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SMOKING AND ORAL EROTICISM

Thesis for the Degree of M. A.

MICHIGAN STATE UNIVERSITY

Charles T. Glaff

1965

THESIS



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## ABSTRACT

### SMOKING AND ORAL EROTICISM

by Charles T. Glatt

According to psychoanalytic theory smoking represents an adult form of autoerotic oral gratification. Although it is obvious that smoking is an oral activity, very little has been done to test the validity of the assumption that one of the primary motives for smoking is to gratify the desire for pleasurable stimulation of the lips and oral cavity.

There are several studies which give indirect support to the psychoanalytic contention, but their findings are more speculative than they are conclusive.

A plausible deduction from the oral theory of smoking is that highly oral erotic persons are more likely to smoke than are individuals who are not as highly oral erotic. This is a grossly oversimplified assumption, however, for the relationship between a drive and its overt expression is never simple or constant due to the numerous intervening variables operative. One such factor is the ego. An impulsive individual is more likely to be easily swayed by his desires than is a person with a stronger ego. It is assumed that oral impulses would be more likely to strive for immediate satisfaction in the absence of a prudent ego. Smoking offers a socially acceptable and quite convenient means of gratifying oral cravings, but, nevertheless, many persons do not smoke because of the health hazards that are involved or because of other rea-

sons.

It was proposed that impulsive smokers, in comparison to impulsive nonsmokers, have more intense oral needs due to their being more strongly tempted to smoke. The second hypothesis was that how much a person smokes is a function of the strength of his oral drive. The third hypothesis had to do with the ability to stop smoking once it had become a habit. Compulsive smokers were postulated to be more intensely oral erotic than are ex-smokers.

Barron's Ego Strength Scale and a modified version of the Blacky Pictures Test were administered to 120 male undergraduates. An Oral Eroticism Scale was constructed for use with the Blacky cartoons.

Although the first two hypotheses were not confirmed, the third one was. It was discovered that ego strength and oral eroticism were negatively correlated in smokers but were not at all related in nonsmokers.

The primary conclusion of the study was that oral eroticism does not have an essential bearing upon whether or not a person smokes, or how much he smokes, but that it is related to whether or not he can quit once he has taken up smoking. Other implications and limitations of the findings were discussed in the light of the research on the dynamics of smoking carried out by other investigators.

Approved: \_\_\_\_\_  
Committee Chairman

Date: \_\_\_\_\_

**SMOKING AND ORAL EROTICISM**

**by**

**Charles T. Glatt**

**A THESIS**

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## INTRODUCTION

Several studies of the psychological factors involved in smoking have appeared in the literature in recent years. The current concern about smoking and lung cancer has intensified the desire to discover the psychological as well as the physiological motives and consequences of using tobacco.

Psychoanalysts contend that one of the primary motives for smoking is that it gratifies an oral erotic drive (Bergler, 1953; Brill, 1922; Cesio, 1957; Fenichel, 1945). The concept of oral eroticism is defined as "a tendency to derive pleasure or satisfaction from stimulation of the lips and inner membranes of the mouth" (English & English, 1958, p. 360).

The prototype for all oral erotic behavior is the nursing experience of infancy. Freud (1938) described sucking as an activity which serves a double function for the infant. First and foremost, it is a reflexive act which is instrumental to the obtaining of nourishment; secondly, and simultaneously, it is a source of erotic satisfaction. After the infant's teeth have erupted and it has been weaned, the desire to repeat the sexual gratification of sucking becomes separate from the desire for food and continues as a physical need in its own right, largely independent of the hunger drive (Freud, 1938; Sears, 1943).

There are several obvious ways in which smoking and nursing are similar forms of behavior. In both instances an ob-

ject is held between the lips, the sucking movements of the lips and cheek muscles are somewhat identical, the objects which are sucked yield substances having characteristic tastes, and physiological changes follow upon ingestion of the fluids.

Although smoking is, in a behavioral sense, an oral activity, is it actually motivated by a desire for the oral gratification it provides?

If people smoke because of a need to be stimulated orally, then persons with strong oral needs would be more likely to smoke than would individuals with less intense oral needs. Therefore, smokers would be expected to be more oral erotic than are nonsmokers. It has been observed that smokers drink a significantly greater amount of coffee and beer than do nonsmokers (Heath, 1958; McArthur, Waldron, & Dickinson, 1958; Matarazzo & Saslow, 1960), that when persons quit smoking they frequently substitute candy, gum, alcohol, or coffee for the former habit (Lawton, 1962), and that men who give up smoking tend to gain weight (Brozek & Keys, 1957). Although these studies demonstrated that smokers often do engage in other forms of oral behavior in addition to or as a substitute for their habit, the findings cannot be claimed as proof that smoking is motivated by an oral need. It may be that metabolic changes caused by the inhalation of tobacco smoke create a need to consume more carbohydrates.

It is highly unlikely that a simple oral explanation of smoking is adequate. The psychoanalysts Bergler (1953) and

Fenichel (1945) did not assume that orality is exclusively responsible for smoking, and there are many who have contended that smoking is influenced by a number of psychological, social, cultural, and physiological factors (Lawton, 1962; McArthur et al., 1958; U. S. Department of Health, Education, and Welfare, 1964).

One reason for doubting the adequacy of a simple oral hypothesis is that since oral eroticism is defined as a predisposition to think and act in certain ways, it cannot be assumed to be related to overt behavior in a direct and automatic fashion. There is not a one-to-one relationship between the strength of a drive and the frequency, intensity, salience, or mode of its expression. More must be known about an individual's personality and the situation in which he is involved before it can be predicted how he will deal with a given drive.

