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Status Inconsistency and Alcohol Consumption

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STATUS INCONSISTENCY AND ALCOHOL CONSUMPTION

by

Michael R. Nusbaumer

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
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Michael R. Nusbaumer
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CHAPTER I

PROBLEM STATEMENT AND REVIEW OF THE LITERATURE

General Problem Statement

In surveying the voluminous amount of work done in the area of alcohol consumption, the tension reduction theory stands out as one of the most widely accepted etiological explanations for differentials in alcohol consumption. This theory states basically that alcohol is consumed in an attempt to reduce the amount of personal stress or tension. Given this theoretical orientation, the general concern of this research is the discovery of the sources of stress that lead in turn to increased alcohol consumption. In this research, the primary focus is on the contribution of one general type of stress source--status inconsistency--to the use of alcohol.

As we will document and elaborate on in our subsequent review of theory and research, an anticipated outcome of status inconsistency is the production of a type of stress. This stress is theorized to be the result of conflicting expectations in interpersonal interactions. If,

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1 In subsequent discussions we will provide a detailed treatment of the subtleties of differences in meaning theorists have applied when using the phrase "status inconsistency." At this point we prefer Weber's use of the concept as "imperfect correlations between status dimensions."
indeed, status inconsistency does produce stress in the individual, and alcohol does serve to reduce that type of stress, then perhaps status inconsistency is one important factor in the use of alcohol. Restated, our major research question is: Do status inconsistent individuals, as a result of increased stress, consume more alcohol than individuals who experience a greater degree of status consistency?

This investigation is important in two ways. On the one hand, this research provides a test of status inconsistency theory which is presumed to apply to all types of social behavior. This research also provides etiological information relevant to an explanation of alcohol consumption.

Of course, support for the possibility of status inconsistency theory adding to the etiological knowledge of alcohol consumption can be seen in much of the literature in the field of alcohol consumption. As we will elaborate upon in later discussions, Kessel and Walton (1965) conclude that alcoholics drink to attain a firmer social footing and to, at least temporarily, reduce the cost (stress) of repressing parts of the self that are of importance to the individual's self-integration.

This emphasis on firm social footing and consistency (integration) within the component parts of the self can also be seen in certain anthropological research. Hamer (1965), in his study of the Forest Potawatomi Indians, makes the following observation:
It is suggested on the basis of the observations that drinking in this community (a) gives the individual a means of coping with an unpredictable universe . . . ; (b) permits persons temporarily to assume desirable status positions when there has been interference with, and inadequate substitutes for, the traditional social structure; . . . (p. 276)

Focusing more precisely upon what is sometimes referred to as the "expectation-conflict" approach to stress production within status inconsistency, the amount of supportive evidence is considerable.

In writing about sources of stress in alcoholics, Bacon (1962) suggests stress may arise from:

(a) the individual's opinion of himself; (b) gaining and holding the respect and affections of others; (c) conflicting with others through self-assertion and criticism; and (d) overall security in ownership, prestige, and personal safety as they are tied up with money. (pp. 88-89)

Cahalan (1970) also finds support, using a national sample, for hypotheses positively relating alienation and maladjustment and unfavorable expectations (those who feel they do not have an access to the achievement of their expectations) to the amount of alcohol consumed.

Perhaps a common result of status inconsistency is a difficulty in establishing a stable, acceptable social identity. In his anthropological study, Robbins (1973) concludes that Naskapi (an Indian tribe) drinking patterns represent identity-resolving struggles by permitting persons to make claims or defend an identity threatened by a lack of access to identity-maintaining goods (p. 118).

The concept of identity and its relation to alcohol consumption has been taken a step further than suggested above. Levy (1958) and
Hershenson (1965) have noted that many individuals may become alcoholics in order to obtain identity. As an alcoholic, an individual takes on a role that has specific meaning and identity for himself and others. In this way, alcohol reduces the stress resulting from a lack of identity.

Research has been conducted in the area of alcohol consumption that closely ties status inconsistency theory to this area. Bacon (1944) writes that:

Alcohol relieves the intense perception of insecurities, problems, fears and failures. For a brief spell the man who is not a member and not active, or who cannot gain satisfactions through membership of activity, finds relief from pain or even an answer to his needs. (p. 308)

This observation has been substantiated in research conducted by Singer, Blane, and Kasschav (1964). In a study comparing alcoholics and non-alcoholics, they found that alcoholics were more socially isolated.

In sum, theoretical assertions and some evidence provide partial support for the general hypothesis that status inconsistency is a condition effecting alcohol consumption. This study subjects this general hypothesis to a test with a national sample.

Theoretical Background and Review of Literature

In order to more clearly outline the theoretical underpinnings and literature review of the crucial areas outlined in the problem statement, this section will be divided into two major parts. The first section will review and discuss the relevant studies of alcohol use.
particularly as they pertain to what has been termed the tension reduction theory. The second section includes a discussion and literature review of status inconsistency theory and related research.

Studies of Alcohol Use

Almost since man began recording his history, he has also recorded the use of alcoholic beverages of one sort or another. During this long history, numerous etiological explanations for alcohol consumption have been suggested (see, for example: Horton, 1942; Bales, 1946; Roebuck & Kessler, 1972; Patrick, 1952; Jellinek, 1960; Chafetz & Demone, 1962; and Pittman & Snyder, 1962), yet one such explanation has been repeatedly presented throughout the history of the scientific study of alcohol consumption. This explanation deals with alcohol's perceived ability to alleviate various types of stress, anxiety or tension experienced by the individual. It has been noted, either implicitly or explicitly, that in many situations individuals experiencing certain types of stress or tension will consume alcohol in an attempt to reduce this stress or tension. It should be noted, however, that this proposition has been dealt with through a number of theoretical approaches and resultant research designs and methods.

The tension reduction theory is composed of two basic hypotheses (Cappel, 1975). The first hypothesis states that alcohol consumption reduces stress or tension. Although widely discussed and accepted in much of the literature (Cappell & Herman, 1972; Cappell,
1975), this hypothesis has received inconclusive support in the research literature resulting particularly from the difficulties of operationalizing valid measures of stress. The second hypothesis is that individuals drink alcohol in order to benefit from its perceived tension-reducing effects. It is this latter hypothesis which is of central concern in this dissertation.

In looking at the early scientific explanations for alcohol consumption, one can see this tension reduction theory at least implicitly suggested (Cappell & Herman, 1972).

