportunities outside of casinos. In a number of countries the increasingly easy access to EGMs in many public places has raised concerns (Storer et al., 2009). In an international review of the evidence, Vasiliadis et al. (2013) substantiated a link between physical accessibility and gambling involvement, in Canada, the USA, Australia, New Zealand and Norway. Clear links were shown between higher numbers of EGMs and higher gambling participation and higher gambling spend.

The impact of greater accessibility has been further quantified in southern hemisphere countries. Looking at New Zealand and Australia together, which both saw a rapid increase in the availability of EGMs from the 1990s onwards, Storer et al (2009: 225) noted that *'It is widely believed that greater availability of electronic gaming machines (EGMs) has led to increases in problem gambling prevalence and related harms.'* They combined 34 different gambling prevalence surveys and tested the hypothesis that increasing availability is linked to increases in problem gambling. Strong statistically meaningful relationships were found for an increase in prevalence with increasing per capita density of EGMs, consistent with the access hypothesis and supported by no evidence of plateauing of prevalence with increasing density of EGMs. Indeed the authors were able to quantify the relationship and suggest that the prevalence of problem gambling increases with the density of EGMs at a rate of around 0.8 problem gamblers for each additional EGM.

Another factor which has been highlighted in a range of international studies is the uneven distribution of EGMs and the tendency for them to be clustered in areas of socio-economic disadvantage (Wardle et al., 2014). In the first systematic review of risk and protective factors in relation to problem gambling,

Downing et al. (2017) found that high socioeconomic status was one of only two clear protective factors against becoming a problem gambler. Conversely a number of individual studies have highlighted the link between low socioeconomic status and problem gambling and evidence from several countries makes particular links between the availability of high stakes gambling machines and rates of problem gambling among those of low socioeconomic status. Rintoul et al. (2013) showed that national measures of socio-economic disadvantage in Australia mapped clearly to EGM losses in one Australian city and they were able to develop a predictive spatial model of vulnerability to gambling related harm and EGM use. They contrasted mean annual EGM losses of \$849 per adult in the areas of greatest disadvantage compared to that \$298 per adult in the least disadvantaged areas. They further suggested that 40% of the apparent effect of disadvantage is explained by the density of EGMs.

In Germany, an ecological analysis found that unemployment was a key variable of *'statistical and practical significance'* that was linked with the number and density of EGMs, based on analysis of 244 local areas (Xouridas et al., 2016). Calculations showed an additional 0.14 machines for every additional unemployed person per thousand of population. The authors suggest that providers seem to actively provide more machines at locations with relatively high unemployment rates.

In the UK, the gambling industry strenuously denies targeting vulnerable or deprived areas. However, spatial mapping shows that there is a similar relationship between EGM density and economic deprivation (Wardle, 2014). The relationship is not entirely linear and straightforward, although the main finding is

robust. Also, earlier in this chapter evidence from the British Gambling Prevalence Survey was considered which showed clear correlations between FOBT use and socio-economic deprivation. The gambling industry uses language of supply and demand, but if unemployed people are using gambling machines more for whatever reason and there are more machines in their local areas, this amounts to the same thing as targeting areas of deprivation. On the specific point of unemployment, the latest UK data is clear that unemployment is by far the most common socio-economic factor that is linked to 'at risk' gambling, with 10 per cent of unemployed people meeting this categorisation (Gambling Commission, 2018).

Several studies and reviews substantiate the link between socio economic disadvantage and EGM use. This relationship is moderated by the accessibility of the venues in which the EGMs are situated. Young et al. (2012) found that venues in accessible locations and those with a higher numbers of EGMs, particularly casinos and clubs located near supermarkets, were most closely associated with gambling-related harm, even when differing player socio-demographics were accounted for. Young et al. (2009) had previously shown a similar pattern in Northern Australia, noting that the accessibility of EGM venues to particular markets and populations was important. They also point to the impact of 'market distortion', and by this they mean a cap on the number of EGMs permitted per venue (10 in a pub), leading to a proliferation of smaller venues with EGMs. This finding has particular relevance to the FOBT debate, since the limit of four FOBTs per UK betting shop has been a key driver in the opening of new betting shops in very accessible high street locations in the UK, as discussed in Chapter Four.

The majority of the studies found in the review of the academic literature looked at harm reduction measures in practice or considered policy in this area. One element which is clearly absent from almost all of the sources of data considered here is the lived experience of FOBT players. Just one study was found in the review which analysed the lived experience of EGM gamblers. Miller et al. (2017) interviewed 26 individuals in Australia who had experience of problem gambling involving EGMs and who were also involved in peer support and advocacy activities. The majority referred to the prevailing discourse about problem gambling, which focused on personal responsibility for problem gambling. They perceived that this increased the stigma associated with the issue. In contrast, they described gambling as risky, addictive and harmful, with problem gambling resulting from the design of EGMs. As a result of their different perspectives, participants proposed different interventions to reduce gambling harm, including reducing accessibility and making products safer.

The problem of the discursive construction of the research agenda by industry has been considered at different points in this chapter. As the one available study of lived experience suggested, the alternative discursive construction, by those with lived experience has rarely been considered (Miller et al., 2018). Yet this perspective can expose some of the limitations and concealments which industry shaped research lead to. It is particularly important, for example, in showing that the discursive construction itself may be harmful in certain ways, such as creating stigma and negative stereotypes (Miller and Thomas, 2017).

In considering the nature and extent of the research literature as a whole, the views of the gambling research community which were investigated by Cassidy (2014) are notable. The clear conclusion from in depth interviews with researchers and a range of other stakeholders was that:

According to our participants, gambling studies is an insular and uncritical homogenous field which suffers from unproductive repetition and rivalries. These weaknesses are reproduced by funding which rewards conformity and marginalizes critical voices (Cassidy, 2014: 346)

The very small number of papers which have been published in independent peer reviewed journals about FOBTs illustrate the issue. From the ANT perspective, this suggests that certain actors have been successful in enrolling the research community in a network in which gambling has been allowed to expand and in which research and criticality is limited to debates and investigations about individual problem gambling in a minority of players rather than about the nature and place of machine gambling in any wider sense.

5.14. Research evidence published outside of peer reviewed literature

As noted earlier in this chapter, there exist a range of studies of FOBTs which have not been published in the peer reviewed academic literature, but which can provide pertinent and useful findings in the context of the questions that this study is investigating. In considering these, it is worth reiterating points made earlier about the lack of a well developed and well funded gambling research infrastructure and community in the UK, which is fully independent of industry. As some of the following examples show, the fact that industry funds studies directly and indirectly, and has vested interests in certain outcomes, lessens the

confidence in those studies, however well conducted they may seem.

A piece of work undertaken by Collins and colleagues, published at the end of 2016, has particular significance in the context of the central question for this thesis, namely the nature of any links between FOBTs and harm. The team took evidence from regular FOBT players, betting shop staff, problem gambling treatment professionals and the general public. They also conducted simulated FOBT playing sessions with 58 players (Collins et al., 2016). The research was specifically commissioned by BACTA in response to the UK government's statement in 2015 that there was insufficient evidence to warrant any reduction on the maximum permitted stake allowable at any one time on a FOBT.

In contrast to a number of contributors to this debate, who might be characterised as anti-gambling, the lead author of this study, who formerly headed the gambling research centre at Salford University, has a track record of highlighting many of the benefits of gambling, in terms of both player enjoyment and economic benefits to society, and certainly of advocating a balanced and scientific approach to assessing risks and benefits (Collins, 2003). The conclusion of Collins et al. In 2016 was that a reduction in maximum permitted stakes to only £2 would be too restrictive, but that there was very clear and compelling evidence for a reduction in the maximum to around £10. It was clear that such a restriction would significantly reduce the frequency and amounts of very large losses incurred by players without materially affecting the patterns of play or enjoyment of the majority of players.

In the case of gambling addiction amongst people who play FOBTs the rate of vulnerability to addiction appears to be quite high and the impact

of a substantial reduction of maximum permitted stakes would appear to be significant. Giving the extreme distress which gambling addiction causes to those who suffer from it and to others, it is hard to think of convincing reasons for not legislating for such a reduction. By contrast, the cumulative case in support of such legislation would seem to be overwhelming (Collins et al., 2016:57).

Caveats do have to be applied to this study, however. It is one of few that look at specific data about FOBT use, but the study was commissioned by BACTA and the discussion in Chapter Two illustrated how that body has a very clear interest in reducing the amount of money spent on FOBTs. This again illustrates the problem highlighted by Cassidy et al. (2013), that the research community and infrastructure in relation to problem gambling remains too closely linked to interest groups.

As noted above, the academic literature mainly contains studies from other jurisdictions particularly Australia and New Zealand. Very pertinent evidence about harm reduction in relation to FOBTs is available from some recent UK studies which do not appear in the academic literature. Some of the evidence results from the DCMS review of 2013 which was discussed in Chapter Two, which made an explicit challenge to bookmakers to produce formal measures that would seek to mitigate the impact of FOBTs on problem gambling levels. One result of this was the implementation by the Association for British Bookmakers (ABB) in March 2014 of a new social responsibility code (ABB,2013). In relation to FOBTs there was a requirement to place messages which promote responsible gambling more prominently on machines, New time and spend limits were introduced. Mandatory warnings for sub-category B2 gaming machine were introduced, in 2014, appearing on machines displays after every £250 fed into the machine or 30 minutes play. Cash machines were no longer allowed in betting

shops. The ABB also introduced mandatory measures to force sub-category B2 gaming machine players to make an active choice on whether to set their own limits in January 2015.

One initiative which is favoured by industry is that of self-exclusion, and this was also part of the measures included in the new code. For some time policies have been in place which allow a person to self exclude from a particular gambling venue. Individual casinos and betting shops have operated such policies for many years. The new development in recent years, enabled by greater use of technology, is to allow self exclusion from a large number of venues within a geographical area. From evidence to date it would seem that there are considerable weaknesses with the self exclusion scheme.

Several BBC investigations have pointed to failures of the scheme. One found eight out of ten failures with a scheme set up by Medway council in Kent (BBC, 2015). Another found that an individual who self excluded from 21 shops in one town was able to bet in 19 of them before being challenged (BBC, 2017). Some failures are not surprising given that the scheme relies on the powers of memory of busy shop staff, together with sometimes poor quality photographs (BBC, 2015).

The leading provider of help, the charity Gamcare notes that

Some callers and clients report to us that it is easy for them to circumvent their exclusions – there are many ways to gamble. This may be to do with the individual's motivation to change, the operator's capacity to identify self-exclusions and often a mix of both (Bracken, 2016:3).

From a regulatory perspective, it should also be noted that according to the

Gambling Commission code of practice, complying with self-exclusions is not a condition of keeping a machine permit. And the courts have ruled that bookmakers are under no legal obligation to honour self-exclusions (Ross, 2012).

In 2015, a fuller evaluation by NatCen of the early impact of the new industry code was published. The evaluation looked at four outcomes:

1. The length of time spent gambling on machines during a session of play;
2. The amount of money gambled on machines during the session;
3. The proportion of machine gambling sessions which lasted 30 minutes or more; and
4. The proportion of machine gambling sessions in which individuals inserted £250 or more into the machine.

The main conclusion was that no evidence could be found that the code had made any difference to any of the four outcomes (Salis et al., 2016).

In addition, an evaluation of the new 2015 gaming machine regulations, published in 2016, found that there was a relatively low uptake of verified accounts, and over-the-counter authorisation with trained staff occurred in only approximately 1 per cent of sessions. A large number of players therefore opted to stake below £50 and increase the duration of their gambling session (Department for Culture, Media and Sport, 2016).

It is important to assess the impact of harm reduction measures which have been implemented in relation to FOBTs, because if these measures are not successful then this allows gambling related harm to continue, and means that other

measures need to be tested and evaluated carefully.

5.15 Gambling Related harm. Evidence from reports for think tanks and public bodies.

Think tanks provide expertise and reports on a range of economic and social problems and a number have published relevant reports on gambling problems. The Centre for Social Justice, for example, produced the 'Breakthrough Britain' report in 2006, which looked at the pervasive effects of gambling related harm on individuals and communities (Centre for Social Justice, 2006). They also contributed evidence about FOBTs to government and APPG reviews.

5.15.1 Estimating the financial costs of gambling related harm

A report from another think tank, the Institute for Public Policy Research (IPPR, 2016), estimated gambling related harm in terms of the cost to the public purse. The report is the first attempt to provide an estimate of this kind, and suggested the direct cost of problem gamblers to the public purse in Great Britain was between £260 million and £1.2 billion per year. It is subject to a number of limitations: the estimates are wide, the availability of relevant data was limited, and it only captures the financial impact, and not more personal or social costs. However, the report has helped to draw attention across government and the public sector to some of the significant costs that they bear in relation to gambling.

These include: between £40 and £150 million per annum to mental health

services; between £140 and £610 million per annum on hospital in patient services; between £40 and £160 million on JSA claimant costs and lost labour tax receipts; and between £10 and £60 million on statutory homelessness applications. As the UK Gambling Commission (2018) have noted, the IPPR report has helped to move thinking towards a public health approach to gambling related harm.

At the start of this study (pages 10 and 11), I noted that whilst working in public services I observed the ways in which those with gambling problems used health and other public services but had little specialist help available to them. This led to my active work to highlight the issue. The IPPR report helps to begin to quantify the issue and support the view that specialist funded help is very limited in comparison to the cost of the issue to the public purse.

For the purpose of this study, a limitation of the IPPR research is that it does not attempt to estimate any costs in relation to particular forms of gambling. However, given all of the evidence presented so far about the primacy of FOBT use among those with the more severe gambling problems, a significant proportion of the harms and costs highlighted above must be linked to FOBT use.

Conclusions

This chapter has surveyed the available information about what is known in relation to FOBT play, FOBT players and gambling related harm. It has shown that some information exists about patterns of play, about demographics of players and about issues and problems that are correlated with FOBT play. Many gaps remain in the knowledge base, and some important questions remain

unanswered. Household surveys are known to miss populations who might be more vulnerable to developing or already having gambling related problems; these groups include prisoners, the homeless, and those living with mental health problems and learning disabilities.

Despite these limitations, the gambling prevalence and more recent health surveys tell us that FOBT users are more likely than other gamblers to be young, male, unemployed, and living in a deprived area and very close to a betting shop which has FOBTs. They are more likely than many other gamblers to wager money on a greater number of different gambling activities, and to be both living on a low income and living with high levels of existing debt.

Data from a range of treatment providers and sources of help to problem gamblers was brought together in relation to FOBTs. In sum, this corroborates the evidence from other countries that high stakes FOBT machine gambling is particularly connected with harm. This form of gambling leads to the amassing of large debts very quickly for some and seems to be a particularly difficult activity to resist and control. FOBTs are the form of gambling which most frequently leads people to seek help from treatment providers.

The peer reviewed academic literature was assessed. The small number of available FOBT studies were assessed and lessons from the broader literature about EGMs was considered in relation to FOBT use. Key questions for this thesis are the nature and extent of links between FOBTs and harm, and what this means for policy. The chapter has shown that there is a shared consensus across

a number of countries that the research literature points to reductions in maximum permitted stake size being one of the few effective measures which can reduce harm from EGMs/FOBTs.

This is clear and fits with the major concerns of the APPG group on FOBTs and other campaign groups, and also with the existing published evidence about harm minimisation. However, a narrow but high profile focus on maximum permitted stake size risks obscuring some of the other important issues which the various sources of data about FOBT and broader EGM play and players point to. These include: the availability and accessibility of machines, particularly in areas of high deprivation and unemployment; the limited efficacy of many of the currently used 'harm reduction' measures, and the use of machines by particular vulnerable groups, including children.

At the start of the chapter the point was made that from the ANT perspective, considering what is missing from the evidence can be an important element in understanding networks of industry, academia, and the public. It can also be important to try to develop those missing elements. Lived experience is what I aimed to capture in the primary data which was gathered for this thesis. This is presented and assessed in the following chapters (six and seven), which illustrate how the issues highlighted in this chapter play out in the lives of individual FOBT players and how the perspective of lived experience does indeed provide additional and different perspectives on FOBTs and harm.

Chapter Six: FOBTs and harm. A Qualitative study

This chapter sets out and analyses qualitative data that was gathered from interactions with individuals and groups of individuals who have sought help and support in relation to their experiences of gambling related harm.

Chapter Five included a summary of the *numbers* of FOBT related posts to forums hosted by two major problem gambling treatment providers in the UK, namely Gamcare and Gamblers Anonymous. One of the purposes of this chapter is to elaborate on those numbers with more detailed *textual* data. Another purpose is to compare the detailed accounts from problem gamblers with the findings and empirical data discussed Chapter Five in relation to EGMs in general, and FOBTs in particular. As discussed in that chapter, a number of empirical studies have been laboratory based, and researchers and regulators have repeatedly called for more real world and qualitative research with gamblers, not least because they can help to contextualise and assess the validity of laboratory findings.

The sources for the qualitative data which form the basis of the following analysis include that gathered through participant observation in GA meetings, semi-structured interviews with gamblers and other stakeholders, data from direct observation in gambling environments, and data gathered from relevant websites. Data from all of these sources was collated and Nvivo (version 10) used as a tool to assist in the management and analysis of the data. As detailed in Chapter Two, the general framework for assessing the data was to use 'thematic analysis', and ANT was also used to make sense of aspects of the data. Key themes were

developed from the total data set, and the themes which are highlighted are those which meet two criteria: 1. They are relevant to the theme of FOBTs and gambling related harm, and 2. they are among the most frequently mentioned themes.