The ego is the mediator between an individual's needs and his environment, controlling the discharge of impulses by means of its adaptive functions and its defenses. The strong or healthy ego is able to suppress impulsive actions which might have consequences harmful to the person and either defers gratification until a more appropriate time or substitutes a more acceptable mode of behavior instrumental to drive satisfaction. An inability to resist the urge for immediate gratification of an aroused impulse is a characteristic of the weak, immature ego.

In theory, individual variations in strength of ego lead

to differences in the manner of expressing impulses. Strong oral needs would tend to play a more immediate and dominant role in the behavior of a person whose ego controls are relatively weak than they would in the behavior of an individual with a stronger ego.

Because smoking offers a socially acceptable and quite convenient means of gratification, it should hold considerable attraction for the impulsive oral erotic. He may have some reservations about smoking, e.g., concern about any health hazards involved, but he would find it hard to resist the oral temptation of a cigarette. Another individual, with an equally strong oral drive but also with a stronger ego, would be inclined to give more serious consideration to other factors before making his decision about whether he should smoke. If he sees any drawbacks to smoking, and if he judges them to outweigh the pleasures he would derive, he would decide not to smoke. There are numerous other ways, less objectionable to him, in which he can find satisfaction for his oral cravings. He may be a gourmet or a glutton; he may be particularly fond of coffee or other beverages. Perhaps he chews gum, or he loves to talk; he may show a strong passion for kissing. If he does choose to smoke, his behavior is ego-syntonic and not compulsive.

Thus, it seems plausible for oral eroticism to be a powerful motive to smoke for persons with weak egos but not to be as impelling a force for persons with strong egos. The latter group would not be so apt to act on the basis of im-

pulses alone, so that strong orality, in and of itself, does not necessarily encourage them to smoke.

It therefore is necessary to obtain a measure of ego strength for each S to guard against the possibility of having any association of orality with smoking be hidden by the manner in which various individuals, with different egos, handle similar impulses.

The first hypothesis of the present study was an empirically-oriented deduction from the preceding theoretical arguments: among persons with weak egos, smokers have, on the average, stronger oral drives than do nonsmokers.

Another train of inquiry into the topic of smoking and orality has its point of departure from the data on smoking gathered during the Harvard Study of Adult Development (Heath, 1945). Examination of the participants in the study revealed that the smokers could generally be differentiated from the nonsmokers by sociocultural background (McArthur et al., 1958). Curiously, it was not the smokers who shared a common social orientation, rather it was the nonsmokers who were more homogeneous (Seltzer, 1962). The typical nonsmoker was described as being a lower middle-class, upwardly mobile individual who lives by the Protestant Ethic and consequently tends to refrain from indulging in the "minor vices," such as smoking and drinking, which are commonly accepted and practised by a majority of the members of the other social classes.

The above observations led McArthur et al. (1958) to conclude that whether or not a man smokes seems to depend upon whether he has been oriented to the habit by his sociocultural

milieu, and that whether he becomes a heavy or compulsive smokers appears to be determined by how useful the habit is to his personal needs. In order to justify their position, they borrowed from Bales (1945) the theory that as a habit becomes more deeply ingrained, it becomes more instrumental to the satisfaction of personal needs. An individual is not induced to smoke by personal needs in themselves; however, his reaction to tobacco, once he has tried it, depends upon the needs that smoking satisfies. Certain needs predispose a person to smoke heavily if he happens to smoke at all. The implication to be drawn from the position of McArthur et al. (1958) is that smokers and nonsmokers are not differentiated in terms of personal needs, but that heavy smokers can be distinguished from light smokers on this basis. They offered evidence for the existence of one such predisposition, namely "emotional constriction," and suggested the presence of another, a need for oral gratification. The second hypothesis of the present study was derived from their supposition: heavy smokers are more oral erotic than are light smokers.

When behavior is reinforced by the gratification of persistent personal needs -- be they biological or psychological -- the presence of these needs becomes most conspicuous under a condition of deprivation. Therefore, if oral gratification reinforces smoking, the ability or inability to quit smoking should be a function of the relative strength of the need for oral stimulation. An orally-fixated smoker would find it difficult to relinquish a habit which has provided him with so



much satisfaction. An individual with a less intense oral drive would not experience the same degree of frustration if he stopped smoking, so it would be easier for him to quit. Thus, the third hypothesis: smokers who try to quit, but can't, have stronger oral drives than do persons who have succeeded in quitting.

## METHOD

### Subjects

Approximately 120 male members from an undergraduate psychology class participated in the study. The criteria for being included in the sample were that Ss be males and attend class that day.

Each S filled out a mimeographed questionnaire which served to classify him according to smoking status. The criteria for categorization were adapted from those used by the United States Public Health Service (Haenszel, Shimkin, & Miller, 1956).

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Table 1

Criteria for Classification of Subjects in terms  
of Average Daily Consumption of Tobacco  
(Rates are for the month preceding the study)

Rank	Category	No. of cigarettes	No. of cigars	No. of pipefuls
0	Nonsmoker <sup>a</sup>	0<1	0<1	0<1
1	Light Smoker	1-9	1-2	1-4
2	Moderate Smoker	10-20	3-4	5-9
3	Heavy Smoker	21-30	5-6	10-14
4	Very Heavy Smoker <sup>b</sup>	>31	>7	>15

<sup>a</sup>Includes only those whose total lifetime consumption hasn't exceeded 5 packs of cigarettes, 20 cigars, and/or 3 packages of pipe tobacco.

