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# Adolescents' Arguments for and against Smoking<sup>1</sup>

By J. Richard Eiser, Joop van der Pligt, University of Exeter, and Penelope Friend, The Royal National Throat, Nose and Ear Hospital, London.

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Considerable attention has been paid to the importance of 'peer group influence' in the onset of cigarette smoking among adolescents, and in intervention programmes designed to teach adolescents to resist such influence (Botvin and Eng, 1982; Evans et al., 1981; Hurd et al., 1980; McAlister et al., 1979). One of the main foundations for such work is the common finding that young people who smoke tend to have more friends who also smoke than is true for their non-smoking peers (Bynner, 1969). Although such findings are strongly suggestive of the presence of some kind of peer group influence, however, they are not in themselves informative about the social process whereby adolescents subdivide themselves into smoking and non-smoking sub-groups, nor about the content of the influence to smoke or not to smoke exerted by any peer group or sub-group thereof. The first of these issues has been discussed elsewhere (Eiser and van der Pligt, 1983). The second, that of the content of the potential influence, is the focus of this report.

Social influence may clearly take many forms, and need not be dependent on overt persuasion. We do not consider in this report, for example, the factors which may affect the likelihood of a particular smoking or non-smoking model eliciting imitation. There still remains, however, the important question of what kinds of arguments young people use to justify their own smoking behaviour to others of their own age.

Arguments generated spontaneously in the course of free discussions may reasonably be considered as reflections of the attitude structures of the individuals concerned. It may be hypothesised that individuals who adopt different positions on an issue, such as smoking, may see different aspects of that issue as 'salient' or subjectively important (Eiser, 1971, 1980). It also seems reasonable to assume that, when people spontaneously introduce a theme into such a discussion, that theme is one which they regard as relatively 'salient' or important. Attitudinal differences between smokers and non-smokers may therefore be reflected in how they respectively attempt to structure discussions about smoking. It is with such possible differences in attitude and argumentation that this report is concerned.

## Method

Subjects were all students (aged 15 years) from the fifth year of two single-sex comprehensive schools in South-East London. A total of 223 students (178 males and 45 females) had completed a questionnaire as part of a related study reported

1. This research was supported by a grant from the Social Science Research Council, London. Our thanks are due to Forest Hill School, and Deptford Green School, London. Assistance from Gemma Hilton is gratefully acknowledged.

elsewhere (Eiser and van der Pligt, 1983). This questionnaire includes items relating to smoking attitudes and behaviour and subjects also named their five best friends in their class. The sample was subdivided into 66 'smokers' 53 males and 13 females and 157 'non-smokers' depending on whether subjects said they had or had not smoked a cigarette during the previous week.

From these, 56 (40 male and 16 female) were selected to take part in the present study, so as to form 14 same-sex groups of four. Each group consisted of two smokers and two non-smokers. Attention was also paid to the frequency with which individuals received friendship choices from their classmates. Although smokers were significantly less popular than non-smokers overall, an attempt was made to balance the groups for the relative popularity of smokers vs. non-smokers. Specifically 5 male and 2 female groups each contained two 'popular' smokers and two 'unpopular' non-smokers, and the remaining 5 male and 2 female groups each contained two 'unpopular' smokers and two 'popular' non-smokers. The 'popular' pair in each group were selected from those receiving a relatively large number of friendship choices from their classmates, and we introduced the further restriction that they should have chosen each other as friends. The 'unpopular' pair conversely were rarely chosen by others, nor did they mutually choose each other. Within the restrictions of these rather stringent criteria, the final selection was on a random basis.

The popularity manipulation was included for purposes not directly relevant to this paper, and in fact had no influence on the results to be reported. Our original intention had been to look for shifts in attitude as a result of group discussion, with the hypothesis that such shifts would more often than not be in the direction of the position held by the more popular pair. We found no support for this hypothesis. However, a benefit of this manipulation for interpretation of the present results is that we can have greater confidence that differences attributed to smoking status are not due to any confounding of smoking status with popularity, even though, as mentioned, there were more popular non-smokers than smokers in the total sample from which the groups were selected (Eiser and van der Pligt, 1983).

