Expert View on Influencing Gambling Behaviour from a Behavioural Science Perspective

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Executive summary

This report uses insights from behavioural/marketing science and existing research into gambling behaviours to provide insights and key recommendations to guide campaign development, as well as ideas for more direct intervention. In particular, it takes a scientifically rigorous view of the evidence base for the drivers of online sports betting behaviour and established methods of driving behaviour change amongst at risk gamblers.

The paper summarises five key areas of research:

- The impulsive nature of gambling behaviour
- Personal relevance and emotion as drivers of behaviour change for gambling
- The mental and physical availability of online sports betting
- Behavioural/personality markers of at risk gamblers
- Tools/behavioural interventions for moderating gambling behaviour

Based on these insights, CSG make the following key recommendations:

1. Campaign activity should reflect the impulsive nature of at risk gamblers, by reflecting other traits indicative of impulsivity such as sensation-seeking and low levels of parental influence.

2. Campaign core messages must be emotionally stimulating and personally relevant to garner at risk gambler’s attention. This should be delivered through low-fear messaging focussed on present/short-term consequences, and framed in terms of positive benefits (such as the time or money saved).

3. To counteract the high mental and physical availability of online sports betting at the start of the football season the campaign must be highly distinctive (for example, by highlighting the typically solitary nature of online sports betting) and stand apart from industry activity, with consistent brand assets across all campaign communications.

4. Key indicators of at risk gamblers within the broader target audience of young men, such as economic inactivity and relevant personality traits, should be used to inform campaign targeting and messaging where possible.
5. Digital tools using simple and specific behavioural prompts represent an opportunity to prompt self-appraisal by ‘at risk’ gamblers by addressing the most common heuristics and biases that influence betting behaviour - and should form a part of wider campaign activity/interventions to effect behavioural change.
Introduction

The primary focus of this brief is to address public awareness of the risks associated with gambling, and how to avoid them. However, the campaign will sit at the heart of a broader public health education strategy for gambling designed to achieve behavioural change amongst the target audiences - specifically, a reduction in the prevalence of problem gambling behaviours. Accordingly insights from behavioural science on how to most effectively influence gambling behaviours are critical to both achieving long term campaign success, as well as enabling the generation of ideas for more direct, individual interventions and tools – beyond the media campaign – to help drive behaviour change.

This is because recent advancements in social psychology, neuroscience and behavioural economics (collectively behavioural science) have led to a deeper understanding of what influences how people behave. Specifically: people think less than they think they think, and subtle, subconscious influences have a stronger impact on behaviour than traditional models of economics, marketing and advertising assume.

As a result it is important to both understand what those subconscious influences might be (known as heuristics and biases), and to further review existing scientific research into combating addictive behaviours with reference to them. By adopting a scientifically robust evidence-based approach this has given us a rich understanding of the drivers of gambling behaviour.

This paper aims to identify some of the relevant theories and research from behavioural science relevant to gambling behaviour, and provide key recommendations to guide campaign development and ideas for more direct intervention.
At risk gamblers are (more) impulsive

Fundamental to behavioural science is dual processing theory, that asserts that our behaviour is guided by decision-making that is both automatic (i.e. habitual, unconscious and instinctive) and reflective (i.e. occasional, considered and planned). Neuroscientists estimate that up to 95% of our cognitive activity is habitual and beyond our conscious awareness and can therefore be defined as automatic, including when we are using a website or an app. This is especially true of behaviours that have become habitual or unthinking – problem and at risk gamblers often articulate this as a feeling of being ‘in the zone’ when they are less in control of their behaviours, and therefore more impulsive.

A causal factor for this prevalence of at risk and problem gambling amongst young men is their increased prevalence of impulsive behaviour. Impulsivity as a personality trait is a key component of problem gambling and its development.