<sup>b</sup>Due to the small number of cases, these were included in the Heavy Smokers when the data were analyzed.

Mixed smokers, i.e., those who regularly used more than one form of tobacco, were rated separately for each type they smoked. Within each category (rank), crude numbers of cigarettes, cigars, and pipefuls were given weighted unit values so as to make each approximately equal in terms of the amount of tobacco smoked. The sum of the ranks for each type of tobacco used by a mixed smoker gave his total smoking rate.

The questionnaire also asked smokers whether or not they had ever seriously tried to stop smoking, how often they had tried, and their varying degrees of success in quitting. Ss who had tried at least twice to break the habit but were still smoking just as much as ever were classified as Compulsive Smokers. It was assumed before testing that, since most smokers try to quit at one time or other, only those who have been more persistent in their efforts to stop would be of research interest. Ss who had been regular smokers at one time but had stopped smoking eight months or more before the time of the study were called Ex-Smokers.

Thus, there were six groups of Ss: Nonsmokers, Light Smokers, Moderate Smokers, Heavy Smokers, Compulsive Smokers, and Ex-Smokers. Compulsive Smokers were included among the groups of Smokers, but Ex-Smokers were not counted in with the Nonsmokers.

### Measures

The first two cartoons of the Blacky Pictures Test (Blum, 1950) were used to obtain a measure of relative intensity of oral drive. The author constructed an Oral Eroticism Scale

consisting of 14 multiple-choice items and a short-answer question.<sup>1</sup> Thermofax copies of the cartoons and typewritten test items were displayed on a screen by means of two overhead projectors.

Barron's (1953) Ego Strength Scale was used to assess over-all adequacy of the ego. Included among the ego functions it purports to measure are orientation toward reality, drive control, adaptability, resourcefulness, and feelings of personal adequacy. It is admittedly a test of somewhat questionable validity (Gottesman, 1959), nevertheless it appears to be the best readily available objective measure of the general quality of ego functioning.

### Procedure

E instructed Ss as follows:

I have several cartoons which will be shown to you one at a time, and the idea is for you to make up a little story about each one. Tell what is happening in each picture, why it's happening, and, since this is sort of a test of how good your imagination can be, try to write vividly about how you think each of the characters feels. You'll have two minutes for each story, which will give you time for a paragraph or two on each cartoon. At the end of each cartoon there will be some questions about it. There are no right or wrong answers to these questions, so choose whichever you imagine the answer to be. Sometimes all or none of the possible answers to a particular question will seem to be appropriate or to make sense to you, but choose one anyway -- whichever sounds the best to you. All of these questions must be answered. you'll see in the cartoons (show introductory cartoon). There's Papa (pointing), Mama, Tippy, and the son, Blacky, who is the main figure in the stories.

Cartoon I was introduced by saying "Here is Blacky with Mama." After allowing for time to write a story about the

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<sup>1</sup>See Appendix for discussion of the Oral Eroticism Scale.

cartoon, ten test items dealing with that picture were presented to Ss, one at a time, each being shown for about ten seconds. During the time these items were shown, the cartoon also remained in view. After completion of the questions, both they and the drawing were removed, and Cartoon II was presented by itself for two minutes. The five test items pertaining to the second cartoon were then presented in similar fashion.

After the Blacky questions were finished, E read aloud the 66-item Ego Strength Scale.<sup>2</sup> Ss were asked to mark True or False "according to the degree to which they [the test items] apply to yourselves."

After completing the Ego Strength Scale, each S was given a mimeographed copy of the Smoking Status Questionnaire to fill out.

Ss answered everything anonymously. The answer sheets and questionnaires were numbered in order to prevent each person's papers from getting separated and confused with someone else's.

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<sup>2</sup>Because of a technical difficulty, E was unable to distribute mimeographed copies of the scale as was originally intended.

## RESULTS

After discarding the tests which were not completed properly, the remaining answer sheets were scored by E. Spontaneous stories to the Blacky cartoons were scored blindly. Whenever an answer to a multiple-choice item was ~~erased~~ and another was given, the original response was counted so as to maximize spontaneity.

Although predictions of results were made, all tests of significance used were two-sided in order to detect differences in either direction.

There were no significant intergroup differences in age, in level of education, or in ego strength, so the effects of these factors could be ruled out.<sup>3</sup>

To test the first hypothesis, that smokers with weak egos are more oral erotic than are nonsmokers with weak egos, all Ss scoring within the lowest quartile on ego strength (43 or less) were considered. As is shown in Table 2, the hypothesis was not confirmed. There was, however, an unexpected and striking difference between the Smokers and the Nonsmokers within the highest quartile (51 or more), with the latter getting significantly higher oral scores.

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<sup>3</sup>In a pilot study run four months earlier, none of the groups of smokers and nonsmokers differed significantly in terms of age, education, or vocabulary IQ (measured by the Thorndike-Gallup Intelligence Scale).