The following outlines the sources of data and first-person accounts of problem gambling.

6.1.1 GA meetings

GA largely operates via face-to-face mutual help group meetings. As explained in chapter two, data was gathered from observations of one GA meeting, held in a city in the North of England. In this chapter the data and themes which particularly relate to FOBT use and FOBT players are detailed; in the following chapter themes that focus on the role of GA in promoting recovery from gambling related harm are highlighted. A broader coverage of all of the themes from the GA data has been published elsewhere (Rogers, 2019).

6.1.2 Interviews with individual FOBT gamblers

A total of sixteen individuals were interviewed, eight recruited via GA and eight via other channels. Two of the sixteen were female. The age range was 18 to 57 and the average age 42.

6.1.3 Online forums

Access to the internet has grown exponentially in recent years and it is estimated

that in the UK some 90% of the population are now online (ONS, 2017). What is often referred to as 'computer mediated communication' (CMC) has become an alternative space for social interaction and the development of supportive social networks (McGowan, 2003) which may replace or complement face to face social interaction. For example, McGowan (2003) found that, in relation to gambling, some twenty online groups had emerged in three years after 1999 which were devoted to the topic of gambling. Such groups often form and coalesce when individuals have problems that they wish to share and seek support in resolving. More recently, Mudry and Strong (2012) examined one example of online support forums for problem gamblers. They identified six common discourses which emerged from analysis of online interactions: shame and guilt, causality, the nature of gambling, gambling as an addiction or illness, control and responsibility, and recovery as a process.

Whilst one strength of that research was that it used a forum with 3,200 members, a potentially large sample, in fact only 11 participants gave permission for data to be used. However, those small number were responsible for a significant proportion of posts to the site (some 1,790). This is a pattern that was observed in a number of the online sites that I surveyed. It is not clear where the forum studied by Mudry and Strong was located (the website or organisation hosting the site, or the range of users in terms of country of origin, or other demographic information), although given the affiliations of the authors and the source of funding it might be surmised that it was Canadian. Here the focus is on UK based websites. The themes that emerged are similar in many ways, illustrating the cross-cultural similarities of difficulties relating to gambling.

It is clear that many problem gamblers have turned to the internet for advice and support. Given the specific focus on FOBT use in the UK, for this study I investigated online support forums for gamblers which are most widely available or used by individuals who live in the UK.

The Gamblers Anonymous website forum was an obvious choice. Observations of GA meetings showed that members also referred to using the online support which is available via the GA website.

Gamcare is a national charity, and one of the major sources of help for those affected by problem gambling in the UK. They have a website which is used by thousands of individuals every year.

The Gordon Moody Association was for some years the only provider of residential treatment for Gambling Problems in the UK. The organisation has a website –www.gamblingtherapy.org. Initially, it appeared that this Gambling Therapy site would not be a relevant source, since their home page suggests that *'Gambling Therapy is a free online service that provides practical advice and emotional support to people affected by problem gambling who reside outside Great Britain'*. However, a careful initial perusal of the site revealed that a good proportion of users were actually based in Great Britain. Many of those who posted from outside Britain provided accounts of problems linked to machine gambling, and some of the interactions between users served to illustrate some of the points which have been made throughout this study in relation to similarities between EGM use elsewhere in the world and FOBT use in Great Britain.

The most widely used areas of the forums on each of the relevant websites were as follows.

1. Gamblers Anonymous website. The majority of posts on the forum on this site appeared under the heading: 'Share Section (here you can post your story and comment on other stories)'. There over 2,400 threads and over 10,000 posts in this section.

2. The Gamcare website has two particularly relevant forum headings: 'Recovery diaries' and '*Overcoming problem gambling (for anyone suffering through a gambling problem)*'. Whilst the 'recovery diaries' section had more posts at the time of analysis, the focus on recovery meant that there were fewer accounts of gambling careers, and the '*Overcoming problem gambling*' section seemed much more fruitful in terms of accounts of gambling careers and material relating to FOBT use. This section contained 47,000 posts.

3. Gordon Moody – Gambling Therapy website. The majority of posts on the forum on this site appeared under the heading: '*My journal (Talk about the life you led before recovery from gambling problems, the life you're leading now, the life you want for the future and how you plan to get there)*'. There were over 2,200 posts under this heading. There were 600 posts to the next most popular area, that for 'Friends and family', a reminder that the needs of those affected by problem gamblers are often great, and not well served elsewhere.

In each case, the majority of the posts to the highlighted areas presented a declaration of some elements of the personal history and problems of the poster,

put forth into the public domain. Such declarations invite responses, and some posts garnered many responses, though many did not.

For present purposes, this body of publicly available accounts of gambling 'careers' provides a rich source of information about the place of machine gambling and FOBT use specifically.

Source of data	Amount of data
Gamblers Anonymous meetings	Notes from 20 meetings over a period of 18 months
Interviews with FOBT gamblers	1 to 2 hour interviews with 16 individuals (age range, 18-57)
Online forum – Gamblers Anonymous website	10,000 posts
Online forum – Gamcare website	47,000 posts
Online forum – Gordon Moody Association 'Gambling Therapy' website	2,800 posts

Table 2 Sources of Qualitative data

The literature review in Chapter Five indicated a number of clear trends and patterns from a range of countries in relation to machine gambling. One widely reported finding is that a problem gambling career may be accelerated where high stakes gambling machines become a significant aspect of a person's gambling. The structural features of high stakes gambling machines which allow for the rapid repetition of high stakes bets mean that a person can very quickly accumulate substantial losses. Other structural features of these machines, including frequent near misses, losses disguised as wins, and the use of light and sound all encourage repeat play. FOBTs are the most widely available UK version of a high stakes gambling machine. The following sections summarise the

key themes which emerged after thematic analysis of accounts from FOBT users. This analysis confirms that the structural features of FOBTs seem important in the evolution of a gambling problem, but also reveals a number of other important themes.

6.2. FOBTs: A Qualitatively and quantitatively different form of gambling?

The data from all of the sources named in the previous section supports the idea that amounts spent, losses incurred and related problems are often more significant in the case of FOBT players than for other types of gambling. The interviews, meeting notes and forums contain many and varied accounts of the development of gambling problems and not all of them relate to FOBTs or to gambling machines. However, many do mention gambling machines in general and FOBTs specifically, and many also mention that other forms of gambling are less problematic and easier to control than the machine gambling. For example, twenty per cent of posts on the GA website mentioned FOBTs (500 from 2,469). More than ten per cent of posts (over 5,000 out of 47,000) on the GamCare mentioned FOBTs or roulette machines.

Individuals were recruited for one to one interviews on the basis of being FOBT users, so all sixteen of this sample had significant experience of FOBT use, and were able to make comparisons between that and other types of gambling experience.

There were many statements in the data set that illustrate the theme that many people experience FOBTs as more problematic and difficult to remove

themselves from than other forms of gambling, as these representative comments show.

I don't know if its just me, but when I say I'm addicted to gambling it literally is just the FOBTS. I've always had a small bet on football accumulators which I enjoy. If i lose its only a small amount My problem is the dreaded roulette game (Fred,GA website).

I don't believe that I would have got addicted to gambling had I not played these machines. I could put a football accumulator on or buy a lottery ticket. I could do all of these things without it causing me harm. But I could not play the machines without it causing me harm. I just have to accept that this is an addictive product (interview transcript, Matt, 2016).

Its very strange and I don't think I can explain it. All I know is that I had many opportunities to gamble through my life and none of them 'bit' me for want of a better word but these machines did (Gordon, GA website).

I know what everybody is referring to here. Those machines, bring out the worst character in people (including myself), all logical thinking goes out of the window as soon as that first note goes in. These alone are the cause of my addiction, as i only bet small amounts on sports, horses etc (Jonathan, GA website).

Such posts typically attracted more responses than other posts. This one, for example, garnered 11 responses.

had a bad time 18 months ago with roulette machines done at least 15k.my wife clicked when i could not pay a bt phone bill.The relief when she found out was unreal and as most other gamblers have said (i promise i wont ever do that again)I done so well up until xmas when i went back to the bookies and the rest is history.Got captured last week(gladly) when she sensed all was not well when i shouted at my youngest for nothing and stormed out the house,Im usually very laid back.She then looked for bank statements right away and confirmed the worst.These fobts are truly my problem- horses,dogs place pots etc have never been to high stakes,and I would never play a fruit machine with bad money believe it or not (Steve, GA website).

These experiences clearly resonated with many others who had experienced similar problems with FOBT gambling, debts, and then deceitful behaviour which followed as the gambler tried to hide the extent of the problem from others.

Seconding Steve's opinion. Same is true for me also, FOBT's turned me from a normal to compulsive gambler, no question about that. Compulsive Gambling took me to my depths, turned me into a liar, a cheat and a very selfish person and I accept today the fact that I can never gambling normally again (Malcolm, GA website).

All of these responses suggest a powerful sense on the part of the individuals concerned that they have no agency or power over their gambling, and that the gambling product (the machine or other gambling activity) has a peculiar power over them. From the ANT perspective, agency is not seen as something which only resides in a person. Rather, various 'actors' in a network have agency in the sense of making things happen and producing responses from other actors. In that sense, the machines have 'agency' in the way that their programmes shape and call forth repetitive behaviour in players which some seem powerless to resist. As was made clear in the literature review, a number of design features coalesce in these machines to give them greater agency and power to script behaviours.

6.3 The big win and the near miss.

An established finding in the gambling literature is that early or intermittent big wins can quickly lead to accelerated gambling and to the development of a gambling problem (Custer, 1984, Ladouceur et al., 2002). Based on widely accepted behavioural principles of intermittent rewards, gambling machines are designed to pay out prizes of different sizes at unpredictable intervals. FOBTs do

not have the very large jackpot sizes of some machines but have relatively high stakes and prizes, meaning that wins of £500 will occur at intermittent intervals, which typically encourage continued, repeated high stakes play.

Neuroscientists have linked various behavioural reinforcement schedules to 'feel good' neuro transmitters such as dopamine. Murch and Clark (2016: 539) suggest that '*It is, perhaps, no coincidence that reinforcement schedules that produce greater dopamine release in the reward network are the same ones found in slot machines*'. From the ANT perspective, the wins, however intermittent, provide a 'script' for subsequent behaviours. This can be seen as one of the key stages identified in ANT, namely the process of 'interestment' (Callon, 1986). The actor becomes enmeshed in a network involving machines and the spaces in which they are located. The player feels stuck in this network, compelled to continue the behaviour, whatever the costs in time, money and other consequences.

2 years ago on my way home from the pub, I put a small amount in the roulette machine and won several hundred on one spin. Since then I feel it has taken over my life and now is close to ruining it totally, losing my family and friends all because of continued gambling. I don't seem to put that much on the horses. football bets even less. but when it comes to the roulette machine, I have put my whole wages in and more (wherever I can get money from) time and time again and never seem to be able to stop myself from going to play them (John, GA website).

MY FOBT hell. I don't know where to start with any of this but here goes....

Im a 24 year old guy who started playing these machines in the bookies about a couple of months ago. I won 6k in just 3 weeks. Now before this all i played was the £25 fruit machines so 6k was HUGE to me. Then it all went wrong. That money went down and down until i was chasing. Then i took out a loan which all went too. Then i ve almost maxed out my credit card. And just to top all of this off my job ended too. Now i have no money and no job. Can someone please show me theirs a way back because right now i can't see it and all i see is the tears pouring down my face (Ian,Gamcare Website).

For some, there may not even have been a big win, but a near miss in the form of seeing others win a jackpot which the person thought they deserved, which had a powerful motivating effect for continued play.

One day I played it and needed to get more change so whilst I did that my so called mates went on the machine and won the money I put in it plus the jackpot. Of course I got angry and then I started playing the roulette machine though I didn't win it was just the beginning of my road to ruin. Over the next 2-3 years I would continue to play these "devil" machines and often thought I would be able to beat them. A lot of time was wasted when I could have improved myself and my chances of job promotion yet I would chase the elusive payouts. It got to the point where I had emptied my savings accounts and maxed out 2 credit cards to this addiction. I had even sold my car to fund this addiction and borrowed money off my brother (Norman, GA website).

These accounts confirm the findings in the literature review which summarised a number of separate studies that illustrate the power of the near miss to fuel continued gambling behaviour.

6.4 FOBTs, debt and financial harm

Many individuals referred to spending 'hundreds of pounds per day' on the machines, and there were a number of references to losses of tens of thousands and even hundreds of thousands of pounds over periods of years.

I stepped back and worked out I've been using the FOBT's for near on 9 years and amassed debts of tens of thousands (Gary, Gamcare website).

I've been gambling for about 5-6 years now not so much horses or dogs or even football but (Machines) i.e. Roulette and i've lied and owe a few quid here and there but i honestly think i've gambled a few hundred thousand (Jack, GA website).

Roulette in bookies, have gone in to place the lottery and ended up losing hundreds. Yes I have had plenty of good days.... however i estimate that over a 12 year period i have lost tens of thousands (Andre,GA website).

The actual amount spent on gambling is not necessarily determinative of a problem or of adverse financial or other consequences, since incomes and assets of players vary significantly. However, where a person has a low income, or where a significant portion of their income is used for gambling, gambling related harm is likely to ensue. Accounts which suggest that a significant proportion of income is spent on FOBT machines and that the individual does not feel free and in control of this, are common. These comments should also be viewed in the context of the clear links between FOBT use and socio-economic deprivation which have been established in the literature which was reviewed in the previous chapter.

my addiction has got a lot worse since I was introduced to the machines. The last three paydays i have gone straight into the bookies and spent all of my wages on these machines which has left me with no money for the rest of the month (Rory, Gamcare website).

i put most of my wages into the machines and although i did replicate my initial success sometimes, most of the time i just lost. Even when i won i managed to lose it all in the next couple of days. and thats where i am now, every month making promises i know i wont and cant keep, and then sinking deeper into a dark place. i've stolen from my brother, my mother, my girlfriend, (i even pawned her engagement ring last month) but still i don't stop (Ron, GA website).

Over 10 years been trying to control or stop playing on the machines, they are ruining my life! Today is prime example, lost everything and was only paid yesterday, what now? Just hit rock bottom (Sean, Gamcare website).

For many, once income was used up, debts of various kinds followed. Again, the comments illustrate the individual stories which make up the statistics which

appear in the literature on the subject. As noted in the previous chapter, studies by the RGSB (2015) and Downs and Woolrych (2009) showed particularly links with FOBTs in those gamblers disclosing high levels of personal debt.

I'm 19 years old and in a whole world of trouble because of roulette machines... Ive been playing since i was 17 years old and have had constant access to money due to the fact i've been working and earning a good wage.. The trouble is when i get paid i will lose it in a flash, Im in several thousands worth of debt to people i know and i have had to move areas twice to get away (interview transcript, Peter, 2016).

i tend to play on the blackjack and roulette machines. why i play on these machines is beyond me. i am a successful professional, however i throw all of my earnings into these machines and try to live off nothing. i make my life so hard doing this (Paul, Gamcare Website).

Spending most or all of monthly income and racking up significant debts of course has an impact on other aspects of life.

Its 6am and i have had what i class as a disgusting weekend of gambling which started at the casino on Fri night and continued in the bookies sat and sun where i proceeded to blow all my months wages on roulette machines!!! I am in he usual regret mode not being able to sleep wondering how I am going to make it through the next 30 days till I get paid! I have nothing to show for 11 years hard work! I am 29 living at home with no car or worthy possessions and am saddled with large debts. I have had two failed relationships (Charlie, GA website).

Today sees me 100days without a bet.How different my life was 15 weeks ago, the total destruction i was causing was seriously stressing me out and i was struggling to cope with all the debts and payday loans i had built up through my gambling problem and more specifically my addiction to Roulette Machines. I was lying to my partner my family absolutely everyone in an attempt to hide my problem. I could see no other way forward than to win my way out of the situation (John, GA website).

A number of students referred to losing all of their EMA (Education Maintenance Allowance) on roulette machines, and similarly a number of university students described placing most or all of their student loan money into the machines.

Again, the frequency of these comments reflect findings from the literature review that students are one of the two groups that participate most in FOBT use.

I've been gambling since the age of around 15 years old. As I look older than my age i've been able to get served in various bookies even while I was in my last year at school. It started with football bets every week to losing all my EMA on roulette machines. I went on to steal from my family (Aidan, GA website).

I am 24 and have been gambling for around 6 years now, as many of you at first my gambling was harmless and very minimal, it's always been FOBT and a few pound on roulette here and there but since I have spiralled out of control. I was at College for a few years, I also had a part time Job, a good relationship and plenty of money, I had student loans which were of course funding my gambling, nobody knew about my gambling until I had nothing left but a bank overdraft (Eric,GA website).

i was wondering if any one has any advice for me; i've am at uni and am not sure what to do because i have lost a lot of money through gambling. in total i've lost about three grand, i've maxed out my overdraft spent my loan and have virtually no money left. I'm not sure if i should stay at university or quit and get a job to pay off my debts. The reason i'm in so much trouble is because i've been trying to win back what i originally lost and it's started to spiral out of control (Jake, Gambling Therapy Website).

What becomes clear from hearing and reading many hundreds of accounts are the puzzlement and despair that individuals experience when they seem to be not in control of their own behaviour and to act in ways which are contrary to their intentions and to their best interests.

This perhaps illustrates the success of the designers of the machines in inscribing processes which condition repeated responses from players and the 'technological unconscious' referred to by Thrift (2004), a response to technology which is continually repeated and yet is puzzling to the individual as it acts at a pre-conscious level.