### Procedure

The group discussions were recorded in classrooms and staff offices during normal classroom periods. For each group, we scheduled six subjects, including two reserves. The four participants were seated in a semicircle round a microphone, with the smokers to one side and the non-smokers to the other. They were instructed to have a free discussion for about 15 minutes on the subject of cigarette smoking, specifically whether it was generally a good or bad thing, whether it was as dangerous as people say, and whether smokers became unhealthy at a young age.

It was explained that two of them (who were then identified) were chosen because they said they were smokers, and the other two because they said they were non-smokers. The task of the smokers was to try to persuade the non-smokers that smoking was generally not too bad or dangerous, whereas the non-smokers were told to try to persuade the smokers that smoking was indeed bad and dangerous. Subjects were asked to treat the discussion as a "kind of debate", and were told that the tapes

would be played back to other students who would be asked to judge "which side had won the argument".

They were asked first to speak in to the microphone, giving their names. This, it was (truthfully) explained, was to aid transcription of the tapes, and they were assured that this part would not be played back to other students. They then started the discussion, with no further participation by the experimenter, until the allotted time expired, or until the discussion came to an end of its own accord.

### Content Analysis

#### (i) Themes introduced into discussion

The 14 group discussions were then transcribed, and content analysed by a graduate psychologist. The first purpose of this analysis was to look for qualitative differences between the themes introduced into the discussion by smokers and non-smokers. Within each discussion, any given theme (e.g. cancer) was scored only once, i.e. when it was first introduced, regardless of how much of the subsequent discussion related to this theme. The coding categories were decided upon following inspection of the transcripts, and an independent coding of a subsample by a second psychologist indicated that a final set of 20 categories could be easily and reliably applied. By and large, the discussants kept fairly closely to the topic of smoking, but statements which introduced completely irrelevant themes were disregarded for purposes of this analysis.

The most immediately striking aspect of these data was the tendency for non-smokers to be much more active in introducing new themes into the discussion than smokers. Taking all 14 discussions together, the non-smokers introduced 171 new themes, compared with only 84 introduced by the smokers. In 12 of the 14 groups, fewer themes were introduced by smokers than non-smokers ( $p < .01$ , by Wilcoxon). This suggests, as do data reported below, that smokers adopted an essentially defensive and reactive posture within the groups. Table 1 presents the 20 different coding categories, and the relative frequencies of introduction of each theme by smokers and non-smokers. For purposes of statistical analysis, these 20 categories were combined on a priori grounds into nine broader categories, labelled (a) to (i) in the Table.

To determine whether frequency of introduction of themes within the nine broader categories was related to subjects' smoking status, a  $2 \times 9 \chi^2$  test was performed *as though* each introduction of a theme was an independent event. This yielded a  $\chi^2$  of 113.43 (df = 8). When categories (a) to (i) are combined, and (f) to (i) are combined, the resultant  $2 \times 2$  contingency table yields a  $\chi^2$  of 98.61 (df = 1). In other words, the simple division represented in Table 1 into "themes most salient to non-smokers" and "themes most salient to smokers" accounts for most of the effect shown in the more detailed breakdown. It must be stressed that these data do not fully satisfy assumptions of independence of observations. Nonetheless, the values of  $\chi^2$  are so far beyond any conventional levels of significance (applicable in the context of complete independence) that we may be confident that the effect is robust.

**Table 1**

Absolute (N) and relative (%) frequencies of themes introduced by smokers and non-smokers.

