

Adolescent Accounts of the UK National Lottery and Scratchcards: An Analysis Using Q-Sorts

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The study examined adolescents' accounts of the UK National Lottery and scratchcards. Q-sorts were used to examine the views of 62 participants aged between 11 and 15 years of age. Findings identified four distinct accounts in relation to the National Lottery (*Moral Opposition, Luck Seeking, Rationalist, & Uncertainty*), and four distinct accounts in relation to scratchcards (*Scepticism, Thrill-Seeking, Rationalist, & Libertarian*). Some of the accounts identified described the UK National Lottery and scratchcards as bona fide forms of gambling. Reports indicated that adolescents were pessimistic about the chances of winning large sums of money, while other accounts demonstrated gambling misperceptions particularly in relation to their belief in luck and the laws of probability. It is argued that to fully understand why adolescents take part in these activities it is important to consider the diverse ways that adolescents represent these activities. These differing representations will have consequences for measures aimed at reducing, preventing, or treating adolescent problem gambling. The utility of Q-sorts as a technique for examining the views of problem and non-problem gamblers is also discussed.

KEY WORDS: adolescence; gambling; accounts; The National Lottery; scratchcards; Q-methodology.

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INTRODUCTION

In November 1994, the UK introduced The National Lottery run by a commercial operator (*Camelot*). The National Lottery is a popular bi-weekly lotto type game where players have to pick six numbers from forty-nine possibilities with the chance of winning huge jackpot prizes. In March 1995, *Camelot* introduced a second game, an instant lottery scratchcard game where players have to rub off latex panels to instantly reveal winning or losing symbols. Fifty percent of all revenue is paid back in winnings to the players and the games are restricted to those over the age of 16 years of age. From this brief description of the two types of lottery on offer in the UK, it can be speculated that different games might have different consequences for players (for instance, in terms of potential problematic play). Some forms of gambling have a strong association with problem gambling. These are usually high intensity activities and/or those that offer repeated opportunities to gamble and chase losses (e.g., slot machines, casino-type games etc.) (Griffiths & Wood, 2001).

Previous research has identified that substantial numbers of young people still play on these lotteries despite the age restriction (Fisher & Balding, 1998; Wood & Griffiths, 1998), and that many adolescents have their tickets/scratchcards bought for them by family and friends (Wood & Griffiths, 1998). For many adolescents these activities form a regular part of the weekly family entertainment (Wood & Griffiths, 1998). Past research has consistently demonstrated that parents who gamble are far more likely to have children who also gamble (Gupta & Derevensky, 1997; Fisher 1993; Griffiths, 1995; Ide-Smith & Lea, 1988; Winters, Stinchfield & Fulkerson, 1993; Wood & Griffiths, 1998; Wynne, Smith & Jacobs, 1996). This is an area of particular concern as it has been identified that rates of pathological gambling in adolescents are often twice as high as those for the adult population (Derevensky & Gupta, 1996; Fisher, 1992; Griffiths, 1995; Shaffer & Hall 1996; Wynne et al., 1996). Wood and Griffiths (1998) in a prevalence study of adolescent lottery and scratchcard gamblers in the UK found a 6% level of adolescent pathological gambling amongst players on both the National Lottery and scratchcards. Furthermore, they found that almost half of the adolescents in their survey (48%) had played

the UK National Lottery, usually with their family and/ or friends. Just under a third of adolescents in the survey (30%) reported that they had played scratchcards, again usually with their family and/ or friends.

One explanation for such high levels of adolescent participation may come from social cognitive theory (Bandura, 1986). Modelling of this type of behaviour may not just be limited to family members, but could conceivably include popular media figures such as television presenters and 'pop' musicians. The UK National Lottery has a dedicated bi-weekly television program hosted by well known celebrities and incorporating well known 'pop' bands that directly appeal to adolescents (e.g., *Boyzone*, *911* etc.).