Table 2  
 Oral Scores of Smoker and Nonsmoker  
 Subgroups Matched on Ego Strength

Subgroup	N	$\bar{X}$	$s^2$	$t$
Weak Ego				
Nonsmokers	10	2.50	2.06	0.71
Smokers	16	3.00	2.89	
Strong Ego				
Nonsmokers	9	2.67	3.50	2.78 <sup>a*</sup>
Smokers	16	0.94	1.93	

<sup>a</sup>The distribution for High-Ego Nonsmokers was approximately normal, but, interestingly enough, the curve for High-Ego Smokers was J-shaped. Boneau (1960) demonstrated that in this situation the distribution of  $t$ 's is skewed, thereby doubling the probability of falsely concluding that the mean of the latter sample is less than the mean of the former. Therefore, the probability level of the computed  $t$  has been doubled to avoid a type I error.

\*Significant at .04 level.

The second hypothesis also failed to receive confirmation. As can be seen in Table 3, Light Smokers and Heavy Smokers had similar oral scores. When they were divided into high and low ego subgroups, there were still no appreciable differences in strength of oral drive.

The third hypothesis, that smokers who cannot quit are more oral erotic than are smokers who have stopped, was confirmed (See Table 3). The difference in orality between the two groups was especially pronounced for Weak Ego  $S$ s ( $t=3.15$ ,  $p<.02$ ). The same trend was present in Strong Ego  $S$ s but it failed to reach significance, perhaps because of the small number of cases that were involved ( $N=5$ ).

It was also noted that Ex-Smokers scored lower than did Nonsmokers ( $t=2.59$ ,  $p<.02$ ).

Table 3

Intergroup Comparisons of Oral Scores

Group	N	$\bar{X}$	$s^2$	t
Nonsmokers	40	2.20	1.65	1.07
Smokers	44	1.84	3.12 <sup>a</sup>	
Light Smokers	10	1.70	3.34	0.04
Heavy Smokers	13	1.62	3.42	
Compulsive Smokers	12	2.58	3.72	2.23*
Ex-Smokers	11	1.09	1.29	

<sup>a</sup>Smokers displayed greater variability in oral scores than did Nonsmokers ( $F=1.88$ ,  $p<.05$ ).

\*Significant at .05 level.

An inverse relationship between orality and ego strength was found among Ss as a whole ( $r=-.22$ ,  $p<.05$ ; test for linearity gave  $F$  of 11.84,  $p<.02$ ). The negative correlation was due entirely to the Smokers, since  $r$  for Nonsmokers was an insignificant .10, while for Smokers,  $r$  was a striking  $-.50$  ( $p<.001$ , two-sided).<sup>4</sup> Thus, Strong Ego Smokers had considerably lower oral scores than did their Weak Ego counterparts ( $t=3.38$ ,  $p<.01$ ). It turned out that Ex-Smokers and Smokers with high ego scores were distinctly lower in orality than were all the other groups.

<sup>4</sup>Visual inspection of the regression lines showed that the correlation for Smokers and the correlation for Nonsmokers were both linear.



When each of the six groups of the study was split at the over-all median Ego Strength score of 47 and the five cases at the 50th percentile were discarded, the distribution curves for Strong and Weak Ego Nonsmokers were similar and normal-shaped. The distribution of oral scores for all Weak Ego Smokers had a slight positive skew, but the Strong Ego Smokers had a J-shaped curve, with over 50% of the cases falling at the lowest end of the distribution. The ego-linked difference in shape of oral distribution was characteristic of the curves for each of the three groups of smokers.

## DISCUSSION

The lack of differentiation between Weak Ego Smokers and Nonsmokers proved that intensity of oral eroticism is not related to whether or not a person smokes. It was demonstrated that possession of a strong oral drive is not a prerequisite for smoking. Almost half of the Smokers received oral scores below the median value for all persons tested. Furthermore, it was established that persons with strong oral drives need not be smokers, since only about half of the Ss scoring above the median smoked.

The theory of oral determination certainly seems to be inadequate as an explanation of smoking in general; however, the possibility is not precluded that it may be appropriate in certain individual cases.

In theory as well as in observation, it would not be expected that all orally-fixated individuals smoke, for the oral drive does not come equipped with genetically predetermined object-choices but acquires them through experience. As was mentioned in the Introduction, there are many avenues to oral gratification other than smoking. It was therefore not expected that all highly oral erotic people smoke. What the present study did demonstrate was that smokers as a group cannot be differentiated from nonsmokers on the basis of strength of oral drive.

The data on strong Ego Smokers and Nonsmokers were puzzling. About all that can be said with certainty is that low

orality is associated with smoking when persons have strong egos. Further remarks about the peculiar association between orality and ego strength will be made later.

By comparing Heavy Smokers with Light Smokers it was established that how much a person smokes is not a function of the intensity of his oral drive. Although the hypothesis that heavy smokers are more oral erotic than are light smokers was based upon the theory that smoking becomes heavy only if the habit serves one or more important personal needs (McArthur et al., 1958), rejection of the hypothesis does not necessarily discredit the theory. It may be that orality is not one of the needs which predisposes an individual to smoke heavily if he does smoke.

There are, however, several considerations which tend to raise doubts about the certainty of any interpretations of the data on Heavy and Light Smokers. First, due to the fact that the sample consisted of undergraduate students, many of them still in their teens, it was likely that some of them took up smoking rather recently. Bales' (1945) model of compulsive behavior requires a response to become well ingrained before it becomes subservient to the individual's needs. The neophyte smokers who might well be in the sample would not yet have become habituated to smoking and consequently would not have become acquainted with the potential for need satisfaction that the habit offers them. It is therefore possible that some of the Smokers who met the need condition specified by Bales and McArthur et al. (e.g., possession of strong oral

needs) had not yet become Heavy Smokers but inevitably would. If such be the case, the average intensity of oral eroticism for the sample of Light Smokers was spuriously high.