One of the first to recognize at least in the scientific literature the value of alcohol in escaping reality and its problems and tensions was G. T. W. Patrick (1916). He noted what consumers of alcohol have probably always known: "Intoxicating beverages furnish the easiest and cheapest means ever discovered for escape from reality into the lighter and freer world of one's fancies" (cited in Patrick, 1952:45).

Shortly after this, Read (1920) recognized the particular importance of alcohol in relation to certain mental or cognitive problems. "Alcohol is taken to promote the social instincts and alleviate and narcotize the many mental conflicts to which we all to some extent are victims" (pp. 242-243).

A significant amount of the early alcohol literature supported

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2This hypothesis will be labeled the "tension reduction hypothesis" in the remainder of this dissertation.
some form of the basic tension reduction theory, as seen in the literature review by Patrick (1952). He points out the following: "The alcohol addict and the chronic alcoholic are generally looked upon as attempting to escape from certain disagreeable conditions in their environment and in their own life organization" (p. 62). He goes on to cite Meyerson in noting that: "The alcohol addict or chronic alcoholic is diagnosed as being a person who seeks to escape from his neurosis, from his depression, his frustrations, his dissatisfactions with life, and all the socially unacceptable and personally distasteful trends in his own character" (Meyerson, 1940; cited in Patrick, 1952:62).

Early theoretical formulations concerning the origins of stress and tension in relation to alcohol consumption centered around two major approaches.

The first approach comes from the field of psychoanalysis. In this area, the stress and tension related to alcohol consumption arise from problem areas of the individual including sexual inferiority (Schilder, 1941; Hart, 1930; and Moore, 1942), filial overdependence (Hart, 1930; Knight, 1937; and Moore, 1942), and developmental failures in terms of fixations at various stages (for literature review in this area see Blum, 1966; Roebuck & Kessler, 1972; and Martindale & Martindale, 1971).

The second approach to stress, tension, and alcohol consumption centers around established behaviorist principles. Conger (1956)
was one of the first to apply behaviorist principles to alcohol consumption studies. He posited the belief that alcohol consumption served as a reinforcer which, in turn, is defined in terms of drive reduction and goes on to note that this reduction in the strength of a drive is simply a state of tension resulting from an unsatisfied drive. This approach has received further elaboration by many writers in this area (see Roebuck & Kessler, 1972).

Since the introduction of the tension reduction theory in the area of alcohol consumption, it has received much attention both in terms of theory and research. Despite some contradictory findings and critical reviews (see Cappell, 1975), the tension reduction theory is still cited as a plausible explanation for alcohol consumption in the current literature (Martindale & Martindale, 1971; Cahalan, 1970; Cahalan, Cisin & Crossley, 1969; Kessel & Walton, 1965; Lucia, 1963; Chafetz & Demone, 1962; Bacon, 1973; Allman, et al., 1972; Opshall & Halton, 1972; Deardorff, et al., 1975; and Rohan, 1975).

Turning to the research that has been conducted in an attempt to test the tension reduction hypothesis, one can see the field is analyzed in three parts: research on animals, research on alcoholics, and research on the general population.

Research on Animals

The first research conducted on the tension reduction theory was done by Masserman, et al. (1945) and Masserman and Yum (1946).
They utilized cats in an experiment to test alcohol's ability to decrease neurotic responses. Establishing conflict situations between food and electric shocks or air blasts, experimental neurosis was produced. In both experiments alcohol was found to reduce the experimental neurosis. Additionally, in a choice situation between plain milk and milk with alcohol, the neurotic cats chose the container with alcohol more often than did normal cats (Masserman & Yum, 1946).

Another classic experiment in this area was performed by Conger (1951). He trained and tested cats in an approach-avoidance situation (a lighted alley with food, ultimately giving them an electric shock at their goals). He found that five minutes after injection of alcohol, the cats ran up to food, although with the injection of a placebo they would not. He also found that in these situations alcohol reduced the strength of the fear without significantly affecting hunger. He therefore concluded that fear reduction was the mechanism of conflict resolution.

Subsequent research on the tension reduction theory in animals has been conducted in numerous areas that were suggested in the above research. Since escape and avoidance are thought to be controlled by fear and anxiety (Cappell & Herman, 1972), there have been several supportive studies conducted in this area. These include research done by Broadhurst and Wallgren (1964), Wallgren and Savolainen (1962), and Chittal and Sheth (1963). It should be noted, however, that certain
of these studies only found support at the highest levels of alcohol injection. Non-supportive findings have been reported by Baum (1970), and McMurray and Jaques (1959).

Another area of research involves accepting the seizures in rats as indicators of tension states. Greenberg and Lester (1953) exposed rats to loud bell noises which precipitated a period of frenetic activity, followed by convulsions and a catatonic state. With the introduction of alcohol, even at moderate levels, there was a much greater resistance to these seizures. This finding was replicated by Dember, Ellen, and Kristoffersen (1953). Caution should be taken, however, in equating seizures in rats with tension states (Cappell & Herman, 1972).

Although the generalizing of findings in animal research to man may be questionable, animal studies do provide some important information. In a review of the literature on the tension reduction theory and animal research, Cappell and Herman (1972) observe conflicting findings in certain areas (escape and avoidance), yet general support in others (experimental conflict, experimental neurosis). Although they state that it (the tension reduction theory, particularly Hypothesis #1) has not been convincingly supported empirically, they also note that the hypothesis has been tested in a wide variety of experimental situations, in a number of different species and with varying degrees of sophistication in experimental methodology and design (Cappell & Herman, 1972:59). In sum, the tests of the tension reduction
hypothesis in animals have been inconclusive.

Stress in Alcoholics

The relationship between stress, tension, anxiety, and alcoholism has received considerable attention in the research literature. For purposes of this literature review, an alcoholic is defined as an individual who has been so labeled by a formal organization or recognized authority involved in the treatment or control of alcoholism (Lemert, 1951, 1967).

One of the first and most prolific areas of research in alcoholism deals with the identification of an alcoholic personality. Through such data collection techniques as psychoanalysis, self-reports and psychological testing, there have developed similar descriptions of personality traits which are characteristic of alcoholics. These personality descriptions usually include such traits as emotional immaturity, feelings of guilt, sex-role confusion, a high level of anxiety particularly in interpersonal relationships, feelings of isolation, poor adjustment to reality, low self-esteem, and a low frustration tolerance (Cantanzaro, 1967; Buhler & LeFever, 1947; Halpern, 1946; Schafer, 1954; Williams, 1950; McCord & McCord, 1960; Robins, Bates & O'Neal, 1962; and Takka, 1966).