Impulsivity has been defined as “the inclination of an individual to act on urge rather than thought, with diminished regard to consequences, and encompasses a range of maladaptive behaviours which are in turn affected by distinct neural systems”. As reported by Secades-Villa, Martínez-Loredo, Grande-Gosende, and Fernández-Hermida (2016), past research has identified impulsivity as a risk factor that predicts (1) gambling onset in youth with low socio-economic status, (2) gambling frequency, and (3) general problem gambling on young males from low socio-economic status. The researchers own findings indicated that impulsivity both precedes later gambling problems and is increased by gambling, worsening the issue. Lai, Ip, & Lee (2011) found that ‘trait impulsivity’, which stems from enduring personality characteristics, led problem gamblers

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3 E.g. “Players in diverse sectors sometimes describe a sense of ‘dissociation’ and narrowing of focus when gambling. For many, this chance to ‘switch off’ is one of the reasons they enjoy gambling as a pastime. But while ‘the zone’ may be enjoyable, significant research evidence shows that individuals have less self-awareness of behaviour and more disordered thinking when stimulated through gambling. A consequence can be the erosion of rational decision-making.” Responsible Gambling: Collaborative Innovation, Revealing Reality research report, 2017
to focus on short-term gains. Overall, Secades-Villa and colleagues concluded that adolescents that reported a tendency towards impulsive behaviour were likely to be at risk of becoming future problem gamblers.

Beyond individual differences, Molinaro et al. (2014) identified family and country-wide related variables that predict the development of problem gambling, using a sample of 30,000+ 16-year old European students. The variables that lead to more involvement in probable problem gambling were:

<table>
<thead>
<tr>
<th>Family related variables</th>
<th>Identified as the strongest predictor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less parental monitoring of behaviour</td>
<td>e.g. parents do not know with whom and where the adolescent is</td>
</tr>
<tr>
<td>Less parental caring</td>
<td>Lacking empathy, closeness, emotional warmth and affection. Hostile parenting styles increase gambling problems</td>
</tr>
<tr>
<td>High parental regulation</td>
<td>e.g. rules of what a child can do outside the house</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country-wide variables</th>
<th></th>
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<tbody>
<tr>
<td>Less country-level expenditure on public health</td>
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</tbody>
</table>

**Summary**

A combination of a personal tendency towards impulsivity combined with negative parental influence (specifically little monitoring and care, and/or high levels of regulation) increase the likelihood of young males in particular being at risk of problem gambling.

As such, CSG recommend that campaign activity seeks to take into account the impulsive nature of at risk gamblers, by targeting other traits indicative of impulsivity such as sensation-seeking and low levels of parental influence.

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Personal relevance and emotional impact are critical to encouraging behaviour change

When ‘in the zone’ gambler’s behaviour will be more irrational and particularly subject to heuristics and biases – as they are likely to be in a more emotional ‘hot state’. At these points only focussing on the purely rational drivers of behaviour (such as presenting information on gambling harms in a neutral way) is very likely to be ineffective. This is supported by the evidence from the Academic Review of Public Awareness Campaigns which concludes that “there is a large body of evidence that gambling warnings that simply provide information, such as about the probabilities of winning, have little to no impact on gambling cognitions and behaviours”.

The clear implication of this research is that there is a paradox that any campaign communications will be most salient when gamblers are actively betting, but it will be more difficult to divert gambler’s attention in those circumstances.

This is supported by the Revealing Reality research: “In general, the literature suggests that very ‘rational’ messages have a lower impact than irrational ones, something that gambling experts believe is even more the case when gamblers are ‘in the zone’ (they know and understand many of them, but may not actually act on them ‘in the moment’).”

Neuroimaging research has also suggested that impulsive decision-making is associated with highly emotional states, because people’s deliberative systems ability to hold back impulses is only active under low emotional states. Harris, Parke and Griffiths (2016) recommendation is to leverage the gambler’s impulsiveness trait through emotional messages that are personally relevant, such as an image of family members in the context of loss chasing consequences, or to encourage positive play behaviours through the use of normative data (i.e. showing average spend/losses).

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10 Responsible gambling public education campaign for Great Britain: A brief scoping review; prepared for GambleAware by Alexander Blaszczynski PhD & Sally Gainsbury PhD, Gambling Treatment and Research Clinic Science Faculty, Brain and Mind Centre, School of Psychology, The University of Sydney, January 2018
11 Ibid., Annexes and Evidence Summary
Given the age range targeted by this campaign, however, family will only be relevant to those married or with children, since adolescents usually have no dependents that might trigger the expected emotional response. Additionally, CSG note that the more serious negative consequences that can arise from chronic problem gambling (e.g. family breakdown, loss of home, substance abuse) are by their nature likely to be more emotional, arresting and distinctive than encouraging positive gaming behaviours – which is more relevant to at risk gamblers. This represents a significant challenge for campaign engagement.