A second difficulty is with the definition of a heavy smoker. In order to obtain a sample of suitable size for testing, all Ss who daily smoked more than a pack of cigarettes, or its equivalent in other forms of tobacco, were called Heavy Smokers. The studies to which McArthur et al. (1958) referred generally defined as heavy smoking a daily consumption of two packs of cigarettes or as a one pack-a-day average over all the years the person has smoked.

The implications of the data with regard to the third hypothesis are more clear-cut. Persons who were able to quit smoking were characterized by relatively weak oral drives. Thus, an individual who tries to give up smoking is more likely to succeed if he is low on orality.

Relevant to the investigation of Compulsive Smokers and Ex-Smokers is an observation reported by McArthur et al. (1958). They found a significant correlation between inability to stop smoking and earliness of weaning from the breast. Although temptation was strong to claim that the psychoanalytic explanation of smoking had been positively confirmed, they more judiciously concluded that lateness of weaning is associated with those personality traits which are also related to ability to stop smoking.

Interestingly enough, the data on oral eroticism which were applicable to the three hypotheses under consideration

coincided exactly with the corresponding data on age of weaning, i.e., Compulsive Smokers were different from Ex-Smokers but Smokers did not differ from Nonsmokers nor did Heavy Smokers from Light Smokers.

It does appear that early weaning and strong orality are related. In psychoanalytic theory it is assumed that early weaning typically creates frustration of the desire to suck, this in turn leading to an oral fixation, which leaves the infant with a more or less permanent and insatiable drive for oral gratification. It must be remembered, however, that a correlation between age of weaning and oral eroticism does not mean that the former is necessarily the cause of the latter. It is quite possible that another, more inclusive, factor accounts for them both.

Another observation from McArthur et al. that supports the oral theory on the dynamics of compulsive smoking is that more childhood thumbsuckers were found among smokers who could not quit than among persons who had discontinued smoking.

The results of the present study support the supposition by McArthur et al. (1958) that a "deeper" need (in this case, orality) has little or no effect upon whether a person smokes but has great effect upon how tenacious the habit may become. When the scope of the oral theory is restricted to ability to stop, the psychoanalytic position on smoking is verified by the data.

Although strong oral eroticism is associated with inability to quit smoking, the possibility is not precluded that physical habituation to nicotine is also involved, for the

amount of tobacco a person smokes is inversely proportional to his ability to stop (McArthur et al., 1958). Studies have shown that nicotine is mildly habit-forming. Heavy smokers developed a "nicotine hunger," and they manifested mild withdrawal symptoms when they abstained (Knapp, Bliss, & Wells, 1963). Furthermore, the smoking of nicotine-free tobacco or other plant materials failed to satisfy habitual smokers (U.S. Department of Health, Education, and Welfare, 1964). Additional proof that smoking is reinforced by the sensory changes brought about by nicotine was provided by an experiment in which nicotine was administered orally, hypodermically, and intravenously to groups of smokers (Johnston, 1942). Many of the subjects reported that the ensuing subjective effects were identical to those following a smoke and that the urge to smoke was greatly reduced.

Nevertheless, one of the conclusions of the Surgeon General's report on smoking was that "The drive to compulsion appears to be solely psychogenic since physical dependence does not develop to the nicotine or other constituents of tobacco" (U. S. Department of Health, Education, and Welfare, 1964, p. 374). The consensus is that psychological treatment of smokers who cannot quit is generally more effective than is the use of lobeline or other tobacco substitutes (Knapp et al., 1963; U. S. Department of Health, Education, and Welfare, 1964). It appears that although nicotine habituation does make it difficult to stop smoking, a strong oral drive (probably in conjunction with other psychological variables) is the decisive

factor. Compulsive Smokers in the present study did not differ significantly from Ex-Smokers in maximum amount of tobacco smoked per unit of time.

Finally, mention must again be made of what was certainly the most surprising -- and puzzling -- discovery of the present study. Ego strength and oral eroticism correlated in Smokers but not in Nonsmokers. Since most of the Smokers possessed a combination of either a strong oral drive and a weak ego or a weak oral drive and a strong ego, it seems that there are two "smoker's syndromes." The first type can be readily understood, given the conceptual framework of psychoanalysis; however, the second set of factors cannot be explained so readily. The data do suggest that there is more than one determinant of smoking. If such be the case, **it would explain why smokers are not more oral erotic than are nonsmokers when oral eroticism is related to ability to quit smoking.**

Matarazzo and Saslow (1960) noted that although a number of variables have been found which differentiate smokers from nonsmokers, no single factor has been proven to be an essential characteristic of smokers. The Surgeon General's report (U. S. Department of Health, Education, and Welfare, 1964, p. 376), in summing up the evidence concerning the causation of smoking, concluded that "Smoking appears to be not one but a range of psychologically diverse behaviors each of which may be induced by a different combination of factors and may serve different needs."

Another explanation, purely speculative, for the negative

correlation between orality and ego strength is that a response set might exist which predisposes an individual to answer in such a way as to get a high score on one of the scales and a correspondingly low score on the other. If a response tendency does exist, it clearly distinguishes smokers from nonsmokers. Further investigation into the distinctive characteristics of the two kinds of smokers -- high oral-low ego and low oral-high ego -- might prove to be enlightening.