This evidence seems to confirm the findings of Schull, referred to earlier, who suggested that the efforts of industry to shift motivations, preferences and habits are successful and that this is a process of *'market creation in which new player dispositions are inculcated via technological mediation'* (Schull, 2013: 103). In the language of actor network Theory, the devices have been designed in such a way that when players interact with them they become locked into a network, the process of 'interestment' as described by Callon (1986).

Again, it should be noted that people appear to get addicted to many forms of gambling . However, the evidence points to the strength of addiction to machine gambling being greater than for other forms. A contention throughout this study is that a binary debate about whether gambling problems are about the person or the product is reductionist and misses the point that both aspects may be important and in particular the interaction between them. This chapter has so far considered evidence about the product in terms of experiential evidence that FOBTs are different to other forms of gambling. The next section goes on to consider primary evidence about the person and discusses certain characteristics which are associated with problematic FOBT use.

6.5. Types of gambler and types of gambling

There has been a particular image of the person who is a machine gambler, one which has to some extent become stereotypical in some of the gambling and sociological literature. Some of the classic sociologies of gambling (Geertz, 1973; Goffman, 1969) seem to dismiss machine gambling as a solitary and asocial activity which, as such, is not worthy of cultural analysis. These authors contrast

machine gambling with other forms of gambling, which are described as demonstrating character and status in social settings.

The image of the solitary person, playing alone to 'escape' for as long as possible from an unsatisfactory self was suggested as typifying the machine gambler in Schull's detailed studies of players in the USA (Schull, 2012). In the UK, the typical FOBT user seems to prefer to play alone, but I noted from direct observation and from interviews and accounts of problem gamblers that there are also a significant minority who like to be part of a group of players.

I conducted over thirty hours of observations in betting shops in a range of locations. Whilst eighty per cent of those I observed were playing alone, twenty per cent played as part of a group which consisted of anything from two to ten people. From observations of these situations, and from interviews with gamblers and posts on websites, it is clear that some individuals like to display character and status by playing on a FOBT and winning with an audience. When observed, these individuals may receive advice from one or more of the observers. In some cases the advice is followed and in some cases it is ignored.

Although they may be based on objectively false beliefs, some modern FOBT players display the behaviours and traits of the 'arcade kings' described by Fisher (1991) and the 'action' gambler described by Geertz and Fisher. They seem to gamble to demonstrate status. Wins are attributed by them and the peer group of watching gamblers as evidence of some level of skill, or if not, as evidence of being selected out by fortune. Either way status is enhanced. What became very evident from discussions with these individuals was the persistence of strong beliefs about the efficacy of systems for beating the machines and the refusal to

acknowledge the reality of how the machines operate (i.e. with a random number generator in a computer chip which is not controllable by any of the staff in the immediate gambling environment). This also mirrors behaviours and beliefs observed in machine players in Papua New Guinea (Pickles, 2013).

It started when a group of us went in on a Saturday to put on football bets. We were offered some free play on the new machines. We had some wins between us and started to think that we could beat the machines. I loved being the centre of that and had a few systems that I thought brought me regular wins. I loved feeling like Billy big bollocks when my numbers came in (interview transcript, Alan, 2015).

Beliefs about winning systems may develop if a random sequence of events leads to a winning run which appears to have a pattern.

Once I started putting money in I started winning big. Then I started going round all of the other bookies and asking for demonstrations. In my mind I thought I can do this and I am still winning money. I thought 'I am on to something'. I convinced myself that I was beating the machines. So I started going round other bookies and repeating the same process. For a short time it was working. Whether it was beginner's luck or what. It certainly wasn't beating the machine. I can understand that now (interview transcript, Simon, 2014).

In earlier chapters, the ways in which researchers have attempted to classify gamblers and their motivations was discussed. Put simply, at one end of a spectrum are seen to be those who gamble for excitement and the display of character – typically the big spender or the man who attempts to display skill in horse race handicapping, poker or some other gambling activity with a perceived skill element. This is Goffman's archetypal man of action. At the other are the 'escape' gamblers who are looking for respite from cares, worries, emotional problems. Typically, these are the low stakes machines players who look to get into the 'zone' of play, in which all else is forgotten, and to maintain this state,

gambling alone, for as long as possible. This is Schull's archetypal escape gambler looking to have maximum 'time on device'. I conclude that the reality is more nuanced, and that this classification is over simplistic. Some of the same individuals seem to display elements of both types, and machine gamblers are not always solitary escapees from human interaction and from emotional problems. For example, one interviewee referred to 'action', 'excitement' and 'escape' from personal problems relating to trauma, almost in the same breath:

My motivation?.. Excitement. Being in action. I suppose is the best way to describe it. I. It was a new world for me. Unfortunately. I had been through what some would describe as a really horrific period, I had had a good friend of mine commit suicide. Going back to 2010 I put a lot of blame on myself for that. I was responsible for the weapon that he used and it was not correctly stowed, according to our operating procedures. That was the back story that meant that I held on to the guilt and the blame when in reality I only shared a small proportion of the blame. And, as time and my guilt deepened my gambling intensified because that was my escape route from reality. Then I got found out and it all came to a head last year. I got sent home from an operation. I was deemed unfit. I was referred to a mental health unit and diagnosed with post traumatic stress (interview transcript, John,2015).

This account does illustrate what many studies have shown – that the 'escape' being sought is an escape from some measure or manner of mental health problem, particularly anxiety and/or depression (Rockloff et al.,2011). FOBT players did often talk about this form of gambling in terms of 'escape'.

Fruit Machines are like an escape from the outside world, i used to think I climbed inside them and could hear every click of an electronic component, they are devilishly addictive as it is "escape (Barry, GA website).

When I was 16 my brother was killed in a car accident and with this came severe depression. When I was 18 I discovered gambling and I enjoyed it. It helped me take my mind off things and I only spent a few pound at a time. However with more wins came more urge to spend. Before I knew it I was spending 100's of pounds on the machines. When really I only wanted to bet on sports that I enjoyed (Alan, Gam-care website).

Understanding the different motivations for FOBT play and the different types of gamblers who may be most at risk of developing harm in relation to that play can be helpful in formulating responses and strategies for reducing harm.

6.6. FOBTs and violence

Mental health problems are associated with suicidal ideas and attempts, and there is a close relationship between gambling, mental health problems and suicide attempts (Roberts et al., 2017). As noted in the evidence reviewed in Chapter Five, repeated losing outcomes for EGM players have been linked to violence in a number of forms: towards self in the form of self-harm and suicide; towards intimate others in the form of domestic violence; towards the machines themselves; and towards staff who work in the venues. In so far as references to them occurred in the data, these forms of violence are considered in the following section.

6.6.1. Suicide

As some of the cases discussed in the previous section illustrate, violence is often an expression of the depths of frustration and despair which have been reached by players and is often linked to thoughts of suicide. The evidence review noted a number of studies showing elevated rates of suicide in problem gamblers and particular links with EGMs (section 5.13.8). Discussion of suicidal thoughts and suicide attempts was one of the most notable things that occurred during observations of GA meetings. References to suicidal ideas were noted on

twenty-seven occasions. Ten references to actual suicide attempts were also noted. In five of these ten cases, EGMs were a significant element in the person's gambling.

my life kind of mirrors yours. I contemplated suicide numerous times, I also lost someone I loved very deeply through gambling. Im 34 four years without a bet and when I was 29 I was in the same situation as you (Edward, GA website).

For a number of individuals who I met at GA meetings, contact with mental health services occurred first and the subject of gambling problems came up during assessments with specialist mental health services. In two cases these assessments followed suicide attempts. Both individuals stated that the assessor appeared not to have any knowledge of gambling problems or of any treatment services. One spoke of the assessor taking her phone out and 'googling' for information about gambling problems.

A number of accounts show the specific links between suicidal ideas and EGM use which are beginning to be recognised by regulators and researchers (John et al., 2019).

I have gambled on everything throughout the ten years - starting with fruit machines, moving onto football, racing, casinos, online casinos, TV roulette, poker etc. I loved the feeling of winning so much, that even when I lost more than I'd won, as long as I had that winning feeling, it was okay. Two and a half years ago I had a long term partner who I loved more than anyone else in the world. We had a wonderful relationship until I spent our mortgage money on TV roulette one night whilst she was out of the house. It was all we had and I panicked about losing her. I was so ashamed about what I'd done but didn't know where to turn to, for the first time in my life, I contemplated suicide. I took the car out and drove, and am still not sure where, hoping that I would crash and die or looking for somewhere to do it. When I returned home my partner was still out. I decided to try and hang myself from the loft and although it scares me to say it, I sat there for ten minutes ready

to lower myself down the hatch suspended by the roof joists. Luckily I couldn't go through with it (Reginald, GA website).

I've being gambling for about 10 years on fruit machines spending every last penny even with having 5 children i'm in debt up to my eyeballs through taking out payday loans amongst many other things ,taking credit out in my daughters name without her knowing,I've sold virtually everything in the house including things that belong to my children i don't know what to do i have even tried to commit suicide before now please can someone tell me there is a cure (John, Gamcare website).

The following account illustrates many of the themes emphasised so far, including beginning with widely available low stakes fruit machines, moving to higher stakes machines, an early big win, and a spiral of compulsive play, debt and relationship problems, leading to thoughts of suicide.

The thing is i gambled for leisure at first in the local pub on the fruit machines and then we went to our local bingo and they have a casino area there and got some new machines with a big jackpot..... i thought i would just try one and i won the jackpot which in my opinion was the worst thing that ever happened to me because the win was the seed of the major addiction that was to follow.....now i am at the stage where i cannot pay my rent i cant put any gas or electric on the prepayment meters and i don't have any food either, i know i have to never gamble again but i just don't know what i am going to do now about the rent and the gas and electric or food as i have no money at all left and no means to get any, i am a complete mess, i don't have any body to talk to at all, and i am supposed to be taking my daughter who is 6 out this weekend as me and her mum are separated but i cant even take her anywhere, i cant even see her because i cant get to her i keep looking at her photo and crying thinking what a waste of space i am.....if it wasn't for her i would have committed suicide by now because i just don't know what i'm going to do (John, GA website).

6.6.2. Violence towards machines and staff

Staff who work in betting shops have a day to day 'ringside view' of FOBT use. To date there has been no known study of shop staff which could provide any systematic picture of this. There is, however, a good deal of anecdotal evidence

which suggests that staff are at best uneasy about FOBTs, and in many cases would like to see them banned. The reason for this is the levels of violence that they witness and the sense of personal danger that this leads to. Reports of violence towards machines by frustrated players seem common, and violence towards shop staff is not uncommon.

One of my interviewees admitted being physically violent towards machines, in the sense of kicking them and physically handling them. He was subsequently being banned from a betting shop as a result (Interviewee transcript, Paul, 2017).

It is perhaps unlikely that people will admit violent offences in public web forums, but a number of individuals admitted desperate and aggressive behaviours of different kinds.

Yesterday I spent hundreds on the slot machines and because I was desperate and didn't want to own up I hit myself blacking my eye and then said I had been mugged police got called I gave a false statement so I have to pay a fine they took me to all the bookies so I am not allowed in them for 12 months I know I shouldn't of lied but I did all because of them machines (Jenny, GA website).

Recently went to my first GA meeting as I am out of control paying roulette machines to the point where I am throwing my bank card at the cashiers in the bookies demanding to top the machine up straight away & ranting at the machine like a man possessed (Colin, GA website).

Most players who were interviewed had witnessed others being violent towards machines.

I have seen people punch the machines. I have seen people shout at staff and say ' you have rigged that'. Show me behind the counter. Show me that you can't change what's on my machine. The staff, bless them, have been employed by the company. They are just trying to

earn a living. They can't be held accountable for what their training is. Yes. I have seen blokes try to kick the front panel off so that they can get into the money. The staff are not going to come out because if they got someone like that they are not going to challenge them. They will call the police. I have my friend who is the assistant manager of that shop in T. He was held up at gunpoint. They had been in during the day. They came back at night and got away with a load of cash. Got caught but yes, it is like I said, people will do anything to get money once they have lost it (interview transcript, Lee, 2016).

As many of the accounts in this chapter show, it was not difficult to find significant support, from available primary data, to support the contention that FOBTs have a particular pull which is different from other forms of gambling and that they are linked to a range of harms. In that sense, the hypothesis that FOBTs are more linked to gambling harm than many other forms of gambling is supported. This is in line with the evidence from other countries about EGM's and the secondary data presented in chapter five, and was an expected finding.

However, careful perusal of the data and thematic analysis led to a conclusion that there were two other significant areas of concern and difficulty for problem gamblers which were linked to FOBT use.

6.7. Gambling Careers

The first was a very frequent account of a gambling career which started with the use of other types of fruit machine during childhood, and the second relates to a graduation from FOBTs to online gambling.

6.7.1. Childhood origins

It will be recalled from the discussion of the history of gambling regulation in

Chapter Two, that concerns about allowing children access to gambling have been a recurring theme of investigations such as Royal Commissions, and regulatory debates. There was a period in the 1970s and 1980s when concern with and research into young people and the use of fruit machines gained a relatively high profile, and a number of research studies on the issue emerged (Fisher, 1993; Griffiths,1991).

The Budd report, which paved the way for the Gambling Act 2005, and emerged just as FOBTs were developing, expressed ambivalence and concern regarding the continued access of children to gambling opportunities on machines (Gambling Review Body,2001). In more recent years, the debate in the UK has become more dominated by the issue of FOBT's as a whole and the concerns about machine gambling more generally and about gambling careers that start in childhood have received relatively little attention. The issue of children and gambling machines nevertheless remains a concern. The following examples illustrate the perception of many that I interviewed, and many contributors to websites that what became a serious gambling problem had roots in childhood exposure to low stakes machine gambling.

I'm 38, have been gambling since I was 18, have probably wasted upwards of £80K, am currently £27K in debt and now want to stop. My game of choice has varied over the last 20 years. I guess like most, it started with fruit machines down the local arcade back in the days when I would go down with my mates and play on the 10p machines. I remember the day the minimum credit went up to 25p and thinking at the time "too rich for my blood!"....how ironic (Paul, GA website).

My story is like so many others on here.. I live in a seaside town where arcades were the place to hang out as I child, my parents split up when I was young, I was bullied and had a miserable childhood. My escapism was to go to the local arcade and play 'Tuppenny Nudger'. I would spend my last 50p so I'd even have to walk home. In the last 6 years

my gambling has become a problem and have run up £20,000's of debt (Jake, GA website).

After reading many posts it seems that fruit machines are for a lot of people the start of the decline. From an early age we are allowed to gamble on these fruit machines and it does affect us believe me. Even the 2p drop machines in the arcades as kids, my mother could never get me off them (John, GA website).

Many of the accounts which point to childhood gambling also highlight the role of family members in introducing individuals when young to gambling opportunities and valorising and legitimising gambling. The role of family in this sense is highlighted in much of the gambling literature (Vitaro et al., 2011; Valentine, 2016).

It is the same old story as was mentioned at the meeting. The fruit machines at the seaside. Also, my mum was quite a big gambler. She would spend a lot of time in (named amusement arcade). We would get rewards if she won. We would get money for sweets and coupons for the sweet shop next door. It is hard talking about it. That must have something to do with it, not that I have ever wanted to look into it. I started with FOBTs when I was 17, going into a bookies. I know exactly what date it was. I saw my brother win on them. I didn't really have much interest in bookies before that, partly because I was not old enough. That is what hooked me (interview transcript, Richard, 2016).

My gambling habits started young, my dad used to take me to the pub most week nights, i would have a coke, bag of crisps and he would sit me on a chair by the fruit machine and let me play on the machine, when I won I was made up. But when we didn't win he would stop after £4 or £5 and I used to think, I cant wait till I am older, when I have money I will carry on till I win and that I did, but in the end you didn't win (Mike, Gamcare website).

As argued in Chapter Four, the legitimacy of FOBT's has been called into question by a range of different groups and interests, which have very different motives. One interest group which has been important represents operators of a range of different EGMs which do not come under the FOBT label. BACTA (the

British Amusement Catering Trade Association). Formed in 1974, the association represents over 600 businesses which include many of those who supply and those who operate EGMs which are not located in the premises of the major bookmakers or casinos, and those which continue to be available for children to use.

Operators of other EGMs which can only harvest a fraction of the profits which FOBTs are able to sustain for their operators are bound to complain and to use whatever leverage they can to achieve tighter regulation of FOBTs as a way of levelling the playing field. The dominance of those interests in the debate over FOBTs risks obscuring the risks which remain from other types of EGM, and in particular the continuing exposure of young children to these forms of gambling, something which remains permitted in the UK, although it is not allowed in most other countries.

6.7.2. Progressing to online gambling

The second point noted above which was dominant in accounts by problem gamblers over the last ten years in the UK is the issue of online gambling. That was not been a particular focus initially for this study, but emerged as a key theme.

Since this study was conceived and the research began there has been a major shift in the habits of gamblers towards online forms. This shift is confirmed in recent reports from treatment providers suggest that more than half of those seeking help now report online gambling problems (Gamcare, 2018).

It is clear that whilst FOBTs have continued to be very profitable for the bookmakers who operate them within their high street premises, those companies have increasingly been investing in their online presence and online offers. It is now possible to easily access online most of the games which are available to play on FOBTs. As a number of problem gamblers and observers have noted, there remain few restrictions on the availability of online gambling or on the stakes and amounts which people can gamble via this medium.

Following the successful campaign to persuade government to reduce the maximum stake size permissible on FOBT's the all party parliamentary group has now turned it's attention to online gambling and the most significant regulatory issue.