Whilst it is clear that the vast majority of adolescents experience little or no immediate problems with lotteries and scratchcards, it is less clear how these types of activities may be affecting them at a more general level. Furthermore, we would suggest that even those adolescents who do not take part 'directly' in these activities, are still very much subject to the cultural phenomenon that (in the UK) is *The National Lottery*. This experience begins with the advertising presented on television and radio, in newspapers, on billboards, and in shop windows. It also includes two 'prime time' television shows (on Wednesday and Saturday evenings) and related news broadcasts (e.g., announcements of winning numbers). There is also the publicity surrounding winners. Finally, there is the ever popular conversation that usually begins "What would you do if you won the lottery?" In this respect, it is clear that a person does not necessarily need to gamble on the lottery or purchase scratchcards to be affected by such activities, or at the very least formulate personal views about them. It is perhaps these views that are of paramount importance for they may eventually be used to decide whether to take part in the future, and could conceivably help formulate views about gambling in general. Whilst personal views are by definition subjective, it is useful to investigate how they are constructed, as there will undoubtedly be common themes that will emerge. Often, the first exposure that adolescents have to the phenomenon of lottery and scratchcard gambling begins at a media level through commercials, and as such is likely to be a fairly uniform experience. Large numbers of adolescents also participate in these activities, usually with family or friends (Fisher & Balding, 1998; Wood & Griffiths, 1998). Therefore, we might expect adolescents to hold a

number of similar views, variation occurring due to individual biopsychosocial differences and direct behavioural experiences.

The present study set out to investigate in detail how adolescents view the UK National Lottery and scratchcards by examining their attitudes towards statements relating to these activities. While there have been a number of published studies that have specifically examined lotteries and scratchcards in relation to adolescents (e.g., Browne, 1993, 1994; Fisher & Balding, 1998), these have not generally examined how adolescents actually view these forms of gambling. Knowledge of these views is useful for a number of reasons. They may:

- help us to develop an understanding of why people decide to gamble
- provide us with ideas on how to address erroneous gambling perceptions (common in many problem gamblers)
- provide us with information to develop prevention strategies, both to prevent gambling behaviour (in minors) and to encourage responsible gambling where legal.

METHOD

Participants

Sixty-two participants, age 11 to 15 years, from three schools in the East-midlands area of the UK took part in the study (with a further eight schools declining to take part). The authors obtained informed consent from the adolescents taking part in the study, in addition to full co-operation from the schools in the administration process. There were an equal number of males and females. It is important to note that large numbers of participants are unnecessary with Q-sorts (see Design section for an overview of the methodological rationale). Participants are typically selected to represent a wide selection of beliefs.

Design and Rationale for Using Q-Methodology

Q-methodology is concerned with subjectivity, and delineates nothing more than a person's communication of his or her point of

view, on any issue that is personally and/ or socially salient (McKeown & Thomas, 1988). In this sense, the research was not trying to directly measure people's behaviour, but was intent on understanding that behaviour, or at least understanding some of the views that may inform such behaviour. Q-sorting is the method that is utilised by Q-methodology. Q-sorts are similar to semi-structured interviews in that the participants' responses are rated on a scale according to the extent that they agree or disagree with the statements that they are given (appearing on Q-cards). However, responses are also rated in relation to each other, and in this way the most salient aspects of each Q-sort emerge. Furthermore, each participant can arrange and re-arrange each statement at their leisure, rather than justifying their responses in relation to previous answers, and/ or subsequent answers. Statements can be generated from a variety of sources including interviews, previous research, the gambling literature and personal ideas. This provides the opportunity of not only representing a diverse selection of views, but also allows participants to play a more active role in the research process. As such, this methodology allows the researcher to be less presumptuous about what are, and are not, the most relevant issues on any particular topic. This methodological approach is radically different to most forms of psychometrics that usually aim to measure participant's responses to predefined operationalised concepts (e.g., IQ scores or personality scales). The uniqueness of Q-methodology is that it provides a high level of negotiation with the participants. Q-methodology has been used successfully to examine a variety of social issues such as deconstructing addiction (Stainton-Rogers, 1988), explaining concepts of health and illness (Stainton-Rogers, 1991), understanding human rights (Stainton-Rogers & Kitzinger, 1995), notions of rebelliousness (Stenner & Marshall, 1995) and stress and coping strategies in community psychiatric nurses (Leary, 1995).