Harris et al provide several key recommendations for an emotion-led approach:

- **Capturing attention**: since gambling and its related activities, such as watching a sports game, tend to claim most of the individual’s attention, emotional messages can activate neurological pathways that circumvent the conscious processing of the content\(^\text{16}\). When the message is also personally significant, selective attention will be drawn towards it, facilitating decision-making.

- **Positive versus negative emotions**: on substance abuse, evidence has shown that fear appeals are ineffective on youth populations, due to either eliciting a false sense of inevitability or acting as a “challenge” for those individuals that enjoy taking risks\(^\text{17}\). Low-fear messages from trusted and/or credible sources, focusing on the present and appealing to positive emotions are recommended. Another consequence of messages that force a negative and uncomfortable self-perception is triggering ‘defensive’ processing (or ‘othering’), where subjects convince themselves that this applies to others but not them, to self-protect their own image\(^\text{18}\). The mix of negative and positive messages seems to generate lower discomfort after exposure when tested on potential drink bingers. When negative messages are subdivided into guilt and discomfort, and are coupled with positive content, a reduction on binge drinking intention was found. Specifically, guilt was more persuasive when combined with the benefits of responsible drinking, while shame was found to be more effective with messages focused on consequences avoided\(^\text{19}\). An example are the pop-ups asking if the user wants to keep playing after indicating that a betting or time limit has been reached: by itself, the message can trigger negative emotions associated to loss, but one framed on protecting the

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money or time to be spent seems to better promote positive gaming behaviour (e.g. “save the rest of your money for that family trip next month”. These have been identified by Harris and colleagues as especially relevant for younger adults.

- Use of text and images: preliminary research on images and text in a gambling context indicates that the use of both is more persuasive (i.e. changing attitudes and increasing compliance) than each alone\(^{20}\).

**Summary**

*For any campaign communications to be effective, the core messages must be emotionally stimulating and personally relevant to garner at risk gambler’s attention.*

CSG recommend that this is delivered through low-fear messaging combining text and images focussed on present/short-term consequences, and framed in terms of the positive benefits (such as the time or money saved). This will ensure messages are most salient to the target audience.

Combating the mental and physical availability of online sports betting

Behavioural science has established that to successfully influence automatic behaviour, it is most effective to make it either cognitively or physically easier\(^1\). This approach has been applied in marketing science research to establish that growing a brand’s purchasers requires building both physical and mental ‘availability’ – that is, making it easier for people to bring to mind (salient), in more relevant situations\(^2\).

Relating this to online sports betting brands, mental availability is primarily driven by gambling advertising, particularly around major sports events\(^3\). This campaign will, in effect, be competing for salience amongst our audience against this background of increased industry activity (potentially with advertisements appearing alongside gambling advertisements), in addition to the residual mental availability of previous industry campaigns. The mental availability of sports betting will be at peak levels driven by industry spend to coincide with the start of the new football season, closely following likely high spend levels during the World Cup. Gambling marketing has become firmly embedded in the financial practices of many Premiership football clubs, and it has been suggested that the symbolic linkage of sport and newer gambling forms can become an issue of public health, especially affecting vulnerable groups such as minors and problem gamblers\(^4\).

Analysis of sports betting industry campaign activity indicates that a number of key themes are prevalent, that both seek to focus on the nature of sports betting as impulsive and emotional, and use relevant heuristics and biases to increase mental availability. There is a clearly defined narrative within UK sports betting advertising that seeks to both reduce the perceived risks involved, and enhance the perceived control of betters (by emphasising the advantages of sports knowledge, for example)\(^5\). Betting while watching sport in betting adverts is also associated with emotionally charged situations such as

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\(^3\) UK industry advertising spend is estimated at over £1.4bn since 2012: https://www.theguardian.com/society/2017/aug/31/uk-gambling-industry-takes-14bn-year-landers


celebrations and/or alcohol drinking. Bettors are typically also depicted staking small amounts of money with large potential returns, implying high risk bets\textsuperscript{26}.

Physical availability of online sports betting has been driven in recent years by the increasing ease of online betting, the proliferation of providers and platforms (e.g. mobile apps, ‘in-play’ betting), and the increasingly frictionless online user experience (e.g. the ability to deposit funds through multiple payment methods). Sports betting has accordingly dramatically altered its essence from a discontinuous to a continuous form of gambling, with progressively increased availability, accessibility, frequency and betting options\textsuperscript{27}.