E. M. Jellinek (1960), in his work dealing with the disease concept of alcoholism, also realized the importance of tension and its relation to alcoholism when he noted that the most common form of pre-alcoholic vulnerability is a low capacity for handling tensions (p. 63). Jellinek operationalized his definition of an alcoholic in terms of one's
loss of control over his drinking behavior. Once an individual has lost control over his drinking behavior, Jellinek views the demand for alcohol as coming from two major sources:

One part reflects the necessity to allay the distressing withdrawal symptoms, i.e., a physical demand; the other part reflects the obsessive belief that ultimately a sufficient amount of alcohol will bring about the tension reduction which, before the loss of control, was achieved quite easily. (Jellinek, 1960:146)

Chafetz and Demone (1962) recognize two categories of alcoholics, one which is labeled the "addicted" alcoholic and suffers from major emotional and psychological problems over a long period of time, and one labeled the "reactive" or the "neurotic" alcoholic. The reactive or neurotic alcoholic has a relatively healthy integrated pre-alcoholic personality. He uses alcohol to excess when he is temporarily overwhelmed by external stress. Excessive drinking is, therefore, most often associated with observable, external stress situations, usually of short duration. This excessive drinking runs a course consistent with tension release (pp. 20-21).

In another article, Noyes and Kolb (1963) further elaborate on this relationship. According to them, "all too frequently the use of alcohol as a means of narcotizing anxiety becomes habitual. The strength of the habit depends upon the degree of anxiety which prompts it and the capacity of alcohol to reduce anxiety" (p. 166).

Williams (1950) also pointed out what he called an "anxiety syndrome" in alcoholics. According to Williams, it was observed
that eventually they (alcoholics in his study) associated every unpleasant situation they had to face, or the anticipation of one, with the need for a drink and later blamed these situations for their drinking (p. 784).

This characteristic of many alcoholics finds additional support in the work of Hadley and Hadley (1971) who found the most often cited benefit of drinking in older alcoholics was a feeling of physical and emotional relaxation: relief from stress and strain.

Kessel and Walton (1965), in recognizing various personality characteristics in alcoholics, conclude that psychological satisfactions from drinking among alcoholics are:

1. The lessening of frustration with increases in gratification.
2. The temporary attainment of a firmer social footing.
3. The release from social inhibition of important parts of the self which normally have to be kept repressed at great cost to the individual's self integration (p. 65).

The relationship between stress and alcoholism can likewise be seen in studies of alcoholics who have gone "on the wagon" for a period of time, yet resumed drinking after such a period of abstinence. Ludwig (1972) cites psychological distress (e.g., "I felt sorry for myself," "to get relief from anxiety") as the most frequent reason given by alcoholics who have been abstinent for a certain period of time before they resumed their drinking habits.

In another study conducted by Higgins and Marlatt (1973) alcoholics were compared to social drinkers in an experimental
setting. Using the threat of painful and non-painful electrical shock plus the Eysenck Personality Neurotic Scale as measures of anxiety, they found no relationship between anxiety and alcohol consumption for either group.

In yet another area of research, Lynn and Hampson (1970) attempted to look at the relationship between national anxiety levels and the prevalence of alcoholism. Based upon questionnaires distributed to male college students on a cross-cultural basis, they found that "there is a high and statistically significant correlation between national anxiety . . . and alcoholism as assessed by deaths from alcoholism and cirrhosis of the liver" (p. 306).

Finally, there is a sizeable body of research in this area that supports the separation of the two tension reduction theory hypotheses. In a series of studies conducted on alcoholics in experimental settings (see McNamee, Mello & Mendelson, 1968; Mendelson, LaDou & Solomon, 1964; and Tamerin & Mendelson, 1969), alcoholics were first asked about the relationship between anxiety and alcohol consumption and then given varying amounts of alcohol and measured (using a variety of means) in terms of the amount of actual tension reduction. The sizeable majority of alcoholics confirmed a belief in the tension reducing properties of alcohol despite the actual lack of change or even increase in tension or anxiety after large amounts of alcohol consumption.

In conclusion, much of the research to date has been interpreted
to support the tension reduction hypothesis. Where the hypothesis has not been supported, it has been in the area of experimentally designed and conducted research studies.

Alcohol, Stress and the General Population

The tension reduction hypothesis has been additionally examined in relationship to the drinking habits of the general population or segments of the general population who are not labeled alcoholics.

Anthropological analysis of certain groups has provided insights into the tension reduction hypothesis.

Articles by Hamer (1965) and Robbins (1973) both indicate that, in situations of great cultural change or upheaval, the consumption of alcohol serves to reduce tensions and stresses brought to bear upon the population. In many instances, it functions to provide social identities or coping mechanisms in which one can find at least temporary stability or calm in a rapidly changing social milieu.

In a cross-cultural analysis of 118 cultures, Horton (1943) found that a theorem positing a direct relationship between drinking and anxiety on a societal level was one of two which received the greatest amount of support. It should be noted, however, that anxiety was measured indirectly through indicators of subsistence, insecurity, and acculturation.

On the other hand, in a review of drinking patterns in preliterate societies, Chafetz and Demone (1962) argue that the preliterate
individual uses alcohol more to enhance social relations than as a means of meeting life's problems (p. 75).

Jellinek (1960) supports and expands upon the differential drinking patterns as related to preliterate and more advanced societies. Particularly in terms of alcohol's tension reduction properties, he believed that:

The individual use of the tension-reducing properties of alcoholic beverages, in contrast to the original tribal or communal use, becomes more motivated as sources of anxieties, frustrations, and tensions in general become more individualized in the higher civilizations than the predominately communal tensions were in the preliterate societies (p. 152).

As with previously reviewed areas that dealt with the tension reduction theory (Hypothesis 1), there is also a great amount of research in this category that has been conducted in an experimental setting.

In setting up an approach-avoidance situation using pennies and electrical shocks, Vogel-Sprott (1967) found support for alcohol's ability to restore initial responses to the pennies and ignore the shocks only when the shocks were severe enough to establish a major avoidance situation among both the experimental and control groups.

A significant number of research studies have been conducted using psychophysiological indicators of stress or anxiety. Such indicators include basal skin conductance, galvanic skin response, and adrenaline production, all of which have been assumed as appropriate measures of tension or anxiety (Cappell & Herman, 1972).