It is not our assertion that the sample used necessarily represented adolescents in general, rather that they provided a snapshot of some of the ways adolescents perceive the UK National Lottery and scratchcards. Essentially, *Q-methodology is not concerned with the frequency of how many people are doing something, but is concerned with exploring a diverse selection of viewpoints* (Stainton Rogers, 1995). Accordingly, any Q-sort should have more Q-cards (statements) than participants otherwise factors will simply become replicated. Thus, the concept of *finite diversity* reflects one of the main tenets of Q-methodology, that an indi-

viduals perceptions of any given phenomena will be constrained by what Keynes (1921) referred to as 'the principle of limited independent variety.' As Stainton Rogers (1995) notes, this may now be related to notions of limited social representations. In this sense, there are only a limited number of linguistically and culturally specific ways of looking at any given phenomenon.

Procedure

A set of 49 Q-cards with statements written on them, pertaining to the National Lottery, were given to 31 of the participants. Another 31 participants were given a similar set of Q-cards with statements relating to scratchcards. The statements were derived from several sources including the gambling literature, aspects of the DSM-IV-J gambling scale (Fisher, 1993), comments and feedback from participants in the authors' previous prevalence study (Wood & Griffiths, 1998), and statements chosen by the researchers to examine adolescent views on lottery and scratchcard advertising and legislation. Together, these statements represented a number of attitudinal dimensions that sought to account for a diverse selection of views (see Table 1; also see Appendix 1 & 2 for a complete list of statements).

The Q-sorts were conducted in classrooms with between 10 and 15 participants compiling them at the same time, but individually. Participants were only required to divulge their age and gender, and were assured that only the researchers would see their responses. The researcher then explained the nature of the task and how to undertake it, in addition, instructions were provided on a response sheet. Typically participants do not have a response sheet and instead arrange their cards on a table or the floor, according to instructions. However, as this study involved adolescents of different ages, a response sheet was formulated to make the task easier to comprehend. Each participant then arranged the 49 Q-cards, by sorting them into piles ranked from -6 (least agree) to +6 (most agree) in accordance with a forced sort matrix (see Figure 1). This type of matrix has been designed in a pyramid shape so that the participant must make strict choices as to which statements they regard as most salient. The underlying premise is that people will hold many general views, but far fewer extreme views about any given topic.

The participants were free to re-arrange the order of the Q-cards

Table 1
Q-Statement Dimensions

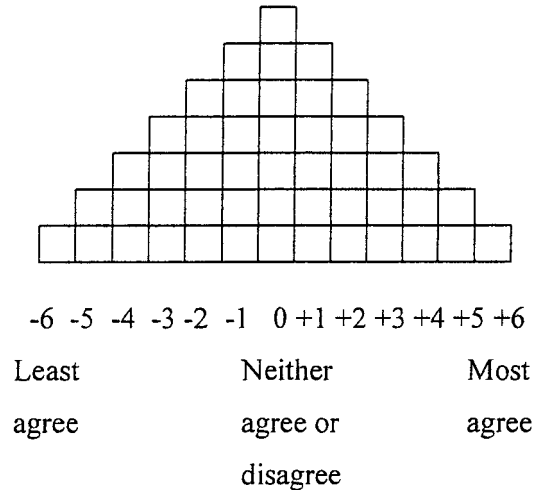
<i>Main Components Examined</i>	<i>Subcomponents</i>	
A. Direction	Pro-Scratchcard/lottery	Anti-Scratchcard/lottery
	Pro-Gambling	Anti-Gambling
B. Beliefs	Luck	Chance
	Skill	Misperception
C. Issues	Problem Gambling	Legislation
	Awareness	Advertising
D. Motivations	Money	Fun/Excitement
	Social Factors	Escape

until they were satisfied that they accurately reflected their views. When this was achieved they wrote the number of each Q-card in the box directly underneath it on the response sheet. The researcher then collected all the response sheets and debriefed the participants.

