

# **The psychology of scams: Provoking and committing errors of judgement**

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## 1 EXECUTIVE SUMMARY

- 1.1 According to the Office of Fair Trading (2006), 3.2 million adults in the UK fall victim to mass marketed scams every year, and collectively lose £3.5 billion. Victims of scams are often labelled as 'greedy' or 'gullible' and elicit the reaction, 'How on earth could anyone fall for that?' However, such labels are unhelpful and superficial generalisations that presume all of us are perfectly rational consumers, ignoring the fact that all of us are vulnerable to a persuasive approach at one time or another. Clearly, responding to a scam is an error of judgement – so our research sought to identify the main categories of decision error that typify victim responses, and to understand the psychology of persuasion employed by scammers to try to provoke such errors.
- 1.2 Although scams are by definition illegal and illegitimate as the 'product' being sold is non-existent, worthless, or of little value, the way in which they are marketed has much in common with legitimate products. A successful scam involves all the standard elements of the 'marketing mix' and the building of a relationship between marketer and customer – that is, between scammer and victim.

### Previous research

- 1.3 Existing empirical research on scams is scarce, descriptive, and of limited quality in terms of identifying underlying psychological processes. We therefore sought to test a broad variety of potential psychological processes underlying victim responses to scams through **four studies** involving (i) in-depth interviews with scam victims, (ii) text mining of a large number of real examples of scam materials, (iii) two questionnaire studies targeted at members of the general public, and (iv) a behavioural experiment, which tried to get people's responses to a simulated prize draw pitch scam, delivered through the mail in the same way as a real scam.

## **Psychological reasons for responding to scams**

- 1.4 The present research suggests that **the psychological reasons for responding to scams involve a mixture of cognitive and motivational processes**. Whilst different kinds of scam do exploit different vulnerabilities to some extent, there are similarities between scams in their content and the use of persuasive techniques. The greatest and most consistent emphasis was on:
- **appeals to trust and authority:** people tend to obey authorities so scammers use, and victims fall for, cues that make the offer look like a legitimate one being made by a reliable official institution or established reputable business;
  - **visceral triggers:** scams exploit basic human desires and needs – such as greed, fear, avoidance of physical pain, or the desire to be liked – in order to provoke intuitive reactions and reduce the motivation of people to process the content of the scam message deeply. For example, scammers use triggers that make potential victims focus on the huge prizes or benefits on offer.
- 1.5 There are also a number of other error-inducing processes that emerged, including:
- **Scarcity cues.** Scams are often personalised to create the impression that the offer is unique to the recipient. They also emphasise the urgency of a response to reduce the potential victim's motivation to process the scam content objectively;
  - **Induction of behavioural commitment.** Scammers ask their potential victims to make small steps of compliance to draw them in, and thereby cause victims to feel committed to continue sending money;
  - **The disproportionate relation between the size of the alleged reward and the cost of trying to obtain it.** Scam victims are led to focus on the alleged big prize or reward in comparison to the relatively small

amount of money they have to send in order to obtain their windfall; a phenomenon called 'phantom fixation'. The high value reward (often life-changing, medically, financially, emotionally or physically) that scam victims thought they could get by responding, makes the money to be paid look rather small by comparison;

- **Lack of emotional control.** Compared to non-victims, scam victims report being less able to regulate and resist emotions associated with scam offers. They seem to be unduly open to persuasion, or perhaps unduly undiscriminating about who they allow to persuade them. This creates an extra vulnerability in those who are socially isolated, because social networks often induce us to regulate our emotions when we otherwise might not.

## Other key findings

- 1.6 Some of the psychological processes we identified as contributing to falling for a scam were to be expected, on the basis either of previous research literature, or common sense. Some others were less predictable.
- 1.7 For example, **it was striking how some scam victims kept their decision to respond private and avoided speaking about it with family members or friends.** It was almost as if with some part of their minds, they knew that what they were doing was unwise, and they feared the confirmation of that that another person would have offered. Indeed to some extent they hide their response to the scam from their more rational selves.
- 1.8 Another counter-intuitive finding is that **scam victims often have better than average background knowledge in the area of the scam content.** For example, it seems that people with experience of playing legitimate prize draws and lotteries are more likely to fall for a scam in this area than people with less knowledge and experience in this field. This also applies to those with some knowledge of investments. Such knowledge can increase rather than decrease the risk of becoming a victim.

- 1.9 Nor did we expect to find that **scam victims report that they put more cognitive effort into analysing scam content than non-victims**. This contradicts the intuitive suggestion that people fall victim to scams because they invest too little cognitive energy in investigating their content, and thus overlook potential information that might betray the scam. This may, however, reflect the victim being 'drawn in' to the scam whilst non-victims include many people who discard scams without giving them a second glance.
- 1.10 From the victim interviews it was clear that some people viewed responding to a scam as **taking a long-odds gamble**: they recognised that there was something wrong with the offer, but the size of the possible prize or reward (relative to the initial outlay) induced them to give it a try on the off-chance that it might be genuine.

### **Psychological harm to victims**

- 1.11 Scams cause psychological as well as financial harm to victims. Victims not only suffer a financial loss, but also a loss of self-esteem because they blame themselves for having been so 'stupid' to fall for the scam. Some of the victims we interviewed appeared to have been seriously damaged by their experience.

### **Vulnerability to repeat scam victimisation**

- 1.12 **Our research suggests that there is a minority of people who are particularly vulnerable to scams**. In particular, people who reported having previously responded to a scam were consistently more likely to show interest in responding again. Though a minority, it is not a small minority; depending on how it is assessed, it could be **between 10 per cent and 20 per cent of the population**. Furthermore, the research suggests that the vulnerability is not specific to the persuasive techniques most characteristic of current common mass marketed scams, though it does include them. This means that there are other

techniques, which scammers do not currently use very much, which would put people further at risk if they were introduced.

- 1.13 **People who show above average vulnerability to scams do not seem to be in general poor decision-makers**, for example they may have successful business or professional careers. They simply seem to be unduly open to persuasion, or perhaps unduly undiscriminating about who they allow to persuade them.
- 1.14 The existence of individual differences in general persuadability throws some light on the fact that some people become '**chronic' or 'serial scam victims**'; it would not be surprising to find that such victims are exceptionally highly persuadable – though that is unlikely to be the complete explanation of chronic victimhood, as other factors such as cognitive impairment are likely to be of some relevance.

### **Implications for consumer education**

- 1.15 The fact that, despite differences of emphasis and content, all types of scam communication covered by this research seem to have a number of important psychological features in common, **suggests that some people can be educated to recognise and resist them**.
- 1.16 Either by modelling themselves on legitimate equivalents, or by copying earlier scams, scammers produce material that 'looks right'. This does mean that the public can learn about particular kinds of scam, and successfully avoid them, but that fact carries a vulnerability: **a creative new scam message is likely to be disproportionately successful**.
- 1.17 **The likely existence of a subset of the population with enhanced vulnerability to scams is both a problem and an opportunity from a consumer education point of view**. It is a problem in that it suggests that a high proportion of any general awareness campaign will be wasted on people who are relatively unlikely ever to fall for a scam. It is an opportunity in that if the more vulnerable group can be identified – or can be encouraged to self-identify – educational material can be targeted at them.

- 1.18 Previous research on fraud has mainly focussed on motivational processes. The present research suggests that **victim responses to scam communications could be understood more fully by integrating motivational and cognitive processes**, and therefore that counter-measures need to involve both kinds of process.
- 1.19 **Not all potential errors of judgement are equally involved in falling for a scam, and public education campaigns need to focus on those that seem to be ubiquitous.** These are appeals to trust and authority, and the clouding of sensible decision-making by the offer of huge rewards.
- 1.20 Non-victims often discard scams virtually unread. **The most effective education strategy may therefore be to help potential victims recognise scams at a glance.** Much effort in scam prevention has already focused on trying to educate potential victims to detect these 'scam alerts' or warning signs.
- 1.21 **Other recent research suggests that making people focus on potential losses reduces their tendency to selectively process only information that is consistent with the decision they have begun to form to respond to a scam.** So awareness raising campaigns should encourage people to approach unsolicited communications with the question, 'How much could I lose here?' rather than 'What's in this for me?' They would then be much more likely to look for reasons why they should not respond to the scam, instead of looking for reasons why they should.
- 1.22 At least some responses to scams seem to be driven by the victim's interpretation of the situation as a **long-odds gamble** – it is probably no good, but it is worth a small punt. Awareness raising campaigns should emphasise that no-one ever wins against a scammer.
- 1.23 **The research suggest that victims are often acting against their own better judgement:** with some part of their minds they recognise a scam for what it is. Awareness raising campaigns could emphasis that, if you think an offer might be a scam, it almost certainly is – **your gut instinct is almost invariably right.**

## **Filtering scam communications**

1.24 The word-level text mining of scam communications suggests that the content of scams in general, and each particular type of scam, can be recognised with fair accuracy by relatively crude word-counting procedures. This offers possibilities for automatic scam elimination, at least those delivered via e-mail, by the use of filters.

## **2 INTRODUCTION**

- 2.1 A 'Scam' is 'a trick, a ruse; a swindle, a racket' (Oxford English Dictionary). Scam, as it is used currently, is both more specific and more general than its nearest synonym, 'Fraud'. Scams have often come to refer to a particular kind of fraudulent or misleading practice, characterised by widely disseminated initial approaches at long distance to people not known to the perpetrator ('scammer'); the scammer expects a low rate of return on the offer but is able to make a profit because the approach has low cost.
- 2.2 According to the definition adopted by the Office of Fair Trading ('OFT') (2006) a mass marketed scam is 'a misleading or deceptive business practice where you receive an unsolicited or uninvited contact (for example by email, letter, phone, or advertisement) and false promises are made to con you out of money'. The scam will not work unless the victim makes some kind of response. Examples of common scams include bogus lotteries, deceptive prize draws and sweepstakes, fake psychics, 'miracle' health cures, foreign money making ('advance fee') offers and 'get-rich-quick' schemes. It is this kind of mass marketed scam that is the subject of the present research.
- 2.3 Our aim in the present research was to improve our understanding of why people fall victim to scams, and of the psychology employed by the scammers to influence consumer behaviour. We started with the basic question of why so many people, so often, react to completely worthless scam offers. According to the OFT (2006), 3.2 million people in the UK fall victim to scams, and lose more than £3.5 billion every year. Why does this happen? Why do some scam victims even react repeatedly so that some of them lose their entire life savings as well as their psychological health? However, as well as understanding scams better, we also want to help combat them more effectively. So we also want to know how an improved understanding of the psychology of scams can play a part in reducing the damage that scams do, for example by informing the development of more effective consumer education messages.

- 2.4 Although scams are by definition illegal and illegitimate, it will be a recurrent theme of this report that they have much in common with the marketing of legitimate products. The product being sold is non-existent, worthless or at best of very little value, but there is no reason why that should make any difference to the means by which it is sold. A successful scam involves all the standard elements of the 'marketing mix' (McCarthy, 1960), Product, Price, Place and Promotion. It also involves the building of a relationship between marketer and customer (Berry, 1983) – that is, between scammer and victim. There may even be an element of repeat selling; certainly OFT experience strongly suggests that anyone who has been a victim of one scam is more likely to be approached by other scammers in future (as their name will be placed on a so-called 'suckers list'), and in a complex scam, there may be many points at which the victim has to take a positive decision in order for the scam to move forward. Most crucially, however, at some point the client has to decide to 'buy' the non-existent or worthless product or service on offer. He or she has to decide to comply with the scam.
- 2.5 The available research on scams is, for the most part, fragmented, descriptive, and non-psychological. Some of it focuses on technical issues (for example, what types of media are used and how technical solutions can be used to counteract scams). Some is essentially descriptive, gathering demographic information about how often people react, how much money they lose, and which subtypes of the population are more or less prone to react. Some simply transfers older theories on the psychology of persuasion in general (for example, Cialdini, 1984-2007) or fraud in particular to the more specific field of scams.
- 2.6 Our intention in the present research project has been to set up a general theoretical framework specifically aimed at explaining psychologically why people respond to scams, and to test it empirically in a variety of ways. Specifically, we propose that, on the one hand to respond to a scam is an error of judgement, and on the other hand, scammers aim to create situations that increase the likelihood of such errors.

- 2.7 The idea of an error of judgement springs from the theory of rational decision making. From its foundations in nineteenth century psychology, economic theory gradually developed the idea of the perfectly rational decision maker, who would always take the best possible decision in the light of all the information available. This theory was raised to new heights by the publication of a seminal work that applied it in new ways, Von Neumann and Morgenstern's (1944) *Theory of games and economic behaviour*. But von Neumann and Morgenstern's work also made it clear that rational decision making depended on a series of assertions that could be tested empirically. The modern disciplines of decision-making, economic psychology and behavioural economics, which provide a rich source of data about such errors, have been largely built on testing that theory and showing that it is not always an accurate or complete description of individual behaviours. Nonetheless, the idea of rational decision making remains important. It provides a standard against which real decisions can be assessed, and a way of classifying the tendencies shown in real decisions. Deviations from rational decision making can therefore be seen as errors of judgement. Although some decision errors are small scale and evanescent, others are not: they are reliable and large enough to account for major macroeconomic phenomena such as the systematic underinvestment in pensions that characterises modern economies (see also Thaler & Sunstein, 2008, chaps 6, 7).
- 2.8 Our focus on falling for a scam as an error of judgement addresses one of the most mystifying features of the scam phenomenon. The existence of scams and scammers is well known. A retrospective account of someone responding to a scam, especially if given briefly, very often elicits the reaction, 'How on earth could anyone fall for that?' – because on rational analysis, it must have been obvious that the scam was just that, a scam. But the assumption that people's decisions and choices are reliably rational is at best a crude approximation that applies only on the average. Furthermore, as defenders of rationality theory have often argued, anyone who shows systematic deviations from rational choice is vulnerable to exploitation (for example, see the 'money pump' argument against irrational preferences, first publicised by Davidson, McKinsey &

Suppes, 1955). Seen in this light, a modest probability of falling for a scam is no longer an inexplicable exception to the general tendency of human choice, but rather an inevitable by-product of the processes that enable normal economic life to continue.

- 2.9 However the wide range of errors of judgement that have been studied means that merely labelling response to a scam as such an error is vacuous. What we need to do is to identify the categories of error that typify scam responses, and to understand the ways in which scammers try to provoke such errors. Whilst our research therefore seeks to identify behavioural issues that create errors in judgement, we recognise that there are other potential sources of such errors.
- 2.10 The present research programme began with a review of the existing research literature. A report of that review is attached as Annexe A, but its conclusions are summarised in Section 3. In the light of previous research, we developed our own theoretical understanding of the psychology of falling for scams, summarised in Section 4, and a research strategy, which is presented in Section 5. Four major studies followed, using different techniques; one of them was in two parts. These are described in Sections 6-10.
- 2.11 Study 1 involved in depth interviews, mainly with victims of scams, though a handful of the interviews were with people who were closely involved with scams but not actual victims ('near victims' or relatives of victims). This study enabled us to probe in depth the psychological processes and impacts of becoming a scam victim. The interview transcripts were initially studied by thematic analysis, extracting the main ideas that people were expressing, and then by text mining, that is, computer-aided analysis of the text materials to build up a picture of their content by counting words and concepts.
- 2.12 Study 2 also involved text mining, but in this study we analysed a large body of examples of scam communications (primarily mailings but also some emails and website material) made available to us by the OFT. This study enabled us to look at the psychology of scams from the point of view of the scammer, so we could compare what the scammers

seemed to be trying to do with the effects the scams seemed, from Study 1, to be having.

- 2.13 Study 3 involved two questionnaire studies targeted at members of the general public: Study 3A used members of a volunteer participant panel, to ensure a high response rate, and Study 3B used people recruited by a house-to-house mail drop, to get a more representative sample. These studies enabled us to probe people's attitudes to scams, and what they think will make them more likely to fall for a scam.
- 2.14 Study 4 was a behavioural experiment, which tried to get people's responses to a simulated prize draw scam, delivered through the mail in the same way as a real scam. For ethical and legal reasons we could not actually ask people for money and we had to reveal that the supposed scam was in fact a simulation. Nevertheless, by presenting the simulation in different ways, we were able to get closer to the process of responding to an actual scam, and to look more directly at some of the factors that underlie falling for a scam.

### **3 PREVIOUS RESEARCH ON THE PSYCHOLOGY OF SCAMS**

- 3.1 Empirical research on scamming is scarce, descriptive, and of limited quality in terms of identifying underlying psychological processes. Many articles that seek to say something about the psychology of scams just rely on information about the general psychology of fraud, and adapt this knowledge theoretically to the more recent problem of mass marketed scamming, without carrying out any new data collection. Nonetheless, the existing literature provides essential context and theoretical background for the present research.
- 3.2 The formal similarity between a scam and a legitimate marketing offer means that the previous literature can conveniently be considered within the context of 'communication theory'. Any communication event involves Source, Medium, Message and Recipient factors. Because scamming is an illegal activity, it is hard to reach or study source factors (these would include, for example, the motivation and plans of the scammer). While there has been considerable research on some particular media (most notably the internet), most of this has been of a largely technical nature, targeted for example at finding technical means of blocking scam and spam email. Most available research therefore focuses on message and recipient factors and our own research plan follows this tradition. All these factors inevitably interact: in particular, it is widely accepted (indeed, it is almost a tautology) that the peculiarities of scam message content represent the scam sources' implicit hypotheses about the characteristics and psychological processes of scam recipients.

#### **Source factors**

- 3.3 In one of the few attempts to comment on the scammers, Duffield and Grabosky (2001) and Grabosky and Duffield (2001) offer a theoretical analysis in which they claim to identify some psychological correlates of fraud offending. However, scamming (which they call 'mass market fraud') is only one of four categories of offence that they consider. The authors conclude that modern media and internet technology facilitate scamming by helping the scammer avoid face to face contact with his or

her victims, and thus seeing the situation from the victims' point of view. Psychological research on prosocial and antisocial behaviour (for example, Batson, 1998) has revealed that immediate visual contact increases feelings of empathy, which reduces individuals' tendency to be aggressive towards people and increases individuals' tendency to be prosocial (see also Milgram, 1965). In the case of internet scamming, the distant technology prevents the emergence of empathy and perspective taking, which facilitates the scammer cheating their victims (he or she feels less empathy for the victim causing less feelings of guilt for betraying them). These processes seem equally likely to apply to other forms of distance communication such as postal scam mailings.

## Message factors

- 3.4 From his perspective as a prosecutor at the US Department of Justice, Rusch (1999) argues that internet scammers use what he calls 'social engineering techniques' to persuade people to comply, in a way that is typical of traditional fraud. To understand these techniques, he suggests using social psychology, and in particular Cialdini's (1984/2007) analysis of persuasion and influence. Rusch focuses on three core social psychological topics as aids to understanding scam messages and how they work. The topics he explores in detail are:
- the contrast between central (logical and systematic) and peripheral (emotional and superficial) routes to persuasion, with the fraudster necessarily relying on peripheral routes, for example by stirring up strong emotions, such as excitement or fear, at the beginning of an interaction;
  - attitudes and beliefs. Rusch sweeps a number of possible effects together here, including the scammers' tendency to demean their victims, and the victims' tendency to focus on the apparent honesty of the scammer rather than analysing what they were being told;
  - persuasion and influence techniques. Here Rusch draws up a long list of techniques, including authority, scarcity, liking and similarity,

reciprocation, commitment and consistency as well as social proof (we discuss these psychological processes in further detail below).

- 3.5 Pursuing the same general theoretical approach as Rusch (1999), Langenderfer and Shimp (2001) carried out a survey of expert opinion, to present a 'tentative theory of scamming vulnerability [...] for future empirical investigation'. With regard to affective processes, they argue that scammers use what Loewenstein (1996), in an influential paper on decision errors, has called viscerally oriented rewards. These are rewards for which the victim is likely to have a very high motivation, either chronically or aroused by the scam message. The obvious examples are money, sex, anxiety and pain, though scams may also exploit strong emotions like pity by references to political, natural or personal disasters (this is commonly done in the so-called 419 advance fee frauds, for example). So scam messages address basic needs such as greed, anxiety, or physical pain (for example, by falsely claiming that the recipient has won a large cash prize in a lottery or by appearing to ask for money in order to offer a 'cure' to an arthritis sufferer who suffers from severe physical pain).
- 3.6 Langenderfer and Shimp (2001) argue that under conditions of high visceral influence the mechanisms of people's decision-making change, making it less likely that clues to the scam status of a message ('scam alerts') will be noticed. For example, 'miracle' health product scams often claim that they can help the potential victim to alleviate pain, a direct offer of a viscerally related reward. The aim is that the victim's pre-existing pain and the associated motivation to reduce it will override caution and prevent the scam being detected. Our previous research has consistently shown that the arousal of such strong motives will tend to reduce rational thought and caution in information-seeking and decision-making (for example, Fischer, et al., 2008b).
- 3.7 Langenderfer and Shimp (2001) also point out that scam messages frequently emphasise the urgency or uniqueness of the opportunity that is being offered. These are of course techniques that are used in legitimate marketing as well, and are widely believed to be effective, though empirical studies of their effectiveness are rare. Examples include

experiments by Worchel, Lee and Adewole (1975), who found the desirability of cookies was maximal when they were perceived to be scarce due to high demand, by Lynn (1989) who manipulated the perceived scarcity of art prints and wine and found that it had a positive and significant effect on the items' desirability, and by Verhallen and Robben (1994) who found that scarcity and preference were positively correlated only for popular items, and only where the scarcity was a result of limited availability due to market conditions, so that supply could be seen to be genuinely limited.

- 3.8 Urgency and uniqueness claims are ubiquitous in legitimate marketing as well as scams, and it can be argued that they are always on the edge of being deceptive, since the seller is almost certain to return to the market with a similar offer in future: their purpose is always to encourage the buyer to a decision sooner and perhaps after less consideration than s/he would normally take. Riquelme & Wang (2004) argue that many websites within legitimate commerce contain biases, which they regard as unintentional, that may mislead consumers to the advantage of the advertiser, and inducing a false sense of urgency would certainly qualify as such a bias. Consumers are sensitive to the implausibility of uniqueness claims: Shirai and Bettman (2005) found that if consumers evaluated a deal they were being offered as though the same or a similar deal would be offered soon, the judged attractiveness of the present deal was lower than if they thought that the interval before the deal would be offered again was longer.
- 3.9 Cukier, Nesselroth, and Cody (2007) and Kienpointner (2006) both carried out analyses of the content of 'Nigerian Scam Letters'. Cukier et al applied Rusch's (1999) analysis of social psychological processes of persuasion, but also invoked literary and anthropological sources to identify the common myths and plot motifs that the scam letters used. They looked at 111 such letters and concluded that the Nigerian letters are a specific and distinct genre of scam mailings. Their results strongly support Langenderfer and Shimp's (2001) argument that scam communications aim to elicit visceral rather than cognitive information processing. They found that key elements in the letters were 'rich narrative appeals to strong emotions like greed, guilt and lust', and that

the scammers used 'archetypical myths of windfall fortunes'. Specifically, the letters address feelings of greed, charity, heroism and other associated strong emotional cues. The authors recognised many 'elements and motifs from the 'rags to riches' myth, which permeates many cultures' (p.8). In these letters, the 'hero has a quest or task to overcome against all odds and is aided by a supernatural agent, such as the fairy god-mother, or a human sidekick' (p.8). These themes are mostly set within stories similar to a fairytale or ideas like the American dream. The authors also found that most victims react to these mailings because of greed. The desire to get rich quickly makes the recipients fall for this fraud (associated with the idea of instant wealth).

## **Recipient factors**

- 3.10 Most investigations of scam recipients can be characterised as differential vulnerability studies: attempts to discover which groups within society are most likely to fall victim to scams in general or particular types of scam. The most substantial evidence on the nature of scams and their victims comes from a series of reports commissioned by the American Association of Retired Persons in the 1990s (AARP 1996abc). These focused on older victims, and on telephone scams. The main findings were that 56 per cent of victims of telemarketing were over the age of 50 years. Forty per cent reported that the reason for responding was that they did not know how to identify a scam approach, and 64 per cent said that they did not know any organisation that they could access for help with identifying scam approaches.
- 3.11 The OFT has also published research into the prevalence and impact of mass marketed scams on the UK public. The research included initial interviews with more than 11,200 people and 1,900 detailed follow-up interviews with people who reported they had been a victim of a scam, or knew someone who had been a victim, or target of a scam. Scaling up from the research results leads to an estimate that nearly half of the UK adult population has been targeted by a scam and that every year one in 15 people (3.2 million adults) in the UK fall victim to a scam at a total annual cost of £3.5billion. Older consumers were more likely to be targeted by a scam, with 25 per cent of those targeted being over the

age of 65, and 24 per cent between 55-64 years old. There was, however, a spread of actual victims across the age ranges. Older victims (aged 55 and over) were likely to lose nearly twice as much per scam compared to younger age groups. Of those who fell for the scams, 32 per cent said it was because of the legitimate and professional appearance of the marketing, 30 per cent said they were caught off guard, and 13 per cent because of the excitement at the prospect of getting a good deal or winning a prize.

- 3.12 Other research with scam recipients (for example, Grimes, Hough & Signorella, 2007) has confirmed that there are reliable individual differences in vulnerability, of the sort that would be predicted from general research on susceptibility to interpersonal influence (for example, Bearden, Netemeyer & Teel, 1989). Almost all authors agree that such differences exist at the demographic level, with the elderly, less well educated, and socially isolated being particularly vulnerable. Scammers are often held to share these beliefs and to target their messages at vulnerable groups, though clearly much internet scamming is essentially untargeted, because of its very low costs to the scammer.
- 3.13 Grimes et al (2007) report that older internet users suffer a double vulnerability to scams – they receive as much scam email as younger users despite lower internet use, and they are more likely to make purchases as a result of spam. The main reasons for this finding might lie in the fact that (a) older people have less experience with the internet as a medium, (b) are cognitively less able to detect typical scam attributes, and (c) may suffer from cognitive impairments that may reduce their motivational and cognitive abilities to deeply elaborate scam messages. Bearden et al. (1989) developed a measure that differentiates between individuals according to their susceptibility to social influence, and this has been suggested as a useful way of identifying people more likely to fall for scams than others.
- 3.14 Research into vulnerability to internet scams suggests an interesting additional factor in relative vulnerability. It appears that people's experience with the internet, and their style of interacting with it, may influence their vulnerability to internet scams. In a paper produced for

the UK government Foresight programme, Dutton and Shepherd (2004) counter-intuitively propose that familiarity with the medium by which a scam arrives may make one more rather than less vulnerable. They found that trust in the internet is higher among frequent users compared to non-frequent users of the internet. This means that, counter-intuitively, people who have experience with the internet may be more prone to fall into the trap of internet scamming than people with low internet experience.

- 3.15 The idea that knowledge might make one vulnerable, through over-confidence, is linked to other results that implicate Ego factors in scam vulnerability. Snyder (1986) argues that victims of gambling swindles are especially keen to win because this would boost their Egos, for example, by impressing a woman, or otherwise attaining social prestige. This need for ego-enhancement then hinders people from detecting fraud in gambling offers, in Snyder's view. Snyder concluded that people mostly become victims because (a) they generalise success in one area of their life (for example their job) to the gambling context, (b) they get involved by the idea of winning with low risk, and (c) their ego makes them vulnerable (for example, prestige and/or self-esteem).
- 3.16 Finally, there is also some research on how people feel after they have been scammed. For example, Shichor et al (1994) investigated the reactions of victims of a major telephone investment scam in the US, and summarised their findings in three words: Anger, Disappointment and Disgust. In so far as these reactions are turned inwards by victims, they are likely to reduce the probability that people will report the fact that they have been scammed. From research on mood regulation (for example, Fischer, et al., 2008b; Jonas, et al., 2006) we know that people seek to alleviate negative emotional states by neglecting or avoiding information that might increase (or at least does not help to reduce) such states, and not reporting the scam might be a way of avoiding further thinking about being defrauded. Furthermore, Snyder (1986) concluded, in the context of gambling swindles, that victims do not want to admit that they have been defrauded, and will avoid reporting swindles for fear of shame or notoriety.

## **4 A NEW THEORETICAL APPROACH: SCAM RESPONSE AS AN ERROR OF JUDGEMENT**

- 4.1 Decision errors result from a number of sources. In a famous paper about decisions under risk, Tversky and Kahneman (1974) described them as 'heuristics and biases'. Heuristics are simplifying rules used to render complex decision problems manageable. No-one could carry out all comparisons required to make ideally rational choices among the innumerable combinations of purchases that can be made in a modern consumer economy: the effort to do so would be literally paralysing. Rather than maximising their benefits, individuals must 'satisfice' (Simon, 1956), adopting simple strategies that usually give a good enough outcome.
- 4.2 Using a heuristic may mean that the outcomes of a single choice are usually not the same as would be predicted from rational choice theory. Over a series of choices, however, heuristics need not produce outcomes that deviate systematically from the predictions of rationality. Indeed, there is evidence that the outcomes of some simple 'rules of thumb' can even be better than that of a principled rational approach (Gigerenzer & Goldstein, 1996). But in some cases, heuristics lead to systematic, predictable deviations from rational choice, which we describe as biases. For example, in decisions under risk, people tend to:
- pay too much attention both to outcomes that are absolutely sure to happen, and to those that are very unlikely to happen, at the expense of those that are moderately likely (Kahneman & Tversky, 1979);
  - neglect the impact of basic occurrence rates when estimating how likely it is that two things will happen together (Kahneman & Tversky, 1973; Fiedler, Brinkmann, Betsch, & Wild, 2000);
  - under-estimate the value of outcomes that are further in the future, when making choices between outcomes that arrive at different times (see the review by Ainslie, 1975).

- 4.3 A particular source of bias in decision making lies in social processes, particularly social norms. Norms can be seen as rules of thumb based on social knowledge: they tell us how we 'ought' to choose, and furthermore how other people are likely to choose. Shared social norms can enable us to reach harmonious outcomes in bargaining situations, which may be very different from those that would be predicted by rational choice theory: for example, in a simple experimental procedure called the ultimatum bargaining game, a 'fairness' norm carried over from everyday life tends to operate, and it ensures that the distributions of outcomes are very different from those predicted by rationality (Thaler, 1988; Güth & Tietz, 1990). But clearly a negotiator who knows but does not share the norms governing the behaviour of other parties may be able to exploit them.
- 4.4 In the next few paragraphs we summarise some of the sources of errors of judgement that have been studied by social and economic psychologists. There are many such errors, and we do not present a complete list here: we focus on those that have already been suggested as processes that scammers try to elicit, or as explanations for why people fall for scams, or which plausibly might serve as such explanations. Even this selective list of sources of error is long. The present research therefore seeks to narrow it down, and investigates, using a number of methods, which of these processes can be identified as most important in the explanation and prediction of why people fall for scams.
- 4.5 Heuristics and the corresponding biases result from a fundamental cognitive fact, the impossibility of carrying out the processes required for fully rational decision making. However their existence opens the way for the intrusion of motivational processes into what would ideally be a purely cognitive operation. Accordingly, the psychological mechanisms underlying errors of judgement can be roughly divided into cognitive and motivational processes. Within both groups, some sources of error are more individual, others more socially induced. In Table 1, we list some of the many types of error that have been identified in both motivational and cognitive groups. In the next part of the report, we explain why

there is good reason to think that they may play a part in falling for a scam.

**Table 1: Some common errors that might cause people to fall for scams**

Motivational	Cognitive
Visceral influences	Reduced cognitive abilities
Reduced motivation for information processing	Positive illusions
Preference for confirmation	Background knowledge and overconfidence
Lack of self-control	Norm activation
Mood regulation and phantom fixation	False consensus
Sensation seeking	Authority
Liking and similarity	Social proof
Reciprocation	Altercasting
Commitment and consistency	

## Motivational sources of error

### 4.6 Common motivational errors include:

- **Visceral influences.** Scammers often address basic human desires and needs (such as greed, fear, avoidance of physical pain, or to feel liked or loved). This can provoke basic visceral (intuitive) reactions and thus reduce individuals' motivation to process the content of a scam message deeply (Langenderfer & Shimp, 2001). The heuristics ('rules of thumb') used in the decision will therefore be simpler, and the probable biases larger. In particular, important cues that may be specific to scams (and thus distinguish scam messages from

legitimate marketing offers) are not detected and falling for the scam becomes more probable. We know from previous research that the quality of decision-making and associated information processing is reduced when people are in strong motivational states (see for example, Frey, 1986; Schwarz, Frey, & Kumpf, 1980). People in such a psychological state simply do not elaborate the pros and cons of a decision and neglect possible shortcomings in decision alternatives' longer-term consequences. Finally, focusing on visceral needs and desires is also associated with a psychological state of being 'out of control', which is discussed below.