\textbf{Online gambling behaviour}

\begin{itemize}
  \item 50\% online gambling via computer
  \item 14\% from 2011
  \item 14\% from 2012
  \item 1 in 4 online gamblers have been in debt (last 4 weeks)
  \item 32\% of online gamblers aged 16-64 gamble at work
  \item 4\% of respondents had bet on eSports (last 12 months)
\end{itemize}

\textit{Summary of online gambling behaviour in the UK, Gambling Commission 2018}

Although latest data suggests a slight decline in overall gambling participation (excluding the National Lottery) over the last four weeks in 2017 from 33\% to 31\%, online gambling has increased from 17\% to 18\%, with mobile phone usage in particular rising from 29\% to

\textsuperscript{26} Hibai Lopez-Gonzalez, Frederic Guerrero-Solé & Mark D. Griffiths (2017): A content analysis of how ‘normal’ sports betting behaviour is represented in gambling advertising, Addiction Research & Theory.

\textsuperscript{27} Hibai Lopez-Gonzalez & Mark D. Griffiths (2016): Understanding the convergence of markets in online sports betting, International Review for the Sociology of Sport, 1-17.
In addition, new technological features of sports betting platforms (e.g. live in-play betting) are used by advertisers to build narratives in which the ability to predict a sports outcome was overlapped by the ability of bettors to use such platforms, equalizing the ease of betting with the ease of winning.

Despite this increasing physical and mental availability of mobile platforms, the vast majority of online gambling still occurs in the home, and is predominantly a solitary activity (see figure 15 below).

However, analysis shows that in sports betting advertising bettors were typically depicted surrounded by people (although isolated in their betting), emphasising the individual consumption practice that mobile betting promotes. Even when betting socially, peer facilitation has also been identified as a fundamental contributing factor to impulse betting, with excessive betting being more plausible when sport matches are viewed in the company of others.

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29 Lopez-Gonzalez et al, 2018, ibid.

30 Gambling Commission, ibid.


This is reflected in The Senet Group Future Thinking research\textsuperscript{33}: “Contrary to the widespread perception of gambling and problem-gambling related stigma\textsuperscript{34} participants portrayed a normalised view toward gambling, predominantly seeing it as a social activity. A social element of gambling/betting played a large role in the wide-held normalised view of gambling and betting...For these individuals, gambling without the social element was seen as problematic. Many participants voiced that gambling alone is an indicator in themselves and others of moving toward problem or dangerous gambling.”

Consequently, a clear distinctive marker of this campaign could be to portray gambling as a solitary activity, and this to be an indicator of ‘at risk’ gambling becoming problematic.

It is unlikely that there will be ‘competitive’ campaigns addressing problem gambling active simultaneously – irrespective of this marketing science research dictates that mental availability (brand salience) is primarily driven by distinctive and consistent brand assets\textsuperscript{35}. Against the background of increased mental and physical availability for online sports betting it will therefore be important that the campaign needs to have a clear brand identity (distinct from industry branding), that is consistent across different channels over time.

The industry-led Senet Group campaign branding (‘When The Fun Stops, Stop’) has been successful in developing consistent brand assets over a relatively short period of time, with awareness of the campaign being high\textsuperscript{36}. However, it is important to note that this campaign has an implied message of gambling being ‘fun’, is predominantly seen in conjunction with betting industry brands and campaign research has not identified any clear impact on behaviour (only intention). A clearly differentiated approach will be required for this campaign.

A consistent brand-led approach has had demonstrable success in addressing similar public health challenges in the past, where distinctive and consistent brand assets have enabled successful reappraisal of multiple behaviours, driving long term behaviour change. One such example is the Department of Transport ‘THINK!’ campaign, which provides an ‘umbrella’ brand for safer driving initiatives ranging from speeding, drink driving, and road safety preventative behaviours primarily targeted towards young men. Campaigns such as ‘Moment of Doubt’ focussed on immediate negative personal consequences for drivers, rather than extreme consequences which were seen as less relevant\textsuperscript{37}. Adoption of a consistent umbrella brand identity of this type will also provide a

\textsuperscript{33} Project Time: Responsible Gambling Message Development Research, Future Thinking, November 2016


\textsuperscript{35} Sharp B., ibid.

\textsuperscript{36} Report on campaign evaluation for The Senet Group, October 2017.

\textsuperscript{37} Campaign evaluation summaries are available at: https://www.gov.uk/government/collections/think-communication-activity#think!-campaign-evaluation
salient link to any future campaigns directed at different audiences or behaviours (e.g. online gaming/casino gambling), helping boost residual awareness.