RESULTS

Responses were analysed using the software package PCQ utilising centroid factor analysis. The National Lottery sorts and the scratchcard sorts were analysed independently from each other. Any factors with an eigen value greater than one were rotated using varimax rotation. Factor analysis identified four significant factors in relation to the National Lottery representing four distinct accounts that we have termed: *Moral Opposition*, *Luck Seeking*, *Rationalist* and *Uncertainty*. Four distinct accounts also emerged in relation to the scratchcard sorts. We termed the scratchcard accounts: *Scepticism*, *Thrill Seeking*, *Rationalist* and *Libertarian*. based on the factor loadings identified. The accounts were compiled by examining the model sorts corresponding to each factor identified. The model sorts provided a score for each of the 49 Q-card statements. Any statement that scored either -3 and below, or $+3$ and above, or that was at least three numbers away from another factor's score (on that statement) was used to define the account (see Appendix 1 & 2). These accounts do not represent individual views,

Figure 1
A Forced Sort Matrix/Response Sheet



and some of the sorts expressed views that would overlap in a number of the accounts identified. However, each account represents of a unique and specific way of viewing the UK National Lottery and scratchcards. The following represent the adolescent accounts that were identified in relation to the National Lottery.

In very basic terms, to generate the account types, the authors examined which statement items loaded on particular factors generated by the factor analysis. The cluster of statements relating to each factor loading were then examined in detail in order to formulate a descriptive name that encapsulated the statement accounts in that particular category. Thus, while trying to be objective, the accounts presented below are necessarily interpretative.

National Lottery Accounts

Moral Opposition. The moral opposition account represented a very negative view of gambling in general. The lottery was viewed as a bona fide form of gambling that may also be addictive. It was expressed that the lottery can make a person sad, and that the National Lottery should be banned. The idea that people of any age should be allowed to play was rejected. It was also reported that the lottery was

generally disliked by family members and/or peers. No misperceptions about lottery gambling were demonstrated, although luck was synonymous with chance. This perspective revealed that achievements and life rewards are a result of working hard and money was not considered of paramount importance. The idea of being alone most of the time was positively rated.

Luck Seeking. The luck seeking account demonstrated a positive view of the lottery, one that opposed the idea that it should be banned. It also strongly disagreed that lottery jackpots were excessively large. A firm belief in luck was expressed and it was suggested that winning the lottery was purely a matter of luck. The lottery was regarded as a gambling activity although some misperceptions about lottery gambling were evident. Specifically, it was expressed that purchasing more tickets would significantly increase a person's chance of winning a lottery jackpot. There was awareness that some individuals spend too much money on the lottery and a belief that life's rewards are achieved by working hard. The law was not seen as an effective deterrent to under-aged gambling. A positive desire was expressed to spend social time with family and friends.

Rationalist. The rationalist account firmly perceived the lottery as a bona fide form of gambling and indicated that lottery jackpots were too large. It was suggested that lotteries may be addictive and that some people spend too much on them. The idea that people of any age should be allowed to play was firmly rejected. However, there was strong opposition to the idea that the lottery should be banned. The chance of winning a lottery jackpot was rated as extremely unlikely, as was the idea of winning any money on the lottery. The idea of being alone most of the time was disliked, and instead, the idea of being around family and friends was very highly rated. This view suggested that you get what you want in life by working hard, and that money was not the most important thing in life. It was also suggested that luck had nothing to do with winning a lottery jackpot and that it was all down to chance. No misperceptions about lottery gambling were evident.

Uncertainty. The uncertainty account also viewed the lottery as a bona fide form of gambling. There was uncertainty as to whether or not the lottery could be addictive, although there was awareness that

some people spend too much money on the lottery. It was reported that family and peers held negative attitudes toward the lottery, and it was expressed that lottery jackpots were too large. Although the lottery was reported as having nothing to do with luck, it was also suggested that some numbers were luckier than others, and that luck was the same thing as chance. Furthermore, it was indicated that selecting identical numbers each week increases a person's chances of winning a lottery jackpot. The idea of being alone most of the time was strongly rejected, and instead the idea of being amongst friends and family was positively rated. This view strongly rejected the notion that money can buy happiness.

The following accounts were generated by the factors identified from the Q-sorts in relation to scratchcards. Each account represents a distinct way of viewing scratchcards and the associated issues.

Scratchcard Accounts

Scepticism. The scepticism account defined scratchcards as a 'hard' form of gambling that could be addictive, although no judgement was given as to whether or not scratchcards should be banned. Misperceptions about scratchcard gambling were not generally evident except that a belief in 'lucky streaks' was expressed. Winning on scratchcards was thought to be difficult and it was suggested that you get rewarded in life by working hard, rather than through gambling. The notion of spending time with family and friends was positively rated. This account strongly disagreed that money buys happiness.

