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# A Q-methodological Investigation into the Meanings of Cigarette Consumption

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## Abstract

This Q-methodological study identified shared subjective explanations of smoking among non-smokers, current smokers and ex-smokers, to consider whether some representations were protective or facilitated quitting. Four factors were identified: named independent addiction; independent non-addiction; anti-smoking; and social addiction. The first two factors were dominated by current and ex-smokers, and the last two by non-smokers. Differences emerged on the use of the 'addiction' concept, the use of smoking as a tool for affect management, the role of image manipulation and the general positive and negative perceptions of smoking. The functional use of the different shared smoking representations is discussed.

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## Keywords

- *Q-methodology*
- *smoking*
- *subjective representation*

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# Introduction

EXPLANATIONS that smokers give concerning their smoking behaviour have received less attention than objective predictors of initiation or maintenance. The premise of this article is that to engage with smokers, we must understand these subjective explanations, and move beyond individuals' accounts of smoking to investigate the shared, social representations. Particularly, we must investigate the differentiation between representations among non-smokers, ex-smokers and current smokers.

## Subjective meanings of smoking: a brief literature review

### Coping and respite in demanding social circumstances

Breteler, Schotborg and Schippers (1996) conceptualized smoking from the perspective of transactional models of coping, arguing it is best seen as a coping behaviour in the face of stress and low self-efficacy. Beyond pharmacological effects that may change mood directly, cigarettes have a complex symbolic representation that facilitates daily living in adverse circumstances (e.g. Stewart et al., 1996).

### Situational factors influencing smoking

Smoking is often associated with particular contexts (e.g. a pub)—as the meaning of smoking differs across situations (Chamberlain & O'Neill, 1998), as does the availability of cigarettes (e.g. Moffat & Johnson, 2001).

### The role of peers and friends

The notion of systematic coercive 'peer-pressure' to smoke is increasingly rejected by smokers and smoking researchers. Rather, smoking functions to facilitate entry into a peer group (Wiltshire, Amos, Haw, & McNeill, 2005) and place individuals within hierarchical social networks (Michel & Amos, 1997)

### Perceived normalization

Smoking is reported by smokers as normal and not deviant (e.g. Unger, Rohrbach, Howard-Pitney, Ritt-Olson, & Mouttapa, 2001), positioning the smoker as someone who does not have to account for their actions.

### Addiction

When exploring the social meanings of smoking, smokers tend to talk about their cigarette addiction on an individual and shared social level. Gillies and Willig (1997) used discourse analysis to analyse women's accounts of smoking, finding distinct physiological and psychological accounts of addiction. The former draws strongly on 'scientific' language ('you get the nicotine and that in your blood', '[nicotine] goes straight into the bloodstream and goes to the brain', 1997, p. 291), serving to distance the speakers from responsibility for their addiction and providing authority for their accounts.

### Locus of control

The theory of locus of control has been specifically applied to smoking (Georgiou & Bradley, 1992). Validated items from their scale—and by implication, the subjective meanings of smoking as an activity—clearly differentiated smokers and non-smokers.

### Mood manipulation

Smokers have provided accounts of various mood changes sought by smoking. Being depressed (Clayton, 1991), stress reduction/management (Denscombe, 2001b), relief of boredom (e.g. Moffat & Johnson, 2001), and other emotional states have all been associated with smoking. This evidence suggests that many smokers report utilitarian reasons for smoking, as a means of regulating affect.

### Health beliefs

On one hand, studies show smokers understand that smoking provides a clear risk to health (e.g. Chamberlain & O'Neill, 1998; Clayton, 1991). Health concerns have been implicated as a key explanation from smokers for quitting (Stewart, 1999). However, either cognitively or discursively, smokers also minimize the perceived threat to themselves (Moffat & Johnson, 2001), even claiming a sense of personal invulnerability (Chamberlain & O'Neill, 1998; Denscombe, 2001b).

### Positive smoking beliefs

There are a number of reported positive consequences of smoking—for example pleasure on lighting and handling cigarettes, enjoying watching smoke and taking direct pleasure from the act of smoking (Gilliard & Bruchon-Schweitzer, 2001).

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### Weight control

Reducing appetite and weight control is one of the reasons that adolescent girls/young women start and continue to smoke. This account of smoking has been consistently demonstrated, with girls who are either over/underweight, dieting or who have lower resistance to pressure around gendered ideals more likely to smoke (Fiissel & Lafreniere, 2006; Zucker, Stewart, Pomerleau, & Boyd, 2005).

### Family

Although there is an extensive literature on objective relationships between family smoking and initiation/maintenance of smoking (Clayton, 1991) it is not yet clear the extent to which these factors are woven into subjective accounts of smoking.

### Image projection

Much work has gone into investigating smoking imagery; smoking has been associated with attempts to look 'cool', 'adult', 'hard' or 'tough' (e.g. Denscombe, 2001b; Rugkasa et al., 2001; Seguire & Chalmers, 2000).