Support for the tension reduction theory (Hypothesis 1), using
either basal skin conductance or galvanic skin response or both as measures of tension, were found by Carpenter (1957), Greenberg and Carpenter (1957), and Lienert and Traxel (1959), yet other studies in this area found either no such support or conflicting results that leave support questionable. These latter reports of findings can be viewed in studies by Coppersmith (1964), McGonnel and Beach (1968), and McDonnell and Carpenter (1959).

The use of adrenaline production as an indicator of tension has also produced conflicting results (see Fleetwood, 1955; and Goddard, 1958).

The major problem in research using psychophysiological indicators appears to lie in the relationship between stress or tension and these indicators, rather than a clear-cut difference in findings dealing with the tension reduction hypothesis.

Other studies using mechanical or artificial means of inducing stress have likewise produced conflicting results.

Korman, Knopf, and Austin (1960) predicted that alcohol would improve performance in stressful situations but would decrease performance in non-stress situations. Again using electrical shocks as stress-producing mechanisms, their predictions were supported where performance was measured by the subject's ability to learn nonsense syllables.

Finally, in studies using delayed auditory feedback as an anxiety-
producing mechanism, alcohol was found to disrupt verbal behavior to a greater extent than a placebo or other drugs (Hughes & Forney, 1963; Forney & Hughes, 1965; Hughes, Forney & Gates, 1963; and Hughes, Forney & Richards, 1965). These findings were interpreted as providing support for the rejection of the tension reduction theory (Hypothesis 1).

Another major area of research on the tension reduction theory dealing with various types of self-reports were conducted in two major settings: cocktail parties and test situations.

Looking first at the test situations, Lundin and Sawyer (1965) used a group of fraternity members to test the relationship between alcohol and test anxiety. Using the Institute for Personality and Ability Testing's anxiety scale, they found no relationship between test anxiety and alcohol consumption. In a basic replication of this study, however, Smart (1968) not only pointed out many methodological problems with the Lundin and Sawyer study, but found support for a curvilinear relationship between alcohol consumption and test anxiety.

In terms of a party-type setting, Kalin, McClelland and Kahn (1965) invited students to attend an informal discussion session or a fraternity party in an attempt to gain information on drinking patterns in normal settings. With the use of the Thematic Apperception Test, they found that alcohol had no effect on a fear-anxiety measure in the discussion sessions but a significant effect was observed in the fraternity setting.
Williams (1966) used an anxiety and depression-based adjective checklist with which students rated themselves at cocktail parties. The checklists were administered at three points: prior to the party, after small amounts of alcohol were consumed and after large amounts of alcohol were consumed. Williams found that small amounts of alcohol significantly decreased anxiety levels, yet after consuming greater amounts of alcohol the anxiety levels returned to approximately pre-party levels. This latter finding was attributed to the negative side effects of heavy alcohol consumption (e.g., nausea and loss of control over one's actions).

Three relatively large-scale studies have lent additional support to the tension reduction hypothesis.

Jess, Gruns, Hanso and Jess (1968), in a study of a small tri-ethnic community in Colorado, attempted to apply Merton's (1949) ends-means scheme plus a social control variable to the frequency of deviant activity (excessive alcohol consumption). Focusing upon two major populations--the community itself and a sample of high school students--they theorized that (1) the greater the adherence to dominant social values (ends) the less the prevalence of excessive drinking; (2) the greater the opportunity to achieve these values and goals (means) the lower the prevalence of drinking; and (3) the greater the extent of social control surrounding drinking behavior the lower the prevalence of excessive drinking behavior. They posited these three major
hypotheses at three different levels: the sociocultural system level, the socialization system level (parents), and the personality system level (individual). They found that in both the community as a whole and the high school students as a whole the best predictor of excessive alcohol consumption was a multivariable explanation including the means-ends disjunction (a frustration-stress producing condition) at both the sociocultural system level and the personality system level and the social control variable again at these same levels.

In 1969, Cahalan, Cisin and Crossley (1969) conducted some 2700 interviews with respondents drawn from a national probability sample dealing with their drinking practices and attitudes. They found that 71% of those categorized as heavy drinkers cited as one of the major benefits of alcohol consumption its ability to relieve depression and nervous tension. This figure represents a much higher proportion citing this benefit than in any other category of drinker (p. 49).

Cahalan, Cisin and Crossley also attempted to delineate two types of drinkers: social drinkers who drink mainly for socially related reasons such as at festive occasions, celebrations, or to be more sociable; and escape drinkers who tend to drink for more individual reasons and use alcohol as a drug which has the power to alleviate anxieties (p. 165). They found that among heavy drinkers, 64% of the women and 48% of the men could be classified as escape drinkers. This again was a larger proportion than in any other category of drinkers. Based
upon Conger's (1956) theoretical formulations, they concluded that those who are escape drinkers report a higher level of anxiety and depression than do non-escape drinkers. If drinking temporarily alleviates these handicaps, the escape drinker would have more incentive to drink (Cahalan, Cisin & Crossley, 1969:178).

Cahalan (1970), using the same data as described above, suggested two additional explanations for alcohol consumption that are stress related: first, alienation and maladjustment in which Cahalan reasoned that those with high scores on this variable would be more likely to use alcohol to relieve tension and anxiety; and second, unfavorable expectations in which those who feel they have access to the achievement of their expectations are less likely than others to drink excessively. Although both of these variables were found to be related to alcohol consumption individually, when added to a stepwise regression analysis with four other variables (all related to social and psychological aspects of the drinking situation), they contributed relatively little to the overall amount of explained variance.

On a more abstract level, Serebro (1972) attempted to test the relationship between alcohol consumption and anxiety among urbanized Africans. He found that total alcohol consumption was a relatively good indicator of anxiety level.

Summary

Although the research on the tension reduction theory has been
widespread and the support for Hypothesis 1 has been inconclusive in many areas, it still seems that a large body of evidence exists to support the tension reduction hypothesis (Hypothesis 2) at this point in time. Even critics of the tension reduction theory admit that there is a large body of research which offers "reasonable support" for the increased self-administration of alcohol in circumscribed stress situations (Cappell, 1975:202). For these reasons, the remainder of this dissertation will assume that individuals do drink alcohol in order to benefit from its at least perceived tension reducing effect.

Status Inconsistency Theory

In looking at potential sources of stress or stress production, status inconsistency theory represents one major viable source. The theory of status inconsistency posits that as a result of having inconsistencies between rankings on various status dimensions, an individual is more likely to experience stress than an individual whose rankings are consistent. This theory has, however, received much criticism on both methodological and theoretical grounds. Despite this criticism, the research connected with the theory of status inconsistency has produced some positive contributions.