Many forms of gambling are available online. What is of interest here is the way in which people have graduated from FOBT use to online gambling, and in particular to gambling on the same games as are available on the FOBTs.

started gambling in my teens, small to start with, just a few pounds a week on the fruit machines, then the bookies where it became 10s and 100s of pounds and then in the last 10 years or so online betting and trips to the casino. In mid December last year I blew around 5000 euros (3500 pounds) in under 2 hours and finally realised it had to stop (Neil, Gamcare website).

These FOBT's always seem to be a hot topic of debate. Like the others in this thread, 100% identification with this. I believe that these machines were the catalyst for my gambling going out of control. Since I was young until I first played these machines, I was an ordinary gambler only losing what I could afford to lose, fixed odds, cards with mates. Once these came along I was hooked very quickly and I believe that my addiction to these machines drove me onto the internet which as Mikey says leads to a 24/7 business. But FOTB's was definitely the catalyst for taking me there (Steve, GA website).

Conversely, some were able to control online use, for example by closing all accounts, but continued to be lured by FOBTs

I been gambling for so long now and was mostly online and then self excluded on most of the sites. But the main problem is them stupid machines in the bookies I keep putting 100s and 100s of £ in them and its worrying how much I put in. I am not sleeping at well and got myself into so much debt now and because of this become ill with all the worry and yet still wake up and go onto them machines (Paul, GA website).

Evidence presented in this study has shown how a combination of factors can lead to FOBT use becoming particularly problematic for some. The architecture and design of the games that they offer, the particular vulnerabilities of individuals, and the accessibility, availability, and promotion of the games all contribute. None of those factors are lessened by moving the games which appeared on FOBT machines in betting shops to online arenas. In fact accessibility and availability are almost certainly increased by such a move. Although there remains a minority of the population who don't access the internet, 95% of the population have a phone with internet access and 84% of the population regularly access the internet on the go (ONS,2020), meaning that they will be able to access online gambling opportunities 24 hours a day.

Conclusions

Selected qualitative data from the primary research carried out with gamblers and other stakeholders was presented and organised according to themes which emerged after careful scrutiny and analysis. With FOBTs as the main focus, thematic analysis was used as a framework for this analysis. The aim was to let players, particularly those with problems, speak for themselves, as far as possible. In addition ideas from actor network theory were applied as a framework

for understanding what individuals report about their interactions with gambling machines. As far as possible, the themes which are most often reported by players, those which are most relevant to the issue of gambling related harm, and those which appear to indicate the most difficult problems that they experience were focused upon.

The detailed accounts of individual gamblers illustrate how successful designers have been at inscribing processes into machines which encourage repeated behaviour by players. In these examples the idea of the 'agency' of a machine seems very real, as players talk about losing their own sense of agency and being in thrall to the dictates and demands of the machines.

ANT argues that both humans and non-human actors should be understood as significant within networks of interaction. The identity of people comes to be defined through their interaction with other actors, including other people, but also non human elements, such as gambling machines. The accounts in this chapter have shown individuals troubled by a sense of self and identity that is defined to a large degree by their interaction with a machine. The connections and interactions are what is of interest, are what is problematic for the individual and are what has come to define their identity. For ANT, an actor network is the effect or result of the connections that constitute it, and the connections or associations are the most important thing.

The lived experience of these gamblers suggests that use of FOBTs is more difficult to control than other forms of gambling and that this results in greater

debts, frustration and despair. These factors are often associated with violence, depression and suicidal ideation.

The interaction between a predisposed individual and a machine which has been specifically engineered to entice people into playing continuously is one which can become particularly sticky and one which leads to some individuals feeling powerless to withdraw themselves from the web of interaction.

Other key themes which emerged from the accounts of lived experience were problem gambling careers which began with childhood machine gambling and also a progression in a problem gambling career from FOBTs to online gambling.

From this focus on problems and difficulties the next chapter moves on to narratives of recovery, and focusses on the role of mutual help to people attempting to tackle problems relating to FOBT use. As that chapter will show, 'recovery' from problematic FOBT gambling is also very much about networks and associations.

The final chapter goes on to assess what the findings might mean in more detail and to formulate a set of recommendations for gamblers, policy makers, researchers, and others. The unique and different ways in which FOBTs appear to link to gambling problems and the levels of violence and mental health problems associated with their use which this chapter has highlighted provide particular challenges for all stakeholders in the gambling and gambling regulation business.

Chapter Seven: Pathways to recovery

The previous chapter considered experiences of problem gambling and related harm, with a focus on FOBTs. This chapter considers experiences of recovery from those problems and ways of reducing and mitigating the harm. Recovery using various forms of help is considered in relation to FOBT users. However, there is a particular focus on Gamblers Anonymous (GA). As noted in chapters Two (section 2.2.1) and Five (section 5.9.3), there were several reasons for the focus on GA. In particular, the organisation provides the greatest amount of face-to-face and group-based help to those experiencing gambling related harm in the UK, and I was able to secure access for an extended period of time to GA meetings, allowing for an in depth analysis of the GA approach.

This mutual help group uses a 'twelve step' method modelled on that of Alcoholics Anonymous (AA). Since their inception, with the establishment of Alcoholics Anonymous in 1935 in the USA, so called 'twelve step' programmes have become both extremely successful in terms of the numbers of people who are drawn to them, but also the subject of a range of criticisms. The latter include sustained academic critiques of the twelve step framework, and the apparent lack of sound empirical evidence that the programmes alone lead to long term abstinence (Humphreys, 2015).

The purpose here is not to analyse the efficacy of the programmes; rather the focus is on the way in which the GA version of the twelve step programme operates, particularly as a social network, and the ways in which some individuals have experienced this as a useful aid to their recovery from gambling related

harm. It should be noted, though, that a recent review of 25 years of evidence have suggested that 'these (twelve step) programmes appear to be an effective clinical and public health ally that aids addiction recovery through its ability to mobilise therapeutic mechanisms similar to those mobilised in formal treatment, but is able to do this for free over the long term in the communities in which people live' (Kelly, 2017). A body of research has emerged which demonstrates that the twelve step approach leads to outcomes which are as good if not better than CBT, motivational Interviewing and other widely used interventions (Kelly, 2017). One conclusion of the review of 25 years of evidence is that this mutual help approach is the nearest thing to a 'free lunch' in public health terms, and that, particularly in times of austerity, researchers and clinicians should take this significant source of help more seriously.

A number of the studies included in the review show that regular attendance at recovery groups is positively associated with abstinence and a range of better outcomes (Bonn Miller et al., 2011; Monico et al., 2015). Some have also noted a dose response relationship, with the level of 12 step meeting attendance correlating with better outcomes, including abstinence (Gossop et al., 2008). This is confirmed by many individual accounts in my data (see section 7.4). However, whilst regular attendance may be helpful, the reality is that a significant proportion of those who are referred to GA do not become regular attenders and drop out after minimal contact. In one of the earliest studies on GA, Stewart and Brown (1988) found a very significant dropout rate in relation to GA attenders in the UK. Almost a quarter of first-time attenders never returned, and nearly 70% had dropped out after ten meetings. Subsequent studies have found lower but still significant dropout rates.

Nonetheless, the scale of GA as a provider of help, the evidence of positive outcomes for regular attenders and the suggestion, by at least some researchers, that it is an important public health ally, make it important to understand the experiences of those who do attend, and the factors and processes which they find useful. It would also be very helpful to understand more about the experiences of those who drop out after initial or minimal contact, but this study was not set up to do that, and, whilst important, that issue is not considered here.

I suggest that there is an additional reason for assessing the value of and experience of GA for those who have specific problems with FOBTs, which relates to social isolation and social networks. Wardle et al. (2012) concluded that the distribution of gambling machines in Great Britain, (particularly FOBTs) in line with other international jurisdictions, displays a significant association with areas of socio-economic deprivation. Reed (2014) showed that the number of FOBTs per adult is higher on average for more deprived local authorities than it is for less deprived local authorities. Individuals who experience gambling related harm in relation to FOBT's are more likely to live in areas of socio-economic deprivation and to be unemployed (Wardle, 2014). It is clear that those who are unemployed and live in areas of socio-economic deprivation tend to have poorer social networks. Thorough reviews of evidence show that whilst the social networks of people experiencing poverty do offer some financial, material and emotional support, it appears this is not enough overcome broader socio-economic inequalities, and that those living in poverty do have lower membership of groups and smaller social networks (Mathews and Besemer, 2014). Those with poorer social networks also have poorer self reported health (O Doherty et al., 2017).

In recent years it has become clear that social factors and social networks can play a crucial role in recovery from addictions and a range of mental and physical health problems. For example, Vassilev et al. (2014) synthesised the evidence about the management of chronic illness and noted that there is increasing recognition that it is not just an individual but a collective process, where social networks can potentially make a considerable contribution to improving health outcomes. In the particular case of gambling, Best et al. (2016) proposed a Social Identity Model of Recovery and suggested that mutual aid fellowships such as GA may facilitate recovery from addiction particularly because they help to foster meaningful social identifications.

As will become evident, the data shows that such social network building seems to be a key function and consequence of GA attendance. It may follow that group-based interventions, rather than individual ones, are generally helpful to problem gamblers, but particularly helpful for at least some individuals with FOBT related problems who are more likely to be socially isolated.

It should also be noted that those experiencing poverty find it harder to access some of the more formal treatments which are available to those with gambling problems. For example, a study of female users of the national problem gambling clinic in London noted that the costs of travel and child care can be significant barriers to accessing help (Kaufman et al., 2017). A review indicated similar barriers (the cost of travel and the lack of local interventions) being highlighted in a number of studies (Rogers et al., 2019). With over 150 meetings per week across the country, the relative accessibility and very low cost of attending GA

may give it a particular value for those experiencing gambling related harm and experiencing poverty and/or high levels of debt.

Before getting in to the detail of the evidence gathered about GA, it is worth noting that there are many other routes to recovery from problems which relate to gambling, including different forms of formal and informal help and natural recovery without any intervention (Gavriel-Fried and Lev-el, 2018). It is likely that, like most problem gamblers, the majority of individuals who experience problems with FOBTs do not seek any help (Loy et al., 2019), and that those who do use a variety of different methods. Current knowledge of the efficacy of different interventions (and none) remains limited, though. We do know that an estimated 30-40% of those who meet criteria as problem gamblers will recover using informal recovery processes, that is, they will rely on their own resources rather than professional or group support (e.g. Gamblers Anonymous) for recovery (Slutske et al. 2009). Given the lack of consensus about how to measure problems which are related to gambling and the recency of efforts to conceptualise gambling related harm (discussed in section 5.13.3), it is no surprise to find that systematic reviews of treatment outcomes for gambling disorders report 63 different outcome measures and that operational criteria for measuring recovery are rarely specified (Pickering et al., 2018). As a result, the comparative efficacy of different interventions remains difficult to assess.

An important limitation in the evidence about recovery is that there are few longitudinal studies which assess outcomes over time. Reith and Dobbie (2012), reporting on a longitudinal study of gamblers in Scotland, conclude that the processes of behaviour change involved in recovery are

embedded in wider social relations and revolve around shifting concepts of self-identity. This involves processes of biographical and temporal reconstruction which are grounded in material circumstances, particularly those relating to money and social relationships (511).

Further, they suggest that recovering from gambling related harm is about having *'an increased sense of agency and authenticity as individuals move into a future that they feel they have some control over'* (511).

Whilst a range of interventions help to provide 'biographical reconstruction' and an increased sense of agency and control, it will be shown in the following sections that the framework and social support provided by GA seem to do this particularly well.

ANT has been used in this study so far to provide a perspective on how gambling behaviour becomes inscribed. In the next section, the same framework is used to show how non-gambling can become inscribed. This can happen in a variety of ways, and support provided through formal face to face counselling, online counselling, online forums, and other mechanisms, can each help individuals to alter their networks so that people, places and influences to which they are regularly exposed support lead to decreases in gambling rather than increased gambling. As discussed in the previous chapter, the Gamcare and Gordon Moody websites hold many accounts from individuals who developed debt, and a range of physical and mental health and relationship problems as a result of FOBT use. Many of those accounts also recommend and show gratitude for the advice and support received from these sources which clearly helped them in their recovery journeys.

However, the philosophy of GA and the interactions in GA meetings and websites help to provide a very particular and strong sense of biographical reconstruction and sense of agency that help to inscribe non-gambling behaviour. As discussed in Chapters Two and Six, in order to gather data about GA the author attended and made notes of twenty weekly open meetings during 2014 and 2015 in one location. To supplement this data, relevant discussions from the GA website were also analysed. This data set is used to inform the analysis in the remainder of this chapter about the particular role of GA in fostering recovery from gambling related harm which follows FOBT use.

7.1. Scripting addiction, scripting recovery

7p.m. on a windy winter evening. The weekly open meeting of Gamblers Anonymous is about to start. I had arrived early to find half a dozen men of varying ages talking about football, work and families, and a range of non-gambling issues, whilst waiting for the meeting to begin. The room is set out with tables and chairs in a rectangular classroom format. It sits in an office which is used by a local mental health charity and is rented out to GA on two evenings each week. On the table at the front where the chair of the meeting now takes his place, are copies of two small publications – the so called GA blue book (title: Towards the First 90 days) and the orange book (title: Questions and Answers about the problem of Compulsive Gambling and the GA Recovery Programme). These documents provide road maps and scripts for those trying to reconstitute their relationship with gambling.

The Chair calls the meeting to order, states some brief ground rules for the meeting, which include a request for individuals to moderate their language during discussions, and then invites a round of introductions in which each person present states their name, and then says: 'I am a compulsive gambler and my last bet was on (x date)'. Readings from one of several GA items of literature follow at some point during the meeting, but immediately following the introduction the chair singles out certain individuals and quizzes them about their situations. I note that every one of the fifteen people present has their arms tightly crossed as proceedings commence. I wonder if this has anything to do with my presence, or is rather defensiveness and concern about being singled out for questioning by the chair (diary notes, 2015)

From the ANT perspective, the material objects which play a part in inscribing gambling behaviours are the gambling machines themselves and the ways in which they are programmed and scripted. In GA, the material objects might be seen as the literature which is on the table, and which is quoted from in every GA meeting that takes place. More than material objects, the GA literature provides vehicles for powerful messages about behaviour and identity. The aim is to instil a particular understanding of gambling behaviour and to inscribe behaviours which no longer involve any gambling. Typically, in a GA meeting, and certainly at every one that I attended, the opening ritual occurred as described above. The role of the chair and other experienced members in scripting recovery also became clear over the time during which I observed meetings.

Regular attendance and reading of the literature helps individuals become socialised into the GA world, as does the guidance and role modelling provided by more experienced members. Part of this socialisation involves adopting the identity and language of the GA community. Laracy (2011) found that absolute assertion of identity as a compulsive gambler was identified as an important aspect of GAs recovery culture. By following the lead of veteran members, new members learned to utilize the medical terminology used in the programme to understand and realize that they were 'compulsive gamblers'. Through regular attendance, the compulsive gambler identity becomes the dominant or master status in one's self-image and can be considered a key component in recovery.

A number of observational and sociological studies of mutual help fellowships have taken a rather critical stance on these processes which appear to

continually reinforce the identity as an addict of whichever variety. Turner and Saunders (1990), for example, were critical of the 'medical relabelling' observed in a Gamblers Anonymous programme in the UK in the 1980s. In what is one of the earlier studies of Gamblers Anonymous, and one of the few that has taken place in the UK, they used sociological frameworks outlined by Garfinkel (1956) and Goffman (1961) to assess the 'opening rituals' and ceremonies of the GA group. For the new member, this ceremony involves a public disclosure of their gambling experiences and related problems. However, brief this is, it can be a frightening experience. However, such disclosures provide a benchmark against which future progress in recovery can be measured. At GA, each meeting begins with each member stating – '*my name is X, I am a compulsive gambler and my last bet was on xx date*'. Within the twelve step programme compulsion and its consequences are seen as an illness. Turner and Saunders noted that some who attend GA embrace the programme and the worldview and others reject it. They concluded, though, that broad consequences arise from encountering fellow sufferers in the GA meetings: an acceptance of the state of their condition (diseased), or a rejection of such a diagnosis but the knowledge of returning to the 'outside' world with a reconstituted self-image and its consequential meaning. My own observations of GA corroborate these findings, in terms of the rituals of the meetings, and the way in which some totally embrace the programme and philosophy whilst others reject it. Turner and Saunders pessimistically suggest that those individuals who 'concede' to the diagnosis must commit themselves to a recovery programme that will never ultimately achieve what it suggests (1990: 59). As later parts of this chapter and other research shows, there is clear evidence to the contrary, and that for those who maintain adherence and 'commit'

to the programme and respond to researchers, the programme can and often does achieve what it suggests.

Ferentzy et al. (2006) noted interesting differences in emphasis, but in most regards the rituals, ceremonies and general content of Gamblers Anonymous meetings are broadly similar to those which occur in Alcoholics Anonymous, Narcotics Anonymous and similar 'fellowships'. Given that fact, it is instructive to seek lessons from the research literature on these twelve step programmes more broadly. Because these groups are 'mutual help' groups which operate outside of formal health and care services, individuals usually self select to attend. This means that observational studies of outcomes are vulnerable to self selection bias. However for one large study Humphreys et al. (2016) used statistical techniques to overcome this issue. They used randomisation as an instrumental variable and were able to look at outcomes of AA attendance in five randomised trials. They concluded that increasing AA attendance leads to short- and long-term decreases in alcohol consumption that cannot be attributed to self-selection.