- **Reduced motivation for information processing.** Scam victims are often found to be in a state of low motivation to process information thoroughly, so that specific attributes that help to distinguish scam messages from legitimate marketing offers are disregarded, inducing errors of judgement (Langenderfer & Shimp, 2001). This decreased motivation can derive from the specific content in scam messages, either by arousing visceral motives, as described above, or by using the devices of induced scarcity and uniqueness to place victims under time pressure. It can also derive from dispositional factors. An obvious example is chronic cognitive impairment (for example, caused by dementia), which makes information processing more effortful. Counter-intuitively, reduced motivation to adequately process decision-relevant information should also be found in people with high rather than low financial resources. Better-off people should simply mind less about losing £10 or £20 in the 'game' of a sweepstake or prize draw scam. Large-scale survey data on gambling behaviour do suggest that, though some forms of gambling are concentrated in low-income groups (for example, lottery play, see Kearney, 2005), higher-income people take bigger and more dangerous risks (Barry, Maciejewski, Desai & Potenza, 2007) which could help to explain why some higher income individuals are susceptible to advanced fee fraud, such as West African 419 scams.
- **Preference for confirmatory information.** A persistent error in human decision making is the tendency to seek information that confirms one's initial hypothesis, rather than information that might prove it

wrong (Festinger, 1957; Frey, 1986; Wason, 1966). Although this tendency is reduced in familiar everyday tasks compared with abstract ones (Wason & Shapiro, 1971), it can readily be detected in social judgements of the same general kind as those involved in falling for scams (see also Fischer et al., 2005; Fischer et al., 2008a,b,c). This information search bias has been found to reduce the quality of decision outcomes (Kray & Galinsky, 2003).

Presumably its psychological basis is that it is more rewarding to find that one is right than to find that one is wrong.

- **Lack of self control.** A survey of expert opinion by Langenderfer & Shimp, 2001 suggests that people who respond to scam communications tend to be less able to regulate their emotional responses. Lack of self-control is one of the best documented causes of non-optimal choice and errors of judgement (for example, Thaler & Shefrin, 1981; Baumeister, Vohs & Tice, 2007). It has been widely seen as responsible for the bias towards immediate rewards that is one of the most striking failures of rationality in human choice (see Ainslie, 1975). On the one hand, self-control is a personality trait (that is, a psychological characteristic that is relatively stable over time, so that some people are persistently better than others at exerting self-control). On the other hand, Baumeister and his colleagues argue that self-control is a limited resource that can be depleted by tasks that require self-control, such as suppressing emotions or actively controlling one's own attention towards specific stimuli (for example, Muraven & Baumeister, 2000). When this resource for self-control is exhausted (a process referred to as ego-depletion; for example, Muraven & Baumeister, 2000), individuals are worse in controlling their emotions and hence in decision making. It follows that both people with low levels of trait self-control, as well as people who are in a psychological state of exhaustion (ego-depletion), should be less able to suppress their emotional reactions towards scam content and thus more inclined to respond to scam messages. Baumeister, Sparks, Stillman and Vohs (2008) argued that this effect applies to consumer behaviour, but so far research has not been carried out into whether it is involved in falling for a scam. In addition, the effects of reduced self-regulation can be expected to

have a greater impact on people who are not integrated into social networks (and there is some evidence that many older scam victims are socially isolated). Social networks induce social norms (social rules) and provide a source for social comparison and social validation. Even in a state of reduced self-control, available social networks (and associated social reference points) might help a potential victim to decide to act with self-control.

- **Mood regulation and phantom fixation.** Falling for a scam could also result from attempts by individuals to control their mental states. Scams trigger basic human needs and desires, and seem to offer the hope that these can be more fully met for the victim. Hence, scam victims might respond in order to replace a negative mood with a hopeful one or to increase a positive mood, an obvious example of this being a fake psychic mailing which promises to remove a person's negative energy and bring them success and happiness. Scammers aim to create a fixation in the victim on the offer or prize which is the bait. They do this by engaging the victim in imagining the money/cure/benefit etc, so that it becomes a specific 'phantom fixation' for the victim, as explored by Horvitz and Pratkanis (2002). The victim is thus over-motivated to obtain the alleged prize or reward, leading to distortions in decision-making.
- **Sensation seeking.** Falling for a scam may also be induced by the emotional effects of the process of engaging in the scam, which may elicit excitement and arousal through the hope for a prize or other benefit. The motivation for feelings of this kind is called sensation seeking (Zuckerman, 1994), a concept which is used to account for people who engage in risky behaviour in order to increase their physiological and related psychological arousal (see also Fischer, et al., 2007); Zuckerman produced a standardised scale to measure people's propensity towards sensation seeking, which can be regarded as a personality trait. Previous research has shown that sensation seeking is associated with a broad variety of negative, risk-taking, and mindless behaviours (cf. Fischer, et al., in press). With regard to potential scam victims, sending money and waiting for a response (even, or perhaps especially, if they have doubts as to the

reality of 'the big prize') might be very highly arousing and hence sought out by people scoring high on the trait of sensation seeking.

- **Liking and similarity.** People tend to like people who like them. Scam offers which include phrases that suggest to recipients that they are liked by the sender should therefore have a higher probability of recipients responding than scam offers which do not include such content (see also Cukier et al., 2007). For example, the scammer might communicate that they are in the same economic, social, professional or private position (for example, have a specific similar health problem) as the potential victim, which can induce an increased liking and empathy for the scammer. In addition, scammers often pay compliments to their potential victims, so that they will feel that the scammer likes them.
- **Reciprocation.** If people are given something, then they feel a strong inclination to give something back. Scammers can use this basic human tendency (for example, by providing a small gift or by making it appear they are bending the rules in the recipient's favour) to successfully pitch their scams. The theory of reciprocal concessions for inducing a response supports the presence of this process (Cialdini et al., 1975).
- **Commitment and consistency.** People tend to appreciate consistency both in their own behaviour as well as in the behaviour and reactions of other people (Festinger, 1957; 1964; Frey, 1986). Consistency provides them with a sense of control and thus facilitates a sense of ability to explain and predict the world. Scams which persuade recipients to respond in a first instance (perhaps without requiring any money to be paid) make them more willing to react in a second instance (where scammers then ask for money). A similar effect has been explored by Cialdini et al (1978), who refer to it as the 'low-ball' sales technique. Cialdini has argued strongly that the manipulation of peoples' desire for consistency is an important factor in all persuasive communication. The desire for consistency probably also partly explains the 'sunk cost effect' (Arkes & Blumer, 1985), in which people take into account past costs when taking present

decisions, despite the fact that, from the perspective of rational choice theory, they are irrelevant. Sunk cost effects are particularly relevant to some types of scam victimisation, when people fall victim to an extended scam, and keep sending money to the same scammer, feeling that they have already invested so much that they need to spend just a little bit more to finally obtain value for what they have paid out in the past. An example of this effect can be found in foreign lottery scams where victims are repeatedly asked for further payments to release their alleged winnings.

## Cognitive Sources of Error

4.7 Common cognitive errors include:

- **Reduced cognitive abilities.** Many elderly people suffer, to varying degrees of severity, from reduced cognitive abilities and thus should have a higher probability of falling victim to a scam. Research carried out by the OFT (research on impact of mass marketed scams, 2006) suggests that older people are more likely to be targeted by scams, but they are not more prone to falling victim. This could, in part, however, be a reflection of the greater reluctance of older scam victims to admit to being scammed. However, on a quantitative basis, the OFT research suggested that older people lose nearly twice as much money per scam compared to younger age groups. The reason for this somewhat unexpected finding might be that among the target group of elder people, there are those that are classified by the OFT as 'chronic scam victims'. These are people who repeatedly respond to scam communications (many of these chronic responders suffer from reduced cognitive abilities). Cognitive abilities are necessary to make good decisions, such as distinguishing typical scam attributes from non-scam attributes (for example, Langenderfer & Shimp, 2001).
- **Positive illusions.** People tend to take too positive a view of themselves. They overestimate their own abilities (above-average effect, see the review by Aliche & Govorun, 2005), the prosperity of their future (optimism bias, see the review by Armor & Taylor,

2002), and their abilities to control their life and environment (illusion of control, see also Taylor & Brown, 1988). It follows that some scam victims may fall for scam messages because they overestimate their abilities to detect fraud, because they overestimate the probability of positive outcomes associated with the scam response; or they overestimate their control over the whole situation.

- **Background knowledge and overconfidence.** Closely related to positive illusions is overconfidence, another typical error of judgement that is readily demonstrated experimentally (for example, Camerer & Lovallo, 1999). From a broad body of research we know that overconfidence in decision alternatives and associated information leads to biases in decision making and information search (Fischer et al., 2008b). The more knowledge people have about a specific area, the more they feel competent in this area. As a consequence, they overestimate their abilities to make good decisions in this area. This line of argument is also supported by the findings of Schulz-Hardt et al. (2008), that an increased amount of decision-relevant knowledge (especially when it is skewed towards a specific direction) makes decision-makers more selective in their information search, and thus leads to a reduction in the quality of decision outcomes (see also Kray & Galinsky, 2003). Research on confirmatory information search reveals that the more supporting information people have for a preferred position, standpoint or decision alternative, the more they are prone to overestimate the quality of information that supports that preferred standpoint (Schulz-Hardt et al., 2008). As a consequence, it is likely that people will have a higher tendency to respond to a scam which falls into their area of background knowledge than to one that does not: they are overconfident in their preliminary preferences (that is, to respond to the scam) and thus neglect inconsistent (warning) information that would help them to recognise the scammer's intention. This prediction has been confirmed: Shadel and Schweitzer-Pak (2007) found that people with high amounts of background knowledge in the area of the scam content (for example, investment decisions) are more prone

to fall into the trap of responding to the scam than people who have less background knowledge. The phenomenon identified by Dutton and Shepherd (2004), whereby people with more experience of the internet may be more vulnerable to internet scams, similarly strongly suggests an overconfidence effect.

- **Norm activation.** Scam content often seems to be targeted to activate specific norms, such as the norm to help or the norm to be a good citizen. To follow a social norm is not in itself an error of judgement: the error that results in falling for a scam is misclassifying the situation as one where a particular norm is appropriate. For example, some West African advance fee scam offers describe a person in need (for example, an impoverished and orphaned child) who needs a specific amount of money to be able to support their siblings. This type of scam works upon the basic human norm to help other people (see also Batson, 1998), especially if they are seen as unfortunate in some way (see also Doob & Ecker, 1970). If this helping norm is activated, the probability increases that people will respond to the scam and lose money.
- **False consensus effect.** Scammers frequently seek to make recipients believe that they have something in common with them (for example, some physical, psychological, intellectual or personal-history-related attribute). The receiver of the scam message also tends to overestimate the reliability and validity of the scam message if it has the apparent backing of others, as well as to overestimate the trustworthiness of the scam source, leading to errors in decision (see also Cukier et al., 2007). For example, mass marketed fake psychic mailings often imply that the potential scam victim is already personally known to the sender due to para-psychological, spiritual or esoteric abilities that the scammer claims. This technique has the potential to increase the probability that people fall for the scam due to the false consensus effect.

- **Authority.** People tend to obey authorities, even if they are not present in a specific situation: classic studies showed that authority influence can even bring people to hurt another person severely (for example, Milgram, 1965). The communication medium and detail might increase the perception of authority (especially for older people), for example envelopes containing scam mailings may refer to an 'Official Notice' or 'Important Documents' enclosed. Texts are often written in machine-type letters and official looking seals and logos are used to increase the perceived underlying authority of a scam. The impact of authority on psychological and behavioural response is located within the area of social influence (Milgram, 1965), which is a classic social psychological domain and a major contributory source to the psychology of persuasive communication.
- **Social proof.** In situations of uncertainty people tend to look to other people in order to define reality. Scam messages that contain cues of social proof (for example, text passages that claim that other people have already reacted or benefited from the scam offer, such as fake testimonials) presumably have a higher probability of success than scams that do not include this psychological cue – as the scammers themselves appear to believe, given the content of scam communications (see also Cukier et al., 2007). Many scams, for example those offering 'miracle' health cures or 'get-rich-quick' opportunities, use fake testimonials from 'satisfied customers' as cues of social proof.
- **Altercasting.** Source credibility theory includes demonstration of the effect of 'Altercasting', in which one person places another in a role, by themselves taking up the complementary role (Pratkanis & Gliner, 2004). Scammers take up roles to cause their victims to act from complementary roles, for example they may act as dependants, causing victims to act as protectors, or act as a 'friend' causing a friendship response. The authority effect discussed above similarly works via altercasting, in that the victim's response will be according to the social role appropriate in response to authority.

## **5 A STRATEGY FOR RESEARCHING ERRORS OF JUDGEMENT IN FALLING FOR SCAMS**

- 5.1 Thus our basic assumptions are (a) that falling for a scam comes down to errors in decision-making, and (b) that scammers create situations (with their scam offers) that increase the likelihood of poor decision-making. As outlined in Section 4, a multitude of cognitive and motivational psychological processes could be responsible for poor decision-making in the context of scam offers. We have therefore integrated these potential psychological processes into a model of the psychology of scams, and sought to test, in the present series of studies, the relative importance of these processes associated with falling victim to a scam communication. Our four studies, which we described briefly earlier, had different roles to play in testing the model.
- 5.2 The relative importance of different kinds of errors of judgement, as they are seen by scam victims, could be discerned from the victims' self-reports in the semi-structured interviews of Study 1. They were considered both through broad thematic analysis of the interview transcripts, and by 'text-mining' (detailed quantitative analysis of the words and ideas found in the transcripts).
- 5.3 The text mining of the 583 examples of scam communications that took place in Study 2 enabled us to find out whether the scammers indeed use words and phrases that create psychological situations that increase the likelihood for decision errors (Study 2), and if so, which kinds of errors they were most often trying to elicit.
- 5.4 The two quasi-experimental questionnaire studies that made up Studies 3A and 3B enabled us to directly compare scam victims to non-victims with regard to relevant misleading psychological processes in scam-relevant decision-making.
- 5.5 Interview analyses, text-mining procedures, and quasi-experiments are all essentially retrospective procedures, so they are not capable of determining cause and effect. Accordingly, in Study 4 we aimed to use information from the previous 3 studies to manipulate the psychological

content of some experimental simulations of scams, and measured peoples' response to them directly.

## **6 STUDY ONE: EXTENDED INTERVIEWS WITH SCAM VICTIMS**

- 6.1 To collect self-report data on the psychological processes that might have led scam victims to respond to scam offers we conducted semi-structured interviews with 25 scam victims and five 'near scam' victims. Further details of the interview procedure are given in Annex B. The interview transcripts were analysed thematically and by text-mining.

### **Method**

- 6.2 We interviewed 30 people, from across the UK. All were recruited on the basis that they self-identified as scam victims. They were recruited by media advertising, from people who had approached the OFT or Consumer Direct (a telephone consumer advice service managed by the OFT) to complain about scams, and through the first batch of questionnaires (Study 3A below). All participants received £50 for participation in the interviews. All interviews were conducted by a researcher who was experienced in conducting one-to-one interviews on sensitive topics.
- 6.3 Most of the interviewees clearly were scam victims. However, as expected, in the course of the interviews it emerged that some of them (a total of seven) were either non-victims or marginal victims. Of these, two were relatives of victims, not victims themselves; two believed on reasonable grounds that they had spotted a scam in time to prevent loss, though in fact they did lose money; and the remaining three must be seen as non-victims by the scammers, as although they were deceived, they did not in fact lose any money.
- 6.4 The interview transcripts were analysed by a combination of top-down, meaning-based and bottom-up, word-based, analyses – thematic analysis and text mining respectively. Both analysis methods focused on the interviews of the 25 participants who had actually lost money in a scam. In the text-mining analysis, the words most frequently mentioned were extracted, and were also combined into psychologically-meaningful categories. The categories used were related to the kinds of errors of judgement that were of interest in the study.

## Results of text-mining

- 6.5 **Most frequently mentioned words.** Overall, we identified 42 frequently-occurring words (based on the frequency they were mentioned, ignoring filler words such as is, the, and, etc). The most often mentioned word (money) was mentioned 381 times, and occurred in 23 out of the 25 interview transcripts analysed. Further details of the most frequently used single words are given in Annexe C.
- 6.6 **Categories.** Although the words used varied between interviews, the categories they fell into were more consistent. Several categories occurred in every interview: these were cost-benefit considerations (that is, mainly words related to the **size of the prize or reward**, such as 'money', 'pay' or 'prize'), **trust and security** (that is words that suggest the scammer to be a trustworthy business partner, such as 'information' or 'company'), **'get in contact'** (that is words that promote getting in contact with the scammers, such as 'telephone', 'contact' or 'call') , and **personal approach** (that is words and phrases that imply that the scammers already know the potential victim, such as 'name' or 'address').
- 6.7 Other high incidence categories were **behavioural commitment** (88 per cent; that is words that imply a specific behaviour, which the potential victim should show towards the scammers; for example, words like 'ring' or 'letter'), **social relations and social proof** (88 per cent; that is words that imply that other people also have been contacted and are satisfied with the scam offer; for example, words like 'people' or 'friends'), **payment** (84 per cent; that is words that refer to payment modalities; for example, 'cheque'), and self-talk/self-blame (64 per cent).
- 6.8 Generally speaking, a more detailed idea of the kind of discourse occurring in interviews can be gained by looking at the rates of co-occurrence of categories. However, in the present case the main categories were so ubiquitous that co-occurrence rates showed very little variation and we have not analysed them further.

## **Results of a thematic analysis**

- 6.9 There was a rich amount of information in the transcripts, about a wide range of scam-types, including several types of lottery and prize draw scams, several 'get rich quick' and work from home scams, bogus weight loss products, and bogus racing tipsters. Interviewees covered a wide range of victim personalities and life circumstances. The interview transcripts were submitted to thematic analysis (Braun & Clarke, 2006), and this revealed the following psychological processes that had led these scam victims to respond to the scam offer. As in the theoretical discussion above, we have divided them into motivational and cognitive processes. In reporting the thematic analysis, we rely heavily on quotations from the interviewees: for the purposes of this report, we have removed obvious speech errors and hesitations from these so that the speakers' meanings emerge more clearly, although the verbatim records were used in the analysis.

## **Identified motivational processes**

### **Visceral processes (emotional triggers)**

- 6.10 Participants spoke about processes such as greed, vulnerability or desperation which led them to respond to the scam communications. This is exactly what is meant by visceral processes: appeals to strong motivational forces which reduce the depth at which people process a message, so they grab at the superficially attractive even when a little careful thought would have exposed it as the scam it was. For the most part people talked about strong money motivation, though whether they described it in self condemning terms (as greed) or in a way that gave them more self-justification (as a desperate need for money) varied:

'I think I was tempted with the large amount of money, which was rather foolish, looking back, but I was tempted with that, and that was really what drew me, probably my greed.'

'It just happened to come at a time when I was very vulnerable ... It hit me on an emotional level, which was where I was having the

problems [...] initially I wasn't going to, definitely I wasn't going to initially. I think it's pure desperation that made me do it. [...] I suppose it does give you hope, it's the hope thing. You know, when you've got to hang on another couple of months and everything's going to be all right again.'

'It's a desperation moment.'

- 6.11 A common pattern of results in the interviews was that scam victims mentioned that they just did not care about the small amount of money they were asked to send in order to get a much bigger alleged prize or reward back. So simply the relation between input and output led to decision errors. Typical quotes for that tendency are the following:

'I could afford to pay just a reasonably small amount and the maximum [prize] was, as I say, five thousand eight hundred and something, so then, as I could afford it, I thought 'Well what shall I do?' you know 'What do I do, I'll just spend it somewhere else, I might as well just spend it there.'

'... so I'm going to go ahead and send the twelve quid because - even though I know this is not going to happen [meaning he knows he isn't going to get the prize money] - it's quite a small risk compared to the five thousand eight hundred quid that they're [...] saying I've won'.

'This was 'wow, this is going to work!' [...] even if they were a hundred pounds, I think I still would have bought them.'

### **Reduced motivation for information processing**

- 6.12 The most obvious way in which motivation for information processing was reduced was through induced scarcity. Some scam victims reported that they had the feeling that they had been offered something really scarce and unique, and that this impression led them to respond to the scammers. It is nearly always the case that the scam approaches seek to engender a sense of urgency in victims, and they often succeed. Typical quotes are the following:

[The scammers said] 'the deadline had already expired, but they were being nice to me and they were going to let me have a little longer over the deadline, because they hadn't sold up all their allocation. If I'd been able to take longer, before I had to finish the deal, yes, I would have made more extensive enquiries'.

'If I'd taken time, I would've thought myself out of it' and 'the guy was almost casual like, you know, great, we'll take your money, but you need to be quick and if you don't get it back quickly, we'll return your cheque, because we won't be needing your money - it will be going out to those that are lucky enough to have their cheques received and become part of the action.'

[The scammers said] 'this is the time to get in, and you know, you've really got to take the choice – your chance and jump in now, otherwise you'll miss it'.

- 6.13 Another way scammers induced a state of reduced motivation for information processing was through the persistence of their approaches. A number of interviewees spoke of being bombarded with either letters or e-mails, and one even said:

'Every other day, I got it through and I used to delete it and then I was just sitting there and I thought 'Oh, I'll just do it this time and I'll see what it's all about and...' Researcher: 'so almost like curiosity' Interviewee: 'It probably was curiosity, just to see what actually happened, because I kept getting it through and through, for ages and ages and ages.'

And another,

after 'numerous, numerous disappointments', she puts most of them in the bin now, but 'if it looks different [...] then I think, Oh go on, I'll give it a go. I'm thinking 'what a fool', you know you're a fool, it's only rubbish again and I sort of think Oh God, not another one, oh, you idiot, falling for that old line again'.

The effect of an extremely large number of letters, announcing that he'd won a prize, on an elderly interviewee was to leave him very confused:

'I must have written him I don't know how many... apart from placing the orders - but I don't get anywhere. I've finished now, I'm not getting any more, well I can't, I can't go on like this can I?'

### **Mood regulation: Future reference points**

- 6.14 It is apparent from some of the interviews that the scam content put the interviewees into some kind of future state with positive emotional connotations. For example, prize draw pitch, sweepstake and lottery scammers use phrases like 'Imagine the positive feelings you will have when the money goes into your account' or 'Imagine which future dreams you can fulfil with the money you have won.'

Typical quotes were:

'I've got two sons, one is an invalid [...] unfortunately, he's grown up, he's married with two children, got his own house and he's a complete invalid, confined to his house, so that would've made a great difference [...] it would have been a real use to us. [...] it could have helped our children and especially our invalid son, put them into easy street.'

'It was the end of all my financial worries, if you like. [...] then I could have said to the missus [...] 'Right, pack the fostering in, we'll go buy a little house in Scotland and we're going.'"

'That amount of money gives you dreams, and you don't want them taken from you.'

### **Commitment: Personal relationships and sunk costs**

- 6.15 A number of interview participants appeared to have felt some kind of behavioural commitment to respond to the scammers. This was mainly

induced by the scam having victims respond by telephone thereby opting into the correspondence or 'relationship' themselves.

'I think the key thing is - if it was just [...] ring this number, and somebody said 'I've got a great deal' - its like never in a month of Sundays. I think it was the fact that I signed up for something, the relationship, as it was, seemed to be going okay ... when I'd rung up with a couple of questions [...] people had answered the phone and given me answers and that went on for two or three months.'

'I was phoning them (the scammers) all the time and they were phoning me back too. I was sort of playing it along, I was attempting to play them at the same game, so to speak, you know, phoning them and discussing with them – a little bit of a ding dong battle, a bit of cross banter.'

'When you went on to a different person you'd put the phone down and then, you know, a couple of days would go by and you'd think about it all and you'd think 'Well, I'll, I'll ring [...] the lottery', see? Well this is maybe twenty-four hours or so after, so you ring the lottery number.'

'I did ring the number he gave me and I had to pay [...] I think it was about fifteen hundred quid, I think to a Mrs Somebody up in London area [...] I rang the woman.'

- 6.16 Sunk cost effects also occurred. Some scam victims reported that they 'threw good money after bad'. In other words, responses to the scammers were made because an amount of money has already been paid before:

'I've already spent that, so [...] there's no way I could get that back, so I'm going to go ahead and send the twelve quid.'

'I didn't want to let the chance go, and yet I did, because I was - in my own mind I was in between the two, you know. I – I wanted it to be real, all the same I knew there *may* be something false about

it' (talking about the time after he'd paid the scammers some money, before paying more).

'He just wouldn't let go. [...] It had built his hopes up so much and he was scared of them being dashed' (wife, of victim, after one amount of money was paid, husband wanting to pay a second amount).

## Identified Cognitive Processes

### Positive illusions: Illusions of control and avoidance of regret

- 6.17 Many of the scam victims we interviewed indicated that they believed themselves to be protected against scam fraud by the law and government to an extent that was in fact unrealistic or simply impossible. These kinds of irrational beliefs often result from overestimations of controllability (positive illusion of control). That is, individuals experience more control over their environment than is actually the case (see also Taylor & Brown, 1988). Typical quotes in that direction were the following:

'If they'd said I'd won something, and my name and address was there, and I didn't get anything, I could have gone to the Consumer Council or something, couldn't I, and complained about it, because it was a lie.'

[...] 'legally bound to pay what they'd said they were going to pay. I said to my wife 'If I don't get this, I'm going to take them to Court', but I've got nobody to take to Court'.

'Part of me thought well, it doesn't matter if it all goes pear shaped, I've got their address, I've got the telephone number, [...] I've got nothing to worry about. I was absolutely gob smacked, but there's nothing you can do about it, because it's like 'well, what evidence have you got?''

- 6.18 There was also a recurrent theme of simple overconfidence, an example of the optimism bias. Scam victims admitted that they were too

confident that they would be able to detect a scam offer. It has been argued that scammers' techniques are seen to include encouraging this confidence in their own ability by getting the victim to convince themselves that they have researched and made a good decision (Pratkanis & Shadel, 2005; pp 95-103).

- 6.19 Another theme that can be interpreted in terms of positive illusion is a 'Regret' effect: Scam victims mentioned that they would have experienced feelings of regret and would never know if they might have won or been onto a good thing, if they did not respond to the scam offer. This can be seen as an example of the optimism bias, because it depends upon an unwillingness to discard the belief that the positive outcome could occur. Typical examples of regret discourse include:

'I was trying really to not let this slip through my fingers, I suppose.'

'[...] at least I've tried it and I won't keep thinking this will be a good way to earn money. Although I hesitated, in the end I felt, well, I've got to try it'.

'It looked such a good thing on paper that I thought, well I've got to do it ... it just hit you, you know.'

'The prospect of a very high return rate, in a short period of time. They sold it high and at the time, naively I thought this was too good an offer to miss.'

'It really was a sort of a bit of bait that you couldn't really resist.'

'... and I should have kicked it out the door, but I didn't know, I wouldn't have known whether I'd lost the money or not, I would have said to myself, should I have had that money?'

- 6.20 In addition, the high quality of the scam communications themselves (in terms of their presentation and design), organisation and persuasive abilities of the scammers on the telephone, induced interviewees to believe in the reliability and authority of the scam offers. Typical quotations mentioned in the interviews were:

'I was a bit too trusting.'

'It all looked so realistic, and they were so plausible.'

'I think the real clincher was the fact that they gave us the information and [said] 'just look for yourself.' I think they wanted me to – well, if he's going to be interested, he's going to have a look on the website. [...] it looks a genuine website and I thought 'Oh that's just what they told me.'"

'The quality of the paper that it was written on made it look genuine [...] this was a nice envelope, a nice written letter, so it I suppose it had that feeling, I suppose in a way they drew me into opening the letter.'

### **Background knowledge and overconfidence**

- 6.21 One of the most important antecedents featured in the interviews was previous knowledge about the area of scam. Counter-intuitively, but as predicted from the overconfidence effect, the background knowledge scam victims had about a specific area (for example, investment decisions) often led to them falling for a scam that addressed that specific area. Typical quotes in the interviews supporting this psychological process were the following:

'I dealt with, as I say, the London Stock Exchange and Brokers in this country, and it didn't *occur* to me that [name of scammer] would be any other.'

'I don't think I had doubts at the time, mainly because they were telling me about, as I say, the alternative [...] fuel - I've been in the industry a number of years [...]'

'I have a little bit of knowledge about those things and there are stables in the States that do that sort of thing.'

## **Social influence and avoidance of social influence**

- 6.22 There is evidence from the interviews of social influence on interviewees' behaviour. Some scam victims reported that they responded because they believed in the (presumably faked) testimonials of other people. In an interesting inversion, many of the victims reported that they kept their tentative decision to respond in private in order not to be blamed or prevented from doing so by others (avoidance of social influence). Typical quotes for that process are the following:

'I think I was attracted by the fact that it seems to be a popular thing to do' (work from home schemes).

'All these people, that are saying that they'd made money out of it, can't be wrong.'

'... and because it was a real person – well, I don't know if it was a real person – that was saying her story, and when I was reading that I was thinking 'Gosh, that's me'.

'I didn't tell my husband [...] he would probably have said 'Don't be such a damn fool', [...] I didn't want him sticking his oar in.'

## **Conclusions from interview analysis**

### **Text mining**

- 6.23 The text-mining analysis of the interview transcripts revealed frequently mentioned words that could be categorised with good agreement into conceptual groups corresponding to the sorts of psychological processes that are known to induce errors of judgement. Of these, quantitatively the most important in relation to falling for a scam were:

- positive visceral cues, such as cost-benefit considerations, and emotions of familiarity triggered by a personal approach;

- behavioural commitments (that is, triggered small steps towards the scammers, for example, by making a telephone call or sending a reply to a letter);
  - trust and security cues (which make the respondent believe that the scam is reliable and trustworthy);
  - social proof (that is, pretending that other 'happy' customers have already responded to the scam offer).
- 6.24 All of these are readily related to particular categories of errors of judgement as outlined in Section 4 of this report. However, at this level of analysis, only a minority of categories of error are reflected in the results.
- 6.25 In Study 2 (see Section 7) we used parallel techniques to investigate whether we find an emphasis within the scam communications themselves on the psychological cues for inducing the same subset of errors. In other words, we investigate whether the scammers include words that increase the likelihood of the particular decision errors that victims feel were salient in inducing them to fall for a scam. As a result of the text-mining of examples of scam communications we indeed found that scammers use most of the categories we found in the scam victims' interviews. This overlap could be found for the categories behavioural commitment, trust and security cues, and social proof. We did not find this overlap for positive visceral cues (although we see a partial overlap with the category 'personal approach', which is supposed to elicit positive emotions by cues of familiarity in the scam communication).
- 6.26 The text-mining results of the interview transcripts also remind us that, in addition to reflecting on the behaviour of falling victim to a scam, the interviewees also discussed the consequences of becoming a scam victim. Thus we also found it necessary to introduce a category 'self-talk', which mainly contained words relating to negative psychological impacts of falling for the scam, such as self-blame. This clearly shows that scam victims not only suffer a financial loss, but also a loss of self-

esteem, because they blame themselves for having been so 'stupid' to fall for the scam. In other words, scams harm their victims not just economically but also psychologically. Some of the interviewees appeared to have been seriously damaged by their experience.

## **Thematic analyses**

- 6.27 As with the text-mining, the thematic analysis of the interview texts revealed some but not all of the errors of judgement, and corresponding psychological processes, that we had expected might underlie falling for a scam. Unsurprisingly, qualitative analysis allowed a more detailed, though necessarily more subjective, picture to emerge, with a wider range of sources of errors of judgement implicated. However, it remained true that some sources of error were not observed to any noticeable extent, and others occurred only in specialised forms. The themes that seemed most important included the following:

### **Motivational processes**

- 6.28 Langenderfer and Shimp's (2001) intuition that scammers use motivational manipulations to reduce the depth at which people process their communications is strongly supported. Scam communications addressed visceral processes, such as greed and anxiety; references to scarcity in the scam communications led victims to believe that it was a unique offer and reduced their motivation to think about it carefully; they often put the potential victims into positive future states; and they made them feel that they had made a commitment that they didn't want to turn back on (for example, by making a telephone call or responding to a specific e-mail address) or that would be lost if they didn't continue to comply (for example, victims decided to send more money, having sent some already, because otherwise the first amount would be wasted).

### **Cognitive processes**

- 6.29 Both individual and social cognitions were involved in the interviewees' responses to the scam. At the individual level, positive illusions seem to have played a large part in people's responses. Victims experienced

some illusion of control, in that they felt that law enforcement agencies would protect their interests to an extent that was in fact unrealistic or simply impossible. Unrealistic optimism was a pervasive theme: the high value (often life-changing, medically, financially, emotionally or physically) that scam victims thought they could get by responding, made the money to be paid look rather small by comparison. The factors that seemed to be in play here were quite similar to those found in people's response to high value, low stake gambles such as genuine lotteries. In addition, several victims reported that they would have felt regret if they had not responded. And so far from serving as a protection against exploitation, pre-existing background knowledge about the area of scam content increased people's vulnerability, making victims overconfident in their own ability to judge that the scam offer was a real worthwhile offer.

- 6.30 Errors of social cognition also played their part, but they operated with a complexity that we had not anticipated. Scam victims often felt that social proof (such as faked testimonials) increased the subjective validity of the scam approaches, and they reported increased trust in the scam because they believed that others had also responded to this offer. On the other hand people reported that they had hidden their decision to respond from other people, so in one sense they were seeking to avoid (benign) social influence.

## Conclusions

- 6.31 In conclusion, overall, the interview results are readily interpreted in terms of a psychology of scams based on our established understanding of decision errors. Although a considerable range of errors of judgement are reflected in the interview material, both the text mining and the thematic analysis show that a number of them are particularly significant. These include the arousal of visceral motivations (emotional triggers); a range of effects relating to undue optimism and overconfidence, including the impacts of the sheer size of prize offered and of the victim's prior knowledge of the area in which the scam was operating; and the air of authority that some scams managed to convey.