In looking at the concept of social class, it was Max Weber (1958), in one of his more prominent essays entitled "Class, Status, and Party," who first suggested that the traditional unidimensional view of social stratification was inappropriate. Weber later advocated
that there were really three distinct status hierarchies which, taken in combination, represent the multidimensional variable of social status. According to Weber:

The term "social status" will be applied to a typically effective claim to positive or negative privilege with respect to social prestige as far as it rests on one or more of the following bases: (a) mode of living, (b) formal process of education which may consist of empirical or rational training and acquisition of the corresponding modes of life, or (c) on the prestige of birth or occupation. (1947:181)

In addition, Weber cautioned that these dimensions of status are frequently imperfectly correlated. (For purposes of this chapter, the following terms refer to this imperfect correlation between status dimensions and are considered to be synonomous: status inconsistency, status discrepancy, status incongruency, and low status crystallization.)

Pitirim Sorokin (1927), writing shortly after Weber's death, also noted the existence of three basic dimensions of social stratification: economic, political, and occupational. Although these three dimensions were different from those outlined by Weber, Sorokin also came to a similar conclusion about their interrelationships. Sorokin noted that:

The intercorrelation among the three forms of stratification is far from being perfect; the strata of each form do not coincide completely with one another . . . . This fact does not permit us to analyze in a summary way all three fundamental forms of social stratification. (1927:12)

Sorokin also appears to be one of the first theorists to recognize an anxiety or tension that is somehow related to the imperfect correla-
tion of the various status dimensions. He describes this situation as being "innerly antagonistic . . . multibonded stratum made up of mutually contradictory, uncongenial bond-values" (1947:289, cited in Jackson, 1960).

Emile Benoit-Smullyan, writing in 1944, also recognized separate status hierarchies similar to those presented by Sorokin. Benoit-Smullyan posited that at least a partial explanation for the imperfect correlation between these status dimensions lies in the fact that as one's status changes, the change does not appear in all dimensions simultaneously. By definition, an imbalance has occurred.

In a dynamic and mobile society, status equilibrium is always being disturbed since pronounced changes in status occur ordinarily in only one type of status at first, and are only gradually converted into equivalent statuses in other hierarchies. (p. 160)^3

It is generally through a process of "status conversion" that individuals experiencing this state of status imbalance act to move towards "status equilibration" or a common level of positions on all status hierarchies. Benoit-Smullyan was particularly concerned with outcomes to status imbalances, especially when status conversion processes were blocked. According to Benoit-Smullyan, there were historical grounds for supposing that when legal, customary, or other barriers seriously hamper the equilibrating tendency, social tensions of

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^3 Examples of this may be seen in the writings of Everett Hughes (1945).
revolutionary magnitude may be generated (1944:160).

Gerhard Lenski (1954), in a pioneering effort to conduct research in the area of status inconsistency and social tensions, made some interesting observations. However, Lenski deviated somewhat from what had previously been indicated as the various status dimensions upon which social stratification was based. According to Lenski, there were four major status dimensions: education, occupation, income, and ethnicity. He hypothesized and confirmed that specific political attitudes and behaviors vary as to the degree and type of status inconsistency experienced (p. 406). For example, Lenski found that:

1. Liberal political tendencies are associated with a low degree of status crystallization regardless of the relationship of the status variables, and

2. Certain types of status inconsistencies are more closely related to political liberalism than others. (p. 411)

According to Lenski:

The individual with a poorly crystallized status is a particular type of marginal man, and is subjected to certain pressures by the social order which are not felt (at least to the same degree) by individuals with a more highly crystallized status. (p. 412)

In his later work, Lenski posited the hypothesis that persons with a low degree of status crystallization are likely to be subjected to disturbing experiences in the interaction process and have great

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4 In conducting this research, it should be noted that Lenski not only proposed but also utilized a method for mathematically deriving an index of status inconsistency.
difficulty in establishing rewarding patterns of social interaction with others (Lenski, 1956A:459).

Although unable to test this hypothesis directly, Lenski formulated three secondary hypotheses, derived from the original one, that served to provide confirming evidence for the original hypothesis. He found that:

1. Low crystallization respondents are more frequently non-participants in voluntary relationships than are high crystallization respondents,

2. The proportion of longstanding voluntary ties which have become inactive is greater among persons with poorly crystallized status than among others, and

3. Persons with poorly crystallized status are more frequently moved to establish and maintain voluntary ties by non-sociable motivations and less frequently by sociable motivations than is characteristic of others (1956A:460-461).

The first major body of negative evidence for Lenski's theory of status inconsistency came in an article by Kenkel (1956). In responding to Kenkel's findings, however, Lenski (1956B) provided further specification of his theoretical statements and responded by noting that Kenkel had used inappropriate status variables. Lenski went on to indicate that the four variables he had used were chosen purposefully, and because they were the most basic components in the American stratification system, no others were acceptable (1956B:368).

Recent theorizing by Elton F. Jackson (1962) suggested that the underlying problem basic to the difficulties experienced in interaction by individuals with inconsistent statuses was that of conflicting
expectations.

An individual's rank on a status dimension controls in part his expectations of others, his expectations of himself, and others' expectations of him . . . . When a person holds high rank on one status dimension and low rank on another, the expectations (both those held by the individual and by others) mobilized by the rank positions will often be in conflict. (p. 470)

Jackson went on to state that: "Two general consequences stem from this central problem of conflicting expectations and both of them in turn lead to psychological stress" (p. 470). The first consequence Jackson saw was frustration. As a result of one's inconsistencies, others' expectations of him are at least partially contradictory. The individual is unable to fulfill all of the expectations and in turn receives negative sanctions from others for failing to do so. Additionally, frustration may occur because the person with inconsistent rankings often expects interaction to be based upon his highest rank, yet this does not occur as a consequence of being evaluated and blocked according to his lowest rank (p. 470).

The second consequence of status inconsistency according to Jackson was a state of uncertainty in terms of what the inconsistent individual can rightfully expect from others, and what they can expect from him (1962:470).

Jackson utilized three of the four vertical status hierarchies

5 This approach to status inconsistency theorizing has been termed the "expectation-conflict approach" (Anderson, 1971).

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(education, occupation and racial-ethnic background) that were sug-
gested by Lenski (1954, 1956A) and attempted to equate inconsistencies
between them with the number and severity of psychophysiological symp-
toms experienced by the individual. Jackson felt this was important
in that "it is an intrapunitive, bodily expressed reaction to stress; it
therefore offers an opportunity to check suggestions that self-blame
may result from status inconsistency" (1962:470).