One of the most comprehensive ethnographic studies of machine gamblers and of GA is that conducted by Schull (2012). She observed the processes at work in GA and other 'therapy' meetings in Las Vegas. She notes how facilitators tell people: *'addiction is a problem of you governing your own life – not the government doing it for you'* (244). She suggests that this refers to requirements for individuals to vigilantly monitor and manage, adjusting and governing behaviour where necessary:

this last lesson falls neatly in line with the more general demand of neo-liberal society that individuals participate robustly in consumptive markets while assuming responsibility for their conduct (245).

Throughout this thesis, it has been argued that the framing of problem gambling as an issue of mere individual psychology is a convenient device which draws attention away from the role of the proliferation of gambling opportunities and the acceleration of the consumption of both time and money which are afforded by modern gambling technologies, factors which may be seen as the domain of policy and politics. Some argue that twelve step programmes are complicit in encouraging narratives which ignore social contexts, socio economic factors and the role of the marketing and availability of products to which people become addicted (Dodes and Dodes, 2014).

However, whilst it may be true that some people simply 'learn the script' in a superficial way, evidence seems to suggest that adopting the twelve step ideology is clearly one element which can be genuinely helpful to individuals who struggle with addictive behaviours and related harms (Kelly, 2017). Pragmatically, it might also be argued that the availability of products is outside the control of the individual, and that the only socio-economic circumstances that can be effected by the individual addict are their own. From this perspective, it should be the role of policy makers and campaigners to deal with the regulation of supply and the way in which potentially addictive products are marketed and made available, and to debate wider issues which impact on socio economic circumstances. The focus of treatment providers should, in this view, be kept firmly on the individual addicts and perhaps their family.

Perhaps it is a reflection of a number of years as a clinician and manager of

treatment services, but I am drawn to note the real world benefits to individuals and families from participation in twelve step programmes. Whilst giving full credence to the critical analyses noted above, I think it important to also give credence to the ways in which individuals find solace, better control of self, and a real reduction in distress and reduction in various forms of harm via these programmes. Such a perspective is consistent with the position taken throughout this study, which recognises the person's own account of their experience, whilst also being cognisant of the way in which such experiences may be interpreted differently via a range of theoretical perspectives.

Returning to the script about scripting, certainly the identity of 'compulsive gambler' was widely encouraged in the English GA meetings, as was reinforcement of the idea of compulsive gambling as a lifelong illness which can only be kept at bay with great vigilance and lifelong attendance at meetings.

One of the two longest serving attenders at the groups regularly said that he believed that compulsive gambling is an illness, and one which he had suffered from since the age of six and would continue to suffer from until the day he died. He was clear that reminding himself of this fact on a daily basis and having it reinforced in weekly meetings was a key element in him remaining abstinent from gambling for some years.

7.2. Ambivalence

Orford (2012) talked about Restraint Erosion Theory as a way of understanding the growth of gambling in recent years. His general point is that there are always

sets of factors which encourage behaviour, but also sets of factors which restrain behaviour, creating constant ambivalence in those trying to change behaviour. He notes that many of the restraints which were previously in place have been dismantled with the liberalisation of gambling.

Oakes et al. (2012) published two studies which looked respectively at 'push' and 'pull' factors in relation gambling machines. Using focus groups of EGM problem gamblers, significant others, and therapists, they found that vigilance, motivation to commit to change, positive social support, cognitive strategies such as remembering past gambling harms or distraction techniques to avoid thinking about gambling to enable gamblers to manage the urge to gamble and urge extinction were key factors that protected against relapse. Conversely, factors which pushed people towards relapse were: urge to gamble, erroneous cognitions about the outcomes of gambling, negative affect, dysfunctional relationships and environmental gambling triggers. A theory was developed that each relapse episode comprises a sequence of mental and behavioural events, which evolves over time and is modified by factors that 'push' this sequence towards relapse and also that a number of gamblers develop an altered state of consciousness during relapse described as the 'zone' which prolongs the relapse.

Linking this notion of push and pull to the idea of scripting, it can be seen that the efforts of gambling industry engineers are directed towards scripting gambling behaviour (Schull, 2012), and those of recovery programmes are directed in the opposite direction towards scripting the complete cessation of gambling behaviour.

Recovery programmes such as GA address the push factors, with advice and discussions in relation to 'erroneous thinking', to managing urges to gamble, and to managing negative effects and difficulties in relationships. The positive social network and cognitive strategies suggested by the programme provide factors which help to pull a person away from relapse.

The tension caused by the complex and constantly changing and competing push and pull factors is evident in the conversations at GA meetings and the experiences recounted by attenders. Ambivalence is present when individuals take the first steps towards GA and remains for many even after continued attendance.

Simon admits to this ambivalence at the outset of his GA journey and also points to the immediate sense that he got of a group that he could identify with and be part of, in contrast to his solitary life as a gambler.

I was scared stiff to be honest with you when I decided to go to my first GA meeting. It was at the old centre, at X house. We got there 15, 20 minutes before the meeting was starting. It was in complete darkness. I was saying 'look, it can't be on tonight'. I've walked towards the building and seen two of the members opening up at the side. I don't know what's gone through my mind but I hot footed it up the road. Because I was not in a comfortable place. Thankfully one of the lads came after me and said 'are you looking for GA?' And then took me in and it went from there really. I was relieved that it wasn't a group of people holding hands. It was a group of normal people with an actual issue that I could relate to , and it was helpful that I could see that there was long periods of abstinence in the room. There was a guy who was going to prison because of his gambling. There was good points, bad points and wake up calls and all three I needed at that point. So, I had a real sense of relief, and of identification with people (interview transcript, Simon, 2015).

Gordon experienced several weeks of acute ambivalence before finally going in

to a GA meeting.

For three weeks I drove to my local GA meeting but did not have the courage to go in so I came home, Thinking..people at a meeting will be lowlifes wanting a drink and a biscuit and that's all. They wont be like me, I'm better than that. Yesterday I went, I listened and participated. They are just normal people at a meeting, from all walks of life. All there because they recognise they have a problem and want support to recover. I am not unique, I'm not better than anyone else, I am a compulsive gambler and attending my first GA meeting was the best thing I have ever done(Gordon, GA website).

Many theories of addiction point to the central role of ambivalence (West, 2006).

When ambivalence is evident and the forces pushing a person towards gambling are strong, it can be seen that equally strong and consistent counterbalancing forces which push people towards abstinence may be necessary and useful.

Becoming embedded in a social network which is focused on abstinence and which offers very regular forms of support and validation for this can be very helpful in this regard. A script is potentially powerful which offers a new identity as an abstinent gambler, regular validation of the length of that abstinence, and which includes other characters who provide role models demonstrating the possibility of a new and better life and a new and better identity after overcoming the most severe problems. This kind of script, which people learn via their regular attendance at twelve step meetings, helps some people to push back against the cravings and forces which are tempting and psychologically pulling individuals back towards their addictive behaviour.

Of course, relapse is the norm when trying to change addictive behaviour, and in the maelstrom of ambivalence, those trying to maintain abstinence from gambling often go through relapse and cycles of abstinence and heavy gambling.

Alec provides a typical example of the FOBT player experiencing this cycle:

my big weakness has always been the FOBTs, whether online or in the bookies. i have lost a fortune over the years, have been in therapy, and have also attended GA, trying to stop gambling is a constant battle, I stop for a while, then I relapse then I stop and it goes on and on. 2005 to 2010 were the worst period, I lost my business, family everything during that time, then I got some help and things got under control (interview transcript, Alec, 2015).

7.3. Social networks and recovery

Socialisation as a member of the community of GA and as a recovering 'compulsive gambler' may provide a positive social network and reduce ambivalence by providing stronger motivations to maintain abstinence and to avoid relapse.

As the GA blue book states (GA, undated: 20)

When we stop gambling there is usually a real void in our lives. Friends in GA can help us fill that void. They can help us to rebuild our social life again and, in the early days, it makes it easier if we socialise in non-gambling company. Making friends in GA can help you recover. It also carries the bonus that you can help another member to recover just by being a friend

Those in attendance will regularly hear from fellow members comments such as '*I truly believe that GA is the main reason that I don't go back to compulsive gambling*', and '*There is nowhere else in the world that can help gamblers like this room full of a few people*'. One regular attender, returning after a relapse commented: '*I feel that you are all my friends here and I have let you down*' (diary notes, 2016).

There is therefore a sense of belonging to a community which understands,

forgives and provides support in times of need. One of those who had been attending the longest gave this account:

At first I went to GA every night. I needed to. It worked for me. It is still working. Most of my friends are in GA. We did the three peaks walk at the weekend. I went with three friends who are all off a bet. I know where they are coming from. We all struggle. There is always someone I can talk to at GA. And I can. They will call me an idiot and tell me to sort myself out or talk in a more understanding way whatever I need. I am not afraid to tell them what I have done. When I meet new people now, part of my fear is that I will have to tell them. Which I will. It is part of my history, of what I have done. With the GA lot. They know don't they? So I don't need to go through all of that (interview transcript, Robert, 2015).

You are not going to have the willpower to stop on your own because you can't or I certainly couldn't. Putting yourself into the fellowship and just keeping peoples numbers at hand is needed. My first three months I was on the phone daily just to try to get some support. We go out for socials now and then. There is a footy night being organised. It is keeping yourself social and not being reclusive like we would have been when we were in action (diary notes, 2016)

The above statement from John illustrates that the social network which GA members develop with each other has weekly meetings as just one element of it. Members are also encouraged to stay in touch and to seek support when they require it outside of the available meetings. GA has a UK website and forum which receives several thousand posts per year which are viewed over twenty thousand times per year. In the meetings, members were occasionally reminded of the website. However, what seems more common is the use of text messaging or telephone conversation as a means of seeking and offering support. In the context of a discussion of the comparative merits of one to one counselling and GA meetings, a comment was made that:

there is one key difference here. I have a few numbers and last week I sent a text saying ' I am down'. Within minutes I had a number of responses. The best form of counselling is in here. Everyone has been through the same. People understand me, and they do support me (diary notes, 2015).

In many of the sessions that were attended there was encouragement to people to swap phone numbers, to send a text when needing support and discussion of times when this source of help had proved invaluable. Research has suggested that text messaging is a useful intervention to aid recovery for young people (Gonzales et al., 2014). It was evident here that texting was utilised and valued as much if not more by older members as by younger ones, and formed an important element in maintaining the social network.

A number of GA groups in Britain also use mediums such as 'WhatsApp' as a vehicle for communication (Gamblers Anonymous, 2017). WhatsApp is an instant messaging application for smartphones which allows users to share many types of information between members of a group, including text, photo and video files.

For some, utilising all of the GA channels of support, including face to face, online, and phone based proved most helpful. Iain said the following:

My mobile phone now is full of GA members and I make an effort to keep in touch..I read the books still.. I use the online chat a lot and the online meeting in between the real ones I make.. being isolated in Scotland can make it hard to get to meetings on a regular basis. but NOT impossible.. I make about one or two a month.. a few more during the holidays. I have also read this forum a lot and thought I would share my story with you.

Life is better in recovery and I am thankful to be part of this fellowship. Honesty has re-entered my life. I no longer say everything is fine when its not.. I talk about my problems and no longer stick my head in the sand. I enjoy reading everyones posting and replies here so thank you all for sharing your thoughts, wisdom and your own experience

too. Meetings make it, Enjoy recovery (interview transcript, Iain, 2015).

The many comments noted about the social support aspects of GA reflect what the literature suggests, which is that a key mechanism by which twelve step programmes lead to positive outcomes is by creating positive social network change (Best, 2017). It seems that the transition from addiction to recovery is generally characterised by social connectedness and changes in social network composition coupled with the emergence of a 'recovery' identity (Bathish et al., 2017). As noted in Chapter Three the argument of theorists who developed ANT is that human behaviour is best understood not in relation to single constructs such as personality type, but rather as arising from complex interactions within a network of influences. Being enmeshed in certain networks of actors can lead to very persistent gambling behaviour; becoming enmeshed in different networks of actors can lead to recovery.

7.4. Meetings make recovery

Learning a script may take many rehearsals. For the twelve step script to become embedded, meaningful and effective enough to drive behaviour sufficiently that relapse can be avoided, a good number of meetings may be required. A cornerstone of the GA philosophy and one which was repeated at most meetings, is the idea that 'meetings make recovery'. This belief in the power of regular attendance is evident in the way that members give agency to the meeting in their language. For example, the chair of the meeting repeatedly stated that *'this room works'*. As evidence he mentioned individuals who had been

'6 months off a bet, 1 year, 5 years, even 33 years off a bet and still go back to it', adding that 'this is because they stopped coming to the meeting'. Relapse to gambling is entirely attributed to lapsing attendance at GA.

Those who relapse after an absence from the meetings may then return to GA and therefore provide apparent evidence to the rest of the attenders to support the theory that regular attendance is a pre-requisite for maintaining abstinence. The belief in this is such that lifelong attendance is mandated by the GA philosophy. On more than one occasion, newer members were asked *'does it scare you that you will have to come back here for the rest of your life?'* They were then advised to follow the example of others in the room and attend every week without fail.

Since the 1950s, Alcoholics Anonymous (AA) have promoted the idea to new members that they should aim to attend 90 meetings in 90 days. Similar advice is offered to GA members (George et al., 2014). Such advice can clearly be difficult to follow where local meetings are only held once a week. Pragmatically, this advice has been adapted, and it was noted that members were advised to attend meetings twice a week, as this was the frequency of available meetings in the city and the next nearest meeting was a fifty mile drive away.

Belief is one thing, evidence another. It may be that those who stop attending GA go on to recover without the need for any further intervention. There are few studies which have looked at outcomes for those who attend GA. What evidence there is suggests that there may well be merit in this emphasis on regular meeting attendance. Oei and Gordon (2008) examined the factors that differentiated

abstinent and relapsed individuals among GA members (n = 75). They found that GA members' attendance and participation in meetings were the most crucial factors which differentiated the two, with belief in a higher power and support from family and friends being other factors which had some influence though they were less important than regular attendance at meetings.

It is clear that members and instigators of recovery groups are alive to this relationship, and over the years the emphasis on continued regular attendance has become a cornerstone of their advice to members, whether in their literature or in the verbal advice given to members at meetings. Whilst regular attendance is held up as the key to success with the GA programme, in reality dropout rates are high, as noted above (section 7.1). The issue was often referred to in the group discussions that were witnessed. One of those with most experience of GA suggested '*GA has a failure rate of 97%. That is not the fault of GA. I have been coming here for years. I see why people fail – by not attending and by being cocky*' (diary notes, 2015).

Empirically, and taking 'drop out' to mean not having attended for more than one month, not having had any contact with group members, and not returning in the period of study, the drop out rate overall for the group that was observed, over one year, was estimated at 55%.

7.5. Networking with wider society

An interesting factor to consider in relation to recovery fellowships is to what extent they are a part of wider social networks and to what extent they are separate. I initially puzzled over why GA, at least in the UK, seems to be more

closed than other twelve step programmes. Paul, the regular chair of the GA meeting that I observed, regularly expressed his frustration about the secrecy of GA:

We need to be out there promoting ourselves. We are still this secret society. We should have the GA number on every betting slip (diary notes, 2016).

There are two points to be made about this. One is that there is an understandable fear of industry involvement and influence in relation to interventions in relation to problem gambling. As noted in earlier chapters, it is clear that the whole infrastructure of research, education and treatment for problem gambling in the UK is not entirely independent of industry and therefore not free from its influence. I was told by GA members who attend regional and national events that members take very seriously the concerns about industry and are very sensitive about the issue. Another example of such concerns came from the director of the National Problem Gambling Clinic, who told me that GA will not meet in her premises, because although it is an NHS clinic, it also receives funding from GambleAware, the charity which receives funding from the voluntary levy which industry contributes towards research education and treatment.

The second point is that the whole infrastructure of twelve step mutual aid organisations has been carefully built on a platform of anonymity, and neutrality about all issues other than the central one of the nature of the addictive behaviour.

The GA orange book (GA, undated) discusses the issue of anonymity

Why are GA members anonymous? Anonymity has a great practical

value in maintaining unity within our fellowship. Through its practice at the level of the press, radio, films and television, we have eliminated the possibility of fame and recognition being given to the individual member; hence, we have not been faced with any great internal struggles for power and prestige which would prove highly detrimental to our essential unity (GA, undated: 19).

Page 16 addresses two other key questions which suggest the neutral position in relation to anything except gambling.

'Does GA want to abolish gambling? No. The question of abolishing gambling is a controversial issue about which GA has no opinion'.

'Who can join GA? Anyone who has a desire to stop gambling. There are no other rules or regulations concerning GA membership'.

Earlier chapters considered the ways in which help for problem gamblers is structured in the UK, and noted that such help has never been part of mainstream health or social care provision. This means that information about sources of help is not widely available from health and social care providers, and where they do signpost people for help, GA may not be always on the list of helping agencies due to the low profile that it adopts.

Confirming the discussion in the previous chapter about the frequent references to suicide in the data, I heard several individuals from GA recount how they ended up being seen by mental health crisis services following suicide attempts which followed from and were directly related to excessive gambling. In each case, the staff at the crisis services had no knowledge of sources of help for gambling problems and individuals either found their way to GA through their own research or after mental health staff *'took out their phone and googled for sources of help for gambling problems'*. This points to the need to provide much more

comprehensive signposting within public health and care agencies towards sources of help for gambling related problems, and for GA to perhaps be more proactive in getting information about their services into the domain of health and care providers.