6.32 Two aspects of the results, though not inconsistent with an analysis of why people fall for scams in terms of decision errors, raise new issues. First, a theme that emerged strongly was the size of the reward or prize for the scam, and its disproportion to the apparent cost of responding. The discourse, and the kinds of decision error, elicited by this factor had strong echoes of what is found in the psychology of lotteries and other high prize, low win-probability gambling (see, for example, Thaler and Ziemba (1988); Rogers, 1998; Rogers & Webley, 2001). Secondly, our examination of social influence showed evidence of states of internal conflict in scam victims, where at one level they recognise the deceptive nature of the scam, and at another level, they are determined to persist in the behaviour that leads to loss. This raises the general point of people being 'in two minds' about the scam. At some level they suspect it is a scam so they do things that hide that knowledge from themselves or from others. This allies strongly with one of the most important classes of integrative theories of errors of judgement, the 'multiple self' models, which are particularly deployed in the intertemporal choice literature (for example, the 'planner/doer' model; see Thaler & Shefrin, 1981; Kivetz & Simonson, 2002; Lea & Webley, 2005).

## **7 STUDY TWO: TEXT MINING OF A SAMPLE OF SCAM COMMUNICATION MATERIALS**

7.1 The text-mining analysis in Study 1 started from the words that scam victims use in talking about their experience. The aim of Study 2 was to look at the words used in the scam communications themselves, to see whether they were mirrored in the discourse of the victims. We also wanted to investigate whether scammers use specific words and triggers that might create (or aim to create) a psychological situation characterised by increased probabilities of decision errors, and if they do so, whether the errors they are seeking to trigger are the ones that, according to our data, victims are most likely to make. These questions can be asked both in general and in connection with particular types of mass marketed scams.

### **Method**

- 7.2 A large corpus of 583 scam communications (primarily mailings but also some emails and website content) was made available by the OFT. They represented 10 different types of scam communication: advance fee ('419') scams (62 mailings and emails), international sweepstake scams (223 mailings), fake clairvoyants (46 mailings), prize draw pitch scams (83 mailings), 'get rich quick' scams (20 mailings), bogus investment scams (6 mailings), bogus lottery scams (68 mailings and emails), 'miracle' cures (11 mailings and website content), premium rate prize draw scams (35 mailings and inserts), and bogus racing tipsters (29 mailings). The text mining software recognised words that were mentioned more than 10 times within at least 10 per cent of the documents of that subcategory. Two raters categorised all identified words by discussion into meaningful broader categories.
- 7.3 The data were analysed in three ways:
- an unweighted overall analysis, in which all 583 scam communications, from all 10 subcategories of scam, were used in a single analysis

- a weighted overall analysis, in which all 583 scam communications were again used, but the ones from the less common types were weighted more heavily to get a more balanced picture
  - separate analyses of each type of scam.
- 7.4 All the analyses were carried out for individual words used. For the unweighted overall analysis and the subcategory analysis, words were also sorted into categories corresponding to key concepts, chosen partly by inspection of the frequent words, but also on the basis of the kinds of errors of judgement that might be relevant to falling for a scam, as outlined in Section 4 of this report. Category names were largely based on the conclusions from Section 4.
- 7.5 Further details of the three analysis methods are given in Annexe D.

## **Results and discussion**

### **Overall analyses**

- 7.6 Tables 2a and 2b show the results of the overall word-level analyses, reporting the words that occurred most frequently in each analysis. Although there are some differences (partly explicable in terms of the very high representation of international sweepstake scam mailings in the sample) the two types of analysis show general agreement about the main features of the content of the scam communications. Clearly, however, a number of the commonest words are near synonyms, and these had very high co-occurrence rates. It follows that the concept-level analysis is more likely to be illuminating, and the broad similarity between the unweighted and weighted analyses seen in Tables 2a and 2b gives some reassurance that, although categorisation can only be applied to the unweighted sample of scam communications, the analysis is likely to give reliable information about scams in general.

**Table 2a Study 2: 20 most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type**

Word	Rank	Frequency
prize	1	3942
cheque	2	2597
cash	3	2314
money	4	2063
winner	5	1849
form	6	1695
number	7	1592
order	8	1380
time	9	1374
payment	10	1288
claim	11	1253
amount	12	1122
document	13	1087
return	14	1041
date	15	987
address	16	951
life	17	870
fee	18	810
information	19	790
game	20	781

**Table 2b Study 2: Ranks of frequencies of occurrence of scam types (20 most frequently occurring words), adjusting for the different numbers of scams of different types available**

Word	Rank
money	1
cash	2
offer	3
cheque	4
guarantee	5
life	6
information	7
pay	8
order	9
prize	10
return	11
claim	12
payment	13
risk	14
bank	15
amount	16
letter	17
sum	18
time	19
work	20

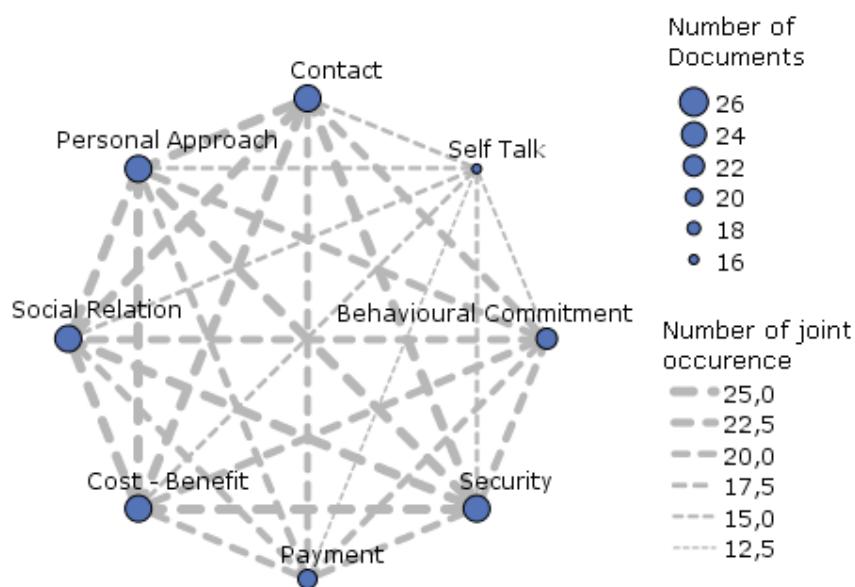
7.7 The words placed in each category are listed in Annex D. The commonest categories were:

- **behavioural commitment** (occurring in 98 per cent of documents [scam communication materials]): words related to the need for the recipient to take a small behavioural step towards the scammers.

- **size of prize** (97 per cent): words concerning the relationship between financial input and output, making the input appear negligible.
  - **trust and security** (97 per cent): words aimed to increase subjective trust in the scam offer, for example, by referring to authorities and official institutions.
  - **Induced scarcity** (97 per cent): words relating to the time-limited nature of the offer, the uniqueness of the opportunity.
  - **emotional triggers** (93 per cent): words likely to elicit visceral processing, for example, by referring to positive emotional experiences in the future when the recipient receives his or her prize or product.
  - **sunk cost effect** (64 per cent): words relating to the risk of loss if further action is not taken.
  - **overconfidence** (54 per cent): words apparently aimed to induce an unreasonable degree of confidence in the recipient.
  - **regret effect** (52 per cent): words referring to negative feelings recipients would have if they did not claim the prize or offer.
- 7.8 Co-occurrence rates were almost entirely predictable from the occurrence rates for the individual concepts (see Figure 1). This implies that there are no important clusterings of these categories: they seem to form a menu of triggers that are used more or less independently of one another.

**Figure 1: Study 2**

Web graph for co-occurrence of concepts in the data-mining of scam materials, all categories, showing the 10 most frequently occurring concepts only. It can be seen that the co-occurrence frequencies (shown by thickness of lines) are closely predicted by the concept frequencies (shown by size of dots). This pattern implies that there are no strong clustering of concepts, so that the different categories of word are used more or less independently in the scam materials.



- 7.9 There is a striking correspondence between this list of categories and the types of errors of judgement that were mentioned by interviewees in Study 1. The obvious inference is that scammers are targeting potential victims' weaknesses with depressing accuracy. However, there are two alternative interpretations. It could be that the victims of current scams are just that subset of the population who are vulnerable to the particular kinds of triggers that scammers are currently using; or it could be that people would be vulnerable to any manipulation whatever, and so they report being affected by the manipulations that are most prevalent in scam communications. This kind of interpretative ambiguity is inevitable

when examining correlational data, and can only be resolved by a more experimental approach, as is attempted in Study 3 and more fully in Study 4.

### **Subcategories of scam**

- 7.10 Table 3 shows all the words that occurred within the top 20, counting the number of documents in which the word occurred at least once rather than total occurrences, in at least one of the 10 types of scam. There were 126 such words, indicating quite wide divergence in content between the scam types. **The actual numbers of documents of each scam type within which each of these words occurred are tabulated in Annex D.** A small set of words were found within the top twenty for at least half the scam types: money (in 9 out of 10), cash, cheque, information and winner(s) (all in 9 out of 10). On the other hand, a total of 79 words were found in the top 20 for only one scam type. Table 3 separates these 'unique' words for each type of scam from the 'common' words, those that occurred within the top 20 for more than one type of scam. Of course, the 'unique' words may not have been truly unique, since they may have occurred at low frequencies in other scam types.
- 7.11 Nonetheless, Table 3 provides a convenient thumbnail sketch both of the general content of the scam communications and of the specific content of each type. It seems likely that if an incoming scam communication could be filtered for these words (as is practical automatically for email), it could not just be recognised as a scam, but placed within a particular scam type with a fair degree of confidence. However the present research does not allow us to say what the false positive rate of such a filter would be, and bearing in mind that scammers use many techniques that are also used in legitimate advertising, it might turn out to be a blunt instrument.

**Table 3 Study 2: 'Common' and 'Unique' words among the 20 most common words for each scam type**

'Common' words were those that were in the top 20 for more than one scam type, 'Unique' words those that were in the top 20 for one type only. For some types more than 20 words are included because several words had tied frequencies at the 20<sup>th</sup> rank.

Scam type (and number of documents available)	'Common' words (in order of the number of scam types they are found in)	'Unique' words (in order of the number of documents within this scam type they are found in)
<b>advance fee scams (62)</b>	Money, information, work, call, address, fund, bank, name, sum, investment, business	Account, kin, death, friend, person, details, country, transfer, response (9)
<b>international sweepstake scams (223)</b>	Money, cash, cheque, winner(s), prize, order, form, return, payment, amount, document, reply, signature, official, envelope, entry	Fee, office, delivery, deadline (4)
<b>Fake Clairvoyant scams (46; 23 words included)</b>	Money, cheque, life, offer, return, guarantee, sum, problems, game(s), envelope, chance	Luck, happiness, people, help, change, future, secret, person, events, friend, gift, words (12)
<b>prize draw pitch scams (83)</b>	Money, cheque, information, winner(s), prize, order, form, claim, return, guarantee, payment, amount, document, reply, signature, official, game(s)	Conditions, request, card (3)
<b>get rich quick scams (20; 22 words included)</b>	Money, cash, cheque, information, order, life, offer, work, home, cost, contact, opportunity, company/ies, business, pay	Start, hours, income, job, car, instructions, working (7)

**Table 3 Study 2: 'Common' and 'Unique' words among the 20 most common words for each scam type**

'Common' words were those that were in the top 20 for more than one scam type, 'Unique' words those that were in the top 20 for one type only. For some types more than 20 words are included because several words had tied frequencies at the 20<sup>th</sup> rank.

Scam type (and number of documents available)	'Common' words (in order of the number of scam types they are found in)	'Unique' words (in order of the number of documents within this scam type they are found in)
<b>Bogus Investment scams (6; 23 words included)</b>	Money, cash, information, life, work, call, price, bank, profit, investment, home, risk, company/ies, pay	Letter, millionaire, report, market, investors, share, stock, story, system (9)
<b>Bogus Lottery scams (68)</b>	Money, cash, winner(s), prize, address, claim, payment, number, fund, telephone, contact, promotion(s)	Fax, batch, lottery, agent, program, congratulations, security, reference (8)
<b>miracle cure scams (11; 22 words included)</b>	Money, order, life, offer, work, guarantee, price, time, problems, results, risk	Effects, refund, trial, body, health, loss, capsules, doctors, fat, reason, weight (11)
<b>premium rate prize scams (35)</b>	Cash, cheque, winner(s), prize, call, address, form, claim, number, name, telephone, cost, promotion(s), entry	Awards, code, allocation, camera, reference, rules (6)
<b>Bogus racing tipster scams (29)</b>	Money, information, winner(s), offer, price, time, profit, results, opportunity, chance	Horse, bet, service, racing, clients, members, questions, rate, bookmakers, race (10)

7.12 A total of 31 concepts were used to group the words within the various scam types (however one of these was 'content-specific information', which obviously varied between scam types). Between 5 and 12

categories were required for each type of scam. With this higher level analysis, more of the content could be seen as common between types: the total number of concepts that were unique to a single type was 15, and the number of such unique concepts required varied from zero to four across the scam types. Table 4 lists the common and unique concepts found in each type of scam; a full listing of the proportions of scam communication materials of each type involving each type of concept can be found in Annexe D.

**Table 4 Study 2: 'Common' and 'Unique' concepts found in more than 25 per cent of documents for each scam type**

'Common' concepts were those found in over 25 per cent of documents of more than one scam type 'Unique' concepts those that were in over 25 per cent of documents for one type only.

Scam type	'Common' concepts (in order of the number of scam types where they occur)	'Unique' concepts (in order of the number of documents within this scam type where they occur)
<b>advance fee ('419') scams</b>	benefit, authority, commitment, transaction/trading, social, location (source of the 'prize' etc) spirituality/religion	reason, confidentiality
<b>international sweepstake scams</b>	benefit, contact, authority, payment, emotion, commitment, content, personal approach/selection, terms and conditions	none
<b>Fake clairvoyant scams</b>	benefit, payment, emotion, commitment, social, life/well-being/health, positive future, spirituality and religion	esoteric symbols, opportunity/scarcity, psychological benefit, supernatural objects/occultism
<b>prize draw pitch scams</b>	benefit, contact, authority, payment, emotion, commitment, personal approach/selection, terms and conditions	none
<b>get rich quick scams</b>	benefit, contact, emotion	future work, future income
<b>Bogus investment scams</b>	contact, payment, emotion, transaction/ trading, investment	none
<b>Bogus lottery scams</b>	benefit, contact, authority, payment, personal approach/selection, location	none

**Table 4 Study 2: 'Common' and 'Unique' concepts found in more than 25 per cent of documents for each scam type**

'Common' concepts were those found in over 25 per cent of documents of more than one scam type 'Unique' concepts those that were in over 25 per cent of documents for one type only.

Scam type	'Common' concepts (in order of the number of scam types where they occur)	'Unique' concepts (in order of the number of documents within this scam type where they occur)
<b>miracle health cure scams</b>	benefit, authority, emotion, content, life/well-being/health, positive future	timescale of benefit, weight, sexuality
<b>premium rate prize scams</b>	benefit, contact, content	competition, effort
<b>Bogus racing tipster scams</b>	benefit, contact, security, payment, content, transaction/trading, investment	gambler, chance

Concepts are abbreviated as follows:

Benefit: Size of prize or other benefit

Authority: Authority, trust, security

Contact: Get in touch / contact modalities

Payment: payment modalities

Emotion: emotional triggers

Commitment: behavioural commitment

Content: specific information about the field of the scam (differs between types)

Social: Social relationships or social proof

7.13 The four concepts that emerge in almost every example of almost every type of scam are:

- the size of prize or other benefit
- contact methods and triggers to get in touch
- authority, trust, and security
- payment methods.

7.14 The emphasis on the size of prize or other benefit, and on authority, trust, and security are clearly aspects of the persuasive communication. But the emphasis on contact modalities and triggers to get in touch, and on payment modalities have a more pragmatic intent: once a recipient has decided to respond to a scam, that decision still has to be turned into a specific form of practical action in order for the person to become a victim. In a search for the techniques of persuasion used by scammers, there is a risk of over-interpreting what are purely practical aspects of the communication.

7.15 Despite a high degree of commonality in the content of the different kinds of scam, there are also some obvious differences. The focus on the individual recipient as having been selected as a winner is specific to the deceptive lottery-sweepstake-prize draw pitch group. While it is more or less essential to such scams, there is no reason why personalisation could not be used in many other types, but in the sample used here it rarely was. Advance fee scams and clairvoyants/psychics rely more heavily than other types on social relationships, though of rather different kinds in the two cases: in advance fee scams, the scammer often tries to build a relationship of apparent mutual co-operation with the victim, whereas fake clairvoyants and other psychics tend to try to build a relationship of emotional dependence in which they play on the good or bad outcomes for the victim that they can foresee (or even bring about). Although appeals to authority are common to many kinds of scam, they do not play such an important role in fake clairvoyant, get rich quick, bogus investment or premium rate prize draw scams. The practical emphasis on explicit payment modalities is missing in premium

rate prize draw scams, where it is indeed not needed – victims are encouraged to respond by making the phone call or sending a text, which in fact constitutes payment, though in the nature of the scam, this is not made explicit. Some scam types seem to need more explanation of the content than others, where recipients' familiarity can safely be assumed.

- 7.16 As with the word-level analysis, at the conceptual level much of the unique content of particular scam types seems to be contingent on what they are about rather than representing persuasive techniques unique to a particular scam type. However there was some indication of such specialisation. For example, requests to maintain confidentiality (which would prevent victims from being warned about a scam) are characteristic of advance fee scams, while scarcity and uniqueness appeals are characteristic of fake clairvoyant scams.
- 7.17 These differences in content between scam types suggest that there is in some sense a culture among scammers, as there is among legitimate advertisers. Either by modelling themselves on legitimate equivalents, or by copying earlier scams, scammers produce material that 'looks right'. This does mean that the public can learn about particular kinds of scam, and successfully avoid them, but that fact carries a vulnerability: a creative new scam message is likely to be disproportionately successful. It is notable that most of our interviewees reported that they were aware of the dangers of scams before they became victims, but they were not aware of the particular type of scam that they fell for.
- 7.18 The word-level text mining does suggest that the content of scams in general, and each particular kind of scam, can be recognised with fair accuracy by relatively crude word-counting procedures. This implies that, properly used, current spam mail filtering procedures probably could remove many scam messages, at least from the email stream. It is possible that websites linked to scam communications could also be recognized and blocked algorithmically. Obviously tests would be needed to establish the false positive rates of such filters, but the content of scams does seem to be sufficiently stereotyped for there to be a possibility of success with such a technique.

## **8 PROFILES OF DIFFERENT SCAM TYPES**

- 8.1 Putting the results of Studies 1 and 2 together, as well as a further review of the corpus of scam material provided by the OFT, we can now provide pen pictures of some of the commonest types of scam. We focus especially on the specific psychological techniques that seem to be being used in these types. As will quickly become evident, all types of scam have something in common, and features that we describe as typical of one type may well turn up in others from time to time. But despite this overlap, the most typical examples of different kinds of scam do differ, and some kinds of scam have quite distinct 'personalities'. Our assignments of psychological techniques to scam types are necessarily subjective, and would need to be confirmed by more extensive research, but they are sufficient to give an idea of the range of techniques in use and the differences between different types of scam.

## PROFILE 8.1: ADVANCE FEE ('419') SCAMS

From: [Ronald@e.mail-ubsa.sa](mailto:Ronald@e.mail-ubsa.sa)  
Sent:  
Subject: BUSINESS OPPORTUNITY

Dear Friend,

I have the honour to introduce to you this business in view of the fact that you may be trustworthy and reliable. I am Mr. Ronald Cherika, Provincial Director of UNION BANK OF SOUTHERN AFRICA (UBSA). I have urgent and confidential business proposition for you. In August 1992, a foreign Gold contractor with the South African Gold Mining Corporation opened an account with us. Since September 2000 he has not operated his account. After intensive investigations I discovered that he had died in an automobile accident.

My investigations proved that he died without leaving a next of kin. He did not declare any kin or relations in all his official documents and all attempts to trace a next of kin was fruitless. The amount involved is US\$36.5m (THIRTY SIX MILLION FIVE HUNDRED THOUSAND UNITED STATES DOLLARS) which is still sitting in my bank. No one will ever come forward to claim it. According to South African law, at the expiration of 5 (five) years the money will revert to the South African government if nobody applies to claim the fund.

I am of the settled conviction that using my insider leverage, I, working with you can secure the funds in the account for us instead of allowing it pass as unclaimed funds into the hands of some government officials. Your assistance as a foreigner is necessary because the management is ready to welcome any person, a foreigner who has correct information of this account, which I am ready to give to you if you are interested to conclude this transaction with me. I am seized with all relevant documents (legal and Banking) that will facilitate our putting you forward as the claimant/beneficiary of the funds.

I will use my position and influence to affect the onward transmission of this money to your desired account. At the conclusion of this business, you shall be handsomely rewarded for your part in this transaction and will be given 30% of the total amount.

Upon your response, I shall then provide you with more details. I assure you there is no risk involved; every aspect of this transaction is safe. Needless to say, UTMOST CONFIDENTIALITY is of vital importance if we are to successfully reap the immense benefits of this transaction.

Awaiting your urgent reply.

My Best Regards,  
Mr. Ronald Cherika

## **Advance fee ('419') scams: What are they?**

- 8.2 Consumers receive a letter, fax or email from someone who says they need help in transferring money overseas, usually US\$10-20 million. Typically, the writer claims to be a senior government official, an accountant with a state owned corporation, or perhaps a relative or lawyer of a deposed or dead politician.
- 8.3 The writer will tell the recipient he needs to transfer his cash to a bank in their country, and that if the recipient lets him use his or her bank account they can keep a big slice for themselves, usually 25 or 30 per cent.
- 8.4 If the recipient replies and gives banking and personal details, they will be sent fake bank statements and similar documents all intended to prove that the money exists and is heading their way. The scammers will use the information given them to empty the victim's bank account or might convince them to send cash up front by money transfer.
- 8.5 There are other variations on advance fee scams, such as where the scammer poses as a charitable organisation soliciting donations to help the victims of a natural disaster, regional conflict, or epidemic or where a scammer poses as a terminally ill mother, poor university student, or other down-on-their-luck person and simply begs the victim for money for college tuition, to sponsor their children, or a similar ruse.

## **Psychological techniques**

- 8.6 Although Advance Fee scam communications are very common (the OFT research on the impact of mass marketed scams, 2006, estimates that 70,000 UK consumers fall victim to such scams every year), we did not have any interviewees who had fallen victim to this kind of scam. However, the psychological techniques involved are visible from the text-mining analysis of the materials that people are sent, and the accounts of victims that have already been published. Three techniques are particularly relevant:

- triggering visceral processing by reference to a large sum of money and by a personalised approach;
- norm activation through an appeal for help;
- perception of authority.

### **Triggering visceral processing by reference to a large sum of money**

- 8.7 As in almost every kind of scam, a key part of the process is to focus victims' attention on a very large sum of money, so as to cut out a more considered appraisal that would lead them to recognise the inherent implausibility of the offer. In Advance Fee scams, the sums are invariably enormous, and the wording is designed to re-emphasise just how huge they are:

'Approximately five years ago, an investor, now deceased invested a total of US\$12.5M (Twelve Million, five hundred thousand United State Dollars.'

'... over 10 million United States Dollars'.

'... an abandoned sum of \$15 million U.S.A. dollars (fifteen million U.S.A. dollars)'.

- 8.8 In addition, Advance Fee scams often try to make out that the victim has been personally selected to receive the benefit of the supposed transaction, and also to give the help that it requires:

'I came to know of you in my private search for a reliable and reputable person to handle the confidential transaction.'

'I had taken pains to find your contact through personal endeavors.'

'Having made a very frenetic and exhaustive search for any family member that would lay claim to this fund, I decided to take my chance with you.'

### **Norm activation through an appeal for help**

- 8.9 In Advance Fee scams, the scammers represent themselves as needing the help of the victim in some way. The circumstances causing the sum of money to be available are usually such as to excite some feeling of sympathy, such as a death, government persecution, or loss of a position. In some cases the scammer represents themselves as being in trouble or danger:

'I am writing from the hospital, therefore this mail is very urgent as you can see that I am going home. I was told by the doctor that I was poisoned and got my liver damaged and can only live for some months.'

'Sarah is an orphan, I adopted her and she is only 17 years old now. I want you to take her along with you to your country...'.

'Here, is my reason for contacting you, I need to bring my family and that of Mr. Olds out of Zimbabwe as soon as possible before any more harm is done to them.'

'I solicit the assistance of men and women of good will to help me, so that I can transfer this money out of here for charity and if possible receive medical treatment as soon as possible and without delay before this cancer will take my life.'

So text-mining reveals that in this kind of scam, unlike others, words like 'kin', 'death', 'friend', and 'person' occur frequently.

### **Perception of authority**

- 8.10 Almost invariably, the person who ostensibly requires the victim's help is falsely represented as being, or having been, in some sort of position of

authority or at least in a position where they would be able to facilitate the alleged offer, as people tend to obey authorities:

'I work as a senior investment consultant for the .... Investment Ltd.'

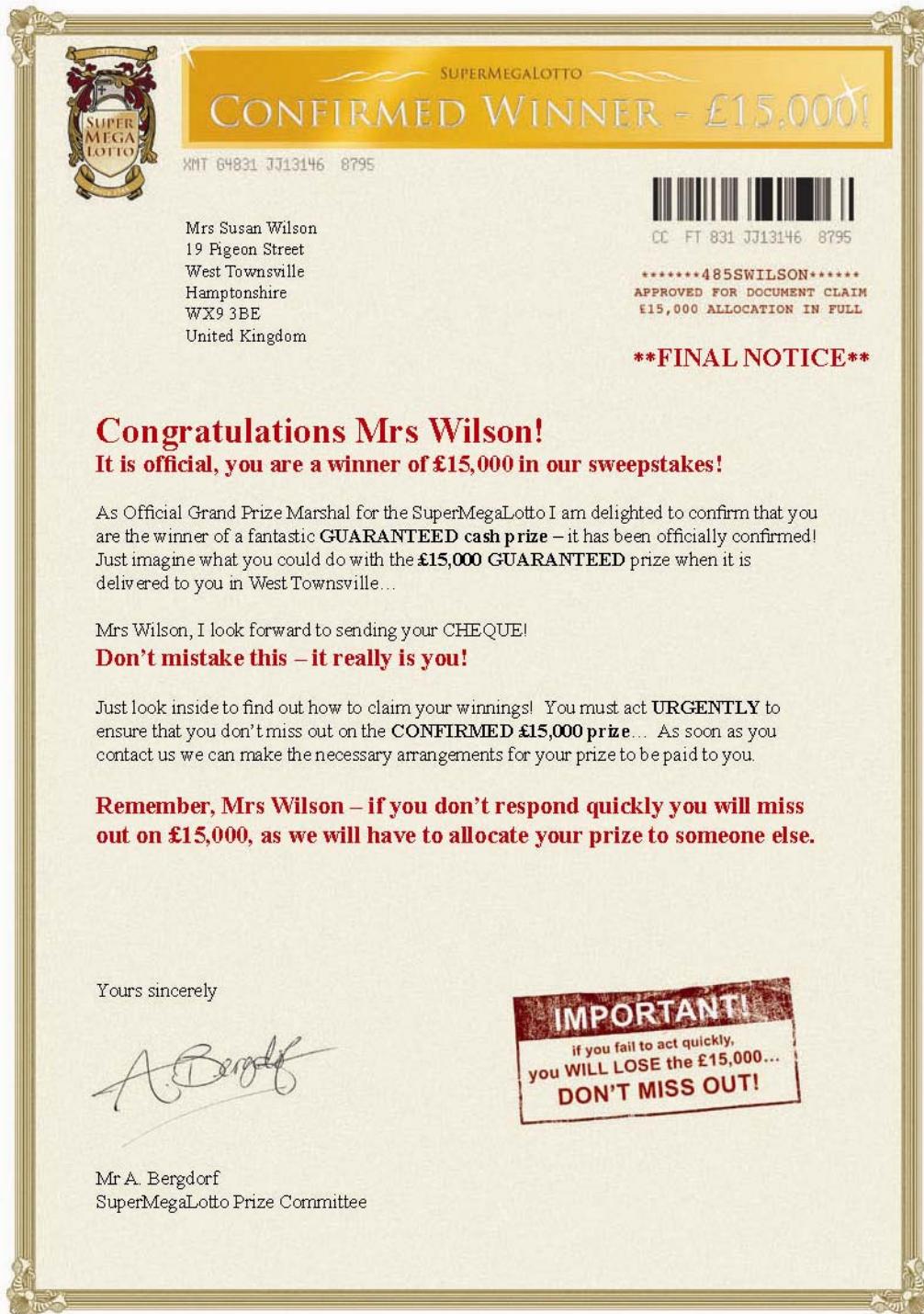
'I am Chen Hsui Fei, Principal Assurance manager for the .... Commercial Bank.'

'I am Ben Coroma, the Head of file Department in .... development bank.'

'I am Barister Nestor Ninko.' [misspelling in original]

- 8.11 Other notable features of many Advance fee scams are the stressing of **urgency of response** (thereby reducing the motivation for information processing) – for example: 'I urgently hope to get your response as soon as possible'; 'We would like to get your decision to this proposal as soon as possible'; 'we should act swiftly on this' and the stressing of the need to **keep the offer confidential**, most probably to stop the intended victim talking to family and friends who might convince them it was a scam (avoidance of social influence) – for example 'Please be informed that this is very confidential and should be a top secret'; 'we are convinced that there is no risk element, as long as both maintain strict Confidentiality' and '...handle such amount in strict confidence and trust'.

## PROFILE 8.2: INTERNATIONAL SWEEPSTAKE SCAMS



## **International sweepstake scams: What are they?**

8.12 Consumers will receive an official looking letter notifying them that they have already won a large cash prize in a sweepstake contest. The misleading impression is given that to claim the 'prize' the recipient must either send a 'processing' fee or purchase some merchandise. In the small print on the reverse of the notification, the 'Official Rules' will explain that the recipient is only being offered the opportunity to enter a sweepstakes with a very small chance of winning the major cash payout and can enter for free, or that the recipient is simply paying for a 'report' that collates details of current sweepstake promotions.

## **Psychological techniques**

8.13 Three main psychological techniques can be seen in these scam communications:

- perception of authority;
- triggering visceral processing by reference to a large sum of money and by a personalised approach;
- reducing motivation for information processing, by stressing the urgency to respond.

### **Perception of authority**

8.14 The most striking feature of these scams is their effort to emulate official or financial communications in the belief that people tend to obey perceived authority – which indeed goes so far that people familiar with real official communications would probably be made suspicious. The letters are littered with coats of arms, official seals, variations of typeface, serial numbers filled in different colours and sizes, watermarks, vouchers in the form of cheques, barcodes, computer readable numbers, mimeographed signatures, imitated rubber stampings, convoluted phrasing (for example 'This original document can serve as proof of non-taxability notably for the Allowance of £8,500 to the beneficiary', and

'Privileged Privacy Rights Contract Document') and every kind of official-sounding verbiage (for example 'This Leaf Is Officially Affixed To Serve As Record of Identification...; 'Official claims entry document'; and 'This is an official awards communication').

Text-mining reveals the frequency with which words like 'document', 'signature', and 'official' are used.

### **Triggering visceral processing by reference to a large sum of money and by a personalised approach**

- 8.15 In common with many kinds of scam, very large sums are mentioned, and indeed often put on cheque-like forms: examples are £5,500, £30,000, £264,000, £711,000, £1,125,000, £1,500,000. In addition, however, there is characteristic use of terms designed to induce certainty such as 'approved', 'now established', 'guaranteed', 'you are 100 per cent guaranteed to receive', 'confirmed winner', 'verified and confirmed' 'Everything is cleared by corporate officers for immediate shipment to claimant' and 'Please try to be present when an authorised government delivery courier arrives'.
- 8.16 As well as the use of large sums, these scams are almost always personalised, with frequent use of the recipient's name and of 'you' throughout the scam text linked to the winning of monies.

### **Reducing motivation for information processing, by stressing the urgency to respond**

- 8.17 Almost every example of this kind of scam contains text like the following:

'... don't wait'.

'... without any further delay'.

'We strongly urge you to return your winner's security-check immediately.'

'It is vital to have this matter finalized within the next 14 days.'

'... within 10-12 days of receipt'.

'Please reply immediately.'

Text mining revealed 'deadline' as one of the commonest words in these scams.

## PROFILE 8.3: FAKE CLAIRVOYANT SCAMS

*I will help you to ensure that the financial rewards I have seen in your future – at least **TWENTY THOUSAND POUNDS** from a big win - are revealed to you*



Dear Susan

**URGENT – It is IMPERATIVE that you contact me IMMEDIATELY, to discover the GREAT FORTUNE that awaits you and remove the CLOUDS from your FUTURE!**

Susan, you must believe me – I know the trouble you have faced and the problems you have seen. But there is a new and bigger threat to your future approaching, and I am afraid that it could cause you to miss out on the happiness you so deserve. Please don't ignore this letter – it will help you to ensure a better life for yourself and those you care about.

I started to pick up signals around your psychic aura a short while ago, Susan. I do not want to alarm you, Susan, but the threat I saw was very serious and I knew I had to warn you IMMEDIATELY.