From his analysis, Jackson concluded that:

1. Both moderate and sharp status inconsistency are psycho-
logically disturbing for the individual, and

2. The response to status inconsistency varies with the char-
acteristics of the inconsistent. Low achieved status or an
ascribed status superior to achieved status influences the
individual to respond politically. The sex of the inconnis-
tent influences the response to discrepancies between
occupation and education. (1962:470)

Robert Mitchell (1964) also lodged several criticisms concern-
ing both the theoretical and methodological work done by Lenski (1954,
1956A) and Jackson (1962). Mitchell's most important criticism centered
around a perceived lack of evidence to support the idea that status inconnis-
tency, as measured to date, actually measured an interaction effect
of all the dimensions. He argued there were no means of determining
whether the effects measured were not merely due to the main effects of
the status dimensions.

Mitchell would have preferred that Lenski and Jackson
develop their summary measures along more traditional lines;
that they add their several dimensions together one at a time,
and then indicate that no single dimension or no single combination of dimensions adequately explains what appears to be an underlying theme of low status crystallization. (Mitchell, 1964:324)

Again, in a "Comment," Lenski (1964) responded to criticisms, this time to those of Mitchell. Lenski pointed out that status inconsistency effects can be thought of as statistical interaction, or non-additive effects of certain combinations of status ranks. He also recommended that these interaction effects can be identified by comparing the sum of rates of the dependent variable for certain consistent rank patterns with the sum of rates for certain inconsistent patterns.

Later, Jackson and Burke (1965) also recognized this problem, as suggested by Mitchell. They advanced the idea that, through the utilization of a dummy variable regression technique, one could not only take into account Mitchell's criticism but also could provide a more precise measurement of status inconsistency effects than the techniques suggested by Lenski (p. 557).

Jackson and Burke, in support of this contention, reexamined the relationship between status inconsistency and the occurrence of psychosomatic symptoms (Jackson, 1962), using a dummy variable regression analysis. Their findings indicate that the simple additive model (with no interaction term) is not a fully adequate explanation of the variations in symptom level by status; the non-additive models (with interaction term) fit the data much more precisely (1965:563).

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This "expectation-conflict" explanation of Jackson's of the
tension-producing nature of status inconsistency was at least partially presented or suggested in prior works by Hughes (1945) and the early work of Lenski (1954, 1956A), although it was not until Jackson's article in 1962 that this approach came to the forefront. In 1966, Lenski made an added contribution when he explicitly delineated his views on the expectation-conflict approach.

Individuals strive to maximize their satisfactions, even, if necessary, at the expense of others. This means that an individual with inconsistent statuses or ranks has a natural tendency to think of himself in terms of that status or rank which is highest, and to expect others to do the same. Meanwhile, others who come in contact with him have a vested interest in doing just the opposite, that is, in treating him in terms of his lowest status or rank. (p. 87)

A variant of this expectation-conflict approach is seen in the Gibbs and Martin (1964) theory of "status integration." Working somewhat from Hughes' (1945) ideas dealing with role conflict, Gibbs and Martin make use of the following concepts: roles, statuses, status integration, and role conflict. Status is seen as a form of social identification and the roles are the rights, duties, and obligations of a particular status. By having a series of social identifications, the individual is expected to perform the roles inherent in each status he occupies. If conforming to the roles of one status interferes with conforming to the roles of another status (which it is assumed is more likely if they are poorly integrated), an individual is confronted with an incompatibility in statuses (1964:23).  

6A very similar approach can be seen in the writings of Sampson (1963, 1969).
Perhaps one of the more intriguing attempts to relate theorizing about status inconsistencies to theorizing in other areas of social science was provided by Geschwender (1967). Geschwender combined the expectation-conflict approach with certain of the main propositions of George Homans (1961), particularly his idea of "distributive justice." Geschwender not only recognizes it is an inconsistency in expectations that produces stress for individuals with inconsistent rankings, but also views certain ranks as investments and/or rewards. Stress is also produced then because of insufficient profits or rewards in relation to the investments made.

Of course, other approaches have been suggested in the literature as an explanation of the occurrence of tension or anxiety experienced by individuals with inconsistent status rankings. One of these approaches is also based upon the writings of George Homans (1961), on the work of Thibaut and Kelly (1959) and Kimberly (1962, 1966, 1967, 1970), all of which emphasize a basic exchange perspective.

Homans (1961) proposes that tensions are derived from exchange situations where persons expect the profits of each participant to be proportional to his investments. Homans labeled this concept of expected proportionality between investments and profit "distributive justice."

Thibaut and Kelly (1959) present a slightly different approach to the tension explanation offered by Homans. This is the concept of
"comparison level" which they define as:

The standard against which an individual evaluates the attractiveness of a given relationship. Attractiveness is a function of how close the outcomes, that is, the rewards and the costs of the relationship, are to what the individual feels he deserves. (cited in Kimberly, 1970:84-85)

Probably the most important spokesman for this "profit-investment" approach is Kimberly (1962, 1966, 1967, 1970). Based upon the work of Thibaut and Kelly (1959), Kimberly makes the argument that tensions are not the direct result of status inconsistency per se, but rather of poor reward-cost outcomes that are often associated with status inconsistency (Kimberly, 1967).

Adams (1965) appears to separate the "just distribution of rewards" from the concept of "relative deprivation."

First, the dissatisfaction associated with relative deprivation results from felt injustice, rather than directly from relative deprivation. Second, what is just is based upon strong expectations. Third, a comparative process is inherent in the development of expectations and the perception of injustice. Fourth, and finally, felt injustice is a response to a discrepancy between what is perceived to be and what is perceived should be. (cited in Kimberly, 1970:84)

It seems that Adams attempted to articulate a "profit-investment" approach in accord with the "expectation-conflict" approach of Weber, Lenski, and Jackson.

Another approach to an explanation of the tension resulting from status inconsistency is based upon Heider's (1958) theory of balance and Festinger's theory of cognitive dissonance. Although, as pointed out by Kimberly (1966), this approach deals with a somewhat
different type of consistency than status inconsistency (Kimberly, 1966: 218), it is still of importance to recognize its theoretical contributions to this general area.

Balance theory, at its most general level, focuses on the tendency for the affect characterizing the individual's responses to parts of an entity to be of like sign (Heider, 1958:182-183). Dissonance theory focuses on cognitions which imply the obverse of one another and which appear to result from commitment to behavior which results in frustration of an important motive (Brehm & Cohen, 1962:228-230).