Thrill Seeking. The thrill seeking account believed that scratchcards were exciting and that winning a lot of money could solve all a person's problems. It was suggested that parents and friends found scratchcards enjoyable and that people of any age should be allowed to play. There was disagreement as to whether you get what you want in life by working hard. However, there was recognition that scratchcards are a type of gambling that may be addictive. It was expressed that scratchcards were generally a waste of money. This account reported a belief in lucky streaks, and luck was seen as markedly different from chance. A number of misperceptions about the nature of scratchcards were evident. For example, it was suggested that only winning back the cost of the scratchcard was still a significant win. It was

also reported that if someone wins £50 on a scratchcard they should then immediately purchase more scratchcards. Furthermore, it was indicated that when someone wins with a scratchcard that they are then less likely to win next time they play. Spending a lot of time alone was negatively rated.

Rationalist. The key issues that defined the rationalist scratchcard account was a belief that you get what you want in life by working hard rather than through luck. Scratchcards were recognised as a type of gambling that may be addictive. The chances of winning any money on scratchcards were perceived as low, and it was expressed that winning on scratchcards was due to chance. However, there was disagreement that scratchcards should be banned. Spending a lot of time with family and/or friends was rated as important, and money was not regarded as the most important thing in life. However, it was suggested that winning a lot of money could solve all a person's problems. Scratchcards were not believed to be exciting and it was expressed that they can make a person sad. There was disbelief that scratchcards can make someone happy even if they do not win. No misperceptions about scratchcard gambling were evident.

Libertarian. The libertarian account defined scratchcards as a bona fide form of gambling that could also be addictive. It was reported that gambling was a bad thing, although it was strongly advocated that scratchcards should not be banned. Indeed, it was suggested that people of any age should be allowed to buy scratchcards. Spending time with family and/or friends was rated as important, and it was expressed that you get what you get rewarded in life as a result of working hard. It was suggested that scratchcards can make people sad, and there was disbelief that scratchcards make people happy even when they do not win. No misperceptions relating to scratchcard gambling were demonstrated.

DISCUSSION

In discussing the results, it should be noted that Q-methodology can only provide a 'snapshot' in time relating to a particular cohort of individuals and their views. There are clearly questions concerning the

generalizability of the results gained from the technique, and caution must be given to the results obtained. However, one of the strengths of this particular methodology is the generation of new types of hypotheses that are unlikely to be generated from other types of research method. The generalizability of the findings can thus be explored and triangulated using other empirical methods.

Given the caveats outlined, the study indicated that adolescents in this study did not view the UK National Lottery and scratchcards uniformly, but account for these activities in several distinct ways. Most of the generated accounts viewed the National Lottery and scratchcards as bona fide forms of gambling. There was also a general awareness of the negative effects of gambling (e.g., problem gambling), and a realisation that winning large sums of money was extremely unlikely. This would seem to indicate that adolescents' awareness about the nature of these forms of gambling has increased over the last few years when comparing findings to previous work by the authors (i.e., Wood & Griffiths, 1998). During this time there have been numerous stories (in the UK media) about underage lottery gambling—in fact many such reports may have been a direct response to some of the authors' previous research. Media reports during this period may well have helped adolescents to more consistently categorise the National Lottery and scratchcards as forms of gambling. It may also be a secondary effect derived from parental influences and attitudes.

The present study also indicated that many parents may now hold a more negative view of the lottery and would, presumably, be less inclined to purchase tickets for their children. This suggests that at least some attitudes toward gambling activities may be amenable to change through the media dissemination of research findings. This is very promising in terms of preventing under-aged gambling and educating the public about gambling issues. However, misperceptions of the nature of gambling were still evident in most of the generated accounts. In particular, the following misperceptions were still evident:

- Luck is synonymous with chance
- Some numbers are luckier than other numbers
- Some people have lucky streaks
- If someone wins one time they are less likely to win next time they play
- Using the same lottery numbers increases the likelihood of winning

- Buying more lottery tickets/scratchcards *significantly* increases the chance of winning a lottery or scratchcard jackpot

Such misperceptions are likely to impact on the participation in such gambling activities. Therefore, prevention and education campaigns may wish to focus in on these misperceptions as areas for specific focus.