My dear Susan, it is not your fault that the dark forces have chosen to target you, but with my help you can ensure that they do not succeed. But you **MUST ACT NOW** to allow me to bestow my protection upon you. I will use all my powers to help you ward off the negative energy holding you back, and then I will help you to ensure that the financial rewards I have seen in your future – at least **TWENTY THOUSAND POUNDS** from a big win - are revealed to you. It is only what you deserve and it is rightfully yours.

You **must** trust me, Susan – your future and your happiness **depend** on it. Please do not hesitate to request my **Spiritual Health Protective talisman for £20**, as this is the **only way** I can intervene in time to help you and make sure that you are protected.

Your friend

A handwritten signature in cursive script, appearing to read "E. May".

Elspeth May  
International Clairvoyant

## **Fake clairvoyant scams: What are they?**

8.18 Consumers receive a letter from a so-called psychic or clairvoyant promising to change the course of their life forever such as bringing good fortune - for a fee. Sometimes these mailings are aggressive in tone, saying something bad will happen to the recipient or their relatives if they do not send money to purchase a lucky talisman, crystal, amulet or a set of numbers. Although they are sent out in their thousands, the mailings are personalised to make it look as if the recipient has been specifically chosen and is personally known to the sender.

## **Psychological techniques**

8.19 Four psychological techniques are particularly evident in these scam communications:

- reducing motivation for information processing, by stressing the urgency to respond;
- triggering visceral processing; unusually, in these scams the technique is sometimes by inducing fear, though reference to large sums of money are also common, and personalised approaches are also evident;
- perception of authority;
- liking and similarity.

### **Reducing motivation for information processing, by stressing the urgency to respond**

8.20 Clairvoyant scam communications often contain phrasing designed to set up deadlines for action. Often this is used as a headline, and then reinforced in the body of the letter, for example:

'Act quickly, because a silent threat is hanging over you.'

'... money for you... between 24 February and 23 April'.

'What I have just discovered while reading your birth date urged me to trigger the 'RED ALERT PLAN' VERY URGENTLY.'

'In exactly 29 days, you will be given an exceptional opportunity to change your life.'

### Triggering visceral processing

- 8.21 Unlike most scams, which tend to work by offering people a dream positive outcome, a significant proportion of clairvoyant scams contain what are in effect threats – though sometimes the threat is of losing a large sum that the victim does not actually have, and will 'lose' only in the sense of not gaining it from the supposed clairvoyant benefactor.
- 8.22 Outright threats do occur, for example:

'You could be severely abused over the next few days and WITHOUT MY PROTECTION you could unknowingly become the victim of this time-space gap.'

'Some people around you are not trustworthy.'

'When the fateful date arrives... no one can predict what will happen to you.'

As in the first example, these are invariably accompanied by a promise that the 'clairvoyant' will avert the danger – for a suitable sum.

- 8.23 Alternatively, the clairvoyant holds out the possibility of a large gain:

'Would a 'helping hand' or 10,000 to 100,000 Pounds be of any interest to you?'

'Order form for an immediate return of luck that should trigger a rapid win in my favour of between £10,000 and £500,000.'

'You have the possibility of living a completely new life... filled with comfort, luxury, abundance, money, encounters, beauty, love and maybe even receiving a double fortune of £1,200,000.00.'

- 8.24 Most of these promised gains revolve around games of chance, because the 'clairvoyant' claims to be able to relieve psychic forces that are causing the victim to suffer bad luck. The text mining analysis picks up these themes, with a high frequency of words like 'offer', 'game(s)', 'chance', and 'luck'.
- 8.25 The theme of current bad luck is a common one, and it is clear from the content of the scam communications that the scammers are hoping to find victims whose lives are currently disappointing or sad. That can be seen in one of our interviews:

'I had a problem with my pension I was getting because I was sixty, and I had so many problems what with my mum dying and one thing and another, and we lost our holiday because we didn't have insurance for my mum and then I saw it advertised ... and she started sending me papers and I sent twenty pounds first of all; I thought that's not too bad, you know; and then next month another one came in – thirty pounds – and then it gets to forty pounds you know.'

'And it felt like you were getting something in return when you sent that?'

'Not really, no. Just bits and pieces, all sheets of paper full of what she wrote to tell me I would be having: getting extra money coming in and one thing and another, and what will happen on certain dates of the month, forecasting about January up to July; she's saying I'm going to be happy and I'm going to get all these extra benefits and everything and certain days some money will come through the post and all this: I must have been mad to believe in it really.'

## **Perception of authority**

- 8.26 A few fake clairvoyant scam letters include some of the same symbols of authority that scams such as deceptive international sweepstakes use. More frequent, however, is the use of the jargon of supposed psychic and occult activity. Text-mining detects heavy use of concepts such as spirituality and religion, esoteric symbols, supernatural objects, astrology and occultism. For example:

'The planets in your Astral Theme ... have created a time-space gap in your Astral Sky.'

'You are a Solitary Cosmic Soul ... the 3 of us are going to create a Telepathic Chain of Influence'.

'The Circle of Three Moons generates phenomenal luck ...'

- 8.27 In addition, however, fake clairvoyant scams invariably claim to come from an individual psychic, usually identified with a photograph (sometimes benign, sometimes sinister) and a series of supposed qualifications. Examples of such alleged qualifications include:

'Extra-Lucid Clairvoyant'

'clairvoyant cosmologists'

'birth medium and parapsychologist'

'International Medium, Confirmed parapsychologist'

'Medium of international standing'

'Experts in Telepathic Research and Analysis'.

## **Liking and similarity**

- 8.28 A particular characteristic of clairvoyant scam communications is the attempt to claim personal knowledge of the victim and to be acting out of a disinterested regard for them. These communications are therefore

heavily personalised with the use of victims' names. Text-mining analysis detects concepts such as benefit, well-being and health, and positive futures, with words such as 'life', 'happiness', 'help', 'secret', 'friend' and 'gift' being common. Examples include:

'I wanted to warn you immediately... Trust me, for I want only your happiness.'

'I have been in close telepathic contact with you.'

#### 8.29 Some even claim a relationship with the victim:

'My nephew... called me three weeks ago and told me, 'Aunt Rose, did you know that we have a cousin living in the UK?''

## PROFILE 8.4: PRIZE DRAW PITCH SCAMS



LETTER / Winnings

Mrs A Monk

I am pleased to be the first to announce to you today that you have been selected during our prize draw which allows our winner to leave with the £10,000.00!

And you'll be in agreement with me, Mrs A Monk:  
Winning £10,000.00, it really is excellent news!

I beg you to reply very urgently to this letter

Return your Registration Form and completed order form, now!

Once again, all my congratulations, Mrs A Monk

Customer Service Manager

\*Time limit for information only. See rules for terms and conditions.

## **Prize draw pitch scams: What are they?**

8.30 Consumers receive mailings notifying them of a large cash prize win. The mailings give the impression that to receive the prize, the consumer has to make a purchase of a product from an accompanying catalogue. In fact the recipient is only being offered the opportunity to enter a prize draw pitch with a very small chance of winning the major cash prize and can in fact enter without placing any order.

## **Psychological techniques**

8.31 These scams are very similar to the international sweepstake scams discussed above, and they make use of similar psychological techniques, specifically:

- authority;
- triggering visceral processing by reference to a large sum of money and by a personalised approach;
- reducing motivation for information processing, by stressing the urgency to respond.

## **Authority**

8.32 Although there is substantial overlap with the international sweepstake scams, and some of these scam communications do seem to be emulating official or financial communications, the kind of authority being claimed is sometimes subtly different – leaning towards language that might be used in a legitimate lottery, for example. But some of the same sorts of language that appear in the international sweepstake scam communications are used, for example 'Confidential letter', 'Solemn Declaration of Official Prize Delivery', 'Official Department'; 'Official Procedure'; 'It's now official, you really have won...' and so forth. Text-mining reveals the frequency with which words like 'guarantee', 'signature', and 'official' are used.

### **Triggering visceral processing by reference to a large sum of money and by a personalised approach**

- 8.33 Compared with the international sweepstake scams, these scam communications do not use such huge sums of money; indeed, in our sample corpus, a substantial proportion used the same supposed prize amount of £10,000, and most of the others used lower sums. Although the sums are not so vast, they are still heavily emphasised, and text-mining of the content of the scam mailings reveals the heavy use of terms like 'money', 'cheque', 'winner', 'prize', and 'payment'.
- 8.34 The same characteristic use of terms designed to induce certainty is found as in the international sweepstake scams, with words like 'Unique confirmed winner', 'without the slightest doubt', 'undeniable and definite proof', 'you have already won' 'definitely intended for you', and 'your recognised status as WINNER has been formally and fully validated'. One victim said:

'I had this letter come through and it *quite* categorically stated that they were congratulating me on being the sole winning, sole holder of the winning number and I had won five thousand eight hundred quid, all right, so I thought well and I read it and read it and read it and I thought there is no way they worded this in a round about sort of way or incorrectly so it it's got to mean what they actually say and they're saying that I've won this five thousand eight hundred quid - so I thought okay.'

- 8.35 Personalisation is again a common theme, with the potential victim's name being entered into the scam text at every opportunity.

### **Reducing motivation for information processing, by stressing the urgency to respond**

- 8.36 The attempts to induce urgency are almost more clamorous than in other types of scam. For example:

'If you do not reply you will definitely lose your prize – Reply awaited within 8 days.'

- 8.37 Almost every one of these scam communications is overprinted 'Urgent'.

## PROFILE 8.5: GET RICH QUICK SCAMS



**CHANGE YOUR LIFE!!**

READ THIS AMAZING MONEY MAKING OPPORTUNITY!

PUT **AN END** TO YOUR 9 TO 5 EXISTENCE!

**MAKE A GUARANTEED £60,000+ IN THE NEXT 30 DAYS FROM THE COMFORT OF YOUR OWN HOME.**

Dear Friend

Are you sick of struggling with debt? Do you wish you could:

- **MAKE MONEY FROM THE COMFORT OF YOUR OWN HOME**
- **SLEEP IN LATE**
- **NEVER COMMUTE AGAIN**

If you said yes to any of the above, then we have good news for you, because we are offering **YOU** access to an **EXCLUSIVE** money making opportunity. It is not often that we share the secret of making money with others, but with a recession we want to make people like you rich beyond your wildest dreams!

It's easy to join – just send us £50 to gain access to our secret money making opportunity – **100% LEGITIMATE AND LEGAL**.

**YOU HAVE NOTHING TO LOSE AND £60,000 TO GAIN!!**

**ACT QUICKLY – OFFER LIMITED TO JUST 50 PEOPLE.**

## **Get rich quick scams: What are they?**

- 8.38 There are at least two kinds of these scams.
- 8.39 In the first, a homeworking or business opportunity is advertised in a local newspaper, shop windows, lamp posts, on the internet or in a letter which claims to offer a quick way to make money without having any qualifications, skills or expertise. This could, for example, allegedly involve taking advantage of a money making system or business opportunity that will quickly generate a large income, or involve 'stuffing envelopes' from home in return for a payment per envelope. The catch is that before starting any work the victim has to pay money up front. After this money has been paid the victim finds that there is no real work and they may, for example, be told to place similar advertisements to attract other people into the scam. Or they may find that the claims made about income earned from a money making scheme are completely unrealistic.
- 8.40 The second kind are pyramid selling schemes. Consumers are asked to pay to become a member and are promised large commission earnings if they recruit others to the scheme. But, in order for every member to make money, there would need to be an endless supply of newcomers.

## **Psychological techniques**

- 8.41 We can see at least three major psychological techniques at play here, through victim interviews and analysis of the corpus of scam communications:
- triggering visceral processing by emphasising a high reward for little effort;
  - liking and similarity;
  - norm activation, exploiting people's desire to be in work and to be at home.

## **Triggering visceral processing by emphasising a high reward for little effort**

- 8.42 Like most kinds of scam, these scam communications often try to narrow people's thought processes. As Table 3 shows, frequent words in the scam materials include 'money', 'cash', 'cheque', 'offer' and 'opportunity'.
- 8.43 With some money making scams the visceral effect of the huge rates of return offered shuts down the victim's broader processing:

'You could make a small fortune... in your morning coffee break.'

'He got paid over £76,000 for just 98 minutes work.'

'You will earn £50,000 in the next 60 days.'

'I banked over £506,297.98 in just 5 days.'

'Your private gold-mine... to provide each of our members with £1,000,000'.

'How do you fancy retiring on £200,000 + per year.'

- 8.44 However, with some work from home scams the headlines do not involve staggeringly high sums of money:

'Earn £130 per hundred.'

'Earn £1.30 per envelope' (a different scheme, though the identity of rates is not a coincidence).

'Well paid work you can do at home.'

'£6.00 to £8.00 per page.'

In this kind of homeworking scam, what is appealing to the victim is not a huge headline sum but rather the possibility of getting a surprisingly good rate of return under conditions where it would normally be hard to work at all. The return does not need to be extraordinarily high, and indeed it might be counterproductive for the scammer if it was. Unlike, for example, prize draw pitch scams, the offer being made in this type of homeworking scam is not intrinsically implausible - they are being offered pay for work done, superficially a reasonable proposition.

Accordingly, the visceral cues are not as strong. This can be seen in one of our interviews:

'Well, basically you get loads of e-mails through the internet saying earn money, work from home; I'm always trying to find different ways to earn more money but I don't really like laying anything out because, obviously you know they are scams. So there was this one which said ...free data entry, start earning dollars from day one, really easy to do ... really easy step by step instructions, start earning money straight away, all you do is fill in coupons for companies and I thought, 'Oh, this sounds quite good...'. So I joined up, paid £17.50 and I got this set of instructions which was like twenty-five pages long, where you had to set up all these different accounts to be able to do what you're meant to do, which is like data entry work okay... Basically all it was ... you then made an ad up, put it on another website and asked somebody to give you thirty-two pounds for the privilege of doing it and then send them all the details that you had got from this company... it was like a pyramid thing... and I thought I'll give it a go, [but] it was just so hard to do that I sent them back a message saying, This is meant to be easy, can I have my money back.'

### Liking and similarity

- 8.45 A particular feature of money making scams is the attempt to exploit liking and similarity. For example, the scammers describe themselves as having been in the same sort of situation as the intended victim:

'6 years ago I was the same'.

'... I literally did not have a penny to my name... my life was a mess'.

'In ... I lost my job.'

'As a child I lived in a caravan and went to school on the local council estate.'

'Of course, like you, I was very sceptical and didn't believe a word of it.'

- 8.46 The scam communications may also include phrases that suggest to recipients that they are liked by the sender (which is also another form of personalisation):

'You have been discreetly recommended by someone who considers you a valuable friend.'

'It is not often that we allow others to join our group, but the flagging economy indicates that additional income is needed by many people like yourself.'

### **Norm activation, exploiting people's desire to be in work and to be at home**

- 8.47 Homeworking scams take advantage of two norms at once. First, it is a very strong social norm that it is better to be in employment than not, and some of these scams go to considerable lengths to put themselves into the context of a normal job opportunity. The text-mining results show that words like 'work', 'company/ies', 'business', 'pay', 'start', 'hours', 'income', and 'job', occur in a way that they do not in other scam types. These schemes often exploit people who would have difficulty taking a conventional job, because of age, family commitments, or disability. To such people, the idea of work that can be done from home often with no experience is therefore highly attractive: one advertisement suggests that you could do this work 'sitting at home in your pyjamas'. Secondly, quite apart from some people's need to work from home, home itself is a powerful norm – it summons up

associations of comfort, convenience, safety, pleasure and the ability to discharge domestic duties. This can be seen in one of our interviews:

'I'd like to do work from home... so I've been looking round for some work to do... so, I've seen these adverts in this magazine, ... there's loads, Working from Home filling envelopes and I've found out since, that every single one of them is a mail box.... I contacted a firm called ..., I gave my name on a recorded phone, then they sent a letter saying... send £35 and we'll knock it off your first Invoice. So unfortunately, I never heard anything else.'

- 8.48 Another feature of some get rich quick scams are the use of false testimonials from other people who have benefited from the scheme (social proof).

## PROFILE 8.6: BOGUS INVESTMENT SCAMS



**Want to make 'big money' investing in stocks and shares?**

**Want to beat a falling stock market?  
We can show you how!!!!**

Dear Investor,

**Do you want to become the next stock market millionaire?**

Today I want to share with you a 'foolproof' method of making huge profits from stock market investments.

There has never been a better time to invest in shares with the current falling market. We can show you how to buck the trend and make **GUARANTEED HUGE RETURNS** from your share portfolio. Just join our **EXCLUSIVE** investment syndicate and follow our regular top **SHARE** tips and recommendations. We have a top team of former fund managers and analysts with a combined 70 years of ~~investment expertise~~. We have already delivered for hundreds of other clients!!!!

This exclusive offer is only open to **SERIOUS** investors who are attracted by the **LIFE CHANGING RETURNS** on offer. Complete the enclosed registration form and return with a one-off payment of £250.



## **Bogus investment scams: What are they?**

8.49 Consumers are contacted by letter, telephone or e-mail and offered the opportunity to invest money into things like shares, fine wine, gemstones, art or other 'rare' high value items. The promise is that these will rocket in value. But what is offered is often over-priced, very high risk and difficult to sell on.

## **Psychological techniques**

8.50 The leading psychological techniques identified in respect of investment scams are:

- exploiting background knowledge and overconfidence;
- triggering visceral processing by emphasising high rewards.

### **Exploiting background knowledge and overconfidence**

8.51 Previous research (for example, Consumer Fraud Research Group, 2006) suggests that victims of phoney investment schemes are typically people with some knowledge of investment, which may contribute to falling victim to the scam rather than protecting them as they overestimate their abilities to make good decisions in this area. This is reflected in the following quotes from victim interviews, although it should be noted that these relate to telephone scams rather than scam mailings.

'I dealt with, as I say, the London Stock Exchange and Brokers in this country, and it didn't *occur* to me that [name of scammer] would be any other.'

'I don't think I had doubts at the time, mainly because they were telling me about, as I say, the alternative [...] fuel - I've been in the industry a number of years [...].'

## **Triggering visceral processing by emphasising high rewards**

- 8.52 Our corpus of written investment scam communications is relatively slim because in the most characteristic cases (so called 'boiler room' share scams) the approach is made by phone. The high rewards that the scammers use to try to blind the victim to the schemes' flaws are not the capital sums so much as the rates of return. Some idea can be gleaned from the following quotes from postal scams in the investment area:

'Does profit £6,740 (tax free) using £5,000 float appeal?'

'A chance to make 110 per cent on your money by September.'

'You could double... triple... maybe quadruple the value of your pension.'

- 8.53 The high monetary rewards involved in these scams are reflected in the terms that occur in them frequently, like 'money', 'cash', 'price', 'bank' and 'millionaire'. Their investment context is also heavily emphasised, with words like 'profit', 'investment', 'company/ies', 'market', 'share', and 'stock'. Frequently they seek to anticipate and neutralise any concern about the unusually high returns being offered, resulting in a high incidence of words like 'risk', 'pay', 'report', 'story' and 'system'.

## PROFILE 8.7: BOGUS LOTTERY SCAMS



FROM THE DESK OF THE PRESIDENT  
INTERNATIONAL PROMOTIONS  
- Awards Department



### **RE: LOTTERY AWARD NOTIFICATION - FINAL NOTICE**

We are pleased to inform you today of the results of the Euro International Lottery Board awards bonanza. All participants were selected by a computer system from 30,000 names as part of our international programme. Your name drew the lucky number of **21-23-30-41-42-46** which consequently won the lottery in the 3rd category. You have therefore been approved for a lump sum payout of €642,230 **(SIX HUNDRED AND FORTY-TWO THOUSAND TWO HUNDRED AND THIRTY EUROS ONLY)** in cash.

Your fund is now deposited securely and is insured in your name. Due to a mix up over names we require you to keep this award **CONFIDENTIAL** from public notice until your claim has been processed and money remitted to your account.

To begin your claim please contact your claims agent **EDUARDO BENITEZ**, Foreign Operations Manager for **GLOBAL SECURITY S.A.** for processing and remittance of your prize to an identified account of your choice. All prize money must be claimed within **TWO WEEKS**. Please also remember that 5% of your winnings are due to your agent **GLOBAL SECURITY S.A.** because they entered you into this draw, and that they will retain your winning ticket for security and verification purposes.

Enclosed with this letter is a payment processing form which you should complete immediately and return to your agent by fax.

Congratulations from all members of our staff and thanks for being part of our promotions programme.

Sincerely

A handwritten signature in blue ink, appearing to read 'DR MARC RODRIGUES'.

Dr Marc Rodrigues  
President



## **Bogus lottery scams: What are they?**

8.54 Consumers receive a letter, e-mail or telephone call telling them that they have won a major cash prize in a lottery. They will often be told to telephone a sales agent who will ask the victim to send money to cover administration, customs and taxes. The winnings do not exist and are never received.

## **Psychological techniques**

8.55 The psychological techniques used are somewhat different from those in other types of prize draw pitch scams. They include:

- triggering visceral processing by reference to winning very high prizes;
- escalating commitment;
- background knowledge and overconfidence;
- perception of authority;
- avoidance of social influence;
- urgency to respond.

### **Triggering visceral processing by describing very high winnings/prizes**

8.56 By their nature bogus lotteries describe winning very large sums of money to shut down the victim's broader processing:

'Dear Winner... You have won the sum of EUR.1.000.000 {One Million Euros}.'

'You have therefore been approved a lump sum payment of €960,000.00 (NINE HUNDRED AND SIXTY THOUSAND EUROS) in

cash. This is from a total cash prize of EUR € 4,800,000.00 shared among the (Five international winners in this category).  
CONGRATULATIONS!'

'You have therefore been approved for a lump sum payout of €785.51000 {SEVEN HUNDRED AND EIGHTY-FIVE THOUSAND FIVE HUNDRED AND TEN EUROS!) only in cash.'

Correspondingly the text mining analysis detects concepts like benefit and payment, supported by high frequencies of words like 'money', 'cash', and 'payment'.

### **Escalating commitment**

- 8.57 A key distinguishing feature of this type of scam is that there is often no request for money in the initial communication. There is simply a request to contact an agent, and it is only when the victim does so that they will be asked for the 'processing fee', 'taxes' or 'release fee' which represents the scammer's profit. If they send one sum, they may well be asked for further, increasing sums. As a result, typical losses in such scams can be high, running into thousands of pounds.
- 8.58 The scammer's need to get the victim to make contact is evident in the text-mining results through the frequent use of words like 'address', 'telephone', 'contact', and 'claim'; the appeal to authority by terms like 'security' and 'reference'; and the actual content of the scam by words like 'congratulations', 'winner(s)', 'prize' and 'promotion(s)'.
- 8.59 The process of escalation, as well as the perception of authority from the scammer posing as a bank manager, can be seen in the following excerpt from one of our interviews:

'A notification here on Millions Lottery International it all looks genuine... it says that you have to contact to begin your claim ... you've got to contact your Agent... a Dr Lopez Foreign Services... So I phoned him first of all obviously and he said you've got to deal with somebody else as well who was apparently a Bank Manager...

he was also very convincing and then he said you have to pay some money. And I said 'Why do you have to pay money because I'm led to believe Lotteries don't tax things on things like this', and he said 'Well if you were a resident of Spain you wouldn't have to pay the money'; it seemed feasible you know, I don't know the Spanish laws ... he said, 'It's because it's in a Security Company', they put it in a Security Company in your name and it can't be got out... so I paid out... about £780... and then of course the old old story, when you've done that they come back to you a few days later and there's another reason to give more money.'

- 8.60 This victim had doubts all along, but although he challenged what the scammers were telling him, discussed the matter with his sons (who immediately told him it was a known scam and produced evidence that it must be) and even contacted the Spanish Embassy (who also told him it was a scam) he went on to make a further two payments and lost a total of over £5,000. This can also be seen as 'chasing losses' or a 'sunk cost' effect.

### **Background knowledge and overconfidence**

- 8.61 Almost every one of the bogus lottery scam communications contains material that seems designed to exploit the victim's awareness of reputable lotteries. Some purport to involve Spanish lotteries, and there is wide public awareness in the UK that there are genuine lotteries in Spain (especially the annual 'El Gordo'). Others falsely claim to be part of the UK National Lottery, or involve well-known brand names in some way or use the names of popular charities – and again it is well known that charities commonly do use prize draws for fund-raising. This can also be seen as an attempt by the scammer to create a perception of authority.

### **Perception of authority**

- 8.62 Although these scams are typically much less florid in their use of symbols of authority than the international sweepstake scams, and some of them take the form of simple text-based emails, most make some use

of the style of official financial communications to try to establish a spurious authority. For example:

'FROM THE DESK OF THE VICE PRESIDENT.'

'Your fund is now deposited with the BANK and insured in your name.'

'Three (3) certificates are to be issued to you by the Ministry of Interior, to back up your winning.'

'Beneficiary's Declaration.'

'Foreign Operations Manager.'

- 8.63 Adding the figures for pence or cents after an enormous sum, as in the examples above, is typical, as is repeating in words a sum given in figures. Complex and official-looking claim or ticket numbers are frequently cited.

### **Avoidance of social influence**

- 8.64 A number of these scams also stress the need to keep the offer confidential, most probably to stop the intended victim talking to family and friends who might convince them it was a scam (avoidance of social influence) – for example:

'Any leakage of this winning notification leading in a double claim will cause you to forfeit your prize thus we advise you to keep this winning notification message confidential away from public notice to prevent double claims and impersonation until after remittance/payment to you.'

'.... the release of your winning information to a third party (friends and family members inclusive) is absolutely ruled out as this will ... give room to double claiming by a third party which is against the ... Promotion Terms and Conditions. You are therefore advised to keep your winning information personal from any third parties (friends and

family members inclusive) until your winnings have been remitted to you'.

'Due to false practices, we ask that you keep your award information strictly from public notice, until your claim has been processed and money remitted to your possession as this is part of our security protocol to avoid double claiming or unwarranted abuse of this program by unscrupulous individuals.'

### **Urgency to respond**

- 8.65 Bogus lottery scams also stress the urgency to respond in order to reduce motivation for information processing. Every example of this kind of scam contains text like the following:

'All winning prize must be claimed not later than 08th DEC... After this date, the funds will be returned to the MINISTERIO DE ECONOMIA Y HACIENDA as unclaimed.'

'Being one of the lucky winners, we hereby contact you to claim your win quickly as this is a free email computer ballot bonanza lottery promotion. Failure to claim your winning will result to rollover or reversion of your winning sum. We also use this medium to notify you that the expiring or lapse date to claim your winning prize is on the 16TH DECEMBER ...'

'Note that there exists a periodic condition on all claims process; therefore you have limited time to claim your winnings. Failure to claim your winnings within the stipulated time frame will lead to the forfeiture of your winnings after which your winnings remitted back to the United Kingdom National Lottery Headquarters and will then be added to next winning draws.'

## PROFILE 8.8: MIRACLE HEALTH CURE SCAMS



**SWISS SLIMMING RESEARCH INSTITUTE**

**NEW!**

**Medical breakthrough**  
**Take one**

# **FAT-OFF CAPSULE**

**a day and lose a guaranteed 20 pounds EVERY week!**

**Eat even more than normal and feel more energetic!**

### **How do they work?**

Fat-Off Capsules contain a secret 'fat eating' ingredient, discovered in plants growing in volcanic ash, that goes to work while you sleep. Simply take one capsule before going to sleep, wake up in the morning and see the difference. We guarantee you'll lose weight with no effort and no side effects.



**Dr Petra Oft** from the Swiss Slimming Research Institute says:

'This is the miracle weight loss discovery that we've been searching for, and is unlike anything else on the market. For the first time in scientific history the dream of losing weight easily has become a reality. Fat-Off Capsules have been clinically proven to be the simplest, most efficient, way to lose weight. Your only worry is checking to ensure you don't lose too much weight - they're that effective!'

**Turn the page to order a bottle of Fat-Off Capsules for just £25 (p&p included)**

**If you are unhappy with the weight loss you have achieved just return the unused Capsules and we'll give you a full refund.**



**'In just 2 weeks I dropped three dress sizes, no diets, no exercise, no waiting – just Fat-Off Capsules!'**

**Emma, London**



**Money back  
guarantee**

## **Miracle health cure scams: What are they?**

- 8.66 Consumers receive a mailing or email promising a health 'miracle' such as easy weight loss without the need to diet or exercise. Other pills, lotions, creams and products will supposedly cure baldness, arthritis, cancer, impotency and other ailments. But it is unlikely that they have been properly tested or proven medically effective. Some might even be dangerous.
- 8.67 The advertising often includes fake testimonials from 'satisfied customers', unsubstantiated claims about product effectiveness, false claims that the product has been clinically proven in trials, and a worthless 'money back' guarantee.

## **Psychological techniques**

- 8.68 The most obvious psychological techniques in use in these scams are:
- social proof;
  - authority;
  - triggering visceral processing;
  - over-confidence effect.

### **Social proof**

- 8.69 Social proof operates in these scams through the use of testimonials from supposedly satisfied customers, which in many cases form a large proportion of the (frequently bulky and professionally produced) mailings. The use of bogus testimonials is almost universal in these scam materials, frequently involving 'before' and 'after' statements and/or photographs, sometimes just pictures of attractive people with 'quotations':

'I lost 64 lbs in 7 weeks – jealous friends accused me of having liposuction! – I didn't tell them [product name], is the secret to instant weight loss!'

'Ever since I started taking [product name], my energy levels have increased and I am feeling a lot better throughout the day.'

'All I can say is WOW! In less than a month (like you said) the pain, inflammation, and redness is all gone.'

'For me it's a true miracle because I really thought I'd live my whole life in the skin of a 'fat person'. But now I can live the sort of life I thought I would never be able to enjoy Thank you so much!'

- 8.70 As one of our interviews demonstrates, these fake testimonials can work in convincing recipients to respond:

'It just put out that it worked well, what I wanted and because it was a real person (well, I don't know if it was a real person), that was saying her story, and when I was reading that I was thinking 'Gosh that's me.' and

'God these could work' and that's what I wanted them for, to lose weight and get your libido back at the same time, it was like, 'Oh my gosh', and 'This is what you really want'.

### **Perception of authority**

- 8.71 Authority is deployed in these scams through the use of false claims that the products are endorsed or supported by medical or scientific personnel or evidence. In the text-mining analysis, authority is one of the most frequently noted concepts, and 'doctor(s)' one of the most frequently occurring words. Real and invented medical jargon ('negative calories', 'delayed accumulation', 'the science behind it is called osmosis', 'enzymes act by 'delayed action', a well-known phenomenon within the pharmaceutical industry') litters the text. In some cases the medical or scientific authorities cited are real, though their application to the supposed cure being offered is at best tenuous and most probably

false. Pictures of doctors in white coats are common, as are detailed reports of supposed clinical trials:

'Professor [...] and Doctor [...] are 2 of the most respected authorities in obesity and weight loss in the world. They have overseen and witnessed every stage of the testing and trials of [product name].'

'100 per cent of the subjects who participated in the trials successfully lost weight, and all were satisfied' – Dr [...], Trial Supervisor.'

'Recently the largest hospital trial of its kind confirmed that users lose weight without actually trying.'

'Independent trials on 100 patients prove that all users lost their fat and cellulite.'

'Researched and tested around the world this method has been internationally proven as the easiest, fastest and only permanent way to lose weight.'

'... it was so safe and so successful in its trials and tests that these pads are now certified by the United States Government!'

'This is Certain, Indisputable, Proven, Approved and Recognised by the highest and most prestigious scientific authorities in the world!'

- 8.72 Again, these claims do work in convincing some people to respond to the offer – even though they show scepticism of other kinds of claims:

'If they've got rather elaborate letters, photographs before and after, Mrs Nellie Farnes Barn from Woking has lost forty-eight pounds, holding her trousers out like this, I think 'yeah no'. But when you get some with a letter in it, from Dr So-and-So of Stockholm University, saying 'this is a completely new product, only just on the market' (that's the latest ploy), then because it's got the doctor on there, Dr-So-and-So of Stockholm University (I've no way of

knowing if they're photographing just a model, but I think maybe this Dr Buckler...) and I thought well maybe, I'll try that.'

### Triggering visceral processing

- 8.73 Unlike bogus lotteries and get rich quick schemes, miracle cure scams are not trying to shut down careful reflection by fascinating the potential victim with large sums of money. Rather, their advertising is directed at people with chronic, hard to treat, embarrassing or, worst, terminal conditions where victims are likely to clutch at any possibility of improvement.
- 8.74 Text mining shows that words and concepts like 'fat', 'weight' and 'sexuality' occur commonly in these materials. The commonest scams involve supposed cures for obesity, but diabetes, impotence, loss of libido, arthritis, baldness and cancer all figure in the corpus of scam materials. People suffering from conditions like these are likely to be desperate for something that will offer them an improvement – indeed, our interviewees use exactly that word. They are likely to have tried many different treatment regimes, and thus to be willing to be persuaded that something unconventional might work, just because they so much want to see an improvement. Examples of the type of claims found in miracle cure scams include:

'For the first time in your life, you'll be able to lose weight effortlessly and automatically without changing any of your normal foods, cutting down or making any sacrifices or special effort at all.'

'Don't waste another day being miserable and unhappy with your weight problem - the solution is in your hands right now.'