Department of Transport, THINK! Campaign, ‘Moment of Doubt’

Summary

The mental and physical availability of online sports betting has never been higher, with industry advertising and platforms exacerbating the impulsive and emotional drivers of betting behaviour. This salience will be at peak levels at the start of the football season.

CSG recommend that to be effective in this context that the campaign must be highly distinctive to capture attention (for example, by highlighting the typically solitary nature of online sports betting) and stand apart from industry activity, with consistent brand assets across all campaign communications.
Behavioural and personality markers of at risk gamblers

Existing research shows that there is a greater prevalence of gambling amongst young men (problem/at-risk incidence is more than double the population average amongst males in the 16-24 and 25-34 age groups), although there are no significant differences in problem/at risk incidence based on social grade, educational attainment and region\(^\text{38}\).

There is, however, evidence of a correlation between (lack of) economic activity and problem gambling\(^\text{39}\): “Problem gambling prevalence (according to either the DSM-IV or PGSI) varied by economic activity. The highest prevalence of problem gambling was found among those who were economically inactive (for example, the long-term sick, carers and those looking after home or family) but not students, unemployed or retired.”

A hypothesis that might explain this trend is that for the economically inactive, who have limited options to improve their financial situation, gambling is more likely to be perceived as a potential route out of financial difficulty (rather than an entertainment pursuit or hobby). As such, their gambling is more likely to become problematic. Students, the unemployed and retired have alternative (and more viable) routes to improving their financial situation, and consequently their gambling is less likely to tip into being problematic.

In terms of personality, there is extensive academic research into the links between personality traits and problem gambling behaviours (in addition to impulsivity, see above). Whilst targeting media campaigns based on personality is not currently a widely adopted approach for behaviour change, it is highly recommended to be considered here for two reasons:

1. The strong evidence base for the predictive power of personality type (particularly the ‘Big 5/OCEAN’ psychometric model) and behaviour, as distinct from more arbitrary characteristics such as demographics\(^\text{40}\);

2. The wealth of academic evidence of the link between personality type and prevalence of at risk/problem gambling behaviours (what might colloquially be known as the ‘addictive personality’).

A recent study classifying gamblers using the PGSI scale found that three personality factors were associated with the transition from non-problem gamblers towards problem-

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\(^{38}\) Gambling Commission, ibid.

\(^{39}\) Gambling Behaviour in Great Britain 2015, NatCen research for Gambling Commission, August 2017


gamblers: increased neuroticism (i.e. less emotional stability), and decreased conscientiousness and agreeableness. People high in neuroticism tend to experience more negative emotions such as anger, anxiety, depression, vulnerability and impulsivity. As such, individuals looking to escape from these emotions or to alter their mood, will find gambling a useful distraction. Low conscientiousness is linked to low proactivity, responsibility, self-discipline, deliberation and goal-striving. The difficulty to effectively self-control and focus on a task hinders a gambler’s efforts to resist the urges to gamble, especially during strong emotional episodes (positive or negative). Lastly, individuals with low levels of agreeableness tend to be more unfriendly, distrustful, boastful, selfish and intolerant; people with these characteristics are more likely to transition into risk or problem gambling.

When designing campaigns to prevent problem gambling, where possible CSG specifically recommend targeting individuals with these traits over a generalized attempt to capture the entire population. This can be achieved through creation of proxy audiences based on psychometric profile, using media data correlated with psychometric survey data, and then testing messaging accordingly. There is a strong evidence base that this approach can deliver greater campaign effectiveness, particularly within digital channels.

If priority is to be given to prevention efforts on individuals with high scores on neuroticism and low scores on conscientiousness and agreeableness, then there are multiple implications for messaging. Personality factors have been linked to different motivational systems in individuals. Hirsh, Kang and Bodenhausen (2012) surmised past research findings to the profile of at risk gamblers: high neuroticism is more susceptible to threats and uncertainty (e.g. the risks of significant losses); low conscientiousness would be poorly motivated by achieving order and efficiency (e.g. less motivated by messaging focusing on regaining control); and low agreeableness would be less affected by communal goals and interpersonal harmony (e.g. less motivated by social norms).

Summary

There are a number of key indicators of at risk gamblers within the broader target audience of young men, such as economic inactivity, and the personality traits of high neuroticism, low conscientiousness and low agreeableness.