A word of caution must be added. The conclusions of the present study are to be applied to males only. There were several reasons why females were not studied. Women have not been as extensively or thoroughly studied in research on smoking, the Ego Strength Scale was validated on males, and the Blacky test is sometimes considered to be better suited for use with males because many females fail to identify readily with the canine protagonist (Neuman & Salvatore, 1958).



## SUMMARY

A study was conducted to investigate the psychoanalytic theory that smoking represents a continuation of the oral erotic state of infancy. The ego as a factor which controls the expression of oral impulses was discussed. Three hypotheses were formulated: (a) impulsive smokers have stronger oral needs than do impulsive nonsmokers, (b) heavy smokers have stronger oral drives than do light smokers, and (c) persons unable to stop smoking are more oral erotic than are those who can quit. Barron's Ego Strength Scale and a modification of the Blacky Pictures Test were given to 120 male undergraduates. An Oral Eroticism Scale was devised to measure intensity of oral drive.

Although the first two hypotheses were not confirmed, the third one was. It was noted that ego strength and orality were negatively correlated among smokers. It was suggested that there are two sets of factors associated with smoking, and that the differences between strong oral-weak ego and weak oral-strong ego smokers should be examined further.

Smoking appears to be a complex behavior or class of behaviors which is motivated by any of several sets of factors, thus a purely oral approach to its dynamics does not suffice. Oral eroticism does not determine whether or not a person smokes, and it probably does not affect how much he smokes, but it is related to whether he is able to stop smoking once it has become a habit.

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## APPENDICES

### A. THE ORAL EROTICISM SCALE

The Blacky Pictures Test was chosen to measure oral eroticism because it was designed for the express purpose of studying the psychoanalytic variables postulated by the psychosexual theory of development (Blum, 1962). Although the Blacky test is more structured than is its progenitor, the Thematic Apperception Test, there are still opportunities for considerable variation in personal interpretations of the test stimuli, so that the individual's most salient motives, affects, and defenses are activated and expressed in his stories. The inquiry items which accompany each cartoon, in the form of multiple-choice and short-answer questions, focus the person's attention upon specific aspects of his reactions to the cartoons. Information gained about how he reacts to the more readily recognizable stimuli supplements that derived from his spontaneous responses, so that the dynamic interplay of impulses and defenses at different levels of consciousness can be observed (Blum & Kaufman, 1952).

Although the Blacky test is ordinarily used within a clinical setting to get a qualitative evaluation of the relative importance of each psychosexual dimension within the total psychological framework of the individual, a revised scoring system for its use in research was published recently (Blum, 1962).

The scoring revision and the original inquiry items were not used in the present study for two reasons. First, Blum's (1962) intention was to measure individual differences in the degree of predisposition to conflict within each of the several dimensions. The present study called for a measure of the relative strength of a particular drive. A person with intense oral needs may or may not have a conflict, depending upon whether the impulses find a satisfactory outlet or are denied direct discharge because of inhibition or lack of a suitable object. The thwarted impulse must then seek symbolic gratification by means of a compromise formation.

The second reason is that a response to an inquiry item is affected by several variables and is therefore not amenable to a simple interpretation. Inquiry item #5 is typical. It offers three alternative answers -- one a supposedly "normal" response (a), one indicative of intense oral needs (b), and another expressive of guilt feelings or of maternal rejection (c):

Judging by appearances, how much longer will Blacky want to be nursed by Mama before being weaned:

- a. He'll want to be on his own fairly soon.
- b. He'll want to continue to be nursed until he's quite a bit older.
- c. He feels Mama would like to turn him loose right now.

Choices (a) and (b) deal with the degree of intensity of Blacky's desire to continue sucking, but (c) deals with something entirely different. Maternal rejection can sometimes be equated symbolically with oral deprivation and thus signify the presence of unsatisfied oral needs, but the relative intensity of oral desires cannot be ascertained from statement (c). According to Blum, (b) is the oral erotic answer, but

is it not possible for a person with strong oral needs to pick (c) because he also feels very much rejected? Or, he may feel guilty about coming so close to admitting that he does have infantile oral wishes and picks the only alternative which allows him to avoid the more direct confrontation with the anxiety-provoking subject of orality. A response to a question which is heterogeneous with respect to the feelings it elicits (as is #5) is, in a mechanical sense, a resultant whose components are oral eroticism, guilt, and feelings of rejection, each of which exerts an influence upon the whole. Since none of the three components can be evaluated separately, there can be no valid measure of oral drive.

In order to avoid the problem of getting responses which are unclear in meaning, the original inquiry items were modified and several new ones were devised. Questions were constructed to offer "clean" inferences about strength of oral drive. For example, response (c) was deleted from item #5. The revised item thus offered an unequivocal measure of the strength of the desire to prolong nursing.

Each item of the author's Oral Eroticism Scale followed the style of the above question, i.e., one alternative referred to an overvaluation of oral activities and another referred to a positive attitude of a more moderate degree. In some cases a third or even a fourth alternative was added to make finer discriminations. Each item was worded as unambiguously as possible and care was taken to keep each answer approximately equal in social desirability.

References within each item to the consequences of expres-

sion of Blacky's oral desires (whether they were gratified or frustrated) or to concomitant feelings (e.g., guilt or anxiety as responses to the arousal of oral impulses) were avoided to insure that each response would be a function of oral eroticism and not of irrelevant factors.