'Free Yourself of the Swelling, Stiffness and Pain, and Live Your Life 150 per cent Better by Banishing Your Arthritis...'

## **Over-confidence effect**

- 8.75 Another common feature of miracle cure scams is the use of fake money back guarantees, to induce an over-confidence effect in recipients.  
Examples include:

'You can try it without any risk whatsoever on your part because with every order comes a complete money back guarantee.'

'That's why I'm offering you a cast-iron guarantee, one that will allow you to put your doubts aside for the sake of the happier and slimmer future...'

'Put simply. If you put weight back on - you get your money back!'

## PROFILE 8.9: PREMIUM RATE PRIZE DRAW SCAMS



Dear Mrs Smith

# CONGRATULATIONS!

You have won a **TOP PRIZE!!**

Well done Mrs Smith. You were entered into our fantastic **£100,000** competition and I'm delighted to inform you that you were one of a small number of very lucky people drawn as a **GUARANTEED WINNER** of a top prize

**WORTH AT LEAST £2,000!!!!!!**

Your special prize code '**CASH WIN**' matches one of the following major prizes:

- ★ **£100,000 CASH**
- ★ **£20,000 CASH**
- ★ **£10,000 CASH**
- ★ **£2,000 CASH\***
- ★ **New kitchen**
- ★ **Flat screen TV**



To find out what fabulous high value prize you can claim immediately call our 24 hour winner's hotline on **090 53120**

....Unfortunately we can only hold your prize for 3 days so call us urgently.... **DON'T MISS OUT.**

Closing date 31 December 2009. \* Prize consists of a book of hundreds of discount vouchers offering savings worth £2,000. Vouchers must be redeemed within 21 days of receipt. £15.99 delivery charge applies for receipt of vouchers.

## **Premium rate prize draw scams: What are they?**

8.76 Consumers receive a letter, text, scratchcard or automated telephone message telling them that they have won a major prize and urging them to ring or text an expensive premium rate number to find out what they can claim. The misleading impression is given that the recipient has won a large cash prize or other highly valuable prize. Nearly everyone who responds ends up with a low value 'giveaway' item rather than the promised major prize.

## **Psychological techniques**

8.77 We can see three principal psychological techniques of persuasion at work in this kind of scam, all emotional rather than cognitive:

- triggering visceral processing by reference to a high value prize or prize;
- reducing the motivation for information processing by inducing scarcity;
- escalating commitment.

### **Using a high-value prize to promote visceral processing**

8.78 As Table 3 (Study 2) shows, the text mining identified words to do with the prize, like 'cash', 'cheque', and 'winner', as very common in this kind of scam. The high value prizes referred to, together with the impression given that they have been 'lucky' to have won a valuable prize, act to dominate the victim's thinking and shut down a more critical analysis of exactly what they are likely to receive.

8.79 Examples of this include phrases such as:

'The amazing high-performance supercar that could be yours.'

'I'm delighted to inform you that our computer has drawn you as a winner!'

'Congratulations, you're a guaranteed winner!'

'Congratulations and well done!'

- 8.80 The low cost of claiming the prize – typically between £10 and £20 – relative to the alleged high value of the prizes won may also induce victims to respond.

### **Induced scarcity**

- 8.81 The scam communications often seek to emphasise both the uniqueness of the offer - that the recipient alone has won a major prize – and its time limited nature in order to induce a response. This reduces the motivation to process the scam content objectively. In practice, nearly everyone will receive the same low value award and the promotion will run for a number of months. Examples of the type of language used include:

'Congratulations on being chosen [recipient's name].'

'... this offer is exclusive to you.'

'I am writing to you in great urgency.'

'... the award allocated to you ... must be claimed immediately'.

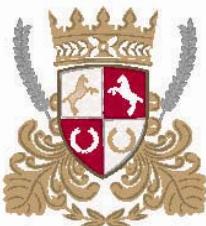
### **Escalating commitment**

- 8.82 Even when victims realise that the phone call to a recorded message (to find out what prize they can claim) is costing money with each minute, they may feel the need to hang on and see what they have won, to justify the expense already incurred. This can extend beyond the initial phone call to the payment of additional costs for delivery of their prize:

'I mean I've had a couple of MP3 Players in the past, which weren't particularly good quality, but they worked, so I gave them to my daughters ... for the ten quid phone call and the two fifty post and package whatever it was, it's like twelve fifty for an MP3 Player that I probably could have got for that price somewhere... but I'd rather have that, after ... spending the ten quid on the phone call, it's something that I could have made use of, so I then paid the one pound fifty or one ninety-nine whatever it was, postage and packaging, insurance.'

At one level, the victim's response here is quite rational: once the £10 is irretrievably spent, the correct question is indeed whether the value of the prize is greater than the £2.50 that remains to be paid. However, that is a level of sophistication that people rarely apply in other contexts, and it is probably better to see this as a kind of 'chasing losses' or 'sunk cost' effect.

## PROFILE 8.10: BOGUS RACING TIPSTER SCAMS



RACE WINNERS PARTNERSHIP

### EXPERT ADVICE = GUARANTEED WINNERS = LIFE CHANGING WEALTH

The Race Winners Partnership is an internationally renowned team of racing experts with a combined experience of over 80 years in the racing industry. Winning isn't about luck it takes skill and knowledge. We work with all of the most influential people in racing and have unrivalled access to insider information that will **guarantee** you MASSIVE profits.

#### DO YOU WANT TO MAKE A GUARANTEED £10,000 A WEEK?

For a limited time, we are offering a select number of new clients access to this lucrative inside information. You can't fail. In the last 6 months of 2007, 19 out of 20 runners we tipped were winners. That's a 95% strike rate! You also have the added security of knowing that all our bets are proofed in advance with the racing press.



*'I've used other tipsters in the past and been disappointed but Race Winners Partnership are lengths ahead of the field when it comes to winning tips. My returns have skyrocketed since I joined. I've just bought a new house and upgraded my car, after only one year!'*

**John - London**

### DON'T MISS OUT ON THIS EXCLUSIVE OFFER OF GUARANTEED SUCCESS

For a limited time we have reduced our membership fee to a special rate of only £100 per year instead of the usual price of £1,000. There are only 40 places available, this is the only chance to profit from this special offer. You will get access to our exclusive service and regular information from our contacts about which horses to back.

We **guarantee** to refund your fee, in full, if at any time you are unhappy with the profits you are making

**TURN OVER FOR FULL MEMBERSHIP DETAILS.**

## **Bogus racing tipster scams: What are they?**

8.83 Consumers receive a glossy mailing from a so-called 'racing pundit' who claims to have access to inside information from trainers and owners and guarantees large profits by subscribing to a tipster service or syndicate. Victims often end up paying hundreds of pounds for a poor or non-existent service and when they try to get their money back, they find out that the pundit's name is made up and the address given is just a mailbox.

## **Psychological techniques**

- 8.84 The psychological techniques of persuasion in use in bogus racing tipster scams include:
- triggering visceral processing;
  - authority;
  - background knowledge and overconfidence.

### **Triggering visceral processing**

8.85 Racing tipster scams typically involve references to very large winnings, either as a total or in terms of substantial sums in short periods or repeatedly. They also stress the small layout required, and many refer to the money worries that the intended victim may be suffering:

'Join me for just £39 and make £20,000 guaranteed!'

'Amazing tax-free profits of up to £10,000 per week using the bookmakers' money.'

'If you could turn £100 into £500,000+ guaranteed, would you be happy?'

'Are YOU drowning in a sea of bills? If I provided a financial life jacket would YOU take it?

'Now you can give up work and become a horse race investing millionaire.'

'What would YOU do if you were earning this sort of money? Enjoy a luxury holiday or buy a foreign villa perhaps, maybe early retirement abroad, buy a great car or even two great cars?'

- 8.86 People are influenced by these sorts of supposed cost/benefit ratios and the promise of large winnings to shut down their broader processing. Here is one of our interviewees who lost about £6,000, £3,000 paid to the so-called tipster, and £3,000 on losing bets made on the basis of the tipster's recommendations:

'This is what you'll win, yes? and now that's the sort of money he wants off you - when I did it about three years ago... it might have been two thousand five hundred, so much deposit plus pay the balance due when we have made you a clear profit of two hundred and fifty thousand pounds; and these are the things what get people, you know, 'Ooh, that's it the end of my worries'. And, without you knowing what betting is, he'd put four or five bets on a page - all winners, and how much you would have got, if you'd put say fifty quid on them, and they amounted to thousands, probably thirty; [but] they were past races, perhaps over the past twelve months...and on paper it looks really really good and you think 'Ooh, if just one of them came in for me, I'd be quite happy, but... I'm still waiting for this two hundred and fifty thousand pounds profit.'

### **Perception of authority**

- 8.87 Tipster scams seek to entrap authority processes in a variety of ways. Their materials are frequently highly professional and glossy in appearance, suggesting that a successful and legitimate business lies behind them. They often use fictitious names of so-called 'experts' with

years of experience and access to inside information to further create a perception of authority. For example:

'I look after the affairs of some of the biggest Gambling Owners in the U.K. and one of the most influential owner/gamblers in Eire.'

'I am personally friendly with many of the top trainers in the land.'

'I am a racing professional - well known, successful and established in racing circles for over 20 years.'

'Having had 30 years experience in the racing industry I have individually built up the most powerful racing team who are now able to pass on their wealth of knowledge to you.'

- 8.88 They are also often styled after the sort of portfolios that a finance company might issue (this is of course in keeping with the rhetoric of legitimate gambling firms, which prefer to use terms like 'investment' rather than 'betting' to describe their customers' activity). Text mining shows that concepts of transaction and trading, and investment, are among the most common in this type of scam material, and words like 'price', 'profit', and 'opportunity' occur frequently. The materials often use visual symbols of authority such as fake crests and seals. In addition, though, they use racing-specific signs of authority, such as tables of past results and winnings in the same style as the racing press and references to results being 'proofed' with the racing press.

### **Background knowledge and overconfidence**

- 8.89 The interviewee quoted above claimed to know nothing about betting. In general, though, racing tipster scams are aimed at people who believe they know something about the betting world – and in particular believe (as most horse race gamblers do, at some level) that there is inside information available that can enable the punter to beat the bookmaker ('it was supposed to be stable information' said one of our interviewees), and that bookmakers are in some sense the enemy of the punter, so that there should be some system available that would outwit them. It is this sense of knowing better and deserving better that the scammers seek to

foster and exploit. As the text mining analysis shows, this is reflected in the frequent use of words like 'information', 'members', and 'bookmakers' in the materials. For example:

'The battle between punter and bookmaker is at last set on something approaching a level playing field. Indeed, in many ways, the pitch is tilted to the advantage of the person betting.'

'At last the betting man or woman has a real chance of earning money at the same time as enjoying the thrill of the chase.'

- 8.90 Another feature of many of these scam mailings is an attempt to imply that there are many 'bogus' tipsters out there but this offer is somehow genuine. For example:

'PLEASE DO NOT BE BLINDED by some of the impersonators that you may have come across in our business that try to get in on a good thing with no genuine inside information at all.'

'Being a true pro in my business I am sick to death of hearing stories of bogus tipsters with misleading figures and misleading information which never turns out to be what you had hoped for.'

'There are a lot of people in this business pretending to be what they're not - and if you've been burned by an 'expert' in the past, you'll recognise this all too well. You must not allow these frauds to cloud your judgement and deny you your one shot at the big time.'

'Have you been approached by syndicates in the past? If you have, it's a fair bet that you will soon have realised that all you've received for your hard-earned cash is a fistful of empty promises and a whole lot of wasted time.'

- 8.91 Many of these mailings also use fake testimonials (social proof), fake money back guarantees and fake references to limited places and special membership discounts to create a sense of urgency and reduce the motivation for information processing.

## **9      STUDY THREE: A COMPARISON OF SUSCEPTIBILITY TO ERRORS OF JUDGEMENT IN VICTIMS AND NON-VICTIMS OF SCAMS**

- 9.1 Studies 1 and 2 revealed a marked coincidence between the kinds of persuasive techniques that could be detected in scam communications, and the kinds of errors of judgement that scam victims reported in interviews. However, as noted above, this does not necessarily mean that scammers are accurately targeting potential victims' vulnerabilities: it may simply mean that those who emerge as victims are those who happen to be vulnerable to the particular techniques that scammers, as a result of cultural processes, happen to use. To disentangle such a selection explanation from a more truly causal process, it is necessary to use a more experimental approach.
- 9.2 Study 3 can be described as a quasi-experiment, in that we sought to investigate susceptibility to a wide range of decision errors in samples of the general population some, but not all, of whom would have been scam victims. The sources of error that were found to be most influential in Studies 1 and 2 (triggers for visceral processing and appeals to trust and authority) were included, but so were sources of error that were found to be less significant in the earlier studies. A postal questionnaire approach was used: it included a list of statements that would be typical of people who were vulnerable to different kinds of decision error, and respondents were asked to indicate how far they agreed with them. There were two different samples of participants. One sample came from a panel of committed research volunteers, and the other was secured by blanket delivery of requests to participate within a geographical area chosen to be demographically typical of the UK within the constraint of being not too distant from Exeter. Neither of these methods is likely to produce a truly representative sample of the UK population, but neither has any obvious bias that would distort the comparison of victims and non-victims. The two samples are likely to have rather different biases, so if they give consistent results, confidence in the generality of our conclusions will be increased.

## **Method**

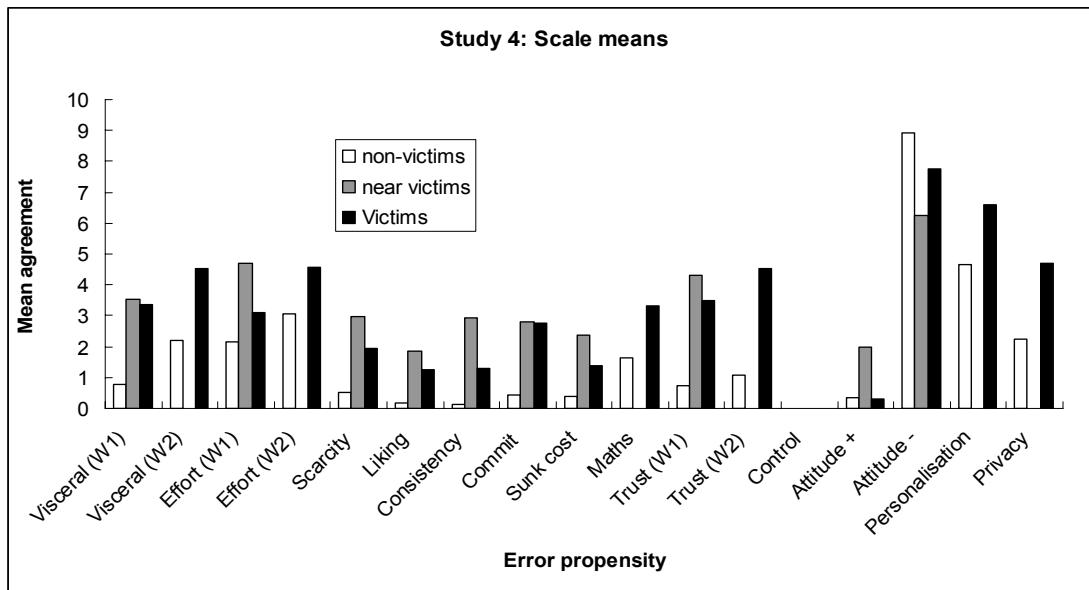
- 9.3 Full details of the method for the study are given in Annexe E, and the text of the questionnaires is in Annexe F. The study took place in two waves. In Wave 1, we posted questionnaires to members of the Participant Panel of the University of Exeter School of Psychology. The panel includes contacts of the School who have volunteered to help the School in its research. In Wave 2, we hand-delivered questionnaires to households in the towns of Taunton and Yeovil, Somerset, chosen to be representative of the UK population. Wave 1 and many of the interviews for Study 1 were completed and their results analysed before Wave 2 was started, so the Wave 2 questionnaire was modified in the light of the earlier results, but both questionnaires had the same general structure.
- 9.4 Participants were asked some general questions on scams, including the types of scams they had received and whether they had ever responded, and were then asked to indicate their feelings about a scam they had received or responded to, using a series of questions that probed vulnerability to different kinds of errors of judgement. For example, the question, 'I responded to the scam in order to feel better' probed for an emotional source of error, mood regulation; the question, 'I felt there was a strong authority behind the scam' probed for a cognitive source of error, reliance on authority. From Wave 1, we got a 49 per cent response rate and 103 usable returns (quite a few returns from non-victims were unusable because people had left large numbers of questions unanswered), and from Wave 2, a 15 per cent response rate and 116 usable returns. In Wave 1 only, the questionnaires concluded with an invitation to take part in an interview, so some of the participants from this study also served in Study 1.

## **Results**

- 9.5 Of the participants submitting usable responses, in Wave 1 65 per cent recalled being approached by scammers in the past two years, while in Wave 2, 73 per cent did. In Wave 1, 11 per cent classified themselves as victims and nine per cent as near victims. Corresponding figures for

Wave 2 were 10 per cent and 3 per cent; because the numbers of near victims were so low, they are amalgamated with the victims in the analysis of Wave 2, since prior analyses of Wave 2 showed that near victims' responses were very similar to those of victims. Figure 2 shows the mean scores (on the scale from 0 to 10) of propensity to the different kinds of judgement error that we tested, in the three groups for Wave 1 and the two groups for Wave 2. Annex G includes a table summarising the results of tests of the significance of the group differences.

**Figure 2: Study 3. Mean scores on scales formed to measure propensities to different kinds of errors of judgement**



Data are shown separately for Waves 1 and 2 (W1 and W2) where constructs were measured in both waves. The scales used were as follows:

- Visceral triggers (positive emotions)
- Cognitive effort
- Scarcity and uniqueness of scam offer
- Liking and similarity
- Need for consistency with future expectations
- Behavioural commitment
- Sunk cost
- Problems with maths
- Trust and authority
- Illusions of control
- General attitude towards scams: Positive
- General attitude towards scams: Negative
- Personal approach
- Need for privacy

## **Discussion**

- 9.6 Response rates in Wave 2 were low, and in Wave 1 there were a considerable number of unusable responses. This implies that there is a limit to the extent to which people who have not been scam victims can meaningfully answer questions about how scams make them feel.
- 9.7 The proportions of respondents who self-reported being victims within a 24-month period was 11 per cent in Wave 1 and 10 per cent in Wave 2. These numbers are about what would be expected from the OFT research of 2006, which gave a figure of 6.5 per cent of the population falling victim in any year; exact agreement would not be expected given that the questions posed were not exactly the same. It would be expected that those with experience of, and therefore interest in, scams would be more likely to return their questionnaires, and there is a potential source of additional bias in the participant panel used for Wave 1, which contains a higher proportion of older and single people than the UK average. However the general agreement with previous OFT figures suggest that these biases were not important.
- 9.8 Accepting the limitations imposed by the return rates, however, the data from the questionnaires are revealing, and a number of useful conclusions can be drawn from examination of Figure 2 and the Table in Annex G.
- 9.9 Where the same constructs were measured in both waves, similar results were obtained. This gives some assurance that non-representativeness or non-randomness of the samples were not distorting the results.
- 9.10 With the sole exception of the attempt to measure illusion of control, all the constructs we sought to measure formed internally consistent scales, despite the fact that we had no opportunity to pre-test the items with a large independent population, as would ideally be done. This result implies that propensities to commit judgement errors are meaningful psychological constructs, on which people differ consistently.

- 9.11 Mean levels of agreement with all the statements are low, except in the case of negative attitude, where high agreement indicates the same kind of response as low agreement to the other statements. Virtually all responses were below five on a scale from 0 to 10. Respondents are not indicating implausible levels of agreement with the probe statements in the questionnaire.
- 9.12 There are marked differences in response between non-victims and near or actual victims. Non-victims' mean levels of agreement are below 1.0 on many of the scales, indicating that the majority of non-victims report no agreement whatsoever with most of the probe statements, whereas near and actual victims report modest mean levels of agreement. These results thus support our expectation that people who are susceptible to a variety of kinds of error of judgement are more likely to fall victim to scams, and thus support the general approach we have taken to the psychology of scams.
- 9.13 There was no evidence that any of the decision error propensities distinguished victims and near victims from non-victims more effectively than others. In particular, the decision errors that scammers seem to try to elicit most frequently (visceral processing and excessive reliance on authority) are no more characteristic of victims and near victims than any of the others. Of course, there was some evidence in Studies 1 and 2 that all these kind of judgement errors may play some role in scam communications and in victims' responses. But in those studies there was clear evidence that some judgement errors play a bigger part in the scam process than others. On the evidence of the present data, this is not because they are the errors to which victims are most vulnerable.
- 9.14 An interesting special case of the last point is that victims report making more cognitive effort to understand scams than non-victims. Given that falling for a scam is by definition an error, this seems surprising at first sight. However it presumably reflects the victim being 'drawn in' to the scam: non-victims no doubt include many people who discard scams without given them a second glance. Presumably, however, this greater effort does not take victims to the lengths of reading the small print,

which in some types of scam would make it clearer that the offer is not what it seems.

- 9.15 Although the differences between near victims and actual victims are typically not significant on individual scales, there is a clear pattern across the scales, with near victims reporting slightly more agreement with the probe statements than actual victims. This is contrary to our expectations: we thought that near victims would emerge as intermediate between non-victims and actual victims. It looks as though the experience of having been the victim of a scam does make people more cautious ('once bitten, twice shy' victims) – and the near victims may be the currently most vulnerable group, since they have the propensities to respond as victims but have not yet been warned off by bitter experience.
- 9.16 Study 3 thus supported our assumption that propensities to errors of judgement differ between scam victims and non-victims. However, the data suggest that victims have a general vulnerability to persuasive techniques, and not just to those that are characteristic of the kind of scam they fell victim to. Indeed, it would be easy to combine responses to almost all the items on each questionnaire to form a single scale of persuadability, which would probably relate closely to the scale proposed by Bearden et al (1989).
- 9.17 Although Study 3 allowed for a more objective approach than Study 1, the data are still only quasi-experimental, so thus cause and effect remain uncertain. Because the data was collected retrospectively, it is possible that scam victims distort their memories about why they reacted. As with any questionnaire study, it is possible that participants distort their responses to make a specific social impression on the researchers (impression management) or to respond in the way they believe the researchers want them to (demand effect). These methodological difficulties can only be resolved with a more fully experimental approach, and this was the basis of Study 4.

## **10 STUDY FOUR: AN EXPERIMENT WITH A SCAM SIMULATION**

- 10.1 Conceptually, the obvious way to investigate the effectiveness of various persuasive techniques in eliciting response to a scam is to send out a number of scam mailings with controlled differences in their content, and see how many of each kind are returned – with any monies sent by respondents being returned. Taken baldly, this approach would risk causing serious offence or even harm to members of the public, violating the ethical standards expected of researchers, and damaging public confidence in both the researchers and the sponsors.
- 10.2 In Study 4 we sought ways of coming as close to a straightforward experimental design as we could without running those risks. We used two different techniques. In Study 4a, we simply sent members of the public a letter that enclosed a simulated prize draw pitch/sweepstake scam mailing and a questionnaire that asked for their reactions to it. This was in a sense a control condition: we expected it to elicit 'cold' responses in which people would tell us what they thought they would be likely to do. In Study 4b, we used almost exactly the same materials, but altered the packing order, so that people opening the envelope would first encounter the simulated scam mailing. Only if they took enough interest in it to open it would they find the explanatory letter, which asked for reactions in the same way. We hoped that this technique would elicit at least some 'hot' responses, reports of how people felt at the time of opening, when they were still treating the scam at its face value and not as a communication from researchers. We would see evidence for that if the responses to the two formats differed.
- 10.3 To anticipate a little, it did turn out that responses were quite different in the two situations. For clarity, we therefore present the two studies separately here. However they were run simultaneously, as a single operation, and in particular there were no differences between the populations to whom the two sets of materials were sent.
- 10.4 In both parts of the study, we varied three aspects of the content of the scam, which we thought might be important on the basis of our own

research as well as the work of other authors in this field, both described earlier in this report:

- whether a visceral trigger was present or not
- whether the scam content looked very official or not
- whether the prize to win was very large, or only moderate.

10.5 In addition, we also noted whether participants reported that they had previously responded to a scam or not (responders vs. non-responders). All combinations of these four independent variables were used, so that we could look for interactions between them.

10.6 We used two kinds of response measures:

- whether or not people responded to the mailing (for this measure, we could not use the responder vs. non-responder independent variable, since we did not know in advance which recipients had previously responded to a scam)
- measures of the way in which people responded to the mailing, derived from the questionnaire responses.

## Methods

10.7 A total of 10,000 scam simulations and questionnaires were sent out, 5,000 in the format for Study 4a and 5,000 in the format for Study 4b. Half of each type were sent to each of two mailing lists, obtained commercially: a general public sample, expected to be typical of UK consumers, and a sample of people who were described as having participated in postal lotteries.

10.8 Eight different scam formats were generated, by varying the three content factors outlined above. Figure 3 shows an example. The letters inviting participation were slightly different in Studies 4a and 4b, and samples can be found at Annexe H. The questionnaire was the same in both studies, and a copy can be found at Annexe I.

Figure 3: Study 4: An example of the simulated scams used



- 10.9 The questionnaire included 14 items that asked the respondents to rate their reactions to the scam. We examined the correlations between the responses between these items using factor analysis (details are shown in Annexe J). The results of the factor analysis showed that the questionnaire responses could be efficiently summarized in terms of the respondents' average responses to two groups of items, one of which was concerned with their intention and likelihood of responding to a scam like the one they had been sent, and the other of which was concerned with how the scam made them feel. We refer to these two scales below as the 'intention to respond' scale and the 'dislike of the scam' scale. The second scale is referred to as measuring 'dislike' because feelings about the scams were always evaluative and we scored them in the direction that a higher scale value corresponded to a more negative evaluation.
- 10.10 In both studies, the mailing included a Freepost envelope for return of the questionnaire.

### **Comparison of return rates in Studies 4a and 4b**

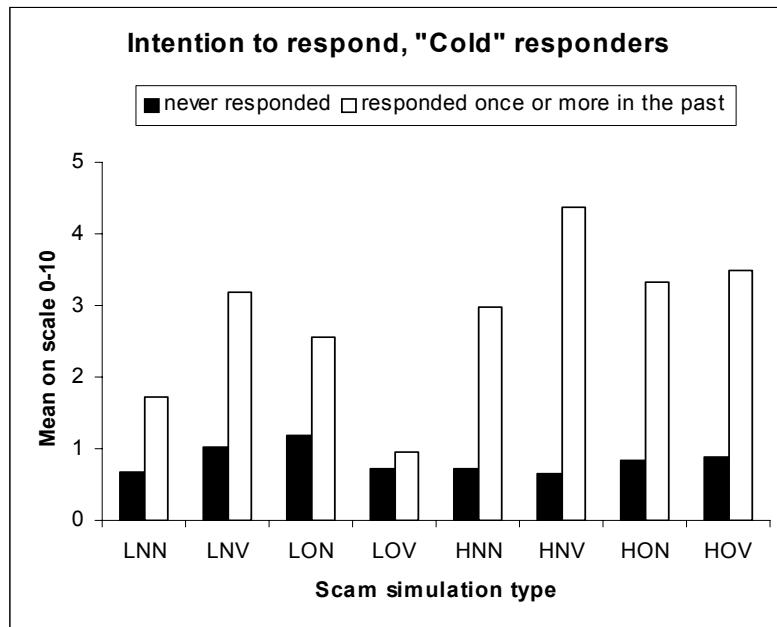
- 10.11 In study 4a, a total of 422 usable responses were received. 53.6 per cent were from women; 0.2 per cent from respondents between 18 and 25 years of age; 3.1 per cent from people between 25 and 35 years of age; 14.9 per cent from 35 to 45 year olds; 27.3 per cent from 45 to 55 year olds; 34.2 per cent from 55 to 65 year olds; and 20.3 per cent from people older than 65. 14.7 per cent reported that they had previously responded to a scam.
- 10.12 In study 4b, 525 usable responses were received. 55.8 per cent were from women; 0.4 per cent from people between 18 and 25 years of age; 3.8 per cent from respondents aged between 25 to 35 years old; 13.8 per cent from 35 to 45 year olds; 25.2 per cent from 45 to 55 year olds; 37.4 per cent from 55 to 65 year olds; and 19.4 per cent from people older than 65. 16.1 per cent said that they had previously responded to a scam.

10.13 The difference in the numbers responding in the two studies was highly significant (2-tailed binomial test,  $P<0.01$ ), but the age and gender distributions were virtually identical, as were the likelihoods that respondents had previously responded to a scam. Furthermore, the pattern of response between the eight different scam types did not differ significantly between plan types. Overall, most responses (148) were received to the least pressing version of the scam (no official markings, low prize, no visceral triggering), with numbers of responses to the other types varying from 109 to 128; however, the differences in response rates did not reach statistical significance.

### **Results of Study 4a: 'Cold' responses to scams**

10.14 Figures 4 and 5 shows the pattern of responses on the 'intention to respond' and 'dislike of the scam' scales for the respondents in Study 4a who received the package which presented itself immediately as a research enquiry. The significance of differences between groups was tested by analysis of variance, and details of this analysis are included in Annex K; only significant effects are described here.

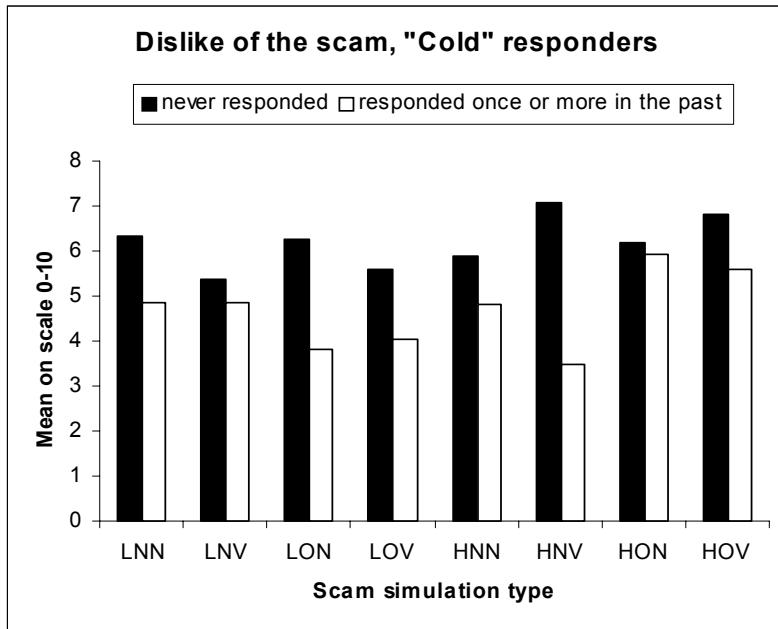
**Figure 4: Study 4a**



Mean scores of intention to respond to a scam as a function of the type of scam simulation received, among people who received the scam simulation enclosed in a letter asking them to participate in research. Scam types are designated by a 3-letter code where the first letter indicates whether the prize was Low (L) or High (H), the second letter indicates that symbols of Official status were not used (N) or used (O), and the final letter indicates that attempts to arouse visceral processing were not used (N) or used (V).

10.15 As regards intention to respond, it can be seen that by far the biggest difference is between those who had responded to a scam in the past, and those who had not, with those who had responded previously more likely to respond again (though bearing in mind that the maximum value on the scale was 10, they still reported that they were relatively unlikely to respond). However, there were also other differences. Higher prizes elicited a higher mean intention to respond, though this effect was largely confined to those who had responded in the past. Statistically, it also appeared that providing cues to visceral processing increased intention to respond somewhat, but only if cues to official status were not also provided, and most strongly among those who had previously responded. Compared with the effect of the size of prize, however, this was a small tendency.

**Figure 5: Study 4a**



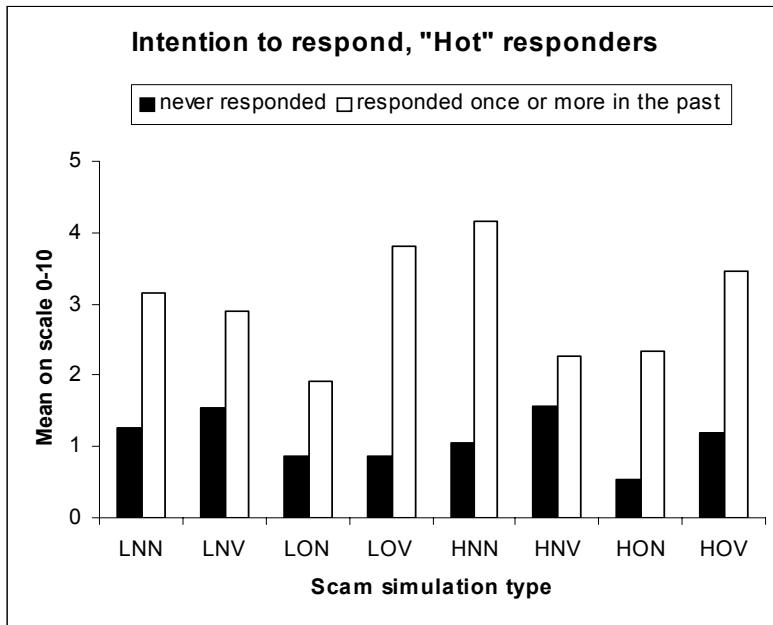
Mean scores of dislike of the scam situation as a function of the type of scam simulation used, among people who received the scam simulation enclosed in a letter asking them to participate in research. Simulation types are coded in the same way as for Figure 4.