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42 See (for example) marketing experiments conducted by CSG partners the Cambridge Psychometric Centre: https://marketingexperiments.com/digital-advertising/ads-based-on-personality
CSG recommend that these indicators are used to inform campaign targeting and messaging where possible, through use of psychometric media data and existing research into key personality traits.

The role of behavioural tools and other interventions for moderating gambling behaviour

That gambling is an inherently impulsive, emotionally-driven automatic behaviour is evidenced by the conscious knowledge of most gamblers that the odds are generally stacked against them (‘the house always wins’). When reflecting on their behaviour when not ‘in the zone’, most gamblers will acknowledge that they lack the knowledge to ‘beat the odds’ (e.g. “the qualitative research conducted for this project suggests that players (even more experienced ones) often lack detailed knowledge about the technical aspects of the games they play”44).

Simply better informing gamblers of the risks involved in gambling has a poor evidence base of success, however. This is generally less effective than prompting conscious reflection on the behaviour: “...messages designed to inform or educate gamblers are generally ineffective. Research supports messages that encourage individuals to consider their own gambling through the provision of questions or statements that prompt self-reflection and appraisal.”45

It is the view of CSG that this will only be effective in these moments of conscious reflection (i.e. when not ‘in the zone’) – if this campaign will largely be present in the same environments as industry messages to maximise saliency (e.g. TV advertising during sporting events) these more rational messages will not resonate with gamblers when ‘in the moment’. At those points more emotive messages are more likely to promote self-reflection and appraisal, as described above.

But when considering the use of other non-advertising based interventions reaching at risk gamblers when they are not in an emotional ‘hot’ state, tools and techniques to prompt self-reflection and appraisal have a greater role to play. In particular, at risk gamblers can be made more conscious of the heuristics and biases that affect decision-making when ‘in the zone’ through simple, easy-to-understand messages that reflect their own behaviours to prompt self-reflection and appraisal. Breaking them out of those habitual behaviours may require ‘emotional stir-up’ to prompt conscious reflection – in

44 Revealing Reality research, ibid.
45 Blaszczynski & Gainsbury (2018), ibid.
effect, generating a Pavlovian emotional response to a negative gambling behaviour (e.g. connecting chasing of loses with harms caused by financial problems)\textsuperscript{46}.

Consequently, an understanding of the relevant heuristics and biases driving gambling behaviour when ‘in the zone’ provides a useful basis for these messages, as identified in the scoping review\textsuperscript{47}: “…common biases and heuristics...contribute to ongoing gambling. These may represent barriers that need to be overcome before behavioural change can be achieved.”

To effectively achieve this it is suggested that simplicity and specificity is key: “making messages \textit{specific} may increase their effectiveness in terms of user engagement. For example, messages should be \textit{simple with one specific action suggested} and conveying a sense of urgency.”

Some key biases that specifically relate to gambling behaviours, and are most prevalent when gamblers are ‘in the zone’, are summarised below\textsuperscript{48}.

- Anchoring – a priming effect where an initial number sets a reference point for subsequent judgements of value (e.g. high default limits will bias gamblers to set higher limits than they would have done otherwise)

- The ‘Power of Free’ – items given free are given a higher relative value, and generate feelings of reciprocity as they are perceived as ‘gifts’ (e.g. ‘free bets’ are likely to be seen as free money, and generate greater favourability to the particular operator)

- Optimism bias – we tend to under-estimate our likelihood of a negative effect relative to others (e.g. gamblers will perceive odds as being ‘shorter’ than they are, believing themselves to be more fortunate or more knowledgeable than others, especially in sports betting where a degree of expertise or skill is perceived as advantageous)

- Framing effects – if events are framed positively they are perceived more favourably and we act accordingly (e.g. industry advertising activity focusses purely on the ‘highs’ of winning)

\textsuperscript{46} Lewin K (1951), \textit{Field Theory in Social Science}, Social Science Paperbacks, London.
\textsuperscript{47} Ibid.
\textsuperscript{48} A useful summary is also contained in Annex 2 of the Revealing Reality report, ibid.
Gamblers fallacy – the belief that independent events have related probability, rather than fixed, and so varies based on previous events (e.g. gamblers thinking that after a run of losses they are due a ‘win’)

‘Hot hand’ fallacy – similar to the above, the belief that success with a random event results in ‘streaks’, leading to higher probability of success in further events (e.g. in sports betting, a belief in lucky teams, players or superstitious rituals)

‘Pain of paying’ – the less salient the act of paying is, the less emotional pain is felt by spending money, and consequently more is spent (e.g. paying online with virtual currency is not seen as being ‘real money’)

The representativeness heuristic – where operators combine a highly likely event with a very unlikely one, transferring the representativeness to the whole betting proposition and altering perceived odds. In addition, it is plausible that representative heuristics work in conjunction with wishful thinking, overestimating the likelihood of an event based on one’s own preferences, as anecdotal evidence from betting advertisements concerning national teams participating in international competitions appear to suggest.