	Smokers		Non-Smokers	
	N	(%)	N	(%)
<i>Themes most salient to non-smokers</i>				
(a) HEALTH RISKS				
1. General health	2	(2)	29	(17)
2. Cancer	3	(4)	12	(7)
3. Fitness and sport	2	(2)	8	(5)
4. Other health risks	0	(0)	1	(1)
(b) SOCIAL COSTS				
5. Smell and dirt	0	(0)	18	(11)
6. Annoyance to others	1	(1)	7	(4)
(c) PERSONAL COSTS				
7. Money	0	(0)	17	(10)
(d) FAMILY				
8. Parental attitudes	0	(0)	17	(10)
(e) SMOKING AS BEHAVIOUR				
9. How much one smokes	2	(2)	9	(5)
10. Starting smoking	0	(0)	10	(6)
11. Giving up smoking	3	(4)	11	(6)
Total (a) to (e)	13	(15)	139	(81)
<i>Themes most salient to smokers</i>				
(f) DENIAL OR RISKS				
12. Denial of cancer association	9	(11)	0	(0)
(g) COMPARATIVE RISKS				
13. Comparison with alcohol	12	(14)	3	(2)
14. Comparison with other habits	8	(9)	5	(3)
(h) SOCIAL BENEFITS				
15. Sociability, being like friends	7	(8)	4	(2)
16. Girl/boyfriends	5	(6)	9	(5)
17. Looking grown up	2	(2)	3	(2)
18. Attractiveness	6	(7)	2	(1)
(i) PERSONAL BENEFITS				
19. Enjoyment of smoking	9	(11)	3	(2)
20. Relaxation	13	(15)	3	(2)
Total (f) to (i)	71	(85)	32	(19)
Total	84	(100)	171	(100)

**(ii) Form of utterance**

The preceding analysis looked at the content of difference contributions to the discussion, but considered only those contributions which introduced a theme for the first time. We next analysed, without respect to the content or novelty of such contributions, the extent to which they were phrased in the form of questions, answers

to questions, or simple declarative statements. In addition, contributions were coded according to whether they were phrased in concrete or personal terms (e.g. "I get out of breath if I run for the bus" or "Why did you start smoking?") as opposed to abstract or general terms (e.g. "Smokers are less fit" or "Why do kids start smoking?") This yielded a 3 x 2 coding frame (question/answer/statement x concrete/abstract) after exclusion of clearly irrelevant or otherwise unclassifiable utterances. The inclusion of the concrete/abstract distinction was inspired by research (e.g. Nisbett and Ross, 1980) which suggests that concrete information is far more persuasive than equally or more 'informative' evidence presented in an abstract, impersonal form.

This analysis revealed clear differences between the smokers and non-smokers. Broadly, the non-smokers did far more of the question-asking, and the smokers did far more of the answering. In fact, in all 14 groups the smokers asked fewer questions and gave more answers than non-smokers. There were no such differences for simple declarative statements. Furthermore, the non-smokers were more likely than the smokers to use concrete rather than abstract forms of expression. Overall, the non-smokers made proportionately more concrete than abstract utterances in 12 of the 14 groups, ( $p < .01$ , by Wilcoxon), whereas smokers made proportionately more concrete than abstract utterances in only eight of the groups. This tended to reflect the question/answer distinction, with most of the non-smokers' questions, and thus the smokers' answers, being concrete rather than abstract. Considering only declarative statements, and ignoring questions and answers, non-smokers showed no tendency to make more concrete than abstract utterances. However, there was a clear tendency for smokers to make proportionately more abstract than concrete statements ( $p < .01$  by Wilcoxon).

In short, there is a tendency for non-smokers to take the initiative by asking most of the questions, and for smokers to be more likely than non-smokers to talk in terms of abstract generalities, rather than relating the discussion to themselves or others personally. These data are summarized in Table 2.

**Table 2**

Mean percentages of smokers' and non-smokers' utterances in each category.