10.16 As regards dislike of the scam, there was no clear pattern of difference between the scam types. With all scam types, however, those who had previously responded to a scam showed a somewhat lower dislike of the scam situation.

### **Results of Study 4b: 'Hot' responses to scams**

10.17 Figures 6 and 7 show the pattern of responses on the 'intention to respond' and 'dislike of the scam' scales for the respondents in Study 4b who received the package which on first sight looked more like a real scam mailing. Again, the significance of differences between groups was tested by analysis of variance, and details of this analysis are included in Annex K; and again, only significant effects are described here.

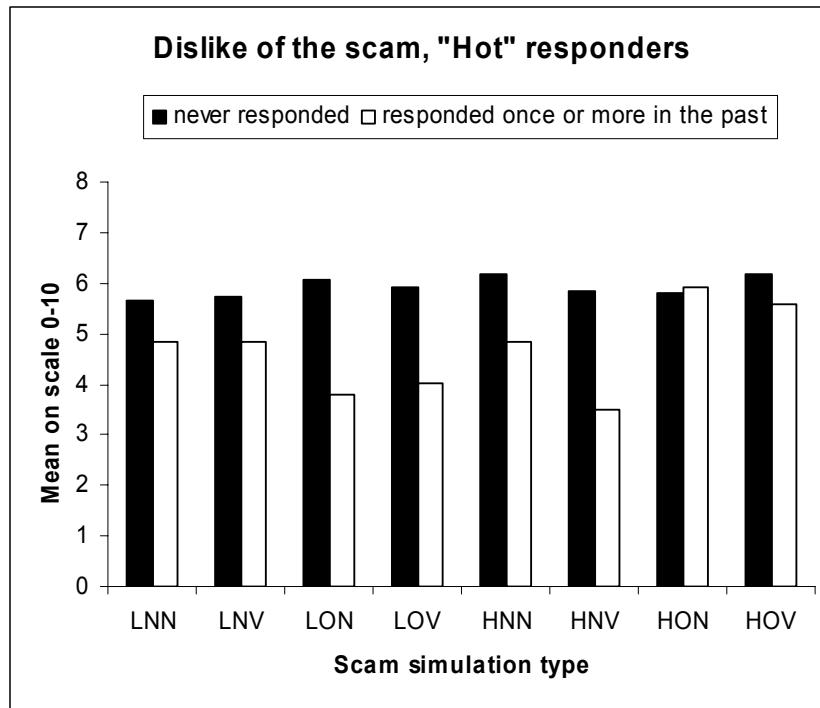
**Figure 6: Study 4b**



Mean scores of intention to respond to a scam as a function of the type of scam simulation used, among people who received the scam simulation with the letter asking them to participate in research initially hidden. Simulation types are coded in the same way as for Figure 4.

- 10.18 As in Study 4a, the biggest difference was between those who did and did not report that they had previously responded to a scam communication. However the pattern of differences between the scam types was quite different from that seen in Study 4a. There was no overall effect of size of prize, but especially in those who had previously responded, the content cues – official status and visceral elicitation – seemed to interact, so that the highest intentions to respond occurred when either both of them were present, or neither.

**Figure 7: Study 4b**



Mean scores of dislike of the scam situation as a function of the type of scam simulation used, among people who received the scam simulation with the letter asking them to participate in research initially hidden. Simulation types are coded in the same way as for Figure 4.

- 10.19 As regards dislike of the scam, as in Study 4a there was no clear pattern of different responses to different types of scam simulation. However once again those who reported that they had never responded to a scam scored consistently higher on the dislike scale than those who said that they had responded before.

## Conclusions

- 10.20 The most striking result from these studies was the consistent difference between those who report that they have, and have not, previously responded to a scam of some sort. Regardless of whether people were making a 'Hot' or a 'Cold' response, and regardless of the detailed content of the scam simulation, previous responders showed a higher likelihood of responding again, and less dislike of the scam situation,

than those who said they had never responded. This confirms the impression from our earlier studies and from other research that there is a sub-population who are particularly vulnerable to scams and hence to becoming repeat victims (for example, previous OFT research found that a victim had a 30 per cent chance of falling for another scam within the following 12 months). In the present study, 15.5 per cent of all respondents said they had responded to a scam at some time in the past, and this is reasonably consistent with other estimates of the proportion of the population likely to be vulnerable.

- 10.21 The 'Hot' and 'Cold' responses differ in what they suggest about the factors likely to be important in determining whether people will respond to a particular scam or not. In the 'Cold' responses, there was a clear effect of the size of prize offered, and this indicates that, when reflecting on scam response, people think they would be likely to be affected by this factor. But this effect was not seen in the 'Hot' responses, where the significant effects were due to the content of the scam communication. The pattern of those effects was not entirely clear, very probably reflecting the fact that manipulating cues for visceral processing and official status is not as straightforward as manipulating the stated prize money. It is more than likely that those variables do in fact interact, and that scammers manipulate them in a hit or miss way until they strike on a combination of messages which comes across as convincing. Where the 'Hot' and 'Cold' responses differ, it seems most probable that the 'Hot' responses are the more authentic indication of behaviour towards a real scam. The 'Cold' responses can only tell us what people think, on reflection, would be a successful scam offer; the 'Hot' responses come closer to what actually causes them to pause before consigning a scam mailing to the waste bin.
- 10.22 The fact that the 'Hot' and 'Cold' results differed suggests that is worth the effort to try to obtain a 'Hot' response when investigating scam effectiveness. That is not a surprising conclusion, though it is one that will inevitably bring an increased risk of conflict between the requirements for valid research and the requirements of researchers' ethical codes. The way in which the scam simulation was delivered had an effect not only on the pattern of response to different types of scam

content, but also on the likelihood that people would respond to the mailing, and there were more 'Hot' than 'Cold' responses. No doubt some of the mailings were discarded without even being opened, and since the envelopes used were identical in all cases, differences in the content could have no effect on relative rates of this kind of immediate discarding (real scam mailings, of course, are often delivered in envelopes that allude to their content, such as a reference to a prize win notification, presumably to try to reduce immediate discard rates). Where the recipient opened the envelope at all, however, it seems that something that looked like a typical scam offer was less likely to be discarded than a letter inviting people to take part in research. This has implications for future research methodology, but it also emphasizes the fundamental issue of concern in our research: to at least a minority of the population, scam offers are attractive. Our mock scam, based on samples that could only have led to the recipients losing money, was more effective at gaining attention than our polite (but probably dull-looking) letter asking for cost-free help with a project for the public good.

## 11 GENERAL CONCLUSIONS

- 11.1 The present research started with the basic question of why so many people, so often, react to completely worthless scam offers. Why are 3.2 million people in the UK not able to detect scam content and so collectively lose more than £3.5 billion every year? Why do some scam victims even react repeatedly so that some of them lose their entire financial resources as well as their psychological health?
- 11.2 Our approach has been to regard falling for a scam not as an anomaly but as a result of the normal processes that govern human economic choices. We rely on a battery of cognitive and social heuristics to make choices that will, most of the time, give good enough results. But by the standard of rational choice theory, these heuristics will lead to decision errors. On the basis of our research, the characterisation of falling for a scam as a decision error seems to be well supported, and the persuasive techniques used by scammers seem to be calculated to induce known categories of error.
- 11.3 Recognising scams as persuasive communications, and a scam response as an error of judgement, brings in an armoury of theoretical and empirical literature that can be used to supplement the thin and patchy research that has been carried out directly on scams. It is already clear, however, that it would be a mistake to assume that persuasive techniques appeal only to emotional or motivational processes, or that errors of judgement are only cognitive in origin. The array of psychological processes that we identified in Sections 3 and 4 of this report as possibly underlying scam susceptibility was almost unhelpfully large. Our research accordingly tested a broad variety of potential psychological processes underlying responses to scam communications. Although it remains likely that every one of these processes plays some part, sometimes, in someone's vulnerability, on the basis of the present findings, we can reduce the list of main drivers of falling for a scam to a handful of central motivational and cognitive processes.

- 11.4 Different kinds of scam do exploit different error tendencies to some extent, but the similarities between scams in their content and persuasive techniques are more striking than their differences – and they do not exploit all kinds of decision error equally. The greatest and most consistent emphasis, both in the hundreds of scam communications we analysed and in our interviews with scam victims, was on appeals to trust and authority (that is, scammers use, and victims fall for, cues that make the offer look like a legitimate one being made by a reliable official institution or established reputable large-scale business), and on visceral triggers with relation to positive future reference points (that is, scammers use triggers that make potential victims focus on the huge prizes or benefits on offer, and imagine positive future emotional states). In our experimental survey, when we tried to elicit 'Hot' responses to a simulated scam mailing (Study 4b), those variables were again found to have some effect on the way people responded. Any theory of scams and scam response will involve multiple, interactive processes of different kinds, but it seems that the complexity needed to build an adequate theory is less than might be feared.
- 11.5 Authority and visceral appeals do not of course exhaust either the content of scam communications or the causes of decision error among victims, and a number of other interesting error-inducing processes emerged from the interviews of Study 1, were confirmed in the questionnaire responses of Study 3, and could be seen to be being exploited in the text-mining in Study 2.
- **The influence of background knowledge.** Scam victims often have significant knowledge about the subject of the scam content, and this can increase rather than decrease the risk of becoming a victim. For example, background knowledge about stocks and share investing may increase the likelihood that one will fall into the trap of an investment scam.
  - **Cues and associated feelings of scarcity.** Scam communications are frequently personally addressed to victims and the 'offers' they make are subject to time limits. The scarcity cues used in scam communications lead victims to experience the offer as an unusual,

urgent and unique one, which is personally addressed to them. This reduces their motivation to process the scam content objectively.

- **Induction of behavioural commitment.** Scammers ask their potential victims to make small steps of compliance to draw them in, and after that the victims feel committed in a variety of ways.
- **The disproportionate relation between the size of the alleged prize and the cost of trying to obtain it.** Scam victims focus on the relatively small amount of money they have to send in order to get the alleged big prize; other researchers, for example, Shadel and Schweitzer-Pak (2007) call this phenomenon 'phantom fixation'.
- **Privacy.** Scam victims keep their decisions private and hide them from family and friends; indeed to some extent they hide them from their more rational selves.
- **Self-regulation.** Scam victims report being less able to regulate and resist emotions associated with scam offers, again indicating an economic mind that is in a certain sense divided against itself. This creates an extra vulnerability in those who are socially isolated, because social networks often induce us to regulate our emotions when we otherwise might not; in turn, this sheds light on the privacy-seeking of those who are on the way to becoming scam victims, which seems to be a way of preventing their social networks acting on them.

- 11.6 The present research suggests that the psychological reasons for responding to scams involve a mixture of cognitive and motivational processes. From a motivational perspective, the most important findings are that people respond to scams because they (a) they feel that the scam is an unusually good offer, (b) cues in the scam content trigger positive emotions with a future reference point, and (c) they are less able than others to regulate and control emotions such as greed and excitement. From a cognitive perspective the most important psychological processes are (a) overconfidence in a specific topic

(because victims feel they have experience and background knowledge in this specific area) and (b) the difference between the financial input and the potential output of the scam (size of prize relative to payment required).

- 11.7 Some of the psychological processes we identified as contributing to falling for a scam were to be expected, on the basis either of previous literature, or plain common sense. Some were less predictable, though reasonable in retrospect. For example, it was striking how some scam victims kept their decision to respond private and avoided speaking about it with family members or friends. It was almost as if with some part of their minds, they knew that what they were doing was unwise, and they feared the confirmation of that that another person would have offered.
- 11.8 Another counter-intuitive result is that scam victims often have better than average background knowledge in the area of the scam content. For example, from our interview material, it seems that people with experience of playing legitimate prize draws and lotteries may be more likely to fall for a scam in this area than people with less knowledge and experience in this field.
- 11.9 Nor did we expect to find, as we did in Study 3, that scam victims report that they put more cognitive effort into analysing scam content than non-victims. This contradicts the intuitive suggestion that people fall victim to scams because they invest too little cognitive energy in investigating their content, and thus overlook potential information (for example, in the small print) that might betray the scam. We presume this reflects the victim being 'drawn in' to the scam whilst non-victims include many people who discard scams without given them a second glance.
- 11.10 Finally, from the interviews it was clear that some people viewed responding to a scam as taking a long-odds gamble: they recognised that there was something wrong with the offer, but the size of the possible prize (relative to the initial outlay) induced them to give it a try on the

off-chance that they might succeed. These unexpected processes would repay further, more detailed investigation.

- 11.11 Although in one sense responding to a scam becomes a normal behaviour within our approach, in another sense it remains exceptional. In our questionnaire surveys (Study 3), scam victims seem to be people who are slightly but consistently more likely than the population at large to fall into decision errors, and in our experiments (Study 4), people who reported having previously responded to a scam were consistently more likely to show interest in responding again, and showed less dislike of the whole scam situation. It seems that there is a minority of people who are particularly vulnerable to scams. Though a minority, it is not a small minority; depending on how it is assessed, it includes something between 10 per cent and 20 per cent of the population. Furthermore, Study 3 suggests that the vulnerability is not specific to the persuasive techniques most characteristic of current common mass marketed scams, though it does include them. It follows that new scams may emerge in future that exploit different persuasive techniques.
- 11.12 People who show above average vulnerability to scams do not seem to be in general poor decision-makers, for example some of those victims we interviewed had had successful careers in business or the professions. They simply seem to be towards one end of the normal range of persuadability. To describe openness to persuasion as a vulnerability is not to say that all persuadability is bad: in normal social exchanges it is sensible, indeed essential, to be open to some kinds of persuasion, such as reciprocation. But some people seem to be unduly open to persuasion, or perhaps unduly indiscriminating about who they allow to persuade them. Such people need in some way to better protect themselves against their openness to conviction by others whose intentions cannot be assumed to be well-disposed.
- 11.13 The existence of individual differences in general persuadability throws some light on the fact that some people become 'chronic' or serial scam victims: it would not be surprising to find that such victims are exceptionally highly persuadable – though that is unlikely to be the

complete explanation of chronic victimhood as other factors such as cognitive impairment are likely to be of some relevance.

- 11.14 The fact that, despite differences of emphasis and content, all types of scam communication covered by this research seem to have a number of important features in common, gives some hope that people can be educated to recognise and resist them.

## **12 IMPLICATIONS FOR POLICY AND PRACTICE**

- 12.1 How can our improved understanding of the psychology of scams play a part in reducing the damage that scams do? Our suggestions here are tentative, because practice always has to be tempered by practical concerns. In addition, some of our ideas are based on relatively detailed points from our data, which really require confirmation in follow-up studies before too much is built on them.
- 12.2 Obviously tackling mass marketed scams is partly a matter of enforcement and disruption at the level of the scammer (source) or means of delivery of the scam. This is largely outside our sphere of expertise, and we concentrate here on measures that might be taken to reduce scams by educating the public and thereby changing people's response to scams. However one aspect of the present results may have application at the level of scam delivery. As noted in Section 7, the word-level text mining does suggest that the content of scams in general, and each particular kind of scam, can be recognised with fair accuracy by relatively crude word-counting procedures, and this offers possibilities for automatic scam elimination at least from the electronic mail stream.
- 12.3 The likely existence of a subset of the population with enhanced scam vulnerability is both a problem and an opportunity from a public education point of view. It is a problem in that it suggests that a high proportion of any advertising effort will be wasted on people who are relatively unlikely ever to fall for a scam. It is an opportunity in that if the more vulnerable group can be identified – or can be encouraged to self-identify – more precise educational material can be focused on them.
- 12.4 We have seen that falling for a scam involves both motivational and cognitive processes. Previous research on fraud (for example, Cialdini, 1984/2007) and scam responding (for example, Shadel & Schweitzer-Pak, 2007) has mainly focussed on motivational processes (for example, liking and similarity, emotional commitment, need for consistency). The cognitive processes that we looked for were suggested by more general decision making research (for example, Fischer, et al., 2008a; Schulz-

Hardt et al., 2008). The present results suggest that responses to scam communications could be understood more fully by integrating motivational and cognitive processes, and therefore that counter-measures need to involve both kinds of process.

- 12.5 Not all potential errors of judgement are equally involved in falling for a scam, and for efficiency, public education campaigns need to focus on those that seem to be ubiquitous. These are appeals to trust and authority, and the clouding of sensible decision-making by the offer of huge rewards. Publicity could usefully emphasise just how easy it is to produce an official looking document, and (though this is already the topic of much publicity) just how implausible it is that anyone would be offering huge sums in return for no effort. In addition, Study 2 showed that there are reliable features of scams that are not to do with persuasion as such, but with the practical needs of the scammer. So people should be put on the alert for communications that spend a lot of time telling you how to send money, or persuading you to make contact. These are of course characteristics of more legitimate direct marketing as well as scams, but they seem to occur with an exceptional intensity in scam communications.
- 12.6 The fact that scam victims and near-victims report processing scam communications more thoroughly than non-victims suggests that efforts to persuade people to read scam materials more thoroughly or carefully are unnecessary and could even be counter-productive. Of course, if people get as far as the small print, they may well recognise a scam as a 'bad buy'. But that is not what non-victims do: Rather, they discard scams virtually unread. The most effective education strategy may be to help potential victims recognise scams at a glance. Much effort in scam prevention has already focused on trying to educate potential victims to detect these 'scam alerts' or warning signs. They range from the simple implausibility either of the offer (for example, a multi-million pound win in a foreign lottery you never entered or claims that a miracle product can make you lose large amounts of weight with no effort, dieting or exercise) or of the means of securing it (for example, wiring money to cover 'taxes and fees' by money transfer to claim your lottery win or giving your bank account details to someone in the belief that they will

transfer large sums of money sitting in an account in a Third World country), to technical features of an email or phishing web site, as discussed by authors such as Furnell (2004) or James (2005, chapter 3).

- 12.7 Kumaraguru et al. (2007) argue that current methods of teaching people to detect such scam cues are ineffective, but they also demonstrate experimentally that better methods are available. For example, research by Fischer et al. (2008c) found making consumers focus on potential losses (giving them a loss decision frame) reduces their tendency to selectively process only information that is consistent with the decision they have begun to form. So in a scam context, it should be helpful to encourage people to approach unsolicited communications with the question, 'How much could I lose here?' rather than, 'What's in this for me?' They would then be much more likely to look for reasons why they should not respond to the scam, instead of looking for reasons why they should. Future research is warranted to investigate the effectiveness of anti-scam education, and there is a basis of theoretical and laboratory work on which new education strategies could be built.
- 12.8 At least some responses to scams seem to be driven by the victim's interpretation of the situation as a long-odds gamble – it is probably no good, but it is worth a small punt. It would be worth considering an awareness raising campaign that emphasises that no-one ever wins against a scammer: it is not like a genuine lottery, because there is no real prize. Allied to this is the evidence that victims are often acting against their own better judgement: with some part of their minds they recognise a scam for what it is. Publicity could perhaps stress that, if you think it might be a scam, it almost certainly is – your gut instinct is almost invariable right. It could also emphasise that as well as a loss to yourself you are possibly contributing to organised crime, and certainly lining a criminal's pockets: this is not an innocent pastime, let alone a benevolent one.

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## **A LITERATURE REVIEW ON THE PSYCHOLOGY OF SCAMS**

- A.1 The following is a short overview of the most important and – in our view – most interesting papers in the scientific literature that refer to scams in any way. This overview is followed by a critical analysis of the psychological processes that have been invoked to explain behaviour in relation to scams. A full list of references to the scientific literature is given.

### **Scope of the available literature**

- A.2 Overall, we found only about 30 scientific articles that explicitly mentioned scams within the authoritative, peer-reviewed, journal literature. In contrast, a Google search for web pages about scams produced 1.4 million hits. Unpublished reports, books, internet sources and cited references that do not discuss scams explicitly but do deal with closely related matters add to the stock of reported research on scams, but clearly systematic research has lagged far behind both the intense public interest in the subject, and lay commentary on it.
- A.3 Empirical research on scamming is particularly scarce and of low quality. Even among the articles we did find in the scientific literature, many just rely on information about the general psychology of fraud, and adapt this knowledge theoretically to the more recent problem of mass marketed scamming, without carrying out any new data collection.
- A.4 The most substantial evidence on the nature of scams and their victims comes from a series of reports commissioned by the American Association of Retired Persons in the 1990s (AARP 1996abc). These focused on older victims, and on telephone scams (the medium to which the population of interest to AARP was most vulnerable at the time). However, their large scale and the good geographical and social spread of their sampling mean that they are still the most reliable source of published data available. The main findings were that overall 14 per cent of all the survey respondents who had been contacted by telemarketing fraudsters had responded to the scam. Forty per cent reported that the reason for responding was that they did not know how to identify a

scam approach, and 64 per cent said that they did not know any organisation that they could approach for help with identifying scam approaches. Fifty six per cent of victims of telemarketing were over the age of 50 years.

- A.5 The OFT has also published research into the prevalence and impact of mass marketed scams on the UK public. The research included initial interviews with more than 11,200 people and 1,900 detailed follow-up interviews with people who reported they had been a victim of a scam, or knew someone who had been a victim, or target of a scam. The research found that nearly half of the UK adult population has been targeted by a scam and that every year one in 15 people (3.2 million adults) in the UK fall victim to a scam at a total annual cost of £3.5billion. Older consumers were more likely to be targeted by a scam, with 25 per cent of those targeted being over the age of 65, and 24 per cent between 55-64 years old. There was, however, a spread of actual victims across the age ranges. Older victims (aged 55 and over) were likely to lose nearly twice as much per scam compared to younger age groups. Of those who fell for the scams, 32 per cent said it was because of the legitimate and professional appearance of the marketing, 30 per cent said they were caught off guard, and 13 per cent because of the excitement at the prospect of getting a good deal or winning a prize.
- A.6 These results show the importance of systematic research and information review about the psychological processes associated with scam approaches as well as the responses and decision making processes of scam victims.
- A.7 The survey that follows includes the most relevant and best quality articles relating to the psychology of scams we have been able to find. It should give an impression about the status of the field, namely that the professional and empirical literature on scamming is thin and fragmented. Not only are there few articles in total, fewer than five per cent of the scientific articles we did find had been published in high rank peer reviewed journals. Research on the psychology of scams is very much in its infancy.

## **Scams as communications**

- A.8 In this section, we briefly summarise the most relevant findings from the scientific literature, categorising the research reports by the classic elements of communication – source, medium, message and receiver.

### **Source factors**

- A.9 As scamming is an unlawful activity, information about the perpetrators and their behaviour is inevitably hard to come by. In two linked papers, Duffield and Grabosky (2001) and Grabosky and Duffield (2001) claim to identify some psychological correlates of fraud offending, but scamming (which they call 'mass market fraud') is only one of four categories of offence that they consider. Furthermore, their analysis is theoretically rather than empirically based. They conclude that modern media and internet technology helps the perpetrator to avoid seeing the situation from the victims' point of view. Together with the lack of social norms, these effects make it easier for the perpetrators to cope with their crime and to reduce their feelings of guilt and empathy for the victims.  
Despite their limitations, these two articles are the best starting point we have for a consideration of source factors in scam communication, so we will return to consider them further in the 'Psychological Processes' section below.
- A.10 We have found no systematic empirical investigations of the motivations, behaviour or criminal careers of scammers. The nearest to usable empirical information about scammers come from 'confessional' books in which former scammers purports to reveal the tricks of the trade and also to give an insight into the mind of a scammer. An example is the book by 'SpammerX' (2004), which concludes that spammers are driven by feelings of 'adrenaline rush, money, danger, and avoidance of local, federal, and international law enforcement agencies'. Sending out scam e-mails and waiting for the responses is a kind of psychological 'kick' to many perpetrators, and could be very appealing for people scoring high on the trait of sensation seeking.

- A.11 An issue that would be worth investigating through such literature, despite the need to treat its claims with caution, is the relationship between scamming and hacking (see also Kilger, Arkin, & Stutzman, 2004). Clearly some hackers have become scammers, and scammers have borrowed tricks from the hacking world (see Mitnick & Simon, 2002). But hacking is usually thought of as an individual activity, with social support if any coming over the internet. In contrast, confessional sources suggest that scamming may be undertaken in more social situations, and some of the more elaborate scams clearly require teams of several people to carry them out. Indeed Furnell (2004) claims that the rise of phishing has brought organised crime into the spamming world.
- A.12 There is better information about the technical devices used by scammers, especially in relation to the internet, but it is more closely related to other literature on the medium of scam communications so is considered below.

### **Medium factors**

- A.13 This is the largest category of literature, but it focuses entirely on a single medium, namely the internet. The Office of Fair Trading has an enforcement remit to tackle scams disseminated via the internet, text message, face-to-face, phone, or post (that is, non-broadcast media), but the characteristics of the latter two media receive very little attention in the literature, even though the significant empirical work of the AARP (1996abc) was based around telephone rather than internet scamming.
- A.14 As regards the internet, a whole category of articles has been found in computer technology and information service journals. This is an extensive literature and we have only included samples of it, because it is only marginally relevant to the present research project. The articles are mainly technical, characterising spam and other internet offences (for example, Grimes, 2004; Hinde 2001, 2002; Sasse 2004), describing how it works in terms of the technology of the internet (for example James, 2005) focusing on software engineering (for example Iglesias et

al, 2007; Kerremans et al, 2005), internet and data management (for example, Hinde 2003; Simpson 2003) or legal and regulatory issues (for example, Ayoade & Kosuge, 2002; Davidson, 2007; Kraut et al 2005; Kumaraguru et al, 2007; Rogers 2006). Papers of this kind typically have little if any explicit psychological content. Inevitably, however, they depend on an implicit psychology of the internet user, and making that explicit might be a worth while source of hypotheses at least. For example, Grimes (2004) argues that anti-spam measures on the internet will only work if they place zero burden on legitimate or casual email use; this is implicitly saying that consumers set a very low value, in terms of the effort or inconvenience they are prepared to suffer, on avoiding exposure to spam (which inevitably includes a proportion of scam messages).

- A.15 Kumaraguru et al (2007) take a different approach, seeking ways of training users to detect and avoid responding to phishing messages rather than blocking every possible spam message by technological means. The implicit psychology of the user in this case is of a technically unsophisticated person who can be taught rules of thumb to reduce risk – but is little influenced by the standard security notices that banks and other authorities send out to warn people of the risks of phishing attacks.

### **Message factors**

- A.16 The most basic kind of message information is what kind of scam is being attempted – that is, what is being offered to the potential victim. Langenderfer and Shimp (2001) argued that scammers use what Loewenstein (1996), in an influential paper on decision errors, has called viscerally oriented rewards. These are rewards for which the victim is likely to have a very high motivation, either chronically or aroused by the scam message. The obvious examples are money, sex, anxiety and pain, though scams may also exploit strong emotions like pity by references to political, natural or personal disasters. So scam messages address basic needs such as greed, anxiety, or physical pain (for example, by falsely claiming that the recipient has won a large cash prize in a lottery or by

appearing to ask for money in order to offer a 'cure' to an arthritis sufferer who suffers from severe physical pain).

- A.17 Langenderfer and Shimp (2001) argue that under conditions of high visceral influence the mechanisms of people's decision making change, making it less likely that clues to the scam status of a message ('scam alerts') will be noticed. For example, 'miracle' health product scams often claim that they can help the potential victim to alleviate pain, a direct offer of a viscerally-related reward. The aim is that the victim's pre-existing pain and the associated motivation to reduce it will override caution and prevent the scam being detected. Cues within these health-related scam communications that, for example, directly address the motivation to be free from pain, additionally reduce rational thought and caution in decision making processes and associated decision-relevant information seeking.
- A.18 Langenderfer and Shimp point out that a frequent aspect of scam message content is an emphasis on the urgency or uniqueness of the opportunity that is being offered. These are of course techniques that are used in legitimate marketing as well, and are widely believed to be effective, though empirical studies of their effectiveness are rare. Examples include experiments by Worchel, Lee and Adewole (1975), who found the desirability of cookies was maximal when they were perceived to be scarce due to high demand, by Lynn (1989) in which he manipulated the perceived scarcity of art prints and wine and found that it had a positive and significant affect on the items' desirability, and by Verhallen and Robben (1994) who found that scarcity and preference were positively correlated only for popular items, and only where the scarcity was a result of limited availability due to market conditions, so that supply could be seen to be genuinely limited.
- A.19 It can be argued that urgency and uniqueness claims are always on the edge of being deceptive, even when genuine goods are being offered at a fair price, since the seller is almost certain to return to the market with a similar offer in future: their purpose is always to encourage the buyer towards a decision sooner and perhaps after less consideration than s/he would normally take.

A.20 Riquelme & Wang (2004) argue that many websites within legitimate commerce contain biases, which they regard as unintentional, that may mislead consumers to the advantage of the advertiser, and inducing a false sense of urgency would certainly qualify as such a bias. In general consumers are sensitive to the implausibility of uniqueness claims: Shirai and Bettman (2005) found that if consumers evaluated a deal they were being offered as though the same or a similar deal would be offered soon, the judged attractiveness of the present deal was lower than if they thought that the interval before the deal was offered again was longer.

### Techniques of persuasion

A.21 Rusch (1999) argues, from his perspective as a prosecutor at the US Department of Justice, that internet scammers use social engineering techniques that are typical of traditional fraud. He concludes therefore that social psychology holds the key to understanding internet scammers' techniques. He makes a number of interesting suggestions about how it might work, soundly based in the research literature on persuasive communication. In particular, he focuses on three core social psychological topics as aids to understanding scam messages and how they work. These are:

- the contrast between central (logical and systematic) and peripheral (emotional and superficial) routes to persuasion, with the fraudster necessarily relying on peripheral routes, for example by stirring up strong emotions such as excitement or fear at the beginning of an interaction;
- attitudes and beliefs. Rusch sweeps a number of possible effects together here, including the scammers' tendency to demean their victims, and the victims' tendency to focus on the apparent honesty of the scammer rather than analysing what they were being told;

- persuasion and influence techniques. Here Rusch draws up a long list of techniques: Authority, Scarcity, Liking and Similarity, Reciprocalation, Commitment and Consistency, Social Proof.
- A.22 Rusch then proceeds to argue that different kinds of internet fraud provide evidence of these various processes at work. The ones that he invokes most often, however, are the false assertion of authority; the creation of an impression of scarcity (an almost inevitable feature of auctions and therefore a ready tool in the hands of the fraudulent user of internet auction sites) and reciprocity, in which something is given to the victim who then, even though it was unsolicited, feels a sense of obligation which is sufficient to keep the interaction going.

### Mythic content

- A.23 Cukier, Nesselroth, and Cody (2007) and Kienpointner (2006) both carried through analyses of the content of 'Nigerian Scam Letters'. Cukier et al applied Rusch's analysis of social psychological processes of persuasion, but also invoked literary and anthropological sources to identify the common myths and plot motifs that the scam letters used. They looked at 111 such letters and concluded that the Nigerian letters are a specific and distinct genre of scam mailings. They found that key elements are 'rich narrative appeals to strong emotions like greed, guilt and lust', and that the scammers used 'archetypical myths of windfall fortunes'. Specifically, the letters address feelings of greed, charity, heroism and other associated strong emotional cues. The authors recognised many 'elements and motifs from the 'rags to riches' myth, which permeates many cultures'. In these letters, the 'hero has a quest or task to overcome against all odds and is aided by supernatural agent such as the fairy god mother or a human sidekick'. These themes are mostly framework by stories similar to a fairytale or ideas like the American dream. The authors also found that most victims react to these mailings because of greed. The desire to get rich quickly makes the receivers fall for this fraud (associated with the idea of instant wealth).

## **Recipient factors**

- A.24 A major issue about the Recipient of the scam communication is whether there are reliable individual differences in vulnerability. Almost all authors agree that such differences exist at the demographic level, with the elderly, less well educated, and socially isolated being particularly vulnerable. Scammers are often held to share these beliefs and to target their messages at vulnerable groups, though clearly much internet scamming is essentially untargeted, because of its very low costs to the scammer.
- A.25 Such demographic factors have been documented empirically. For example, Grimes et al (2007) report that older internet users suffer a double extra vulnerability to scams – they receive as much spam email as younger users despite lower internet use, and they are more likely to make purchases as a result of spam. The main reasons for this finding might lie in the fact that (a) older people have less experience with the internet as a medium, (b) are cognitively less able to detect typical scam attributes, and (c) may suffer from cognitive impairments that may reduce their motivational and cognitive abilities to deeply elaborate scam messages.
- A.26 Is it possible to go beyond these broad demographic differences in vulnerability to a more psychological level, which might be more illuminating from the point of view of understanding the mechanisms through which people fall for scams? An older article by Bearden et al (1989) – important partly because the senior author is a highly respected consumer psychologist and partly because the article was published in the most influential journal in the field – discusses how susceptibility to interpersonal influence attempts in general can be measured, and establishes a scale that is reliable, valid, and practical to use. The authors proposed that susceptibility to interpersonal (social) influence is a basic trait (personality characteristic) that may vary across different people and is associated to other personality characteristics (such as for example, conformity or self-esteem). Bearden et al. (1989) defined consumer susceptibility to interpersonal influence as 'the need to identify with or enhance one's image in the opinion of significant others through

the acquisition and use of products and brands, the willingness to conform to the expectations of others regarding purchase decisions, and/or the tendency to learn about products and services by observing others or seeking information from others'. The authors showed that the constructed measure differentiates between individuals who are highly susceptible to fall for scams versus people who are less prone to respond.