7.6 FOBT users and GA

I set out to specifically study FOBTs and to map the harms which link to FOBT use as well as interventions which might be helpful to those who developed problems with their use of FOBTs. The first Gamblers Anonymous meeting that I attended indicated that a good proportion of attenders had specific problems with FOBTs and subsequent meetings and interviews with GA members confirmed this.

The groups are brilliant. The machines are becoming a more common theme. Through all ages. Black, white, yellow. Everyone is struggling with the machines when they come in. They all have a back story that is football, horses, bingo, but it will be the machine of some sort that has exacerbated their issue 8 times out of 10 and that is why they have come to seek help (interview transcript, Paul, 2015).

As noted throughout this thesis, the national prevalence surveys suggest that FOBTs are one of the forms of gambling most associated with harm and that those who have problems with FOBT's are more likely to be young, unemployed males living in areas of socio-economic deprivation. Whatever the characteristics and background of the players, it is usually the case that FOBT players become very isolated and tend to opt for long periods of solitary play when using the machines (Schull, 2012). As described in the previous chapter, many describe the associated feelings of isolation. The 'fellowship' and social networks of GA can

help to counter this isolation.

Julian, who arrived at GA after years of problems related to FOBT play, including dropping out of university, and racking up very large debts, said:

It is the sharing process more than anything else. I can sometimes get my feelings out. Just say to people – this is how low I am. This is where I am in my life. People there have gone through similar experiences. What they are telling you is genuine. It is from their heart. At least there are other people who understand just how lonely and desperate you get (diary notes, 2016).

John illustrates the change that can occur with just a few months of becoming part of the GA network. He said the following.

How different my life was 15 weeks ago, the total destruction i was causing was seriously stressing me out and i was struggling to cope with all the debts and payday loans i had built up through my gambling problem and more specifically my addiction to Roulette Machines(FOBTs). I was lying to my partner my family absolutely everyone in an attempt to hide my problem. I could see no other way forward than to win my way out of the situation. I knew enough was enough, and i came to GA back in November, and haven't looked back since (John, GA website).

There were a range of similar accounts.

The Machines are like an escape from the outside world, i used to think I climbed inside them and could hear every click of an electronic component, they are devilishly addictive as it is "escape" it's like being with a woman who treats you badly but suddenly does something wonderful, it's that pursuit of the "wonderful". I did not wish to gamble but normal life was too hard, escape was easier and I did not understand who I am and what this illness is. However I found GA and I found a home in which I found the "understanding" that I can never ask a parent/loved one of a compulsive gambler to understand (Fred, GA website).

Evidence has been assessed in earlier chapters linking FOBT gamblers to more intense gambling related harm in terms of debt, socio-economic status, isolation, unemployment, mental health problems. The previous chapter showed that there

may in some cases be a common pattern of a gambling career which starts with machine gambling in childhood. Mutual help groups may be particularly useful for these FOBT users who have entrenched gambling focused lives, which have been that way since childhood, and who are isolated with poorly developed social networks.

7.7 Suicide

Previous chapters considered published evidence about links between EGM gambling and suicide (5.13.8) and primary evidence gathered for this study about experiences of suicide attempts and suicidal thoughts in FOBT users.

It was notable that support from the GA community was helpful to a number of individuals in relation to this issue. One person described in a meeting that I attended how he had driven his van to the top of a cliff and was close to driving it over the edge, mulling over the harm that he had caused to his family by the lies, theft and mood swings linked to his gambling, and the despair he felt at thinking about his debts and his inability to stop gambling. At that moment, a call to his mobile from another GA member came and he suggested that answering the phone at that moment may have saved his life.

A number of other GA members gave accounts of suicidal thoughts/ attempts and the particular role of GA in helping them move towards recovery.

I am a compulsive gambler. I attended my first GA meeting over 11 years ago, aged 18. As I quickly began to recover financially, as any 18-year-old living with their parents would, I could see little need for the meetings. Five years and an attempted suicide later, I was back.

Gambling had taken everything from me. And I had willingly given it. My relationship and any chance of future romance, my friends, my family, my money, my confidence, my sanity and almost my life. I had hit a low and I only had one place to turn (after trying to take my own life). That place was GA. It took me seven days to decide not to kill myself. On the seventh day I returned to GA (Paul, GA website).

A number highlighted a gambling career which moved from childhood machine gambling via FOBTs to suicide attempts and then recovery with the assistance of GA.

I started gambling very young in the seaside arcades. I moved to FOBTs. I would sleep and breathe them. It ended with a suicide attempt and then a stay in a mental hospital. They advised GA. Whilst I was in there I was reading this forum and website. When I got out I went to meetings and I am now 2.5 years clean. It shows that it can be done (Alison, GA website).

7.8. Assisting others

Many who attend GA do not follow the formal steps of the twelve step framework and philosophy of the programme. For those that do 'work' the twelve steps of GA, the final one, building on all of the previous ones is: *'Having made an effort to practise these principles in all our affairs, we tried to carry this message to other compulsive gamblers.'* (GA Orange book, undated:19).

Whether or not individuals work through all of the twelve steps, many who attend GA reach the point where they want to reach out to others who are still struggling.

I have just completed a year free of gambling and part of my recovery is helping others. I see being able to aid research and being able to move forward, being able to hopefully help others who have had the same sort of problems as I had as part of that recovery (interview transcript, Alan, 2016).

For years I went through life constantly trying to stop gambling,

reaching a few months, went through cycles of feeling really good for not gambling and feeling awful for gambling again, normally ending up in a worse position than the last time. I did this until I hit rock bottom, I realised that no matter what I did on my own, I was never going to get out of this self-destructive cycle. Only in the GA rooms and working the 12 step program have I found the answer, and I'm now 18 months into recovery and one day at a time working on staying stopped. One thing that helps me in GA is the ability to help others stop gambling, it's not just about what I get out of GA, it's also about what I put in (interview transcript, Simon, 2016).

A regular attender who was approaching one year of abstinence from gambling was asked by the chair whether it had been easy or not. His response was that:

Because of the group it has been. If I didn't have the group I would not be as far on as I am now. The group has been my main source of recovery. I would like to put a lot back into it because of what I have got out of it (diary notes, 2016).

For the new attendee, having overcome all of their doubts and ambivalence to get there, the examples of long term abstinence provided by those who continue to attend and 'put something back' can be particularly encouraging.

Same old story here I'm afraid. Started gambling at 16 on machines and have found myself betting on everything possible losing wages, loans, other people money. Happily with my girlfriend and have now come clean about a lot of missing money and "lost" money. Anyway, went to my first meeting last Tuesday and I must say, I have never been made to feel more welcome. The people there that run the meeting along with the people that have been free from gambling but still go to continue their recovery but to guide and give examples of a better life to others (diary notes, 2015).

Evidence suggests that helping others may be not only an altruistic act, but also a key aspect of recovery. Studies have suggested that helping helps the helper in the context of twelve step groups (Zemore et al., 2004). A more recent study suggested that the giving of support seems to be more important even than the receiving of support. Hutchison et al. (2018) found that giving social support

within the context of GA increased abstinence self efficacy and decreased perceived risk in gambling trigger situations. Such a premise fits with the growing literature about the broader benefits to the wellbeing of any individual which accrue from giving to others (Brown et al., 2015; Krause, 2015). In that sense, the twelve step framework taps in to some aspects of psychology and human behaviour which appear to be well validated in terms of the power of social networks and of mutual helping.

Conclusions

The key themes which emerged from the observational study of GA in England support much of what is reported in the literature about GA elsewhere, and with the broader literature about twelve step mutual aid groups. The findings show that GA is of central importance in the lives of many of the those who attend regularly. It provides a regularly timetabled source of effective mutual help and advice and forms part of a crucial social network which is helpful to participants in their struggle to maintain abstinence from gambling which had become very harmful to them. It has been particularly helpful for many who experience harms relating to FOBT use.

An organisation which can provide mutual self-help in a wide range of locations, for no cost other than that of getting to the meeting and perhaps making a small voluntary contribution, is always going to be able to offer something that professional agencies and structures cannot. A number of commentators have noted the benefits to problem gamblers of both sexes, of this low cost social support (Rugle and Rosenthal, 1994 ; Ferentzy and Skinner, 2003). As Kelly

(2017) suggests in relation to AA, such mutual aid meetings which are widely available over the long term and free of charge may be the closest thing to a 'free lunch' in public health.

Although AA is relatively well known, health and care professionals are still often reluctant to refer individuals to the programme, despite the clear evidence of benefits as discussed earlier. Best et al. (2016) have found that training for health professionals can increase their understanding of AA, and their willingness to refer. Arguably GA is less well known than AA, and there may therefore be significant merit in offering training to professionals about the GA programme and its benefits. Additionally it has been found that those attending inpatient treatment for drug and alcohol addiction benefit from active referral to twelve step programmes, whether the referral is made by peers or professionals (Manning et al., 2012). At the present time a significant increase in the provision of formal help for problem gamblers is under way, with the roll out of a number of new NHS clinics across the UK during 2020 and 2021. There is a good case to be made for including signposting and/or referral to GA in the offer from these clinics, as well as investigating the outcomes of this.

In relation to actor network theory, Schull applied this to the study of machine gambling to show how addiction is co-produced via the actions of subjects and objects together through their encounters with each other. When machine gamblers (and other gamblers) attempt to rewrite their script using help such as GA it can be seen that recovery is co-produced through encounters, and talk. This is largely about encounters between groups of subjects but is also mediated via objects in the form of the GA literature which, unchanged since the 1950s,

continues to play a powerful role in scripting the encounters which take place at GA.

As shown in the previous chapter, FOBTs remain a significant focus of concern, but online gambling is now showing up as the most frequent type of gambling which is linked to gambling related harm (Gambling Commission, 2019). GA can offer useful help for all problem gamblers. For those who become isolated in the machine zones of betting shops or elsewhere it can provide a programme for living and a valuable social network. In an increasingly online world, many of the restraint factors which were discussed earlier have been removed. It is now possible to have the online version of the betting shop, the bingo hall, the slot machine, in any room of your house or on your mobile phone in any place, and at any time of day or night. In such circumstances the online presence of GA, and the availability of social support via the same technologies, can go some way to counterbalance this constant immersion in inducements to gamble, and can help alongside the traditional face to face meetings.

The next chapter will summarise the findings from this study and address what might be useful in terms of the evolution of and next steps for gambling regulation and policy in the UK in a context of rapidly evolving gambling forms and opportunities.

Chapter Eight: Conclusions

This thesis set out to examine the links between FOBTs and gambling related harm, with a focus on both the role of policy and on the 'lived experience' of harm, rather than just the examination of quantitative data which has been the focus of much gambling research.

The nature of gambling related harms and the role of a range of factors in the development of these harms has been analysed, including technological developments and the development of legislation and policy through time. The role of helping agencies, particularly Gamblers Anonymous, in mitigating harms, has also been considered.

This concluding chapter summarises the key findings, and suggests some implications and recommendations which follow from them. The original contributions of this study are considered. The strengths and limitations of the chosen methodology and approach are also considered, before a brief summarising conclusion.

As outlined in Chapter Two, a mixed methods study was developed. Methods were chosen which were deemed most suitable to exploring the lived experience of gambling related harm and these were complemented by reviews of existing empirical literature about GRH, and analyses of the evolution of policy in relation to this issue. Chapter Three explored the role of actor network theory (ANT) as a particularly relevant framework for understanding a range of different factors which may be involved in both the development of and the mitigation of gambling related harms. Using this framework, it was argued that links between gambling related harm and gambling machines are best understood by considering the networks of influence in which gamblers and gambling machines are nested. As shown throughout the thesis, this proved to be a fruitful framework for understanding a number of different actors and factors which come together to influence the links between gambling machines and gambling related harm.

Chapter Four provided some historical context to the debate about machine gambling and harm by noting key elements and events which led to significant developments in machine gambling in the UK, culminating in the widespread introduction of the FOBT to gambling environments. Concerns and evidence of harm linked to machine gambling at different points in the 20th century were discussed, and the way in which regulators responded to those concerns and the available evidence was noted. The role and influence of a range of stakeholders in shaping resulting policy and law were considered. The key elements which led to widespread FOBT use seem to have been a tax change which made FOBT machines much more profitable to operate, and the liberalisation of gambling

regulation which occurred with the UK Gambling Act 2005, a development which was in line with and influenced by a global liberalisation of gambling regulation in the early 21st century.

Before reporting on my own empirical evidence, I explored existing literature and evidence in Chapter Five. A notable finding from the review of existing academic literature was the very small number of papers which have been published in peer reviewed journals about FOBTs specifically. In comparison, the international literature about the whole range of different kinds of EGMs is significantly more substantial. Evidence from this wider academic literature was therefore considered. Given the paucity of evidence about FOBTs within the peer reviewed literature, other sources were then also assessed in relation to the specific question of FOBTs and harm. The fact that data about FOBT use, and papers about their impact, are more numerous in industry led studies than in the independent peer reviewed literature perhaps illustrates the contention of scholars such as Cassidy et al. (2013), who have argued that there remains a lack of a fully independent gambling research culture in the UK.

Evidence gathered from a range of sources points to some very strong associations between FOBTs and gambling related harm and some characteristics of that association. FOBT users are more likely than other gamblers to be young, male, unemployed, and living in a deprived area and very close to a betting shop which has FOBTs. They are more likely than many other gamblers to wager money on a greater number of different gambling activities, and to be both living on a low income and living with high levels of existing debt. FOBT gambling leads to the amassing of large debts very quickly for some, and

seems to be a particularly difficult activity for individuals to resist and control.

FOBTs are the form of gambling which most frequently leads people to seek help from treatment providers. The proportion of self-identified problem gamblers who identified FOBTs as their sole or main form of problematic gambling was up to 50% (for users of the Gordon Moody residential treatment facility) and 60% (users of the National Problem Gambling Clinic). These figures are from treatment facilities which provide a last resort for those with the most severe problems, indicating a particular link between FOBTs and GRH. The ability to rapidly repeat bets of high amounts on FOBTs has been a particular focus of debates.

Conclusions about this were fairly clear with Collins et al. (2016) suggesting that:

In the case of gambling addiction amongst people who play FOBTs the rate of vulnerability to addiction appears to be quite high and the impact of a substantial reduction of maximum permitted stakes would appear to be significant (Collins et al., 2016: 57).

Such a conclusion is strengthened by a bigger set of studies from other countries which make the same conclusions about permitted stakes and speed of play on a range of EGMs. There is an international consensus that limiting maximum permitted stake sizes to around £1 to £2 is a significant lever which can be used to mitigate gambling related harm (Jackson et al., 2016). Whilst this study was taking place the government responded to sustained campaigns with action to reduce the maximum permitted single stakes from £50 to £2. This change, which surprised and pleased many campaigners in equal measure, illustrates some of the factors discussed in Chapter Four about influences on policy, and also illustrates the utility of an ANT perspective in terms of understanding how networks of influence may be relatively stable and then change relatively rapidly.

The impact of this reduction remains to be seen and whilst it is likely to reduce some of the harms related to FOBT use, the evidence considered here shows that a range of other factors are involved in problematic use of FOBTs.

Data from existing studies was complemented by qualitative data from my own research with self identified problem gamblers and other stakeholders. A particular contribution of qualitative research is to broaden the picture and to show how spending significant amounts of money and or time on FOBTs links to harms in a range of ways in the life of individual gamblers, and to illustrate the lived experience of those harms.

8.1 Key themes

Some key themes emerged and ran as threads through the evidence chapters, featuring in existing published evidence (Chapter Five), my findings about experience of FOBTs and harm (Chapter Six), and findings about recovery pathways (Chapter Seven). These include: violence towards machines and people; suicidal ideation; links between FOBT use and debt; typical gambling careers; heterogeneity in the typology of machine gamblers; and the place of social networks in fostering recovery from gambling related harm

An original contribution of this study is to bring together a comprehensive and heterogenous set of existing evidence in relation to FOBTs and gambling related harm, and to add to this new evidence from research with FOBT gamblers. The key themes which emerge from all of this evidence together provide new insights

into the most common difficulties and harms which are experienced by FOBT gamblers and those around them. The next section considers these themes and their implications in more detail.

In relation to the theme of violence, many of the gamblers that I interviewed, and those who interacted with the online forums, reported perpetrating or witnessing verbal and physical violence towards machines and/or staff. These first person accounts from gamblers were confirmed by interviews with and other reports from those who had worked in environments in which FOBTs are located.

The individual accounts suggest that the violence often seems to be an expression of frustration and despair. The despair links to a sense of helplessness and feeling powerless to control behaviour which the individual recognises as causing harm. Again, the ANT perspective is useful here. Individual gamblers become enmeshed in a network of influence. It can be puzzling to the individual that they appear unable to control their own thoughts and behaviour, and this can lead to frustration and rage. A broader perspective can help which recognises that individuals have agency, but that such agency can be significantly compromised when gambling environments and gambling products are designed and engineered to relentlessly encourage continued immersion in them. The theoretical framework of ANT helped to elucidate the relationships which gamblers reported between themselves and FOBT machines. The interaction between a predisposed individual and a machine which has been specifically engineered to entice people into playing continuously is one which can become particularly sticky, and one which leads to some individuals feeling powerless to withdraw themselves from the web of interaction.