It was believed that the modified scale and scoring system provided a more objective frame of reference for measuring oral eroticism than could be obtained from the original version of the Blacky. It thereby answered one of the major criticisms of the Blacky Test -- its lack of a precise scoring system (Beck, 1956).

The first two cartoons ("Oral Eroticism" and "Oral Sadism," respectively) of the Blacky test were used in the Oral Eroticism Scale. These pictures were the most likely to elicit spontaneous stories of an oral nature. It was imperative that the test for orality be short, therefore the entire set of twelve cartoons was not shown.

Ten multiple-choice questions pertained to the first cartoon; the remaining five dealt with the second. Several of the items were "fillers" or "distractors," i.e., they were irrelevant to the topic of orality in order to disguise the purpose of the test. For the first picture, the primary topics of the items were attitudes toward eating, preoccupation with food, and the desire to suck. Items for the second cartoon dealt with oral eroticism in a different manner. Ss were asked to interpret the situation portrayed in the picture and were given several sets of alternatives from which to choose, one of each group's being of an oral erotic nature.



The Oral Eroticism Scale is reproduced in Table 4. Spontaneous stories were scored for oral themes according to the categories listed in the table.

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Table 4

The Oral Eroticism Scale

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Cartoon I

Scoring categories for spontaneous story (one point given for mention of each of the following themes):

- A. Blacky loves to eat, eagerly looks forward to meal-time, lives for this moment.
- B. Blacky is happy to be eating, enjoys his meal, is hungry or thirsty.
- C. Mama's milk tastes good, it feels good to suck.
- D. Blacky wants to regress to infancy, he has regressed, solid food doesn't appeal to him.

Inquiry items (\* denotes responses which are scored, one point for each):

- 1. How does Blacky feel in this scene?
  - (1) Very happy -- not a care in the world.
  - (2) Fairly happy.
  - (3) Indifferent.
  - (4) Rather unhappy.
- 2. How does Mama feel in this scene?
  - (1) Very contented.
  - (2) Pleased but tired.
  - (3) Rather unhappy.
- 3. Which one of the following best describes Blacky?
  - \* (1) He loves to eat almost anytime -- whether he's hungry or not.
  - (2) He enjoys eating but usually eats only when he's hungry.
- 4. Which would Blacky rather do?
  - (1) Stay until his feeding is over and then go out to play.
  - \* (2) Take his time about eating so that he can enjoy his meal longer.

(Table continued on next page)

Table 4. (continued)

5. Blacky
  - (1) Is satisfied with his feeding schedule.
  - \* (2) Would like to be fed more often.
  - (3) Would like to switch to eating solid food.
6. What is Blacky thinking about in this scene?
  - (1) How warm it is today.
  - (2) How much he loves Mama.
  - (3) Nothing, for he is sound asleep.
7. Blacky
  - \* (1) Spends a lot of his time thinking about food.
  - (2) Doesn't usually think about food except when it's time to eat or when he's hungry.
8. Judging by appearances, how much longer will Blacky want to be nursed?
  - (1) He'll want to be on his own fairly soon.
  - \* (2) He'll want to continue being nursed until he's quite a bit older.
9. If Mama ran out of milk, which would Blacky be more likely to do after finding out that she is dry?
  - (1) Bite Mama out of frustration.
  - \* (2) Keep on sucking anyway.
  - (3) Go away disappointed and hungry.
10. How will Blacky feel about eating when he grows older?
  - \* (1) He will rather eat than do most anything else.
  - (2) He will enjoy eating but will like lots of other things just as much.
  - (3) He will never have much interest in food or in eating.

## Cartoon II

Scoring categories for spontaneous story:

- E. Blacky is angry because Mama won't nurse him any longer, she ran out of milk, he's hungry and she's not there.
- F. Blacky has eaten Mama.
- G. Blacky likes the taste of the collar, he's trying to eat it.

(Table continued on next page)

Table 4. (continued)

Inquiry items:

11. Why is Blacky doing that to Mama's collar?<sup>a</sup>
12. Blacky most often acts like this when
  - (1) He wants to play.
  - (2) He has been scolded by Mama for doing something wrong.
  - \* (3) Mama tries to wean him.
  - (4) He wants to attract someone's attention.
13. How often does Blacky feel like acting up like this?
  - (1) Once in a while.
  - (2) Fairly often.
  - (3) Very often.
14. What impresses Blacky most about Mama's collar?
  - (1) It's a handy plaything.
  - \* (2) It has an interesting taste.
  - (3) It belongs to Mama.
15. If Mama came over at this moment to feed him, what would Blacky really like to do?
  - (1) Ignore Mama and continue chewing her collar.
  - \* (2) Put down the collar and start eating.
  - (3) Continue playing and eat later on.

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<sup>a</sup>One point given if there is mention of theme E, however, it is scored only if the theme was not brought up in the spontaneous story.

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After administering the Oral Eroticism Scale to Ss, the test's reliability was measured and an item analysis was made.<sup>1</sup> Kuder-Richardson Formula #20 (Kuder & Richardson, 1937) for deriving a coefficient of internal consistency gave  $r = .55$  for the ten inquiry items, with the point biserial  $r$ 's ranging

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<sup>1</sup>The total number of scorable test papers was 109, with but 95 of these classifiable in terms of the 6 categories of Ss. The others either were irregular smokers or had failed to answer the smoking status questionnaire properly. From the 13 miscellaneous papers 5 were selected randomly to be added to the 95 in order to have a sample of 100 to simplify and facilitate computation of correlation coefficients.

from .14 to .63.