- A.27 Obviously, scams and frauds of all kinds, are interpersonal influence attempts par excellence, but although Bearden et al's article has been highly influential, it has been followed up almost entirely in the context of legitimate marketing. It does seem reasonable, however, to conclude that susceptibility to scams will vary depending on the recipient's personality, over and above the obvious contextual or situational impact factors such as age and previous experience. Relevant kinds of experience include how used the person is to the media via which the scam communication is delivered, and how much background knowledge they have about the scam message content.
- A.28 As regards Internet scams, two lines of evidence suggest that people's experience with the internet and their style of interacting with it may influence their vulnerability. Rodgers and Chen (2007), in a large sample survey, found that the more elevated people's motives for using the internet, the more negative their responses to spam. Rodgers and Chen view spam as a special form of internet advertising, and they argue that internet advertising is distinctive because the recipient interacts more actively with the advertisement than with other media. Secondly, in a paper produced for the UK government Foresight programme, Dutton and Shepherd (2004) counter-intuitively propose that familiarity with the medium by which a scam arrives may make one more rather than less vulnerable. They found that trust in the internet is higher among frequent users compared to non-frequent users of the internet. This means that people who have experience with the internet may be more prone to fall into the trap of scamming than people with low internet experience. This would be an overconfidence effect, and could be linked to a number of other situations that have been studied in the decision-making literature, where overconfidence is a typical error of judgement, readily

demonstrated experimentally (for example Camerer & Lovallo, 1999). From a broad body of research we know that overconfidence in decision alternatives and associated information leads to biases in decision making and information search (Fischer et al., 2008). For example, people tend to seek out more confirmatory information when they are very confident that their decision is correct. This tendency leads to an information search bias that has been found to reduce the quality of decision outcomes (Kray & Galinsky, 2003).

- A.29 Related to scamming, people with high experience of the internet medium tend to be overconfident with information that has been received via this medium (because they have much experience with it and thus they trust in it much more). As a consequence of this overconfidence they tend to neglect information that is inconsistent with their preliminary standpoint or behavioural reaction (see also Fischer et al., 2005 who showed that people mainly seek for information which supports their own standpoint, and then systematically regard this as higher quality information compared to information which questions their standpoint). As a result, people fall for scams because they are overconfident in their preliminary preferences (that is, to react to the scam) and thus neglect inconsistent (warning) information that would help them to recognise the fraud intention.

### Psychological processes in scam response - introduction

- A.30 Dutton and Shepherd's proposal of overconfidence effects introduces the second theme in research on Recipient factors, namely the psychological processes that might be involved in falling for a scam. Empirically, this is an under-developed area. The most substantial theoretical contribution is the paper by Langenderfer and Shimp (2001), already referred to. They take the list of influence techniques proposed by Rusch (1999), and consider in much more detail how they might work at the level of the recipient of the scam communication. We will discuss their proposals further below, but in brief they seek to marry ideas about visceral influences on decision making (Loewenstein, 1996) with an influential theory of persuasive communication, the Elaboration Likelihood Model of Petty and Cacioppo (1986). Their paper thus brings

together the two key approaches to the psychology of scams. They argue that the effect of many variables that determine the effectiveness of scams will depend critically on whether or not the scammer, by using that variable, succeeds in arousing a state of high visceral involvement (that is, in a state of experienced strong emotions and associated motivations) in the potential victim. If so, cognitive resources (that is, individuals' conscious thoughts) are likely to be directed wholly to the supposed reward, with a consequent loss of self-control and of the ability to respond to warning cues, even in people who would not otherwise be vulnerable. In our opinion, this model is rather compelling and helpful in the explanation of why people fall for scam communications. In particular, the combination of affective (motivational) and cognitive factors is a substantial development in the scarce literature on the psychology of scamming.

### The effects of being scammed

- A.31 The final area of research into Recipient factors concerns the psychological consequences of having been scammed. While noting that investigations of victims of white-collar crimes are generally rare, Schicor et al (1994) investigated the reactions of victims of a major telephone investment scam in the US, and summarised their findings in three words: Anger, Disappointment and Disgust, and in so far as these reactions are turned inwards by victims, they are likely to reduce the probability that people will report the fact that they have been scammed. From mood regulation theories (for example, Jonas et al., 2006) we know that people want to alleviate their negative emotional state by neglecting or avoiding information that might increase (or at least does not help to reduce) this negative affective state. Thus, not reporting the scam might be a way of avoiding further thinking about being defrauded.
- A.32 Snyder (1986) concludes, in the context of gambling swindles (mostly investigated in the context of betting), that victims generalise their feelings of success - that is, they feel generally successful as gamblers - when objectively the success belongs to particular bets. This works to the victim's detriment. Also, the Ego is an important factor; victims have been found to be keen on, for example, impressing a woman, as well as

attaining social prestige for winning. These key variables hinder people from detecting fraud in gambling offers, in Snyder's view. Snyder concluded that people mostly become victims because (a) they generalise success in one area of their life (for example their job) to the gambling context, (b) they get involved by the idea of winning with low risk, and (c) their ego makes them vulnerable (for example prestige, self-esteem). It would be interesting to investigate whether these findings also can be transferred to victims of lottery scams.

### **Psychological processes involved in responding to scams**

- A.33 Because of the importance for the present research of understanding the psychological processes involved in responding to scams, we draw out in this final section of the review the main themes that have emerged in the survey of the literature above.

### **Internet technology reduces empathy and perspective taking**

- A.34 Internet technology helps the scam perpetrator to avoid face to face contact with his or her victims (Duffield & Grabowski, 2001). Psychological research on pro-social and anti-social behaviour (for example Batson, 1998) revealed that immediate visual contact increases feelings of empathy, which reduces individuals' tendency to be aggressive towards other people and increases individuals' tendency to be pro-social. In the case of scamming, the distance that internet technology allows between the sender and the receiver of a message prevents the emergence of empathy, so that the perpetrator is never likely to see things from the perspective of the victim, making it all the easier to go on and cheat them. These processes are very likely to generalize to other forms of distance communication such as postal scam mailings.

### **Sensation seeking**

- A.35 Sensation seeking is a cognitive and affective psychological state that can explain both why victims fall for scams as well as why perpetrators engage in scamming.

A.36 In psychological terms these feelings and experiences can be subsumed under the concept of sensation seeking (Zuckerman, 1994), which accounts for people who engage in risky behaviour in order to increase their physiological and related psychological arousal state. Sensation seeking can be measured by a standardised scale (Zuckerman, 1994) and represents a trait (that is, personality characteristic) that is regarded to be stable over time. Previous research has shown that sensation seeking is responsible for a broad variety of negative, risk-taking, and mindless behaviours. With regard to potential scam victims, sending money and waiting for a potential response ('the big prize') might be very highly arousing for people scoring high on the trait of sensation seeking.

### **Visceral influences**

A.37 Scam perpetrators often address basic human desires and needs (such as greed, fear, avoidance of physical pain, or to feel liked or loved). This can provoke basic visceral reactions and thus reduce individuals' motivation to deeply process the content of a scam message (Langenderfer & Shimp, 2001). Thus, important cues that may be specific to scams (and thus help distinguish scam messages from non-scam messages) are not detected and falling for the scam becomes more probable. In addition, we know from previous research that the quality of decision making is reduced when people are in a state of strong motivational and visceral psychological processes. People in such a psychological state simply do not elaborate pros and cons of a decision and neglect possible shortcomings in decision alternatives and decision-related ramifications. Finally, addressing visceral reactions in scam recipients is also associated with a psychological state of being 'out of control'. For example, people in the psychological state of strong buying desire often neglect the negative implications associated with their buying decision (such as increased debts, etc). Similar processes might occur with scam offers.

### **Lack of self control**

- A.38 Lack of self-control is one of the best documented causes of non-optimal choice and errors of judgement (for example Thaler & Shifrin, 1981; Baumeister, Vohs & Tice, 2007). These authors have shown that self-control is a limited resource that can be depleted by tasks that require self-control (such as suppressing emotions or controlling what one is attending to). As soon as this resource for self-control is depleted, individuals are worse in decision making and controlling their emotions. So far the applied transition to scam research has not been made in this area. Therefore, it would be up to future research to investigate lack of control and ego-depletion as a possible cause for becoming a scam victim.

### **Lack of motivation**

- A.39 Scam victims are often found to be in a state of low motivation to process information thoroughly (for example, Langenderfer & Shimp, 2001). This decreased motivation might derive from (a) cognitive impairments (for example, caused by dementia) and (b) by specific content in scam messages (for example, scam messages address basic human drives and desires, which can reduce the ability and motivation of deeper thinking). As a consequence, specific attributes that help to distinguish scam messages from non-scam messages are disregarded, inducing errors of judgement. Counter-intuitively this tendency for reduced motivation to adequately process decision-relevant information should be increased for people with high rather than low financial resources. They simply mind less about losing £10 or £20 'in the game'.

### **Reduced cognitive abilities**

- A.40 Many elderly people suffer, to varying degrees of severity, from reduced cognitive abilities and thus should have a higher probability of falling victim to a scam. Research carried out by the OFT (Research on impact of mass marketed scams, 2006) suggests that older people are more likely to be targeted by scams, but they are not more prone to falling victim to scams. This could, in part, however, be a reflection of the

greater reluctance of older scam victims to admit to being scammed. However, on a quantitative basis, the OFT research suggested that older people lose nearly twice as much money per scam compared to younger age groups. The reason for this somewhat unexpected finding might be that among the target group of elder people, there are those that are classified by the OFT as 'chronic scam victims'. These are people who repeatedly respond to scam communications (many of these chronic responders suffer from reduced cognitive abilities). Cognitive abilities are necessary to make good decisions, such as distinguishing typical scam attributes from non-scam attributes (for example, Langenderfer & Shimp, 2001). However, since cognitive processes are psychologically distinct from motivational and visceral ones, we have pointed them out separately. In particular, people with lowered cognitive abilities will be vulnerable to scams even if high visceral influence is not aroused.

### **Norm activation**

- A.41 Scam content often activates specific norms, such as the norm to help or the norm to be a good citizen. Norm arousal is a classic means of persuasion. For example, some West African advance fee scam offers describe a person in need (for example, an impoverished and orphaned child) who needs a specific amount of money to be able to support their siblings. These types of scam offers just activate a basic human norm to help other people (see also Batson, 1998). This argument is expanded further by Doob & Ecker, 1970, who research stigma and compliance. By activating this helping norm, the probability increases that people will respond to scams and lose money.

### **False consensus effect**

- A.42 Scammers make recipients believe that they have something in common with them (for example, some physical, psychological, intellectual or personal history-related attribute). Thus, the receiver of the scam message tends to overestimate the reliability and validity of the scam message as well as to overestimate the trustworthiness of the scam source, leading to errors in decision (see also Cukier et al., 2007). For example, mass marketed fake psychic mailings often imply that the

potential scam victim is already personally known to the sender due to para-psychological, spiritual or esoteric abilities that the scammer claims. This technique has the potential to increase the probability that people fall for the scam due to the false consensus effect.

## **Authority**

- A.43 People tend to obey authorities, even if they are not present in a specific situation (see also Milgram, 1965). Classic studies showed that authority influence can even bring people to hurt another person severely. The communication medium might increase the perception of authority (especially for older people), for example envelopes may refer to an 'Official Notice' or 'Important Documents' enclosed, texts are written in machine-type letters and official looking seals and logo's can be used to increase the perceived underlying authority of a scam. The impact of authority on psychological and behavioural responding is located within the area of social influence, which is a classic social psychological domain and a major contributory source to the psychology of persuasive communication.

## **Altercasting**

- A.44 Source credibility theory includes demonstration of the effect of 'Altercasting', in which one person places another in a role, by themselves taking up the complementary role (Pratkanis et al., 2004). Scammers take up roles to cause their victims to act from complementary roles, for example they may act as dependants, causing victims to act as protectors, or act as a 'friend' causing a friendship response. The authority effect discussed above similarly works via altercasting, in that the victim's response will be according to the social role appropriate in response to authority.

## **Liking and similarity**

- A.45 People tend to like people who like them. Scam offers, which include phrases that suggest to recipients that they are liked by the sender, should have a higher probability of recipients responding than scam

offers which do not include such content (see also Cukier et al., 2007). For example, the scammer might communicate that they are in the same economic, social, professional or private position (for example, have a specific similar health problem) as the potential victims, which can induce an increased liking and empathy for the scammer. In addition, scammers also normally make compliments towards their potential victims, so that they feel unique and special.

### **Reciprocation**

- A.46 If people are given something then they feel a strong inclination to give something back. Scammers can use this basic human tendency (for example, by providing a small gift or by making it appear they are bending the rules in the recipient's favour) to successfully pitch their scams. The theory of reciprocal concessions for inducing compliance supports the presence of this process (Cialdini et al., 1975).

### **Commitment and consistency**

- A.47 People tend to appreciate consistency both in their own behaviour as well as in the behaviour and reactions of other people. Consistency provides them with a sense of control and thus facilitates a sense of ability to explain and predict the world (see control theory by Brem, 1964). Scams which persuade recipients to respond in a first instance (perhaps without requiring any money to be paid) make them more willing to react in a second instance (where scammers then ask for money). A similar effect has been explored by Cialdini et al (1978), who refer to it as the 'low-ball' sales technique.

### **Social proof**

- A.48 In situations of uncertainty people tend to look to other people in order to define reality. Scam messages, which contain cues of social proof (for example text passages that argue that other people already reacted or benefited from the scam offer such as fake testimonials) have a higher probability to be successful than scams that do not include this psychological cue (see also Cukier et al., 2007).

## **Mood regulation and phantom fixation**

- A.49 Scams trigger basic human needs and desires, which are mostly associated with positive emotions. Hence, many scam victims might respond in order to reduce negative mood or to increase positive mood. Scammers aim to create a fixation in the victim on the offer or prize which is the bait. They do this by engaging the victim in imagining the item/money/etc, so that it becomes a specific 'phantom fixation' for the victim, as explored by Horvitz & Pratkanis (2002).

## **Positive illusions**

- A.50 People tend to overestimate their abilities (above-average effect), the prosperity of their future (positive illusion about the own future) and their abilities to carry out control over their life and environment (illusion of control, see also Taylor & Brown, 1988). Scam victims might comply with scam messages because they overestimate their abilities to detect fraud, because they experience a high level of control over the whole situation (that is, they overestimate the probability for positive outcomes associated with the scam response; or they overestimate their own abilities to detect scam from non-scam communications), and/or tend to attribute positive future outcomes to complying with the scam message.

## **Self-regulation**

- A.51 People who respond to scam communications tend to be less able to self-regulate their emotional responses (Langenderfer & Shimp, 2007). From self-regulation theory (ego-depletion accounts) we know that self-regulation and self-control is a limited resource that is reduced when people have recently had to exert self-control; the capacity for self control is also a personality characteristic (that is, some people are better, some people are worse in exerting self-control). In particular people with low levels of trait self-control as well as people who are in a psychological state of exhaustion (ego-depletion) should be less able to suppress their emotional reactions towards scam content and thus more inclined to react to scam messages. In addition, the negative effects of reduced self-regulation on the inclination to respond to scams might

have a greater impact on people who are not integrated into social networks. Social networks induce social norms (social rules) and provide a source for social comparison. Even in a state of reduced self-control, available social networks (and associated social reference points) might help to decide what offer is genuine and what is not in the context of scam communications.

### **Approaches to consumer education**

- A.52 Given that the essence of scams is that they are dishonest, scam communications do contain clues about their status. Much effort in scam prevention has focused on trying to educate potential victims to detect these 'scam alerts' or warning signs. They range from the simple implausibility either of the offer (for example a multi-million pound prize in a lottery you never entered) or of the means of securing it (for example disclosing your bank account password and PIN number to a website in response to a phishing email when banks constantly say that they will never ask for information in that way), to technical features of an email or phishing web site, as discussed by authors such as Furnell (2004) or James (2005). Kumaraguru et al. (2007) argue that current methods of teaching people to detect such cues, such as sending out security notices, are ineffective, but demonstrate experimentally that inserting training emails into the normal email stream was effective in raising people's awareness of scams and of reliable defensive techniques. In a more general context, research by Fischer et al. (2008) found making consumers focus on potential losses (loss decision frame) reduces their tendency to selectively process decision-consistent information.

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## **B STUDY ONE: DETAILS OF THE INTERVIEW METHOD**

- B.1 We interviewed 30 people, from many different places in the UK. All were recruited on the basis that they self-identified as scam victims. They were recruited by media advertising, from people who had approached the OFT or Consumer Direct to complain about scams, and through the first batch of questionnaires (Study 3A). All participants received £50 for participation in the interviews. All interviews were conducted by a researcher who was experienced in conducting one-to-one interviews on sensitive topics.
- B.2 Most of the interviewees clearly were scam victims. However, as expected, in the course of the interviews it emerged that some of them (a total of seven) were either non-victims or marginal victims. Of these, two were relatives of victims, not victims themselves; two believed on reasonable grounds that they had spotted a scam in time to prevent loss, though in fact they did lose money (one filled his details in ready to pay on-line for a presumably fraudulent product, but didn't press the 'submit' button, while the other cancelled his standing order after a free trial; in both cases money was in fact taken); and the remaining three must be seen as non-victims by the scammers, since although they were deceived, they did not in fact lose any money.
- B.3 Most interviews lasted about one hour. The interviews were semi-structured. Interviewees were encouraged to tell the story in their own words. The interviewer's role was to check her understanding and to encourage a deeper picture to emerge. The interviewer attempted to focus the conversation on the time before the interviewee gave the scammer the money or information, but naturally the interviews also included content about the interviewee's feelings afterwards. In addition, a number of questions were asked of each interviewee where they seemed appropriate. These were: Did you have any doubts at the time? Did it seem urgent - that the offer would expire? Did it seem a big step or a small step? Would you have felt able to talk to anyone about it? (Did you feel it was a private matter? Are there people you would certainly not have told?) Do you have any thoughts on how you might have been able to act differently? (Or what might have changed things?) Were you

aware in general, before this happened, that there are such things as trick letters/scams being sent to people? (If it was a premium rate phone scam, that there are expensive rate phone numbers from which the scammer makes a profit?) Was there any one thing about it, which really tipped the balance and led to you being scammed? (Or if they nearly fell for it, what tipped the balance in their favour). What advice would you give to others?

- B.4 All interviews were audio-taped and afterwards transcribed in full by an independent person, then corrected by the interviewer. All information that could identify the interviewee was removed at this stage. The interview transcripts were analysed by a combination of top-down, meaning-based and bottom-up, word-based, analyses. Both analysis methods focused on the interviews of the 25 participants who had actually lost money in a scam, and in particular only their statements / words and phrases contributed to the text-mining analyses. In the top-down (thematic) analysis, a researcher who was experienced with conducting qualitative interviews reviewed the interview transcripts to pin-point recurring psychological themes around participants' behaviour (cf. Braun & Clarke, 2006), focusing on why they did or did not become a scam victim. In the bottom-up (text-mining) analysis, the words most frequently mentioned were extracted from the raw interview transcriptions (after deletion of the interviewer's questions). These words were combined into psychologically-meaningful categories by the two independent raters; discrepancies were solved by discussion. The categories used were related to the kinds of errors of judgement that were of interest in the study.

## **C      STUDY ONE: FURTHER DETAILS FROM THE ANALYSIS OF INTERVIEW TRANSCRIPTS**

- C.1 The text-mining procedure identified the following top 20 mentioned words: money ( $N = 381$  occurrences across 23 interviews), people ( $N = 329$ ), number ( $N = 161$ ), phone ( $N = 146$ ), letter ( $N = 127$ ), work (103), pay (101), name (88), company (84), pound (77), call (76), bank (74), address ( $N = 68$ ), scam ( $N = 59$ ), contact ( $N = 56$ ), information ( $N = 55$ ), cheque ( $N = 55$ ), telephone ( $N = 51$ ), ring ( $N = 48$ ), home ( $N = 48$ ).

**Table C.1 Study 1: Top 40 Most frequently mentioned single words from the analysis of interview transcripts (ignoring filler words such as is, the, and, etc.)**

Word	Rank	Frequency	Interviews
money	1	381	23
people	2	329	25
number	3	161	21
phone	4	146	21
letter	5	127	20
Work	6	103	15
Pay	7	101	17
name	8	88	22
company	9	84	14
pound	10	77	15
Call	11	76	16
Bank	12	74	13
address	13	68	15
Scam	14	59	18
contact	15	56	16
information	16	55	16
cheque	17	55	11

telephone	18	51	14
Ring	19	48	17
home	20	48	10
amount	21	47	17
e-mail	22	47	8
Start	23	44	15
Quid	24	44	11
person	25	40	16
order	26	40	9
Wife	27	39	11
Mind	28	37	16
internet	29	37	14
paper	30	37	12
website	31	37	8
google	32	36	3
Deal	33	35	13
shares	34	35	3
chance	35	32	11
Prize	36	32	8
Firm	37	32	8

lottery	38	32	7
office	39	31	12
london	40	20	6

## **D STUDY TWO: DETAILS OF METHOD USED FOR TEXT MINING ANALYSIS OF SCAM MATERIALS**

- D.1 Text mining procedures conduct a deep structural and semantic analysis with scam text and so enable us to identify typical phrases of more or less successful scams, categorize different scam contents, and thus assess the psychological quality of recurring scam content.
- D.2 More specifically, text mining refers generally to the process of deriving high quality information from text (for example, large amounts of documents, customers' feedback, interview transcripts or open-ended responses). High quality information is typically derived through the dividing of patterns and trends through means such as statistical pattern learning. Text mining usually involves the process of structuring the input text (usually parsing, along with the addition of some derived linguistic features and the removal of others, and subsequent insertion into a data base), deriving patterns within the structured data, and finally evaluation and interpretation of the output. High quality text mining tasks include text categorisation, text clustering, concept extraction, sentiment analysis, document summarisation, and entity relation modelling (i.e. learning relations between named entities). Text mining also can be used to explore the relationships between the content of documents and information stored in categorical or numeric variables such as the gender or the age of the respondent.
- D.3 **Unweighted overall analysis.** All 583 scam communications, from all 10 subcategories of scam, were used in a single analysis, without regard to what type of scam they came from. Multiple occurrences of all words were counted. Assuming that the scam communications received by the OFT constitute an unbiased sample of the scam materials received by the public, this analysis will allow us to reach conclusions about the typical discourse of scam communications considered as a whole.

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
prize	1	3942	358
cheque	2	2597	363
cash	3	2314	373
money	4	2063	364
winner	5	1849	331
form	6	1695	388
number	7	1592	394
order	8	1380	329
time	9	1374	302
payment	10	1288	330
claim	11	1253	290
amount	12	1122	341
document	13	1087	247
return	14	1041	347
date	15	987	373
address	16	951	361

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
life	17	870	147
fee	18	810	220
information	19	790	274
game	20	781	130
letter	21	763	266
official	22	751	231
delivery	23	705	203
reply	24	696	266
envelope	25	689	281
bank	26	686	205
service	27	652	252
entry	28	647	183
funds	29	641	202
opportunity	30	610	217
card	31	602	221
people	32	592	151

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
awards	33	590	162
£10000	34	581	94
sum	35	579	256
office	36	574	218
offer	37	564	215
guarantee	38	550	199
contact	39	520	257
signature	40	508	262
person	41	499	203
box	42	496	187
recipient	43	496	157
profit	44	494	50
company	45	462	186
request	46	450	177
bet	47	447	38
system	48	440	89

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
pay	49	437	205
work	50	434	120
luck	51	431	82
mail	52	429	187
place	53	429	170
property	54	427	82
report	55	424	124
conditions	56	423	174
processing	57	417	195
record	58	413	156
chance	59	411	164
secret	60	407	76
results	61	402	188
account	62	397	170
rules	63	392	143
deadline	64	383	169

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
home	65	377	157
notification	66	376	172
status	67	371	184
benefit	68	371	154
receipt	69	370	195
help	70	368	134
bonus	71	366	85
release	72	361	145
code	73	349	153
call	74	348	153
page	75	344	174
value	76	342	146
gift	77	338	102
question	78	337	141
success	79	326	85
method	80	325	101

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
terms	81	324	144
members	82	320	139
winnings	83	320	119
lottery	84	320	104
option	85	318	121
details	86	316	189
message	87	316	131
costs	88	310	158
acceptance	89	309	115
telephone	90	300	171
security	91	299	183
response	92	299	171
credit	93	298	172
transfer	94	298	113
100%	95	292	139
power	96	286	65

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
program	97	285	98
sign	98	273	167
change	99	272	133
file	100	269	148
products	101	269	95
procedures	102	268	144
proof	103	267	121
agent	104	266	93
congratulations	105	265	187
price	106	262	104
certificate	107	260	105
promotion	108	259	121
department	109	258	117
hours	110	258	105
customer	111	255	105
list	112	253	127

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
individual	113	251	118
answer	114	249	126
postal order	115	245	165
event	116	243	94
instructions	117	242	148
racing	118	239	28
confirmation	119	235	132
hand	120	235	108
documentation	121	235	86
set	122	234	128
world	123	232	109
selection	124	231	72
problems	125	227	103
act	126	224	159
horse	127	224	38
attention	128	221	149

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
start	129	221	106
business	130	220	78
friend	131	218	106
happiness	132	218	55
future	133	217	107
eligibility	134	217	84
delay	135	213	144
access	136	213	120
book	137	212	44
fortune	138	211	75
tick	139	210	115
identification	140	204	96
participation	141	202	101
candidate	142	201	62
process	143	200	91
sweepstakes	144	199	74

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
charge	145	198	121
manager	146	197	124
weight	147	197	30
purchase	148	194	111
risk	149	194	96
judges	150	194	43
period	151	191	111
contest	152	191	70
reason	153	190	101
share	154	189	90
sponsors	155	188	69
control	156	187	87
road	157	186	92
play	158	186	88
investment	159	185	69
step	160	183	88

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
clients	161	183	62
registration	162	181	64
£20000	163	181	35
birth	164	179	106
phone	165	174	102
accordance	166	173	90
line	167	169	93
allocation	168	169	68
items	169	168	72
income	170	168	57
postage	171	166	104
priority	172	163	77
membership	173	163	32
payout	174	162	80
disbursement	175	160	55
participants	176	158	88

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
verification	177	157	83
dispatch	178	153	81
distribution	179	153	67
fat	180	153	16
visa	181	152	123
choice	182	152	101
working	183	151	75
turn	184	151	69
words	185	150	89
double	186	146	80
£10	187	145	66
writing	188	144	98
stamp	189	144	71
tiebreaker	190	144	21
regulations	191	143	71
holder	192	143	64

**Table D.1 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (unweighted)**

Word	Rank	Frequency	Documents
advantage	193	142	95
city	194	142	73
reference	195	141	98
package	196	140	42
dreams	= 197	137	67
advice	= 197	137	67
country	198	135	88
return	200	135	87

**D.4 Weighted overall analysis.** All 587 scam communications within all 10 subcategories of scam types were again used to perform this analysis. However the different frequencies within each scam subtype were controlled by weighting the obtained word frequencies by the number of available scam communications within each category. Each of the 10 categories (for example investment scams, bogus lottery scams) received a weight of 1. Each document within a category gets a weight of  $(1/n)$ , that is, for example: if there are 46 documents within a category, the weight of each document is  $(1/46)$ . A weighted concept score of 10 would mean that this concept occurs in every document in every category. This analysis allows for the possibility that the scam communications received by OFT do not constitute an unbiased sample of the scam materials received by the public, and allows us to reach conclusions about the typical discourse of scam communications abstracted from the prevalence of particular types of scam.

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
money	1
cash	2
offer	3
cheque	4
guarantee	5
life	6
information	7

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
pay	8
order	9
prize	10
return	11
claim	12
payment	13
risk	14
bank	15
amount	16
letter	17
sum	18
time	19
work	20
system	21
price	22
telephone	23

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
form	24
envelope	25
call	26
chance	27
results	28
account	29
profit	30
address	31
contact	32
home	33
number	34
winners	35
winner	36
100%	37
opportunity	38
details	39

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
card	40
cost	41
problems	42
success	43
security	44
awards	45
investment	46
delivery	47
service	48
winnings	49
congratulations	50
office	51
proof	52
fund	53
start	54
rules	55

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

<b>Word</b>	<b>Rank</b>
business	56
instructions	57
members	58
entry	59
signature	60
document	61
value	62
charge	63
trial	64
person	65
reply	66
credit	67
doubt	68
hours	69
share	70
official	71

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
company	72
access	73
benefit	74
companies	75
report	76
sign	77
code	78
refund	79
income	80
help	81
name	82
energy	83
option	84
loss	85
terms	86
conditions	87

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
notification	88
transfer	89
manager	90
advantage	91
lottery	92
fee	93
mail	94
choice	95
response	96
friend	97
reason	98
answer	99
health	100
deadline	101
horse	102
phone	103

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

<b>Word</b>	<b>Rank</b>
product	104
bet	105
power	106
gift	107
processing	108
effects	109
agent	110
membership	111
property	112
department	113
luck	114
game	115
millionaire	116
participation	117
confidence	118
participants	119

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

<b>Word</b>	<b>Rank</b>
racing	120
tel	121
reference	122
body	123
email	124
advice	125
fax	126
attention	127
questions	128
clients	129
happiness	130
costs	131
batch	132
request	133
control	134
change	135

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
future	136
confirmation	137
fat	138
doctors	139
capsules	140
weight_	141
race	142
bookmakers	143
living	144
events	145
purchase	146
play	147
visa	148
book	149
family	150
games	151

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
postage	152
tax	153
bonus	154
program	155
allocation	156
blood	157
diets	158
exercise	159
treatment	160
promotions	161
destiny	162
working	163
contacts	164
products	165
fortune	166
question	167

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
customer	168
stakes	169
beneficiary	170
catalogue	171
voucher	172
payout	173
documentation	174
knowledge	175
gambles	176
quality	177
job	178
identification	179
pain	180
drugs	181
pound	182
ticket	183

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
promotion	184
acceptance	185
country	186
£10000	187
certificate	188
writing	189
birth	190
eyes	191
car	192
investors	193
story	194
market	195
stock	196
madrid	197
record	198
rights	199

**Table D.2 Study 2: Most frequently occurring words in scam communication materials, across the entire corpus of communications regardless of type (weighted)**

Word	Rank
spain	200

D.5 **Subcategory analysis.** The scam communications in each of the subcategories were analysed separately and the results compared between subcategories. In this analysis, the number of documents containing each word was counted, not the total number of occurrences. This analysis allows us to look at the different content of different types of scam.

**Table D.3 20 Most frequently occurring words in Advance fee ('419') scams**

Word	Rank	Frequency
fund	1	116
bank	2	112
money	3	97
account	4	79
name	5	57
kin	6	55
god	7	54

call	8	47
address	9	39
investment	10	39
transaction	11	39
death	12	38
business	13	37
country	14	37
information	15	36
transfer	16	36
deceased	17	35
friend	18	34
details	19	31
company	20	31

**Table D.4 20 Most frequently occurring words in International sweepstake scams**

Word	Rank	Frequency
prize	1	2004
cash	2	1652
form	3	959
cheque	4	913
payment	5	773
fee	6	715
return	7	702
amount	8	670
winner	9	625
document	10	581
claim	11	544
order	12	491
entry	13	477
official	14	460
money	15	441
office	16	438
delivery	17	411

awards	18	409
recipient	19	372
record	20	352

**Table D.5 20 Most frequently occurring words in Fake clairvoyant scams**

Word	Rank	Frequency
life	1	484
money	2	423
luck	3	361
secret	4	273
cheque	5	219
power	6	218
happiness	7	188
people	8	186
help	9	179
sum	10	156
games	11	147
events	12	146
person	13	144

gift	14	142
change	15	123
fortune	16	119
card	17	118
problems	18	116
future	19	113
guarantee	20	111

**Table D.6 20 Most frequently occurring words in Prize draw pitch scams**

Word	Rank	Frequency
prize	1	1533
cheque	2	1385
order	3	831
winner	4	818
£10000	5	483
document	6	421
game	7	414
form	8	400
payment	9	319
claim	10	272
reply	11	260
delivery	12	248
official	13	234
conditions	14	227
request	15	217
return	16	216
amount	17	210

rules	18	202
bank	19	196
guarantee	20	179

**Table D.7 20 Most frequently occurring words in 'Get rich quick' scams**

Word	Rank	Frequency
money	1	202
work	2	185
system	3	151
success	4	141
home	5	114
business	6	93
pay	7	85
life	8	83
cash	9	72
profit	10	65
product	11	65
opportunity	12	63
income	13	57

working	14	57
order	15	55
email	16	53
companies	17	51
agent	18	51
hours	19	50
job	20	49

**Table D.8 20 Most frequently occurring words in Bogus investment scams**

Word	Rank	Frequency
money	1	103
market	2	65
trading	3	40
investment	4	36
trade	5	30
system	6	30
hours	7	27
profit	8	25
life	9	25
share	10	24
property	11	24
stock	12	22
cash	13	22
work	14	21
bank	15	21
story	16	16
risk	17	16

report	18	15
home	19	15
price	20	14

**Table D.9 20 Most frequently occurring words in Bogus lottery scams**

Word	Rank	Frequency
prize	1	199
number	2	180
agent	3	145
lottery	4	133
address	5	129
fax	6	125
program	7	125
money	8	122
fund	9	118
claim	10	117
promotions	11	114
cash	12	100
security	13	100

batch	14	97
contact	15	97
bank	16	97
email	17	94
company	18	84
tel	19	77
account	20	76

**Table D.10 20 Most frequently occurring words in 'Miracle' health cure scams**

Word	Rank	Frequency
weight	1	161
fat	2	142
body	3	99
diets	4	96
life	5	73
capsules	6	72
sugar	7	69
time	8	64
trial	9	64
treatment	10	64
blood	11	63
exercise	12	58
offer	13	54
results	14	52
health	15	50
doctors	16	48
loss	17	47

foods	18	45
erection	19	44
order	20	43

**Table D.11 20 Most frequently occurring words in Premium rate prize draw scams**

Word	Rank	Frequency
cash	1	285
claim	2	238
number	3	135
call	4	121
awards	5	120
prize	6	118
code	7	97
address	8	79
form	9	74
name	10	62
winners	11	60
cheque	12	54
vouchers	13	52

promotion	14	47
allocation	15	40
camera	16	39
delivery	17	38
value	18	37
holiday	19	34
rules	20	33

**Table D.12 20 Most frequently occurring words in Bogus racing tipster scams**

Word	Rank	Frequency
money	1	465
bet	2	389
profit	3	382
information	4	266
racing	5	236
time	6	229
service	7	214
winners	8	203
horse	9	188
offer	10	161
book	11	158
system	12	149
opportunity	13	123
membership	14	120
race	15	110
clients	16	108
price	17	99

results	18	98
guarantee	19	91
members	20	88

D.6 For each analysis, the gross frequencies of words are reported in full; for the unweighted overall analysis and the subcategory analysis, frequencies of concepts to which the words could be assimilated are also presented (conceptual grouping cannot be done in a weighted analysis). Two independent raters sorted all significantly identified words into categories corresponding to key concepts, with disagreements being resolved by discussion. The categories were chosen partly on the basis of an inspection of the frequent words, but they were also influenced by the analysis in Section 4 of this report of the kinds of errors of judgement that might be relevant to scam compliance. Category names were largely based on these analyses.