In sum, this "balance" approach assumes: "(1) that balanced ranks are stable; (2) that imbalanced ranks tend to change until they become balanced; and (3) that imbalanced ranks produce a state of tension" (Zelditch & Anderson, 1966:249).

Other Theoretical Considerations

Two additional theoretical criticisms of status inconsistency theory have been presented in the literature that warrant consideration.

The first, as noted by Box and Ford (1969), and Burton (1972) is that the theory of status inconsistency, as presented, is logically incomplete. Certain additional theoretical assumptions must be made in order to present a more logically sound theory.

Box and Ford argue that the following additional assumptions must be made:
1. The relevant others always have status profiles in which no ranking is lower than the inconsistent's highest rank.

2. Ego always attempts to maximize his status.

3. The relevant others are aware of the status inconsistent's lower or lowest status.

4. No social constraints operate to inhibit the behavior of the others towards the status inconsistent.

5. "Objective" statuses are salient to the actors, and are considered relevant in the interaction situation. (p. 198)

The major problem arises from the fact that research evidence exists which indicates at least one, if not all, of these assumptions are false (see Box & Ford, 1969; Burton, 1972).

The second area of criticism deals with the relationship between objective and subjective evaluation of inconsistencies. This idea is basically a further extension of point 5 cited above from Box and Ford.

Nelson (1973) proposes that:

Objective inconsistency may be defined in terms of an arbitrary manipulation of an individual's status ranks, or it may be defined in terms of the normative expectations linking together the various status dimensions. Subjective consistency, on the other hand, involves asking the respondent to decide for himself whether or not he is inconsistent. (p. 3)

In this situation, particularly when objective inconsistency is defined using the first definition given above, it is quite likely that the theorist-research (objective) defined status inconsistent and the respondent (subjective) defined inconsistent will not yield the same empirical results (Stehr, 1968; Nelson, 1973). In fact, it has been suggested that "there are certain situations in which objective status inconsistenc-
cies exist, yet these inconsistencies may be not only easily accommodated, but downright palatable" (Hyman, 1967:396).

Subsequent to the major theoretical developments of Lenski (1954, 1956A, 1956B, 1964) and Jackson (1962), the research literature has been replete with studies dealing with status inconsistency. A sizeable portion of this literature has, however, not been supportive of the theory.

In looking at the relationship between status inconsistency and some direct measures of stress, there have only been two studies that have dealt with this question. The first, by Hesser (1971), dealt with a sample of American Protestant clergymen; yet he found slight support for a direct relationship between status inconsistency and stress. The other study, done by House and Harkins (1975), also supported such a direct relationship. It should be noted, however, that these direct measures of stress are somewhat questionable.

In terms of indirect measures of stress, relationships have been explored in the following areas. Positive direct relationships have been found between status inconsistency and voting behavior or desire for social change by Goffman (1957), Segal and Knoke (1968), Segal (1969), Smith (1969), Ploch (1968), Lenski (1964, 1967), and Eitzen (1970). Negative findings were reported by Kenkel (1956), Brandemeyer (1965), Kelly and Chambliss (1966), Broom and Jones (1970), Laumann and Segal (1971), Olsen and Tully (1972), Knoke (1969), Eitzen (1968), and
Hornung (1971).

There has been additional research done on Lenski's (1956) hypothesis concerning social participation. Positive support has been provided by Geschwender (1968) and Bauman (1968). Negative findings have been indicated by Laumann and Segal (1971) and Sokol (1961).

In terms of status inconsistency and stress as measured by psychosomatic symptoms, support has been found by Jackson (1962) and Jackson and Burke (1965), although others such as Meile and Haese (1969) and Jackson and Curtis (1972) found no such support.

Support has also been presented for relationships between status inconsistency and crew performance by Adams (1953); schizophrenia and psychopathies by Dunaham, Phillips and Srinvasan (1966) and Eitzen and Bair (1972); attitudes toward segregation by Fauman (1968); right-wing extremism by Rush (1967); political efficacy by Hornung (1973); morbidity by Wan (1973); and health and other social variables by Ploch (1968).

A lack of support for the above relationships has also been brought forward in the case of job satisfaction by Hyman (1967) and attitudes toward Negroes by Treiman (1966).

Non-supportive findings have also been reported on church-like versus sect-like religiosity by Demerath (1965); Seeman's powerlessness scale by Hodge and Segal (1970); hostility towards immigrants by Runciman and Bagley (1969); social class identification (equilibra-
tion) by Segal, Segal and Knoke (1970); and coronary heart disease by Horan and Bradford (1974).

Finally, Jackson and Curtis (1972) presented negative findings on a series of dependent variables including social participation, political liberalism, satisfaction and symptoms of stress (psychosomatic symptoms), intolerance, anomia, and self-perceptions.

Research has also been conducted in an attempt to identify certain types of status inconsistencies that are more stressful than others. Research in this area has been conducted by Lenski (1954, 1956), Jackson (1961), Jackson and Burke (1965), Jackson and Curtis (1972), Lauman and Segal (1971), Smith (1969), Treiman (1966), Ploch (1968), Hornung (1971), Segal (1969), Knoke (1968, 1972), Olsen and Tully (1972), Segal and Knoke (1969), Broom and Jones (1970), and Eitzen and Bain (1972). As before, these results were mixed in their support of status inconsistency effects.

Research Objectives

The major theoretical concern of this research deals with the application of status inconsistency theory to the study of alcohol consumption. It has been generally hypothesized that the degree of status inconsistency, as a stress-producing characteristic, is related to the amount of alcohol an individual consumes. This is based upon the recognized social and physical functions alcohol performs in stress or tension reduction.

The most crucial area of concern is with the "identification" problem. Blalock defines the identification problem in terms of the existence of too many unknowns within a particular study for it to be solvable (1966:52). He elaborates on this point in the following manner:

If one takes status inconsistency as a perfect mathematical function of a difference between two statuses, and if he also wishes to estimate the separate main effects of these statuses, the three "independent" variables will be confounded together. This can be seen empirically by noting that one cannot vary inconsistency while holding constant both statuses, nor can he vary one status while holding constant the other status and inconsistency. Without a priori assumptions, the structural parameters cannot be estimated by least squares or any other purely empirical procedure. (1967B: 69-70)

Another facet of the identification problem arises as a result of the relationship between the status inconsistency model, modes of analysis, and exogenous variables. Using Lenski's (1954, 1956) hypotheses as an example, Lenski posited that status inconsistency produces strain or stress which in turn manifests itself in the lack of social participation or voting patterns. The model used for analysis, however, implies that liberal voting patterns and the lack of social participation are a direct result of status inconsistency. As a consequence, the particular type of strain or stress related to status
inconsistency has remained unmeasured, at least directly. By not being able to identify this particular type of stress or strain, it is thus impossible to control for exogenous variables that may also produce this type of stress or strain (Blalock, 1966:52). This point is also discussed by Stehr (1968).