Q-sorts may prove to be a useful tool in identifying and understanding the views of gamblers and non-gamblers alike. By identifying adolescents' views toward gambling activities it should be possible to develop a more detailed understanding of what gambling means to the specific individual. In this sense, Q-sorts could be a valuable means for exploring problem gamblers' personal accounts of their gambling behaviour. This method might also be used to examine the salience of particular gambling features and associated factors to the individual. Furthermore, it could provide the problem gambler with the opportunity to develop a concrete understanding of what their gambling behaviour means to them and how they rationalise that behaviour. This information could then be used by a therapist to target those issues that are most fundamental in maintaining a pattern of problem gambling behaviour.

The present study also identified several implications for preventing under-aged gambling on the National Lottery and scratchcards. Specifically, prevention programs aimed at youth need to be aware of the variety of attitudes that adolescents may hold towards these activities (e.g., *moral opposition, thrill-seeking, libertarian*). Furthermore, the generated accounts also highlight the structural distinctions between lotteries and scratchcards. Prevention and treatment approaches need to be aware of the differentiation adolescents may draw between the two activities. For example, the *thrill-seeking* account of scratchcards would need to be challenged very differently from the *luck-seeking* account of the lottery. Such insights into the views of youth gamblers are undoubtedly useful for developing prevention and education strategies that can accurately address erroneous gambling perceptions. Such perceptions could be challenged on a large scale through advertising and education campaigns, or on a more specific individual and/or group basis.

Finally, another important aspect of this study that should be mentioned was the experience of the participants themselves. The process of Q-sorting is by no means an easy task and requires a great

deal of introspection and personal evaluation. Many of the participants in the current study reported that they found the experience both challenging and enlightening. Participants were asked to consider a wide range of issues that challenged them to confront and evaluate their personal views. This suggests that Q-sorts can help make a person's views on a subject more concrete and allow them to validate those views. Whilst participants are sorting the cards, each statement can be considered either in isolation and/or in relation to other related statements. In this sense, a Q-sort can also be a learning and/or realisation process that is often rewarding in and of itself. However, it should be recognised that the sorting process can also be a demanding exercise. Frequently, participants in the present study reported their frustration at having to make decisions about which statements they agree and disagree with most, although this was always resolved by the time the sort was finally completed. The process of making choices and evaluating personal views is further amplified by the use of the forced sort matrix (see Figure 1). It is not always necessary to use this type of matrix with Q-sorts, and some researchers or clinicians may wish to use a less discriminatory matrix. For example, participants could be allowed to place an equal number of Q-cards on each level of the rating scale. However, the advantage of using a forced sort configuration is that the participants must make strict evaluations of those factors that are most personally significant. In this way, a more focused and considered set of views may emerge than when participants are allowed to express multiple views of an equal rating.

Thus, Q-sorts provide a unique way of examining participants' views in a way that holds few assumptions. They allow participants to decide for themselves what are, and what are not, the most important issues. The present study generated several distinct adolescent accounts concerning the UK National Lottery and scratchcards. Furthermore, the study suggests that adolescents' views may change over time, although this would need to be confirmed through further longitudinal research. On the whole, participants were reasonably realistic about the nature of these activities, particularly concerning their actual chances of winning. However, it was evident that some adolescents still hold a number of gambling misperceptions in relation to these activities. The challenge will be to take this information and use it to develop prevention and/or intervention strategies specifically aimed at redressing those misperceptions identified.