	Smokers		Non-Smokers	
	Concrete	Abstract	Concrete	Abstract
Questions	11.2	4.0	42.2	7.9
Answers	30.5	12.4	9.7	5.5
Statements	13.6	28.2	15.4	19.2
Total	55.3	44.6	67.3	32.6

**Discussion**

The results of the content analysis show, firstly, clear differences in the aspects of the issue which were most 'salient' to the smokers and non-smokers respectively, in the sense of being most likely to be introduced by them into the discussion. Non-smokers,

as would be expected, were more likely to mention the dangers and costs of smoking, and also parental attitudes. Smokers emphasized, relatively, the benefits and pleasure of smoking, were more inclined to challenge the assumption that smoking causes lung cancer, and to argue that smoking is no worse than a variety of other habits.

Secondly, there were clear differences in the form of utterance made by each side. The non-smokers took much more of the initiative as far as question-asking was concerned. It would be going too far to suggest that the non-smokers were mounting a verbal assault on the smokers. Nonetheless, these data suggest that the non-smokers saw smoking as a behaviour which 'called for explanation' in a way that the smokers apparently did not. If this interpretation is correct, it would be compatible with research on attribution processes suggesting that people primarily seek explanations for events which are unusual and/or negatively valued (Wong & Weiner, 1981). Furthermore, when making declarative statements, the smokers were more inclined to talk in general abstract rather than concrete personal terms. This may be consistent with the suggestion that smokers are resistant to accepting the *personal* relevance of anti-smoking evidence (Fishbein, 1982).

The data base for such conclusions is admittedly less than perfectly naturalistic, and a function of the 'debating' structure which we imposed. We are not claiming that the discussions were necessarily typical of the verbal encounters in which our subjects would engage. Nonetheless, the specific arguments generated were generated *spontaneously* and, in our view, may be taken to reflect part of the *potential* repertoires of devices for accomplishing and/or resisting social influence in the context of cigarette smoking which were available to our subjects. Our data show that smoking and non-smoking teenagers can employ quite different repertoires of arguments.

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## Cancer: What Prevents Prevention?

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In 1980 this Journal published our observations arising out of the evaluation of a slide-pack intended to illustrate an introductory talk on cancer. ("New to You but Not to Me", Grant & Davison, 1980.) We have now produced a sequel to this pack, intended to illustrate a talk on the prevention of cancer, and this has also been the subject of an evaluation study.

The new pack deals chiefly with the preventability of cervical cancer, by means of the smear test, and of lung cancer, by giving up or refraining from smoking. It touches briefly upon the association of cancer of the skin with excessive exposure to the sun, and of cancer of the bowel with low-fibre diet. It concludes with the reminder that while most cancers cannot yet be prevented, death from cancer frequently can—by early treatment. The last three slides show individuals who have been successfully treated for different cancers.

The method of evaluation was the same as in the previous study, i.e. a brief questionnaire was administered by the speaker immediately after a talk in which the slides had been used. The speaker was the same on each occasion and the commentary was closely followed. This was carried out on five occasions with five different groups, three wholly female, one predominantly female and one wholly male. The total number of respondents was 81, comprising 17 men and 64 women. The age range of the women was broad, but the men were predominantly elderly, 14 of them being over 60 years old. We did not attempt to classify respondents by social class, but some indication may be derived from the type of group. Two groups, one male and one female, were attached to Methodist churches, both in predominantly middle-class seaside towns. The other three were a Townswomens Guild in a market town, a branch of the National Housewives Register in a "dormitory" town and a group of Home Care Assistants in a large industrial town. The groups were chosen because they were the first five groups requesting a talk on cancer for whom this presentation was suitable.

We began the previous study by asking whether or not the audience thought the slides should be shown to other groups like theirs. Such a question perhaps comes rather too obviously into the category—familiar to students of Latin—of Questions which Expect the Answer Yes. This time we offered a series of adjectives and asked respondents to tick those which they thought applicable to the slides, and to supply any other word which in their opinion might also apply. The result is shown in Table 1.

This was encouraging, especially as the two who did not tick "interesting" both ticked "enjoyable".

Those who ticked "frightening" were asked to say which parts of the presentation struck them as most alarming. Two of the seven did not respond to this request. Three