**Table D.13: Categories corresponding to key concepts**

Behavioural Commitment	Trust and Security	Emotional triggers	Induced scarcity	Overconfidence	Size of prize	Regret effect
act	100 per cent	advantage	access	information	allocation	acceptance
action	account	advice	candidate	system	amount	decision
answer	administration	beneficiary	code		awards	delay
book	agent	benefit	congratulations		bonus	investment
call	bank	bet	contest		cash	trial
claim	business	birth	coupon		cheque	

**Table D.13: Categories corresponding to key concepts**

Behavioural Commitment	Trust and Security	Emotional triggers	Induced scarcity	Overconfidence	Size of prize	Regret effect
completion	centre	body	eligibility		delivery	
contact	certificate	chance	entry		double	
deadline	clients	change	group		funds	
despatch	commission	choice	holder		income	
envelope	committee	destiny	individual		money	
form	company	doubt	letter		price	
instructions	computer	dreams	lottery		prize	
mail	conditions	energy	members		profit	
order	confirmation	event	message		share	
pay	control	experience	notification		stake	
payment	corporate	fat	offer		sum	
phone	customer	fortune	participation		value	
postal order	department	friend	people		£10	
refund	disbursement	future	person		£100	
reminder	distribution	game	priority		£10000	
reply	document	gift	promotion		£20	
request	documentation	gold	receiver		£20000	

**Table D.13: Categories corresponding to key concepts**

Behavioural Commitment	Trust and Security	Emotional triggers	Induced scarcity	Overconfidence	Size of prize	Regret effect
response	entitlement	happiness	recipient		£30000	
return	government	health	score			
sign	guarantee	help	selection			
start	identification	home	tiebreaker			
step	insurance	house	winner			
telephone	judges	life				
tick	management	living				
	manager	luck				
	membership	mind				
	method	news				
	office	opportunity				
	official	option				
	participants	play				
	payout	power				
	procedures	problems				
	process	racing				
	program	record				

**Table D.13: Categories corresponding to key concepts**

Behavioural Commitment	Trust and Security	Emotional triggers	Induced scarcity	Overconfidence	Size of prize	Regret effect
	proof	risk				
	property	secret				
	receipt	success				
	reference	weight				
	registration	winnings				
	regulations	world				
	release					
	report					
	research					
	results					
	rights					
	rules					
	security					
	service					
	signature					
	sponsors					
	terms					

**Table D.13: Categories corresponding to key concepts**

Behavioural Commitment	Trust and Security	Emotional triggers	Induced scarcity	Overconfidence	Size of prize	Regret effect
transfer						
	verification					
		voucher				

D.7 Web graphs were also constructed to illustrate the frequencies of co-occurrences of words and concepts, but only apparently important data from these are reported and discussed in text.

## **E STUDY THREE: DETAILS OF METHOD**

### **Participants and design**

- E.1 The study took place in two waves. In Wave 1, we sent out our questionnaire to 300 potential participants from the Participant Panel of the University of Exeter School of Psychology. The panel includes local residents and other contacts of the School (including parents of students and former students) who have expressed a willingness to assist the School in its research. In Wave 2, we hand-delivered questionnaires to 1000 households in the towns of Taunton, and Yeovil, Somerset. Wards within these towns were chosen from 2001 census data to have age and gender distributions close to the UK national averages and within those wards areas of typical housing were selected by the distributors by direct observation. A letter explaining the purpose and nature of the research, and a Freepost reply envelope, were enclosed with all questionnaires. In Wave 1, 148 completed questionnaires were returned; of these, 45 had to be excluded, because the dependent measures were not completed (mostly these came from respondents who reported no scam experience), leaving a usable sample of 103. In Wave 2, 153 responses were received, of which 116 were usable.

### **Materials and procedure**

- E.2 Copies of the questionnaires are attached in Annexe F. Wave 1 and many of the interviews for Study 1 were completed and their results analysed before Wave 2 was started, so the Wave 2 questionnaire was modified in the light of the earlier results. However both questionnaires had the same general structure. Participants were first asked some general questions on scams, including open questions about the types of scams they had received. Next, before answering the dependent measures on underlying psychological processes, participants received the following instruction: 'If you have ever responded (or nearly responded) to a scam, please indicate how you felt when responding to it, by circling one of the numbers. If you have never responded to a scam, then please indicate generally how you felt about a specific scam offer you remember receiving'. Afterwards, they responded to a series of

items designed to probe vulnerability to different kinds of errors of judgement, using a scale from 0 (*not at all*) to 10 (*definitely*). The error propensities examined in the questionnaires are shown in Table E.1; for the wording of the items concerned, see Annexe F. In Wave 1 only, the questionnaires concluded with an invitation to take part in an interview.

## Data analysis

- E.3 On the basis of their replies to the questions about scam experience, participants were classified as victims or non-victims; in Wave 1 only, an additional category of near-victims was included. Wherever the Cronbach's  $\alpha$  value for the items relating to a particular error propensity reached satisfactory levels ( $\alpha >= .65$ ), the items were treated as a scale and responses to them collapsed to their mean values before analysis. The  $\alpha$  value for cognitive effort did not reach this criterion for Wave 2, but in the light of the Wave 1 result the scale was used in this case. Scores on the resultant scales were then analysed by one-way analyses of variance taking the victim classification as the sole independent variable. If significant differences were found, post hoc tests were used to assess which victim experience groups differed significantly.

**Table E.1 Study 3: The judgement error propensities investigated, the number of items used (*n*) and internal consistencies of the scales as assessed by Cronbach's coefficient ( $\alpha$ )**

Error propensity	Wave 1		Wave 2		Modification of items between waves
	<i>n</i>	$\alpha$	<i>n</i>	$\alpha$	
Visceral triggers (positive emotions)	3	.87	8	.66	All new items
Cognitive effort	3	.70	4	.37 <sup>a</sup>	minor
Scarcity and uniqueness of scam offer	3	.85			
Liking and similarity	3	.81			
Need for consistency with future expectations	1	n/a			
Behavioural commitment	3	.73			
Sunk cost	1	n/a			
Problems with maths			2	.66	
Trust and authority	4	.87	4	.85	minor
Illusions of control	2	.33 <sup>b</sup>			
General attitude towards scams: Positive	1				
General attitude towards scams: Negative	1				
Personal approach			1	n/a	
Need for privacy			1	n/a	

<sup>a</sup>Unacceptably low  $\alpha$  value, but scale formed in light of results from Wave 1

<sup>b</sup>Unacceptably low  $\alpha$  value, items analysed separately

## F STUDY THREE: TEXT OF THE QUESTIONNAIRES

### STUDY 3: WAVE 1 QUESTIONNAIRE



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2 January 2008

Dear Participant Panel Member,

A Happy New Year! Once again we are writing to ask for your help with some research. We have been asked by the UK government's Office of Fair Trading (OFT) to carry out some studies into why people fall for scam mailings. You know the kind of thing we mean, and you have probably received them – for example letters telling you that you have won millions of Euros in the Spanish lottery (which you never entered in the first place) and all you have to do is send off £100 to claim it... and of course you never get the millions of Euros, and nor do you ever see your £100 again.

We say 'of course', but the fact is that every year, millions of people fall for scams like this. You don't have to be old, or confused, or stupid to be caught out by them. And there are big sums of money involved: OFT reckons that people in the UK lose a total of

£3.5 billion to scammers every year, and some of them lose their life savings and the roof over their heads.

To help us understand what is going on here, we would like you to answer some simple questions about scams you may have received in the last few months or years. We'd like as many people as possible to fill in the questionnaire. In addition, though, we are very keen to arrange some interviews with people who have actually fallen for one of these scams, or who came quite close to doing so. Looking back, it often seems so obvious that a scam was too good to be true, but at the time it didn't seem like that – we want to know what it was that tricked you, or what it was that stopped you just in time. If you are able to give us an interview, and we select you for one, we will pay you £50.

Thank you very much for your help on this important issue. Please try to answer all questions as accurately as possible, but if your memory is hazy, remember that incomplete information will be more use to us than none at all. We assure you that all your answers are strictly confidential and will be used only for scientific purposes, and unless you volunteer for an interview, we will not even know your identity. You can return the questionnaire and interview invitation in the FREEPOST envelope provided, which doesn't need a stamp. If you'd like to know more about the project, please please don't hesitate to contact Peter Fischer (phone 01392, email @exeter.ac.uk).

Yours sincerely

Stephen Lea  
Professor of Psychology

Peter Fischer  
Senior Lecturer in Social Psychology

## **THE SCAMS QUESTIONNAIRE**

ITEM 1: Have you been approached by scammers in the last 24 months?

NO      YES

ITEM 2: If you answered ITEM 1 with YES then please indicate what type of scam have you been offered (e.g., Spanish lottery, preparing a bank account for some kind of heritage, etc.). Write down as many as you can remember

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ITEM 3: Did you react to a scam within the last 24 months (e.g., answering the scam or asking for further details)?

NO      NEARLY      YES

ITEM 4: If you answered ITEM 3 with YES or NEARLY then please indicate how you answered to the scam approach.

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ITEM 5: If you responded a scam in the last couple of months, please indicate why you did that (e.g., how did you feel, what convinced you that the scam is not a fraud, etc.).

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**ITEM 6:** Are you willing to take part in an interview (for which you will be paid £50) about a time when you fell for a scam, or nearly fell for one?

NO YES

If you answer YES, please fill in the separate sheet and include it in the FREEPOST envelope, or send it to us separately if you prefer.

ITEMS 7a-z: If you have ever responded (or nearly responded) to a scam, please indicate how you felt when responding to it, by circling one of the numbers. If you have never responded to a scam, then please indicate generally how you felt about a specific scam offers you remember receiving.

(f) I felt I was being very effective by responding to the scam.	0	1	2	3	4	5	6	7	8	9	10
	Not at all									Definitely	
(g) I felt very lucky to get this offer.	0	1	2	3	4	5	6	7	8	9	10
	Not at all									Definitely	
(h) I felt very positive about my personal future when I responded to the scam.	0	1	2	3	4	5	6	7	8	9	10
	Not at all									Definitely	
(i) I responded to the scam in order to feel better.	0	1	2	3	4	5	6	7	8	9	10
	Not at all									Definitely	
(j) I felt there was a strong authority behind the scam.	0	1	2	3	4	5	6	7	8	9	10
	Not at all									Definitely	
(k) I felt that responding to the scam would make me more successful than other people	0	1	2	3	4	5	6	7	8	9	10
	Not at all									Definitely	
(l) I felt high commitment towards the scammers.	0	1	2	3	4	5	6	7	8	9	10
	Not at all									Definitely	
(m) I felt that the scammers liked me, so I responded.	0	1	2	3	4	5	6	7	8	9	10
	Not at all									Definitely	

(n) Other people also received this scam offer, so I felt that it must be genuine.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(o) I felt that the scammers were like me.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(p) I felt that the scammers had the same attitudes as me.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(q) I responded to the scam because I felt that I have to be consistent with my expectations for my life.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(r) Often I feel that scams offer me something which is scarce.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(s) I felt that the scammers had given me something interesting, so I felt I should respond	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(t) I felt that I had invested a lot in the scam (e.g., reading time), so I responded.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely

(u) Scams give me a feeling of being in control of my life	0 1 2 3 4 5 6 7 8 9 10	Not at all	Definitely
(v) Generally, I feel very positive about scam offers.	0 1 2 3 4 5 6 7 8 9 10	Not at all	Definitely
(w) Generally, I feel very negative about scam offers.	0 1 2 3 4 5 6 7 8 9 10	Not at all	Definitely
(x) I tend to read most scam offers very thoroughly.	0 1 2 3 4 5 6 7 8 9 10	Not at all	Definitely
(y) I tend to be very interested in scam offers.	0 1 2 3 4 5 6 7 8 9 10	Not at all	Definitely
(z) For me it is an intellectual challenge to detect whether a scam offer is real or not.	0 1 2 3 4 5 6 7 8 9 10	Not at all	Definitely

**THANK YOU VERY MUCH FOR YOUR HELP. NOW PLEASE PUT THE COMPLETED  
QUESTIONNAIRE IN THE FREEPOST ENVELOPE PROVIDED, AND POST IT BACK TO  
US. NO STAMP IS NEEDED**

**THERE IS AN INVITATION TO TAKE PART IN AN INTERVIEW (FOR WHICH YOU WILL BE PAID) ON A SEPARATE SHEET.**



SOCIAL, ECONOMIC AND ORGANIZATIONAL  
RESEARCH GROUP

SCHOOL OF PSYCHOLOGY

## PSYCHOLOGY OF SCAMS INTERVIEW INVITATION

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Email

Web [www.exeter.ac.uk/~SEGLea](http://www.exeter.ac.uk/~SEGLea)

If you are willing to give us an interview about your experience with scams, please return this form with the questionnaire:

Name .....

Address.....  
.....  
.....

Phone number (please give all numbers where we might reach you) .....

.....

Your experience with scams (please tick the one that best describes it):

I never receive scam mailings .....

I have received them but have never come near responding.....

I have come near to falling for a scam .....

I have fallen for a scam and lost money as a result.....

If you are selected for an interview, you will be paid £50.

**NOW PLEASE RETURN THIS FORM TO US. YOU CAN RETURN IT IN THE SAME ENVELOPE, OR SEND IT SEPARATELY TO THE SAME FREEPOST ADDRESS – NO STAMP IS NEEDED. THANK YOU VERY MUCH**

## **STUDY 3: WAVE 2 QUESTIONNAIRE**

1 May 2008

Dear Sir or Madam,

We have been asked by the UK government's Office of Fair Trading (OFT) to carry out some research into why people fall for scam mailings, and e-mails. You know the kind of thing we mean, and you have probably received them – for example letters telling you that you have won millions of Euros in the Spanish lottery (which you never entered in the first place) and all you have to do is send off some money to claim it. Or mailshots telling you that you have won a large cash prize and asking you to send a small processing fee, call a premium rate number, or order from a catalogue to receive it...and of course you never get the lottery win or cash prize, and nor do you ever see your money again.

We say 'of course', but the fact is that every year, millions of people fall for scams like these. You don't have to be old, or confused, or gullible to be caught out by them. And there are big sums of money involved: OFT reckons that people in the UK lose a total of £3.5 billion to scammers every year, and some of them lose their life savings and the roof over their heads.

To help us understand what is going on here, we would like you to answer some simple questions about scams you may have received in the last few months or years. We'd like as many people as possible to fill in the questionnaire. Please feel free to copy it and send us responses from more people. Looking back, it often seems so obvious that a scam was too good to be true, but at the time it didn't seem like that – we want to know what it was that tricked you, or what it was that stopped you just in time. If the OFT has a better understanding of what makes people fall for scams it can look at ways to prevent the problem either through education or other effective campaigns.

Thank you very much for your help on this important issue. Please try to answer all questions as accurately as possible, but if your memory is hazy, remember that incomplete information will be more use to us than none at all. We assure you that all your answers are strictly confidential and will be used only for scientific purposes, we

will not even know your identity. You can return the questionnaire in the FREEPOST envelope provided, which doesn't need a stamp. If you'd like to know more about the project, please please don't hesitate to contact Peter Fischer (phone 01392, email @exeter.ac.uk).

Yours sincerely

Stephen Lea Peter Fischer

Professor of Psychology     Senior Lecturer in Social Psychology

## **THE SCAMS QUESTIONNAIRE**

ITEM 1: Have you been approached by scammers in the last 24 months by letter or e-mail?

NO      YES

ITEM 2: If you answered ITEM 1 with YES then please indicate what type of scam have you been offered (e.g., Spanish lottery, prize draw win, sweepstake, miracle health cure, get-rich-quick scheme, foreign money-making offer, fake psychic, etc.). Please write down as many as you can remember

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ITEM 3: Did you reply back in any way to a scam within the last 24 months (e.g., answering the scam, phoning, asking for further details or visiting a web-site)?

NO      NEARLY      YES

ITEM 4: If you answered ITEM 3 with YES or NEARLY then please indicate how you answered the scam approach. Did you send any money or personal information, and if yes, how much?

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**ITEM 5:** If you responded to a scam in the last couple of years, please indicate why you did that (e.g., how did you feel, what led you to believe that it was not a scam, etc.).

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**ITEMS 6a-z:** If you have ever responded (or nearly responded) to a scam, please indicate how you felt at the time, by circling one of the numbers. You may have found out that it was a scam later; please answer this questionnaire about the time when you responded (or nearly did). If you have never responded to a scam, then please indicate generally how you felt about a specific scam offer you remember receiving.

(f) Other people were apparently taking up this offer	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(g) I am very interested in the topic the scam was about.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(h) It was an intellectual challenge to decide whether the deal was worthwhile.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(i) Responding to an offer can make me feel better	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(j) I felt there was a strong authority behind the letter, text, or e-mail	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(k) I felt or I was personally addressed by the letter or e-mail.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(l) I felt a high level of commitment towards the sender of the letter, text or e-mail.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(m) I felt that the sender of the letter, text or e-mail liked me.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely

(n) The sender of the letter, text or e-mail impressed me as being very reliable	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(o) I don't tend to read the small print.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(p) I felt that the sender had the same attitudes as me.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(q) I am more intelligent than the average person	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(r) The amount of money & time they were asking for was small	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(s) I am more successful in my job than the average person.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(t) I felt that I had invested a lot in dealings with the offer (e.g., reading time),	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(u) Sometimes I am rather greedy.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely

(v) The law would be able to sort my situation if I was defrauded	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(w) I believe in following my gut feelings.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(x) Sometimes I have problems with judging probabilities.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(y) Sometimes, I struggle to imagine big numbers.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(z) I am normally cautious when I take financial decisions.	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely
(zz) It would have felt uncomfortable to talk to other people about this offer	0    1    2    3    4    5    6    7    8    9    10	Not at all	Definitely

THANK YOU VERY MUCH FOR YOUR HELP. NOW PLEASE PUT THE COMPLETED  
QUESTIONNAIRE IN THE FREEPOST ENVELOPE PROVIDED, AND POST IT BACK TO  
US. NO STAMP IS NEEDED

## **G      STUDY THREE: TESTS OF THE SIGNIFICANCE OF GROUP DIFFERENCES IN QUESTIONNAIRE RESPONSES**

Table G.1 summarises the results of tests of the significance of differences in questionnaire responses between victims, near-victims, and non-victims.

**Table G.1 Study 3: Significance of difference between victim status groups.**  
**Note that the near-victim classification was not used in the analysis of Wave 2 results.**

Error propensity	Overall significance			Significance of post hoc tests		
	F	Degrees of freedom	Effect size ( $\eta^2$ )	Non-victim vs near victim	Near victim vs victim	Non-victim vs victim
Visceral triggers (positive emotions)						
Wave 1	18.14 ** *	2, 100	.27	***	NS	***
Wave 2	19.56 ** *	1, 83	.19			***
Cognitive effort						
Wave 1	6.65 **	2,100	.12	***	NS	.06
Wave 2	7.68 **	1, 82	.09			**
Scarcity and uniqueness of scam offer	18.95 ** *	2, 100	.28	***	.08	***
Liking and similarity	19.94 ** *	2, 99	.29	***	NS	***
Need for consistency with future expectations	27.02 ** *	2, 91	.37	***	**	**

Behavioural commitment	29.21 ** *	2, 99	.37	***	NS	***
Sunk cost	11.95 ** *	2, 95	.20	***	.08	*
Problems with maths	9.83 **	1, 83	.11			**
Trust and authority						
Wave 1	41.96 ** *	2, 100	.46	***	NS	***
Wave 2	45.48 ** *	1, 83	.35			***
Illusions of control	<2.24					
General attitude towards scams:						
Positive	7.21 ***	2, 99	.13	***	***	NS
Negative	4.93 **	2, 99	.09	**	NS	NS
Personal approach	2.97	1, 83	.04			.09
Need for privacy	6.60 **	1, 79	.08			**

\*, \*\*, \*\*\*  $P < .05, .01, .001$

## H STUDY FOUR: TEXT OF THE LETTER INVITING PARTICIPATION IN STUDY 4B



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August 2008

Please help us with our Research into Postal Scams

Dear \*\*\*\*\*,

You have just read a letter that was supposedly from '[] Organization'. In fact, this company does not exist, and this letter is from the University of Exeter University. We are a team of researchers at the University and are currently working with the Office of Fair Trading.

Every year, millions of people fall for postal scams very like the one you have just read. And there are big sums of money involved: The Office of Fair Trading estimates that people in the UK lose a total of £3.5 billion to scammers every year – and sadly some of them lose their life savings and the roof over their heads. You do not have to be old, confused or gullible to be caught out by them - the OFT knows of victims from all walks of life, including ex-police officers and vicars!

We are trying to help the OFT understand the techniques used by the scammers, so that they can educate and protect people better. Your receipt of this letter actually forms part of our study. We apologise for not obtaining your permission before sending it. In order to find out how real scam letters are unfortunately so effective, we needed people who were not forewarned. As we hope you will understand, an experiment about how easy it is for scammers to get people to comply with their wishes would not work if we had asked your permission first. Your involvement would be much appreciated.

Because you weren't told exactly what was going on at the beginning, you have the opportunity at this point to withhold your data from the study. If this is what you prefer, please simply throw this away, which will have the same effect as if we had not sent it to you in the first place.

In order to help the OFT, we want to find out more about the effect that scam letters have on people. So we've enclosed a short questionnaire about this, and a Freepost envelope. This is an anonymous questionnaire, so we won't know who has sent them to us. If you are willing to take the time to fill this in, we would be very grateful. Hopefully we can help others learn not to fall for these scams, and your experience could help with this.

We obtained your name and address from the Electoral Register, and if you would prefer not to give these details to people in future you can contact .....

You may have experienced some unpleasant effects from our letter, and if you have, we trust these will have been short-lived. It is possible that you were hoping to win some money, and feel disappointed, or that the letter was a source of confusion. You may have experienced a sense of not being in control. You may be annoyed with us for sending this letter to you and asking for research information. If the scam letter caught you out, you may be feeling foolish. If you are experiencing any troubling results of receiving our letter, we would like you to ring us or write to us, or contact by e-mail, because if our letter has troubled you, we should help put this right.

Possibly, you will be better placed, because of this letter, to be able to detect when someone is attempting to gain money from you fraudulently. You may be able to spread the word of how to avoid these scams amongst your contacts.

You are very welcome to contact us – address and phone number above – if you want to, for any reason.

Yours sincerely

Professor Stephen Lea, Dr Peter Fischer, Dr Kath Evans

## I STUDY FOUR: QUESTIONNAIRE USED IN BOTH STUDY 4A AND 4B

Now would you tell us how well each statement describes your feelings when you first read the pretend scam. Please put a tick in one box in each row. Don't worry about being too exact, just put the tick in roughly the right place.

	Not At All	Extremely									
		0	1	2	3	4	5	6	7	8	9
I felt very positive about responding to the letter.											
Reading the letter made me think about a positive future with all that money.											
I thought the letter was very boring.											
The letter made me feel that I'd really like to have that much money, so I wanted to respond											
The thought of the winnings really gave me a 'kick'.											
I really didn't even think about the offer made in the letter.											
The size of the prize really intrigued me.											

Now just two questions about you, please circle your answer

Sex                    M       F

Age 18-25 25-35 35-45 45-55  
55-65 65 +

**Thank you very much for your help !! Now please put the questionnaire in the FREEPOST envelope provided and post it to us. No stamp is needed**

## J STUDY FOUR: RESULTS OF FACTOR ANALYSES OF RESPONSES TO THE QUESTIONNAIRE ITEMS

Principal axis factoring was used. The following initial eigen values were found:

**Total Variance Explained**

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings(a)  Total
	Total	per cent of Variance	Cumulative per cent	Total	per cent of Variance	Cumulative per cent	
1	5.569	39.779	39.779	5.154	36.812	36.812	5.096
2	2.137	15.265	55.044	1.551	11.075	47.888	2.073
3	.931	6.653	61.697				
4	.821	5.867	67.564				
5	.764	5.457	73.020				
6	.710	5.072	78.092				
7	.586	4.185	82.277				
8	.549	3.920	86.197				
9	.443	3.164	89.361				
10	.394	2.817	92.178				
11	.319	2.281	94.459				
12	.314	2.246	96.705				
13	.272	1.942	98.648				
14	.189	1.352	100.000				

Extraction Method: Principal Axis Factoring. a When factors are correlated, sums of squared loadings cannot be added to obtain a total variance.

This pattern of results strongly suggests that two factors should be retained. Accordingly, two factors were used and the factor analysis was followed by Oblimin rotation using Kaiser normalization. The following structure matrix was obtained, reporting only factor loadings that exceeded 0.300:

**Structure Matrix**

Item	Factor	
	1	2
Made me feel I'd really like to have that much money, so I wanted to respond	.864	
The thought of the winnings really gave me a 'kick'	.847	
This was a chance to get a big prize for doing almost nothing	.809	
Reading it made me think about positive future with all that money	.807	
The size of the prize really intrigued me	.783	
I thought in detail about what I could do with all that money	.739	
I believed the letter came from an official institution	.667	
Felt very positive about responding to the letter	.589	
The content of the letter really sounded very official	.486	
I was very doubtful about the content of the letter		.759
The letter seemed very unreliable to me		.666
Felt very negative about responding to the letter		.586
I really didn't even think about the offer made in the letter		.434
I thought the letter was very boring		.413

The Pearson correlation between the two factors was -0.261

## K STUDY FOUR: TESTS OF THE SIGNIFICANCE OF GROUP DIFFERENCES IN RETURN RATES AND QUESTIONNAIRE RESPONSES

### Study 4a: Cold responses to scams

- K.1 Figures 4 and 5 in the main text show the pattern of responses on the 'intention to respond' and 'dislike of the scam' scales for the respondents in Study 4a who received the package which presented itself immediately as a research enquiry. The significance of differences between groups was tested by analysis of variance. A 2 (visceral cue: yes vs. no) x 2 (trust cue/official: yes vs. no) x 2 (prize cue: yes vs. no) x 2 (previous scam responder: yes vs. no) ANOVA revealed a significant main effect for 'responder',  $F(1, 399) = 70.06$ ,  $p < .001$ ,  $\omega^2 = .15$ , indicating that previous responders ( $M = 2.97$ ,  $SD = 2.84$ ) reported a stronger intention to respond than previous non-responders ( $M = 0.83$ ,  $SD = 1.32$ ). Moreover, we found a significant main effect for 'prize',  $F(1, 399) = 7.67$ ,  $p < .01$ ,  $\omega^2 = .02$ , indicating that a high prize ( $M = 1.35$ ,  $SD = 2.14$ ) offered in the scam led to stronger response intentions than a low prize ( $M = 1.06$ ,  $SD = 1.54$ ).
- K.2 In addition, we observed a significant interaction for the factors 'prize cue' and 'responder',  $F(1, 399) = 11.02$ ,  $p = .001$ ,  $\omega^2 = .03$ . Follow-up analyses did not show any significant simple effects. However, this interaction in tendency means that a high prize makes people who have responded in the past more likely to respond (but not people who have never responded). Also, we observed a significant interaction for the factors 'visceral cue' and 'trust cue',  $F(1, 399) = 6.93$ ,  $p < .01$ ,  $\omega^2 = .02$ . Follow-up analyses did not show any significant simple effects. However, this interaction in tendency means that for people who have responded in the past, with a low prize an official-looking letter is less effective, but with a high prize, an official-looking letter is more effective. No further differential meaningful effects were observed for emotional dislike of the scam.

## **Results of Study 4b: Hot responses to scams**

- K.3 Figures 6 and 7 in the main text show the pattern of responses on the 'intention to respond' and 'dislike of the scam' scales for the respondents in Study 4b who received the package which on first sight looked more like a real scam mailing. Again, the significance of differences between groups was tested by analysis of variance. A 2 (visceral cue: yes vs. no)  $\times$  2 (trust cue/official: yes vs. no)  $\times$  2 (prize cue: yes vs. no)  $\times$  2 (previous scam responder: yes vs. no) ANOVA revealed a significant main effect for 'scam victim',  $F(1, 497) = 62.77$ ,  $p < .001$ ,  $\omega^2 = .11$ , indicating that previous responders ( $M = 3.00$ ,  $SD = 2.50$ ) reported a stronger intention to respond than previous non-responders ( $M = 1.09$ ,  $SD = 1.85$ ).
- K.4 Moreover, we observed a significant two-way interaction between the factors 'visceral cue' and 'trust cue',  $F(1, 497) = 7.03$ ,  $p < .01$ ,  $\omega^2 = .01$ . Given no trust cue (non-official looking scam), no difference occurred between the condition with ( $M = 1.74$ ,  $SD = 2.38$ ) and without ( $M = 1.53$ ,  $SD = 1.98$ ) an additional visceral cue,  $F < 1$ . However, where a trust cue existed, participants with an additional visceral cue ( $M = 1.51$ ,  $SD = 2.28$ ) reported stronger response intentions than participants without an additional visceral cue ( $M = 0.86$ ,  $SD = 1.60$ ),  $F(1, 497) = 6.86$ ,  $p < .01$ ,  $\omega^2 = .03$ .
- K.5 Moreover, this latter two-way-interaction was qualified by a significant three-way interaction between the factors 'visceral cue', 'trust cue', and 'previous responder',  $F(1, 497) = 7.68$ ,  $p < .01$ ,  $\omega^2 = .02$ , indicating that the effect for the two-way interaction between 'visceral cue' and 'trust cue' is more pronounced for previous responders than non-responders. Concretely, for non-responders we found just a main effect for 'trust cue',  $F(1, 425) = 7.65$ ,  $p < .01$ ,  $\omega^2 = .02$ , indicating that less official looking scams ( $M = 1.34$ ,  $SD = 2.03$ ) led to more response intentions than official looking ones ( $M = 0.84$ ,  $SD = 1.62$ ). In contrast, this main effect was not found for previous responders. However, for previous responders we found a significant two-way interaction between 'visceral cue' and 'trust cue',  $F(1, 80) = 5.33$ ,  $p = .02$ ,  $\omega^2 = .06$ .

K.6 Follow-up analyses of all participants' data clarified that without an additional visceral cue non-official looking scams ( $M = 3.59$ ,  $SD = 2.50$ ) led to marginally stronger response intentions than official looking scams ( $M = 2.09$ ,  $SD = 2.62$ ),  $F(1, 36) = 3.25$ ,  $p = .08$ ,  $\omega^2 = .08$ . However, as soon as a visceral cue was provided, the difference between official looking scams ( $M = 3.58$ ,  $SD = 2.54$ ) and non-official looking scams vanished ( $M = 2.58$ ,  $SD = 2.24$ ),  $F(1, 44) = 2.01$ ,  $p = .16$ ,  $\omega^2 = .04$ . In other words: previous responders [are not particularly susceptible to official looking scams in themselves. However, as soon as a visceral trigger comes into play, scams with a trust cue (that is, official looking scams) make previous responders more willing to respond again. No further significant main effects or interactions were observed. In addition, no differential meaningful effects were observed for emotional dislike of the scam.