Appendix 1
Statement Loadings from Lottery Model Sort

<i>Q-Statements</i>	<i>Accounts</i>			
	<i>Moral Opposition</i>	<i>Luck Seeking</i>	<i>Rationalist</i>	<i>Uncertainty</i>
1 The lottery is exciting	-3	+2	+2	+2
2 The lottery has nothing to do with luck	0	-5	-3	-4
3 It is wrong that lottery jackpots are so big	+2	-5	+4	+3
4 Sometimes I have lucky streaks	-1	+5	-2	+3
5 It doesn't matter how you pick lottery numbers	0	-3	+4	-1
6 I like to watch the National Lottery Live TV programme	-3	+2	+2	+1
7 The lottery is addictive	+5	+1	+4	0
8 I will never play on the National Lottery	+3	-5	-1	-2
9 Playing the lottery is gambling	+6	+5	+6	+4
10 The lottery should be banned	+5	-5	-4	-4
11 The lottery is just a bit of fun	-3	+4	+2	+3
12 My parent/s like the lottery	-4	+2	+1	+2
13 The lottery is harmless	-5	+1	-3	-1
14 The government supports the lottery so it must be OK	-2	+2	-1	-1
15 I think gambling is bad	+2	-3	+1	-1
16 The chances of winning any money are low	+3	-2	+5	-1
17 I or my family will win the lottery jackpot one day	-5	+2	-5	+1

(continued)

Appendix 1 (Continued)

<i>Q-Statements</i>	<i>Accounts</i>			
	<i>Moral Opposition</i>	<i>Luck Seeking</i>	<i>Rationalist</i>	<i>Uncertainty</i>
18 I like being on my own most of the time	+5	-3	-3	-4
19 I think I am a lucky person	+1	+2	0	+1
20 Most of my friends like the lottery	+2	+3	+1	+2
21 Luck is the same thing as chance	+4	0	-2	+3
22 If a number is drawn one week it is less likely to appear the next week	-5	+1	-4	+1
23 Most people I know think the lottery is good	+1	+2	+2	+2
24 It could be you?	-3	+5	+1	+3
25 There is a skill to winning the lottery	-5	-2	-4	-1
26 Winning a lot of money would solve all my problems	-4	+2	-1	+1
27 If you want to win the lottery you have to play in every draw	-3	+2	-4	+1
28 Using the same numbers each week means you are more likely to win	-5	+1	-4	+3
29 I like to spend a lot of time with my friends and/or family	+2	+5	+5	+4
30 To win the lottery you must have a system	-5	-1	-5	-1
31 You get what you want in life by working hard	+5	+4	+3	+1

Appendix 1 (*Continued*)

<i>Q-Statements</i>	<i>Accounts</i>			
	<i>Moral Opposition</i>	<i>Luck Seeking</i>	<i>Rationalist</i>	<i>Uncertainty</i>
32 Luck decides what you get out of life	-2	+4	-2	+1
33 The lottery can make you sad	+2	+2	+1	+2
34 Some numbers are luckier than others	-1	+4	-2	+3
35 The lottery makes people happy even if they don't win anything	-2	-1	-2	-2
36 Some people spend too much money on lottery tickets	+4	+4	+3	+2
37 I think people of any age should be allowed to play the lottery	-2	0	-2	+1
38 Winning is more important than playing	-1	+2	-1	-2
39 Buying more tickets means you are much more likely to win the jackpot	-2	+4	-4	-1
40 You can only win the lottery by chance	+2	+3	+5	0
41 If someone loses they should try again to win back their money	-2	+1	-3	+1
42 If a number is drawn one week it is less likely to be drawn again the week after	-5	+1	-5	0
43 The lottery adverts on TV are good	-2	+1	-1	-1

(continued)

Appendix 1 (*Continued*)

<i>Q-Statements</i>	<i>Accounts</i>			
	<i>Moral Opposition</i>	<i>Luck Seeking</i>	<i>Rationalist</i>	<i>Uncertainty</i>
44 You can buy lottery tickets almost anywhere	+1	+3	+2	+3
45 Money is the most important thing in life	-5	-2	-4	-1
46 Money buys happiness	-5	+2	-4	+1
47 I think about the lottery a lot	-3	+1	-5	-1
48 It matters which shop a person buys their lottery ticket from	-5	-1	-3	0
49 If I wanted to play the lottery I wouldn't try to play, because I am not old enough	+2	-3	-1	-1