Personal motivation in these moments of self-reflection is strongly influenced by concepts of self-efficacy (i.e. how easy we think it is for our behaviour to change). As ‘at risk’ gamblers may be yet to experience any direct negative consequences of their behaviours, and are not conscious of being at risk, these barriers may not currently be significant. However, it is well-established that self-efficacy can be enhanced by providing easy to use tools to enable effective behaviour change at the most salient places and times. In particular, these enable self-selection of messages and information relevant to personal circumstances and motivations as recommended by Harris et al: “this is an argument allowing gamblers to self-set the messages they receive, as they are best positioned to determine what would invoke an emotional response and motivate them to avoid excessive gambling, be it fear-based messages, or a more positively-valenced approach.”

One example of this (developed with strategic direction from CSG) is the My QuitBuddy app, developed for the Australian Department of Health. This app has aided over half a million Australians in their quit smoking attempts by using a number of behavioural techniques that combat dominant heuristics to address smoking habits:

49 As highlighted in the Revealing Reality research: “For many players, money spent in gambling environments, via credit or chip for example, is often not seen as ‘real money’ – therefore regular reviews of behaviours and the financial implications of behaviours could be beneficial...Where money is ‘virtual’ or ‘intangible’ (particularly online) players can view it as unlike other, ‘real’ currencies.”
51 Ibid.
- Gamification, providing salient data on an ongoing quit attempt (e.g. money saved, tar avoided)

- Social proof via supportive messages from other smokers and friends/family

- Distraction/displacement activities e.g. games

- Salient ‘push’ notification reminders at smokers ‘danger times’ (i.e. self-selected moments when willpower/motivation is likely to be low)

This combination of interventions delivered quitting success rates eight times higher than that achieved by smokers without help.\textsuperscript{52}

\begin{center}
\textbf{Screenshots of the My Quitbuddy app}
\end{center}

Similarly, apps and other online tools such as live chat/messaging can facilitate behaviour change at scale through automation and incorporation of machine learning technology to dynamically optimise content and user experience. Automated tools also have an implied neutrality and lack of judgement that benefits those wishing to talk confidentially, especially younger audiences - as adopted by the Department of Health’s ‘Talk to Frank’ campaign.\textsuperscript{53}

\textsuperscript{52} Case study information is available here: https://www.theprojectfactory.com/my-quit-buddy

\textsuperscript{53} http://www.talktofrank.com
Summary

When not ‘in the zone’, digital tools represent an opportunity to prompt self-appraisal by ‘at risk’ gamblers through addressing the most common heuristics and biases that influence betting behaviour. These messages should be simple and relate to specific behaviours.

CSG recommend the creation of these tools to enhance overall campaign effectiveness alongside advertising campaign activity, to provide longer-term interventions to effect behavioural change.

Summary of recommendations

1. Campaign activity should reflect the impulsive nature of at risk gamblers, by reflecting other traits indicative of impulsivity such as sensation-seeking and low levels of parental influence (for example).

2. Campaign core messages must be emotionally stimulating and personally relevant to garner at risk gambler’s attention. This should be delivered through low-fear messaging focussed on present/short-term consequences, and framed in terms of positive benefits (such as the time or money saved).

3. To counteract the high mental and physical availability of online sports betting at the start of the football season the campaign must be highly distinctive (for example, by highlighting the typically solitary nature of online sports betting) and stand apart from industry activity, with consistent brand assets across all campaign communications.

4. Key indicators of at risk gamblers within the broader target audience of young men, such as economic inactivity and relevant personality traits, should be used to inform campaign targeting and messaging where possible.

5. Digital tools using simple and specific behavioural prompts represent an opportunity to prompt self-appraisal by ‘at risk’ gamblers through addressing the most common heuristics and biases that influence betting behaviour - and should form a part of wider campaign activity/interventions to effect behavioural change.