One result of the despair and helplessness experienced by some FOBT gamblers is the experience of suicidal thoughts. Discussion of suicidal thoughts and attempts was one of the most notable things observed at GA meetings, with ten of the eighty-seven individuals who attended reporting suicide attempts, and many more reporting suicidal thoughts. More pertinently five of the ten who discussed previous suicide attempts made specific reference to problems with EGMs. This was corroborated by many of the online testimonies. Data from interviews with the regular chair of the GA meeting, and with some of those who had attended for a number of years, suggested both that the proportion of attenders reporting particular problems with FOBTs had steadily increased, and that those with mental health problems and suicidal thoughts had also steadily increased. This exactly parallels the findings in the literature review in terms of the steady increase in mental health problems and suicidal thoughts in users of key UK treatment providers, as FOBTs came to be the most dominant form of gambling.

The lack of research studies on the specific issue of gambling and suicide, particularly in the UK was highlighted in the literature review. It is helpful that UK researchers are now developing work on this theme and a review has just been published (GambleAware, 2019). Further studies on this subject are warranted, and also ways to better integrate mental health and suicide prevention services and information with gambling related help should be considered.

Observation of interactions in GA communities highlighted the prevalence of

suicidal thoughts and attempts in those who were part of those communities but also the role of social networks and mutual help groups such as GA in mitigating that suicide risk, and other risks of harm. Several individuals claimed that they had been prevented from taking their lives only by a timely intervention from another GA member at a key moment, and comments about the importance of this community in maintaining mental health and keeping at bay any thoughts of self harm were common.

Accounts of gamblers reported in Chapter Six confirmed that many reported being able to control other forms of gambling, but were unable to do so when gambling on FOBTs. An obvious consequence of the lack of control is spending greater amounts of both time and money on the FOBTs. Given the design of FOBTs, which allow for very rapid repeated play with large stakes, losses can mount quickly, and so debt is a frequently reported experience by FOBT players.

Reports of debt levels in the tens or hundreds of thousands of pounds were not uncommon in the interview transcripts and reports from FOBT gamblers.

Individuals frequently reported funnelling all available funds into a FOBT in a short period of time – with monthly or weekly wages, student loans or other available forms of credit all swallowed up in a matter of hours or days. Again, this corroborates what I was able to find in existing published literature. Almost half (45%) of individuals disclosing gambling debt reported that FOBTs were a particular problem (RGSB, 2015), and Downs and Woolrych (2009) showed that debts of around £60,000 were average for problem gamblers who disclosed problems with debt.

An interesting contrast between the accounts of lived experience and the literature is the lack of emphasis in people's accounts on the issue of maximum permitted stake size. This was a focus of the now successful campaign for policy change in relation to FOBTs, and the international literature was clear that lowering maximum permitted stake size is one of the few harm reduction measures for which there is clear evidence. For those caught up in problematic FOBT gambling the primary perceptions are of the compulsion, and of some of the consequences. They do not always make the connection that, whilst it might not reduce the level of interaction with the machine, and time spent playing, significantly slowing down the rate of financial loss would have a harm reduction effect, by reducing the consequences which follow from higher levels of debt.

This suggests the importance and benefit, as stated earlier, of a mixed method approach which combines detailed investigations of lived experience with other kinds of evidence.

As the review of existing studies showed, it is the case that FOBTs are disproportionately located in areas of deprivation and unemployment. Reed (2014) showed that the number of FOBTs per adult is higher on average for more deprived local authorities than it is for less deprived local authorities. Individuals who experience gambling related harm in relation to FOBT's are more likely to live in areas of socio-economic deprivation and to be unemployed (Wardle 2014). Debates continue about the nature of cause and effect in relation to this link, but the fact that the correlation is strong means that it is no surprise that FOBT users who are unemployed and have few resources report particular problems with

debt.

Agencies which offer advice and support are beginning to develop much better awareness of the issue. For example, Citizens Advice Bureau have been at the forefront of developing training on the issue and now have a partnership with GambleAware to develop and provide training for advisers in their bureaux across the country (GambleAware, 2018). Similarly, specialist debt agencies such as Step Change are developing and providing more specialist advice in relation to gambling debt.

Previous research about gambling careers and recovery from problem gambling has not been extensive and has produced heterogeneous findings. The evidence that I collated, which details experiences of significant gambling related harm and then recovery from that harm, show that whilst experiences are heterogeneous in many ways there are some typical patterns.

One clear finding from the many accounts of lived experience, was that a common gambling career is one which starts with machine gambling in childhood, progresses to machine use in adult hood (and often FOBT use) and then moves to online gambling. That online gambling often features similar games to those that are played on FOBT terminals (for example, roulette). Such a pattern does not appear to have been reported previously, but this may simply reflect the lack of longitudinal studies of gambling behaviour.

Those longitudinal studies that do exist certainly show that those who begin gambling at an early age are more likely to develop problem gambling at a later

age (Stinchfield, 2000), particularly when gambling as a child takes place within family networks (Reith and Dobbie, 2011). Importantly, in relation to a point rehearsed several times in this study, Reith and Dobbie (2011) noted that environments (socio-economic, cultural and geographical) were very significant in the accounts of gambling careers that they recorded. Rather than individual psychological factors predisposing to gambling, respondents suggested that modelling the behaviour of family members and others was more important. Being brought up in heavy drinking and gambling social networks and an environment in which betting shops and other gambling opportunities were a key part of the social fabric were also key triggers for the beginning of a gambling career. These environments were generally in areas of high deprivation. This fits with the findings of a number of studies referred to in the literature review earlier in this study which noted strong links between those who use FOBTs and experience gambling related harm, and socio economic deprivation. Many of the attenders at the GA meeting that I observed, and those individuals that I interviewed about their FOBT use, lived in areas of high deprivation and many referred to growing up in families in which heavy drinking and frequent gambling were valorised.

There are no simple solutions to such problems, but in terms of both research and policy, these findings point to the need to take into account socio-economic factors when researching individual gambling behaviours, and suggest that policy aimed at reducing problem gambling can only be effective if also allied to policies which also improve socio-economic status and improve the environments in which people live.

In the sociological literature, one of the key notions in relation to gambling has been a contrast between those whose gambling relates to status as a risk taker, and those who gamble as an escape mechanism. The former type features heavily in classic sociological studies, such as those published by Goffman (1967) and Geertz (1973). The latter features heavily in more detailed modern ethnographies, such as those published by Schull (2012). Each of those authors agrees that gamblers who largely gamble on purely chance based activities, and particularly those who use EGMs, are more likely to be escape gamblers.

I conclude, based on my interviews with gamblers and the reading of many reports from gamblers, that this binary is over simplistic and that some individuals report both kinds of gambling. FOBT users might be more likely to be escape gamblers, and certainly a significant proportion of the accounts of problematic use referred to this motivation. But many accounts that I recorded also referred to FOBT use and gambling for status. This fits also with earlier British research and research elsewhere about fruit machine players in which some of the participants – the so called 'Arcade Kings' – clearly fitted a typology of gambling for status (Fisher, 1991; Pickles, 2013). Planning and delivering appropriate help for those experiencing gambling related harm requires accurate information about the patterns and motivations for their gambling behaviour.

The argument was made in Chapter Seven that mutual helping agencies have a particular role in fostering recovery from gambling related harm which is linked to FOBTs. My contention was that problem gambling featuring FOBTs is known to be particularly associated with deprivation, social isolation and low social capital; it follows that help which provides a new social network may be particularly

effective in assisting people in this situation. The discourse observed at over 20 GA meetings and the interviews with GA members support this contention.

Social networks and social capital are increasingly being recognised as important in 'recovery' from a range of issues (Best et al., 2016). As West (2006) notes in his detailed theory of addiction, '*social reinforcers (rewards and punishments) are among the most powerful to operate on human beings*' (2006: 211). Empirical evidence from recent large-scale surveys also confirms the role of social networks such as those provided by mutual help groups in fostering and sustaining recovery from addictive behaviours (Best et al., 2017). This also chimes with a key tenet of some of the broader sociological literature on addiction. Alexander (2000) developed the theory that addictive behaviour is largely linked to psycho social dislocation and resulting isolation. Solutions to this then involve strengthening social networks. A recovery pathway which is group based may be particularly helpful in helping to overcome feelings and experiences of loneliness and isolation and in developing 'bonding' social capital (Bourdieu, 1972).

There are a number of forms of group-based support for those who experience gambling related harm. Gamblers Anonymous, at least in the UK, whilst not the only such source, remains one of the most accessible and widely used sources of group based help. The findings in this study show that GA is of central importance in the lives of many of the those who attend regularly. It provides a regularly timetabled source of effective mutual help and advice and forms part of a crucial social network which is helpful to participants in their struggle to maintain abstinence from gambling which had become very harmful to them. It has been

particularly helpful for many who experience harms relating to FOBT use.

Given that such mutual aid networks provide the nearest thing to a 'free lunch' in public health terms (Kelly, 2017), it seems warranted to recommend that, despite the difficulties in relation to access, further research is conducted on GA. In the UK, the Responsible Gambling Strategy Board (RGSB) is responsible for developing programmes for research and of giving expert advice to the UK regulator, the UK Gambling commission. The current RGSB framework for research lists as one of the priorities a project which looks at 'what works in gambling treatment' (RGSB, 2017). There is no specific reference to GA, but they do suggest that evaluation should pay close attention to understanding the value for money of different approaches. A 'free lunch' is cost effective and values for money if it has at least some level of actual value. The largest and most credible studies in the field of addiction studies have shown that, at least in the case of alcohol addiction, a twelve step programme approach is just as effective as well established interventions such as CBT (Project Match Research Group, 1998).

It would make seem to make sense to invest in studies to find out much more about how and in what circumstances GA is helpful to people. In particular finding out more about factors that predict engagement or drop out would be particularly helpful in designing ways to facilitate engagement.

Large scale studies such as Project Match showed that diverse interventions for addiction seemed to have broad equivalence in terms of outcomes, at least in the case of alcohol dependence (Project MATCH research group, 1997). However, as Best et al. (2017) have recently shown different recovery identities and 'self

ascriptions' are associated with different outcomes and levels of well being. We are still in the early stages of understanding how different interventions and different pathways to recovery relate to outcomes and well being. This remains the case for more the more highly studied cases of drug and alcohol addiction, and is more so in the case of the less understood case of gambling addiction. More ethnographic and qualitative studies of GA would also help in elucidating links the ways in which recovery identities and scripts develop and link to outcomes.

8.2 Strengths and limitations of the study

The study melded several different elements and approaches to address the question of the link between FOBTs and gambling related harm. In this concluding section, some comments and reflections are made on the degree to which this blend was successful and the strengths and limitations of the specific methods as well as the overall approach.

Bringing a sociological perspective and a focus on lived experience has been useful. Given the relative paucity of recent sociological research on gambling, and of published studies based on lived experience, it was expected that this approach would be illuminating. The fact that the findings from the data about lived experience corroborated many of the themes which stood out in the existing published literature, and at the same time added new perspectives, illustrates the merits of this strategy.

The decision to combine one to one interviews and observations of meetings of

gamblers, together with a cache of online accounts of gambling related harm, was a useful one in allowing me to amass a relatively large dataset representing experiences from across the country.

In qualitative research, thematic analysis is a typical and widely used approach to managing and analysing data. As noted in Chapter Three, critics suggest that it is easy for researchers to 'cherry pick' data and to find themes that simply reflect their existing prejudices and/or hypotheses. However, with a rigorous approach this need not be the case, and I believe that a careful focus on the key question of the study, together with careful noting of the frequency of occurrence, has led to an accurate portrayal of the most common and relevant themes which illustrate the experience of FOBT related harm.

The decision to meld the data from the qualitative analysis of accounts of lived experience together with a fairly systematic review of existing literature was taken only after considerable discussion and debates with supervisors and colleagues. Systematic review methodologies tend to be used more in medical and health-based studies, and it is relatively rare to find the approach used alongside more sociological and qualitative approaches to research. However, in recent years, the potential benefits of such blending have been increasingly argued for by advocates of mixed methods (Yardley and Bishop, 2015). The fact that both of these different approaches revealed a number of similar themes, and that the review was thorough and systematic, provides triangulation and I believe, strengthens confidence in the findings and the validity of the emergent themes. As noted in chapter five, I was unable to follow the full protocols which are recommended for systematic reviews in some disciplines. It might have added

rigour to this study, though, to have used the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines and to have presented the review in this ways, with a flowchart indicating the steps taken and how studies/data were selected for inclusion (PRISMA, undated).

ANT is not widely understood, or used, though it has been applied in a range of disparate studies and disciplines over the last couple of decades. Again, some of the criticisms and potential weaknesses of the approach were thoroughly addressed earlier (Chapter Three). Similarly to the criticisms of thematic analysis, those who are skeptical of the value of ANT suggest that a researcher may simply focus on the elements of an actor network which suits their agenda, and note the role and influences of those actors who they are most interested in, ignoring others. This is of course easily possible, and the answer is again rigour in application of the method. A mantra of the ANT approach is to '*follow the evidence*'. In this study, I read very widely and considered the role and the influence of a wide range of stakeholders and actors over a long time period. I was careful to select those actors and influences which had clearly had the most impact on FOBT gamblers, as revealed by the evidence of that impact. The broad scope of the study meant that I considered many influences, and many different sources of evidence. Combining published academic papers, evidence submitted to government enquiries from a wide range of stakeholders, histories of gambling and of social policy, and hundreds of accounts of lived experience, provided a deep pool of evidence. Those elements which rose to the top from this deep pool and showed their importance via the ripples they created were highlighted.

Covering such a breadth of data as an individual means that there are risks that I

missed some important sources and also that the breadth is at the expense of some depth. This was a choice made in the hope that the breadth would lead to making some new connections and produce some new knowledge, as well as providing signposts to future research which could look at the most pertinent areas in more depth. Whilst I was able to select what I judged the most important actors based on evidence of influence, some judgements had to be made about who and what to include and exclude. The echo of the criticism of 'autolimitlessness' remains in my mind, and no doubt other researchers approaching the theme might make different judgements about the relative influence and importance of different actors.

The results suggest that the approach of ANT is a useful one in highlighting how individual people (actors) are influenced in the real world, via a set of sometimes hidden networks and influences which they may or may not be aware of. Studies which attempt to attribute gambling behaviour to a particular personality type or a particular aspect of a gambling activity have been inconclusive. Studies which consider the influence and interaction and influence of a range of elements and actors over time may provide a picture that is both more nuanced and detailed but also more informative.

This suggests that ANT would be a useful frame for future research into gambling and may help to bring coherence and integration to studies and perspectives which are often separate; psychological studies of individual gambling behaviour; sociological studies of the role of disadvantage and deprivation in the aetiology of addiction; and studies of regulatory processes, and the role of industry, self regulation and corporate social responsibility (CSR).

However, such studies require the careful amassing of a wide range of evidence and may be more time consuming than many other types of study. This may make students with limited time and resources reluctant to adopt the approach. Although an increasing number of ANT studies do appear in academic literature funders may be reluctant to support such studies. The breadth and cross disciplinary nature of such studies can be seen as a strength but might be exactly why funding bodies set up for specific disciplines might be reluctant to be involved.

In relation to the aim of exploring the particular links between FOBTs and harm, it might be argued that a limitation of this study is the focus on Gamblers Anonymous. The biggest part of the direct observation and discussion with those experiencing gambling related harm took place at GA meetings in one location and only a minority of GA attenders at the observed meetings reported FOBT as the main problem. Also, those who engage with GA the most may be a non-representative sample of those experiencing gambling related harm which follows from FOBT use, since most gamblers with problems still do not engage with any treatment, and those who do attend GA often do so only once or twice and then drop out.

However, the observational data from GA was complemented with a large amount of online data from gamblers, which did focus on FOBTs. I also collated a significant amount of empirical data which specifically explored links between FOBTs and harm from a range of different perspectives and, as far is known, this collation of evidence on the subject is the most comprehensive that exists to date.

Another clear limitation of this study is the focus on only some aspects of the spectrum of harms which are beginning to be recognised as constituting gambling related harm (GRH). As discussed in Chapter Five, the gambling research community has in recent years begun to operationalise and delineate a range of elements and measures of GRH. A relevant framework discussed in chapter five, and now being adopted by UK research bodies is one which includes cultural harm and a temporal dimension. The latter draws attention to long term effects across a lifetime as well as inter generational harms which may result from the gambling behaviour of an individual. I concur that consideration of impacts over long time scales are important. I demonstrated that with the analysis of the impact of policy decisions and changes at different points in the twentieth century on contemporary FOBT use. However, in this study the main focus was on the individual gamblers and their experience of gambling related harm. The impact on families and wider communities was touched on briefly,, and a number of the accounts of lived experience discussed the impact on relationships and the impact over a number of years of a gambling career. However, broader impacts over wider networks and communities, and over longer time periods, were not explored or analysed to any significant extent.

8.3 Recommendations for policy makers and treatment providers.

One aim of this study was to use the findings about gambling related harm (GRH) and recovery from that harm to make recommendations for researchers, policy makers and treatment providers. It was noted that GRH is a recently introduced

concept which remains poorly defined and operationalised. It is clear that there needs to be more research to help both define GRH and measure it; and then a focus on both prevention of the range of harms which are measured, and the best methods of treatment and recovery from those harms.

Some specific gaps in knowledge of harm are clear from this study. Chapter Four suggested that elements of the Gambling Act 2005 were inherently antinomial in the sense that the aim to allow unfettered expansion and favour the commercial development of gambling has almost inevitably led to an increase in gambling related harm. This makes it difficult to meaningfully achieve the third stated aim of the act of '*protecting children and other vulnerable persons from being harmed or exploited by gambling*' (DCMS, 2005). If children and other vulnerable persons are to be meaningfully protected from harm, then as a first step a clear understanding is required of who is a vulnerable person and how and why they become and remain vulnerable.