The items which correlated poorly with the total score were eliminated, and the combination of items which yielded the highest reliability was determined. The data are presented in Table 5:

Table 5

Item Analysis of the Most Highly Homogeneous Inquiry Questions of the Oral Eroticism Scale  
( $N=100$ ,  $\bar{X}=1.91$ ,  $s=1.51$ )

Item No.	$N^a$	$\bar{X}^b$	$r_{pb}$
3	45	3.07	.70
4	43	3.02	.64
7	32	3.38	.67
8	52	2.81	.62
10	19	3.74	.59

Note. -- Kuder-Richardson  $r=.63$ .

<sup>a</sup>Number of persons choosing oral erotic answer to that particular item.

<sup>b</sup>Mean total score for persons choosing oral erotic answer to that particular item.

The seven categories for scoring spontaneous stories were very inconsistent with each other ( $r=-.64$ ). After discarding the poorest discriminators, reliability improved, but only to a maximum of .18, for A, E, F, and G. A score based on these four categories correlated .68 with the five inquiry items, so it was decided that different combinations of the nine items be tried to see whether reliability could be increased beyond the .63 obtained for the most homogeneous

multiple-choice questions. The combination which gave the highest reliability ( $r=.65$ ) was of the five inquiry items and criterion A of the spontaneous story scoring categories.

Each of the final items dealt with the first cartoon. It is possible that a different aspect of oral eroticism was called forth by the second cartoon since it presented a visual stimulus of a different nature from that of the first picture. It therefore is not surprising that the items from Cartoon II did not correlate well with those from Cartoon I. Although but 6 of the original 18 items were used to measure oral eroticism, they were homogeneous and discriminated well between high and low scorers (See Table 6).

Table 6

Item Analysis of the Final Oral Eroticism Scale  
( $N=100$ ,  $\bar{X}=2.02$ ,  $s=1.64$ )

Item No.	$N^a$	$\bar{X}^b$	$r_{pb}$
3	45	3.22	.66
4	43	3.26	.65
7	32	3.59	.66
8	52	2.94	.59
10	19	3.95	.57
A	11	4.18	.46

Note. -- Kuder-Richardson  $r=.65$ .

<sup>a</sup>Number of persons choosing oral erotic answer to that particular item.

<sup>b</sup>Mean total score for persons choosing oral erotic answer to that particular item.

## B. SMOKING STATUS QUESTIONNAIRE

AGE (round off to nearest year) \_\_\_\_\_

NUMBER OF YEARS OF COLLEGE COMPLETED:

- |                           |             |
|---------------------------|-------------|
| — less than 1 (freshman)  | — 3 years   |
| — 1 full year (sophomore) | — 4 years   |
| — 2 full years            | — 5 or more |

A. Have you ever smoked any cigarettes, cigars, or pipes?  
 — No (skip the rest of the questionnaire)  
 — Yes (answer the following questions)

B. Within the past week, have you smoked an average of at least one cigarette, cigar, or pipe a day?  
 — Yes (answer questions below)      — No (answer questions below)

C. How many cigarettes, cigars, and pipefuls do you smoke a day? (average it out for the past month)

Cigarettes	Cigars	Pipefuls
(1) — 1 to 9	— 1 or 2	— 1 to 4
(2) — 10-20	— 3 or 4	— 5 to 9
(3) — 21-30	— 5 or 6	— 10-14
(4) — 31-40	— 7 or 8	— 15-19
(5) — 41 or more	— 9 or more	— 20 or more

D. Did you ever smoke more than this amount (for a period of a month or more)?

— No  
 — Yes: What was the maximum number you smoked per day?  
 — cigarettes — cigars — pipefuls

E. Have you ever seriously tried to quit smoking?  
 — No  
 — Yes (answer questions below)

F. How often have you tried, seriously, to quit?  
 — Once  
 — More than once

G. What was the result of your attempt(s) to quit?

— Cut down to  $\frac{1}{2}$  or less of amount smoked previously and have stayed at about that level ever since

— No lasting change -- still smoke about as much or more than did at the time I tried

K. During your entire life, have you smoked as many as 5 packs of cigarettes, 20 cigars, and/or 3 packages of pipe tobacco?  
 — No (skip rest of questions)  
 — Yes (answer questions below)

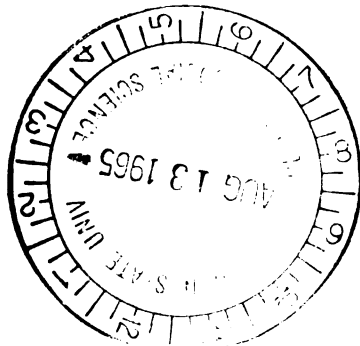
L. What was the maximum number of cigarettes, cigars, and/or pipefuls that you ever smoked per day over a period of one month?

Cigarettes	Cigars	Pipefuls
(1) — 1 to 9	— 1 or 2	— 1 to 4
(2) — 10-20	— 3 or 4	— 5 to 9
(3) — 21-30	— 5 or 6	— 10-14
(4) — 31-40	— 7 or 8	— 15-19
(5) — 41 or more	— 9 or more	— 20 or more

M. How long ago did you stop smoking regularly?  
 (1) — Less than 10 days ago  
 (2) — More than 10 days ago but since the time that the Surgeon General's report on smoking was made public  
 (3) — Before the time of the Surgeon General's report

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