## The Q-methodological approach

We used Q-methodology to begin to identify *shared* social representations, and consider how these representations could then be used functionally to legitimize or prevent smoking behaviour. Behaviourally, we may expect different representations to be used by smokers, ex-smokers and non-smokers. It is anticipated that in the future, smoking will be seen as an anachronism, as the social representations permitting of smoking will have become, in Gleeson's (1991) terms, a cultural artefact. That is, it will not be within people's linguistic repertoire to justify smoking, as the current social representations used to do this will have ceased to be accessible. Data in this study were collected prior to new anti-smoking legislation in the UK, preventing smoking in most work places and enclosed public spaces (Health Act, 2006). One can imagine that new aspects of smoking representations may emerge through everyday interaction within and between smokers and non-smokers, which will serve to justify the behaviour in a new way (e.g. the 'persecuted smoker'?).

Stephenson (1935) proposed an alternative to traditional correlation methods, *Q-methodology*, in which individuals' self-referent views (rather than items within psychometric scales) were factor analysed. Q-methodology facilitates the development of surprising findings in a way in which thematic analysis of interviews does not; the emergent properties of the factors, although interpreted by the researcher, are the product of *collective action* of participants, producing *shared* representations. This employs Q-methodology to investigate the shared subjective meanings of smoking, and to explore the diversity in representation of smoking among non-smokers, ex-smokers and current smokers.

## Method

### Design

A Q-methodological design was used, comprising a Q-pack of 60 statements, sorted from –5 to + 5.

Forty-seven female and 48 male undergraduates, aged 18–54 (mean 26 years; SD = 9) were recruited from a socially heterogeneous UK university. They comprised one Black-African, one Black-Caribbean, 17 Indian, five Pakistani, 68 white, two mixed-race and one Black-English person. Participants received course credit for participation.

Smoking was classified though self-report. Current smokers ($n = 50$) had smoked in the last month. Ex-smokers ($n = 18$) *had* smoked more than 100 cigarettes, but none in the last month. Non-smokers ($n = 27$) had *not* smoked more than 100 cigarettes ever, and none in the last month.

### Materials

The Q-pack comprised 60 statements based on themes outlined above. These were developed from analysis of emergent themes in psychological literature, representing a microcosm of the dominant aspects of the smoking concourse. Piloting confirmed their comprehensiveness, balance and intelligibility. The final selection was a subjective assessment, discussed by the authors, inevitably nuanced in an idiosyncratic way but constructed to err on the side of over inclusion. The potential of Q-methodology to identify redundant items ameliorates this as a problem.

The content of the statements followed the following pattern: Coping/Respite (3 statements); Situational factors (1); Peers and friends (8); Addiction (6); Mood manipulation (7); Smoking locus of control (4); Health beliefs (7); Other smoking beliefs (4); Family issues (2); Weight control (2); Image projection (11); Self-identity construction

(2); Social norms (3); Social/Personal skills (1).[1] Alternative versions of the pack were produced, syntactically altered for current, ex- and non-smokers to make the statements meaningful for them.

## Procedure

Participants were asked to read carefully through all of the statements. They then sorted them into piles of statements they agreed with, disagreed with or had no strong opinion about. From the first pile of statements participants placed the three that they most agreed with in the right hand column of their sorting grid (the +5 column). They then selected four remaining statements they most agreed with, and put these in the +4 column, and so on until they had placed all of the cards that they agreed with. The process was then repeated, filling in the grid from the opposite end with the statements that the participant least agreed with. The remaining pile was then used to fill in the centre columns of the grid.

## Results and interpretation

Data were entered into the MCQ computer package and subjected to a Q-methodological analysis with principal components factor analysis and varimax rotation. Four factors were chosen following a visual examination of the scree plot of factors with eigen values greater than one, which showed a 'step' at factor four.

## Interpretation of factors

*Factor one*    Factor one reflects concern about damage to health, and views smoking as an addictive behaviour. Those in this factor can be summarized as being 'Independent Addiction', *opposing smoking imagery*. It rejects positive imagery associated with smoking, such as being sophisticated or sexy. Two statements reflecting external locus of control are strongly disagreed with, which may reflect a sense of individual/personal responsibility for smoking. Factor one is characterized by a largely negative view of smoking, with ideas of the smoker as addicted being central. The notion of regret at starting smoking (+5) is consistent with this. The impression of the function of smoking is around controlling dependence on cigarettes. The concept of this factor reflecting 'independent' addiction arises from the generally individualistic reasons given for smoking, and explicit rejection of the 'image projection' functions of smoking. The rejection of statements associated with external locus of control reinforces the idea that this factor

represents an individualistic model of smoking. There is also a theme of affect regulation within this account (as expected of an account based around managing addictive symptomatology), and a strong correlation ($r = 0.6$) between this factor and factor two—the primary difference being the extent to which addiction is accepted.

*Factor two*    Factor two is also associated with a belief that smoking causes health damage. These smokers are perhaps best using a representation of 'Independent non-addiction'. The predominant themes in factor two are affect control, and a rejection of the notion of addiction. Participants responded in a way highly consistent with some of the suggestions of Denscombe (2001a), in their rejection of the role of peers in smoking, and in their claims for the agency of their smoking ('Smoking is my own choice—I am not the victim of pressure from anyone', +5; 'I have felt pressure from my friends that I ought to smoke', –5). Smoking is normalized, and used to control mood. Again, there is a rejection of notions of smoking being a mechanism of image/identity management.