On that point, one recommendation which clearly follows from the discussions and findings in this thesis is that there is a need for further research in relation to gambling and vulnerable groups. The main sources of data about gambling related harm in the UK still come from prevalence estimates extrapolated from household surveys, and it is clear that at least some vulnerable groups are significantly under represented in such surveys. For example, almost no data or research exists in relation to gambling and adults who are vulnerable because of issues relating to decision making capacity. We know that some two million adults in the UK may lack the capacity to make some decisions for themselves

(Department of Health, 2004), and it is very clear that impaired decision making is associated with problem gambling (Chamberlain et al., 2015).

Other vulnerable groups have received more attention in relation to gambling. Children have been a focus for concern for many decades, as was shown in Chapter Four. The finding in my research that many who experience gambling harm which relates to FOBT use report starting gambling in childhood should lead regulators to take seriously the views expressed clearly in the Gambling Review Body report (Budd et al., 2001) and to consider further restrictions on gambling for children.

Adopting a public health approach may also lead to better understanding of the nature of gambling related harms, as well as more effective policy responses to those harms. This approach has been mentioned at various points in the thesis and is now being belatedly adopted and applied to gambling in the UK (Gambling Commission, 2008; Rogers et al., 2019).

This thesis made a case for the place of qualitative research methodology in investigating gambling related harm. The ethnographic methods and exploration of lived experience which were used in data gathering have led to findings which provide new and complementary information to that found in much of the existing survey based gambling research.

This brings up a recommendation for policy makers and researchers in terms of methodology. As Miller et al. (2017) have shown clearly, research based on lived experience tends to lead to different conclusions and recommendations for policy. Those authors suggest that those who have experienced gambling issues prefer

different policy solutions – which generally involve reducing the number of opportunities to gamble. This is because they recognise that availability and opportunity are key to gambling related harm. Without the opportunities gambling would never start and there could be no gambling related harm. Once started, easily accessible opportunities make abstinence more difficult and relapse more common. Although they have experienced problems and may or may not have had successful treatment, that treatment is not the priority for many with lived experience. This in contrast to industry who want to frame the discourse around the individual and the need for treatment, and not to acknowledge the role of increased gambling opportunities in the development of harms.

My findings echo this in terms of what those with lived experience tend to favour in terms of policy responses, and it is important for both policy makers and those who develop research strategies and specific research projects to recognise that research which privileges the accounts of those affected by gambling related harm tends to recommend different policy responses than the majority of published gambling research which focusses on prevalence rates and constructions of the 'problem gambler'. If the accounts of those with lived experience were prioritised the direction of policy might move towards greater restrictions on opportunities to gamble and to reversing the significant liberalisation which occurred after the 2005 Gambling Act.

In terms of policy recommendations, a point made by Young et al. (2010) in a study using ANT in relation to tobacco policy is relevant here. They suggest that ANT can be a powerful planning tool in terms of policy change and policy innovation. They also suggest that when policy makers actively shape actor

networks with the aim of developing policy responses, all actors who have something positive to contribute should be included. However they suggest that : *'actors whose goals are intrinsically antithetical to a problem's definition (let alone resolution) should be excluded'*. They recommend that *'In tobacco control, regulation of tobacco marketing should exclude the industry'*. Pertinent questions for the development of gambling regulation are whether and to what extent the gambling industry should be involved.

In terms of other recommendations for policy makers and for further research, there remains a clear need to better understand the 90% of individuals who experience gambling related harm who do not seek the help that is offered. The evidence from this thesis supports much existing literature in illustrating the ways in which different helping agencies do provide very effective and welcome support to those experiencing gambling related harm. However, how to effectively engage the majority who do not engage with the problem gambling treatment community, remains a significant challenge.

This study has shown that many gambling careers which result in harms begin with machine gambling in childhood and progress to online gambling. Further research is called for in both of these areas, and certainly more longitudinal studies of gambling careers are required. Those careers may be very heterogeneous but careful consideration of links between childhood exposure to gambling machines and later gambling related harm is necessary.

In some senses, this thesis has problematised technology in relation to gambling related harm, noting the structural and technological features of EGMs and

FOBTs which are particularly linked to harm. The steps which have now been taken to reduce the maximum stake size for FOBTs is warranted by the UK and international evidence given that the facility to rapidly stake large amounts repeatedly is clearly linked to debts and other harms.

A more positive role for technology is also possible in relation to gambling related harm. The affordances of technology can assist in a range of ways to facilitate both better understanding of the factors involved in a number of aspects of gambling related harm, and also the mitigation of those harms.

The design and set up of EGMs mean that significant amounts of data about patterns of play are stored by operators and this data has begun to be used to better understand the nature of play that might be limited to harm. As yet, there has been limited access to and use of this data by researchers, though this is starting to change (RGSB, 2018).

In terms of mitigation of harm, the internet allows for easy connections and the removal of a number of typical barriers to help seeking, so that individuals can find formal and informal help whilst remaining anonymous and without the time and expense of travelling to locations where help seeking agencies are located. This thesis illustrated that the use of technology platforms by most of the existing gambling treatment providers in the UK is welcomed by users and is of great help to many. It remains the case that the majority of those experiencing gambling related harm do not seek help. The few longitudinal studies which have taken place suggest that 'natural' recovery from problem gambling is more common than was previously thought, (Reith and Dobbie, 2012), but we do not know

whether this is more true or less true in cases which are dominated by FOBT use.

For those who become isolated in the machine zones of betting shops or online gambling worlds, the online presence of helping agencies, and the availability of social support via the same technologies, can go some way to counterbalance the constant immersion in gambling and inducements to gamble, and can help alongside traditional face to face help.

There is a need for further research examining the nature of any links between gambling and suicide. Results from a scoping review on the subject and an analysis of the adult psychiatric morbidity survey have just been published (GambleAware, 2019). The scoping review confirmed many gaps in the evidence. Looking at recommendations from this study and other research plans published by those who are responsible for setting gambling research agendas (e.g the RGSB), it is not clear that FOBTs or specific types of gambling are going to be a focus in any further research studies. I would argue that evidence and arguments presented in this thesis suggest that such types of gambling should form a clear focus for future studies investigating suicide and gambling.

It also seems valid, based on the study of GA, to recommend that information about and signposting to GA networks is consistently included in any advice given to gamblers and in advice and training given to all those who work with those affected by gambling related harm.

Debates will continue to develop in relation to links between different forms of gambling and different types of harm. It is inevitable that industry will attempt to

frame those debates in ways which serve their own interests, and this often means discrediting certain kinds of knowledge and research findings, whilst promoting others. As Boaz et al. (2019) suggest, the relationship between evidence, policy, and practice is 'nuanced, dynamic, political and contested' (2019:1). That reinforces the need for thorough and independent research, which allows for both the design of that research and the publication and dissemination to be free of vested interests. Vested interests will still have the freedom to attempt to influence policy makers and in the end those policy makers have to make value judgements. In an effort to overcome the way in which debates about gambling were framed for much of history, modern research has attempted to focus on science rather than morality. In the end, as Chambers (2011) notes, policy decisions about issues such as gambling are inevitably about values and morality. Policy makers need to make decisions which cannot be value neutral about what level of gambling related harm is tolerable and acceptable. Freedom always comes at a price, and the freedom to gamble for the many will have negative consequences for a significant few. The nature of the harm and the exact number of that significant few will depend on regulatory choices. In the same way that alcohol related harm is clearly linked to issues of availability and minimum pricing (Rice and Drummond, 2012), so too the level of gambling related harm is clearly linked to both general availability but also to the availability to particularly vulnerable groups of the more harmful forms of gambling.

8.4. Conclusions

In terms of the main aim of this study, I have been able to explore and confirm a number of links between FOBTs and gambling related harm. This thesis has confirmed what has been asserted in other countries, in terms of the specific and

unique links between many different types of EGMs and gambling related harm. It has further shown that we are now at a point where, just as regulators are accepting such links and placing restrictions on FOBTs in the UK, the bigger concern in terms of gambling related harm, is now online gambling in its various guises.

The main primary research conducted was qualitative and ethnographic and such approaches are not designed to address questions of cause and effect. They are designed to explore experiences within particular corners of the world and to do so particularly from the perspectives of those who inhabit those places. The study has articulated the experiences of those who inhabit the worlds of FOBT gambling in relation to several specific gambling related harms, including violence, suicide, debt, deprivation, and the impact on others. An original contribution of this study is in elaborating this particular set of harms and perhaps providing signposts to both policy makers and researchers in terms of priorities for further investigation. A further contribution is in showing that FOBT gambling often forms a staging post on a journey which starts with machine gambling in childhood and later progresses to online gambling.

In preventing, reducing and mitigating harm relating to any form of gambling the structural factors of gambling products and the environments in which they occur are very important factors to consider and should be given as much weight as individual profiles of gamblers and their demographic and psychological characteristics. Sociological research which addresses interactions between persons, products and environments is well placed to provide understanding of these issues and to help inform all stakeholders of the best responses when

those interactions are linked to harm. A framework such as ANT can be particularly valuable in highlighting both the disparate range of influences on human behaviour, the particular role of technology; and that behaviour is often best understood by examining interactions rather than individual influences alone. As regulators, researchers and treatment providers grasp with the developing issue of online gambling this may provide a fruitful avenue for future research.

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Appendix One Copy of Ethics Approval application

6 Name of Principal Investigator or Supervisor	Supervisor = Rachela Colosi Email address: rcolosi@lincoln.ac.uk	Telephone: 01522 837123
7 Names of other researchers or student investigators involved		
8 Location(s) at which project is to be carried out	Various, including Gamblers anonymous meetings in Hull and Lincoln; and public and commercial premises containing	

gambling machines in Hull, Hornsea,
Bridlington and Skegness.

<p>9 Statement of the ethical issues involved and how they are to be addressed –including a risk assessment of the project based on the vulnerability of participants, the extent to which it is likely to be harmful and whether there will be significant discomfort.</p> <p>(This will normally cover such issues as whether the risks/adverse effects associated with the project have been dealt with and whether the benefits of research outweigh the risks)</p>	<p>There are a number of sets of guidelines which have been consulted and used to inform the research proposal and which will be used to inform the research as it develops.</p> <p>These include</p> <ol style="list-style-type: none"> 1. The Association of Social Anthropologists of the UK and the Commonwealth Ethical Guidelines for Good Research Practice. 2. British Sociological Association Statement of Ethical Practice. 3. University of Lincoln Ethical Principles for Conducting Research with Humans and Non-Human Animals <p>The following addresses potential harms and benefits from the proposed study and also addresses some of the issues highlighted in the named guidelines.</p> <p>In terms of the type of study, a number of potential harms from ethnography have been identified in the literature. The more likely include the following:</p> <ol style="list-style-type: none"> 1. 2. 1. Distress during interviews. This is possible. I will be interviewing subjects about a subject which might be or have been very problematic for them, and which may have caused significant harm to them and their families. I am a trained counsellor and psychiatric nurse, and spent ten years working with people therapeutically in addictions services. Whilst being careful to maintain role boundaries between researcher and therapist I will always provide information about sources of help. Whilst my purpose will not be to screen for gambling problems, if any of the self identified non problem gamblers appear to demonstrate or identify problem gambling I will signpost them to relevant sources of help. 3. 4. 2. The temporal positioning of risk. A researcher has limited control of findings once in the public domain. Experience shows that the greatest risk in ethnography arises at the time of publication (Murphy and Dingwall 2001) rather than during the fieldwork. The experience of being written about may cause distress and it can be difficult to fully anonymise. Journalists can sometimes trace individuals despite best efforts to hide identity. I will reduce the likelihood of these problems by anonymising as fully as possible, and by explaining to potential interviewees as much as possible about the range of consequences which can occur after being written about. 5. 1. Issues of autonomy/self determination. People may not fully understand the consequences of participating and as noted earlier, there may be consequences later, after the publication of findings, which are not foreseen. I will take all possible steps to reduce and mitigate such things. My participant information sheet will give participants the right to drop out/withdraw at any stage without a reason and to withdraw permission for their details to appear in any publications. Please see appendices 1 and 2 - draft participant information sheets re interviews, and consent form. <p>In relation to the Gamblers Anonymous meetings, the organisation holds both 'closed' and 'open' meetings, the latter being open to family members, supporters and other guests by permission. I have attended one meeting as a guest and met with the meeting convenor, to explain the proposed research and seek outline permission from members to observe, in advance of formal ethical approval being sought. Outline permission was given from all members at that meeting. Because membership of the group can change from week to week to some degree I will give a brief reminder at the beginning of each meeting of my role and emphasise that I will remove data in relation to anyone who does not wish to take part.</p>
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1. Issues of deception and loss of privacy.

As far as practically possible I will inform those whom I am observing and conversing with about the study and its purposes. I will make strenuous efforts to protect anonymity and to keep information private and secure. I will not identify particular locations of observations and will never use real names or obvious identifying features for persons observed or interviewed. I will inform participants as far as possible about the potential uses of the data. Ie that selected observations may be used to illustrate themes in writings which are intended for publication.

When observing in public/commercial premises I will inform and seek permission where possible. However, it needs to be stressed that the emphasis of the study is on users and not on the operating or managerial practices of the venues. Moreover I will protect the identity of all participants (including the venue operators, workers etc) and be selective about how I use data, always putting all the participants sense of privacy, confidentiality and general welfare first.

If it is not possible to gain permission from operators I will seek advice on whether to gather and use data or not.

In most instances I aim to inform participants of the research and it is unlikely that there will be many scenarios in which this is not possible. However, there are two important caveats. One is that some of the proposed sites of observation involve situations in which many people may come and go in a short space of time and it may not be practically possible to seek permission from each of them to make notes about their observed behaviour. The second is that there has been a lengthy and ongoing debate about covert observation in social research. The codes of ethics referred to above address this issue and give clear guidance on situations in which it may be permissible.

One of the purposes of this study is to study actual behaviour in the real world, to complement most of the studies on this subject, which are more hypothetical or use artificially scenarios set up in a laboratory. Any observations and data which relate to real world scenarios in which permissions have not been obtainable from venues or participants will be carefully assessed and only used where they provide significant information pertinent to the study. In such cases the utmost care will be taken to protect identities.

In order to maintain confidentiality and privacy, data will be protected as far as possible. Notes or recordings taken during or immediately after observations will be carried immediately to a location in which notebooks can be stored securely in a locked cabinet within secure premises.

Notes transcribed electronically will be stored on the user desktop of the researcher within the secure university of Lincoln electronic system.

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FOR STUDENT APPLICATIONS ONLY –
Academic Support for Ethics

Academic support should be sought prior to submitting this form to the designated Ethics Committee within the Faculty

**Undergraduate / Postgraduate Taught
application**

**Academic Member of staff
nominated by
the
School (consult your project tutor)**

Postgraduate Research
Applicatio

Director of Studies – Rachela Colosi

I support the application for ethical approval

Academic / Director of Studies Signature

Date

PRINT NAME

FOR COMPLETION BY THE DESIGNATED ETHICS COMMITTEE WITHIN THE COLLEGE

Please select ONE of A, B, C or D below:

- A. Ethical approval is given to this research.**
- B. Conditional ethical approval is given to this research.**

**Please state the condition (inc.
date by which condition must be
satisfied if applicable)**

- _____
 C. Ethical approval cannot be given to this research but the application is referred on to the University Research Ethics Committee for higher level consideration.

Please state the reason

- D. Ethical approval cannot be given to this research and it is recommended that the research should not proceed.
-

Please state the reason, bearing in mind the University's ethical framework, including the primary concern for Academic

Signature of the Chair of the designated Ethics Committee within the College

Signature

Date

Chair of _____

Appendix Two - Participant Information Sheet

Title of Study: Enhancing understanding of the of the use of FOBTs (Fixed Odds Betting Terminals) using ethnography.

Information for Participants

I am a senior lecturer at the University of Lincoln and currently conducting a piece of research for a PhD study on the subject of gambling, with a particular focus on the use of Fixed Odds Betting Terminals (FOBTs). Ethnography is a research method which aims to understand the ways in which individuals and groups understand the world from their own perspective. Observations and interviews are methods used to help to understand behaviours and the meanings that people give to their behaviours.

Should you choose to take part, I will ask you to take part in an initial interview of approximately one hour. During this I will ask you questions about your gambling. Following this if both parties agree that it is helpful and relevant there may be an invitation to further interviews. The interviews will be recorded and the recordings will later be transcribed. Findings from the written transcriptions may be written up both for a PhD thesis, and for articles which may be published at some point in academic journals. This information will be treated in confidence and stored securely (written notes in locked cabinets and electronic documents in secure university systems). After analysis, the data will be destroyed after the PhD thesis and related articles have been written. I will take the utmost care not to write anything which may lead to individual respondents being identifiable: all quotes and information will be anonymised and not be attributed to particular individuals. You have the right to refuse to take part in the study at any point and to withdraw permission at any point after you have given initial permission. I hope that you will be able to support me in this research. For further information please contact me at : jrogers@lincoln.ac.uk. You can also address any queries to the director of studies: Rachela Colosi – 01522 837123

Jim Rogers Senior Lecturer, PhD student. University of Lincoln

Appendix Three Sample advert for recruiting participants for interview.

Fixed Odds Betting Terminals



UNIVERSITY OF
LINCOLN

Have you ever played games for money on a FOBT
(Fixed Odds Betting Terminal)?

Researchers at the university of Lincoln are seeking to better understand the experiences of people who play such games. If you have used FOBTs we would like to interview you.

Participation involves an initial one hour interview either at a site convenient to you or at the university campus in Lincoln, with the possibility of further interviews if mutually agreed.

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