Appendix 2
Statement Loadings from Scratchcard Model Sort

<i>Q-Statements</i>	<i>Accounts</i>			
	<i>Thrill</i>			
	<i>Scepticism</i>	<i>Seeking</i>	<i>Rationalist</i>	<i>Libertarian</i>
1 Scratchcards can make you sad	+2	+2	+4	+2
2 Scratchcards make people happy even if they don't win anything	-2	-1	-3	-3
3 Scratchcards are exciting	0	+5	-3	+2
4 Winning a lot of money would solve all my problems	-1	+5	+3	+1
5 The chances of winning <i>any</i> money on scratchcards is low	+4	-3	+1	+2
6 I will never play scratchcards	+1	-5	0	-2
7 If someone gets a winning scratchcard they should buy another one straight away	-3	+4	-3	-2
8 If someone wins on a scratchcard they are less likely to win next time they buy one	-5	+3	-4	-2
9 Scratchcards are sold almost everywhere	+4	+3	+3	+4
10 Scratchcards are a waste of money	+5	-2	+2	+1
11 Playing scratchcards is gambling	+6	+3	+5	+5
12 My parent/s like scratchcards	-3	+2	+1	-2
13 Scratchcards are just a bit of fun	-1	+3	+1	+3

(continued)

Appendix 2 (*Continued*)

<i>Q-Statements</i>	<i>Accounts</i>			
	<i>Thrill</i>			
	<i>Scepticism</i>	<i>Seeking</i>	<i>Rationalist</i>	<i>Libertarian</i>
14 Scratchcards are addictive	+4	+4	+4	+5
15 If someone loses they should try again to win back their money	-3	+2	-3	-3
16 Scratchcards are harmless	-3	-2	-2	-2
17 I think gambling is bad	+1	-2	-1	+4
18 Luck is the same thing as chance	0	-3	-2	-3
19 I or my family will win a scratchcard jackpot one day	-3	-2	-3	-3
20 I like being on my own most of the time	-4	-4	-2	-2
21 The government supports scratchcards so they must be ok	-2	0	-1	0
22 Where a person buys scratchcards is important, as some places are luckier than others	-4	+2	-4	-2
23 I think I am a lucky person	+1	+2	0	+1
24 Scratchcards have nothing to do with luck	-4	-2	-1	+1
25 Most people I know think scratchcards are good	0	+4	+2	+1
26 Scratchcards are good value	-3	-1	-3	-2
27 There is a skill to winning scratchcards	-3	-2	-5	-4

Appendix 2 (*Continued*)

<i>Q-Statements</i>	<i>Accounts</i>			
	<i>Thrill</i>			
	<i>Scepticism</i>	<i>Seeking</i>	<i>Rationalist</i>	<i>Libertarian</i>
28 My friends like scratchcards	+1	+4	+1	+2
29 If someone wins £1 they haven't really won anything at all	+2	-4	+2	+3
30 If I wanted to play scratchcards I wouldn't try to play, because I am not old enough	0	-3	-1	-1
31 I like to spend a lot of time with my friends and/or family	+4	+2	+5	+4
32 To win scratchcards you must have a system	-4	-3	-6	-4
33 You get what you want in life by working hard	+5	0	+5	+5
34 You get what you want in life mainly by luck	-2	+2	-3	-2
35 Scratchcards should be banned	-4	-2	-3	-5
36 Scratchcards have nothing to do with luck	-4	-3	-3	-2
37 Sometimes I have lucky streaks	+5	+1	+1	0
38 If a person wins £50 on a scratchcard they should buy more scratchcards	-2	+4	-5	-3
39 I think people of any age should be allowed to play scratchcards	0	+4	-2	+5
40 Money buys happiness	-4	+3	-1	-3
41 Buying several scratchcards means you are much more likely to win the jackpot	-2	+1	-3	-3

(continued)

Appendix 2 (*Continued*)

<i>Q-Statements</i>	<i>Accounts</i>			
	<i>Thrill</i>			
	<i>Scepticism</i>	<i>Seeking</i>	<i>Rationalist</i>	<i>Libertarian</i>
42 If you want to win with scratchcards you must buy them every day	-2	-2	-3	-4
43 Scratchcards are hard to win	+3	-2	+2	+3
44 You can only win scratchcards by chance	+3	+2	+5	+4
45 Scratchcard adverts on TV are good	0	+1	-1	0
46 I think about scratchcards a lot	-5	-2	-5	-5
47 Money is the most important thing in life	-5	+3	-5	-3
48 Buying the same type of scratchcard each week means you are more likely to win	-3	-1	-3	-4
49 Some <i>types</i> of scratchcards are luckier than others	+2	+2	0	-2

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