This factor is similar to factor one; the difference being the extent to which factor two implies rejection of the notion of being addicted. Unless a smoker can accept the notion of addiction, they may not be able to anticipate withdrawal symptoms. This lack of feeling trapped by smoking may encourage the smoker to persist in smoking, on the basis that it could be stopped any time.

*Factor three*    This factor also accepts the notion of health damage caused by smoking, but argues for being in control of smoking (and rejects peer influence), and opposes positive features of smoking. This factor represents the 'Anti-smoking': *Non-addiction, viewing smoking as negative with negative vicarious experiences*. This factor was almost entirely a product of the sorts of a sub-group of the non-smokers. The source of this received view of smoking perhaps represents most clearly the traditional agenda of the health educator. Unsurprisingly, given its constituent members are not smokers, there is a rejection of the notion of being addicted to cigarettes, and like the other factors negative health messages are to the fore. However, the negative images attached to smoking elsewhere in the literature appear here; smoking is vain/arrogant, dirty and smelly, and they reject or fail to recognize any positive features of smoking as experienced by smokers—particularly, mood regulation.

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Family smoking is also reported negatively, suggesting these participants have experienced objectionable smoking 'second hand'.

*Factor four*   This factor represents a view of normalized, social smoking. Participants disagree with intrinsic (non-social) benefits of the pleasure/taste of cigarettes, and are unlikely to report family smoking. Despite placing their smoking in a social arena, these smokers do not adopt an external locus. These might be classed as reporting a model of 'Social addiction' in smokers—those for whom smoking is normalized and functional—possibly with a sense of smoking as an addiction.

This factor places smoking in a broad social context. It was more likely for non-smokers than smokers to load on this factor, and those smokers who do load on the factor do so negatively—indicating a polar opposition to it. One possibility as to why this factor is more likely to be one reported by non-smokers is that it represents a stereotype of smokers, perpetuated as a myth among some non-smokers. This would warrant further investigation, to ascertain whether the use of this kind of representation allows these non-smokers to avoid becoming smokers. It is also possible that these participants, not having any stake in presenting smoking in any particular positive or negative light, are describing the behaviour of some smokers in a way which the smokers themselves would feel uncomfortable doing.

A direct examination of the content of the factor shows that as well as differences in the social functions of smoking, the emphasis on positive image projection also differentiates this factor from each of the other three. The prevailing discourse among smokers is of autonomy and freedom of choice (Denscombe, 2001b). If there were a group of smokers who were smoking to be cool, sophisticated and so on, it would be very difficult for this to emerge in their own Q-sort. There is nothing so guaranteed to undermine an attempt to be cool as admitting the attempt. This suggests a rhetorical account of smoking in which smokers could not admit the social function of their smoking—an issue at odds with 'objective' data.

## Distribution of participants across factors

Smokers primarily loaded upon the first two of the four factors—'independent addiction' (44% loading *only* on this factor, 52% in total) and 'independent non-addiction' (38% uniquely, 41% total). Non-smokers were distributed across the four factors, but notably, factor four was made up of 17 per cent of the non-smokers, but only 2 per cent of the smokers and 5 per cent of the ex-smokers. The few smokers who did load on this factor did so negatively, explicitly rejecting the values within it. Factor three was a more extreme example of this pattern, as 32 per cent of the non-smokers loaded on this factor, but only one current smoker and no ex-smokers contributing to this factor. More than half (55% uniquely, 58% in total) of the ex-smokers loaded on factor two (affect regulation). They also had a noteworthy representation on factor one (37%). In many respects, the current and ex-smokers sorted in similar ways to each other, the main difference being a shift to affect regulation and away from independent addiction in the ex-smokers.

## Discussion

The implications of these results are three-fold. First, current, non- and ex-smokers do not form homogeneous, distinct groups, which use their own patterns of talk about smoking, as there is a degree of shared representation. Second, non-smokers, differ in their 'under' emphasis on the affect regulation function of smoking, and their construction of the anti-smoking factor. Finally, there are similarities but subtle differences across the current and ex-smokers, as they comprised factors one ('independent addiction') and two ('independent non-addiction'), and there was a shift away from independent addiction and towards affect regulation in the ex-smokers. These findings suggest that some non-smokers may talk about smoking in quite a different way to current and ex-smokers. Plausibly, smokers who are more likely to use factor two (independent non-addiction) discourse are feeling less trapped by a construction of smoking as an inescapable addiction. Alternatively, it is conceivable that ex-smokers can reconstruct retrospectively their earlier smoking behaviour in a way that is consistent with their successful quit attempts.

An implication of this work is that we may need to move smokers not to the representation of anti-smoking non-smokers but to the representation of ex-smokers. Current attempts in health promotion to perpetuate a negative representation of smokers as suggested in factors three and four is likely to be rejected, and fail. This approach ignores the fact that ex-smokers have a special knowledge and experience of smoking, which is at odds with the

## Author biographies

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