In an attempt to give direction to further research in the area of status inconsistency, Blalock proposed three possible solutions to the identification problem:

1. By making a priori assumptions regarding the signs or magnitudes of some of the coefficients,
2. By finding and measuring additional exogenous variables that appear in some but not all of the equations,
3. By postulating certain kinds of non-linear relationships. (1966:52)

A second area of concern for Blalock is the "specification" problem. In Lenski's (1954) original writings, he assumed that status inconsistency influenced the dependent variable with the same magnitude regardless of the direction of the inconsistency. Blalock, however, conceives of the possibility of getting such results when:

A. There is an inconsistency effect in one direction only.
B. The effect is positive in one direction, but negative in the other.
C. One or the other of the main effects of the status variables is zero.
D. The main effects of the status variables are in opposite directions and the magnitudes of the inconsistency are quite large (albeit in opposite directions).
E. The composite table shows no interaction in spite of the fact that there are inconsistency effects. (Bla
lcock, 1967A:306)

Certain of these possibilities are also discussed by Mitchell (1964) and Hyman (1966).

In response to Jackson's (1962) research, in which the assumption was made that neither status variable had a significant main effect upon the dependent variable and there is an inconsistency effect only when achieved status is low and ascribed status is high, Blalock posed two additional alternatives:

A. Inconsistency effects appear only when the achieved status is higher than the ascribed. This would require that two main effects be opposed, however.

B. Among other alternatives, a situation where inconsistency effects are equal but in opposite directions. (1967A:306)

A final alternative assumption is offered by Blalock in the following manner:

One might argue it is the lower of the two statuses that produces strains in the individual and that his behavior is due to the strain component ought therefore to be essentially similar in nature to that produced by the "main" effect of this particular variable. (1967A:314)

In summing up Blalock's approach to status inconsistency, he notes that one should always evaluate the evidence in favor of any particular theory against all plausible rival hypotheses (1967A:308).

This is evidenced in his statement that:

There is a sense in which the existence of interaction can be helpful in appraising the utility of the inconsistency
formulation when predicting to specific dependent variables . . . . Provided one assumes that the individual status variables produce effects that are additive, then the amount of interaction presents a kind of minimum "net" inconsistency effect. Thus, whenever one finds interaction, he might suspect an inconsistency effect, though it may be difficult to pin down to specific cells. Empirical support for or against status inconsistency models would therefore seem to hinge on the interaction term. (Blalock, 1967A:308)

Here again, however, Blalock warns that interaction might not indicate status inconsistency alone. It might additionally result from a series of potential methodological problem sources and approaches (1967B:70).

In conclusion, therefore, an interaction term appears to represent an upper limit or maximum estimate of status inconsistency effects.

In order to test the viability of the status inconsistency dimension in relation to alcohol consumption, it is also necessary to control for the independent main effects of the status variables that comprise the bases for the status inconsistency measure (Lenski, 1954, 1964; Jackson, 1962; Mitchell, 1964; and Jackson & Burke, 1965). Through operationalization of status inconsistency as an interaction effect between the main status variables (Lenski, 1964; Mitchell, 1964; and Jackson & Burke, 1965), its explanatory power must then be tested in relation to the additional amount of variance explained in the dependent variable by the non-additive model (status inconsistency model) as opposed to the amount of variation explained by the simple additive model (model containing the added effects of each major status
dimension only). 7

In this sense, the first research hypothesis can be presented in the following manner:

H1: The non-additive (status inconsistency) model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model.

As has been observed in much of the literature dealing with status inconsistency, there appear to be certain types of status inconsistencies more stressful than others (see previous discussion). It is, therefore, an additional concern of this research to also attempt to discover certain types of inconsistencies. It was Jackson (1962) who concluded that the actual coping methods utilized by the inconsistent were dependent upon the type of inconsistency. In summarizing his findings and combining them with those of Lenski (1954, 1956), he found that in situations of high-ascribed and low-achieved status rankings individuals tend to respond somatically, and with low-ascribed and high-achieved rankings they tend to respond politically (p. 479).

Jackson posits an explanation for this difference in these findings to the possibility that:

A person whose achievement ranks are inferior to his ascribed rank is likely to view his situation as one of personal failure. Unlike the low status consistent, he cannot justify his lack of success in terms of ascribed handicaps. His difficulties

7If there is no significant increase in the explained variance by the non-additive model, then parsimony dictates the use of the more simplistic additive model.
therefore tend to stimulate feelings of personal deficiency and self-blame. (1962:477)

He goes on to state that "the inconsistent of low occupation and education tends to develop symptoms; an internally directed, passive, non-adaptive response" (Jackson, 1962:477).

For those inconsistent with high-achieved ranks and low-ascribed ranks, Jackson (1962) attributes differential responses to the blaming of others and not one's self for one's problems. An individual exhibiting this type of status configuration has also learned, via his high-achieved statuses, to respond more actively to problems and to see them in their social context.

Because of the nature of alcohol consumption, the nature of the effects of alcohol consumption, and the previously suggested etiological explanations of alcohol consumption (see Bacon, 1962; Martindale & Martindale, 1971; Roebuck & Kessler, 1972; and Chafetz & Demone, 1962), it seems more plausible to assume that alcohol consumption would be more prevalent in inconsistencies with low-achieved and high-ascribed ranks. The reasoning is based upon the intrapunitive nature, non-adaptive consequences, and the personal stress reduction properties that are commonly associated with alcohol consumption.

Given the above assumption, the following hypotheses are suggested:

H2: The non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the
extent to which the racial-ethnic ranking exceeds the occupation ranking.

H3: The non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the income ranking.

H4: The non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the education ranking.

Jackson (1962) also suggested two additional hypotheses based upon differences in sex. For females, he found higher symptom levels when their educational ranking is superior to their husband's occupational ranking. He attributed this to the self-blame and status deprivation experienced by the woman who has "married beneath herself."

Again, observing the similarity between psychosomatic symptoms and alcohol consumption in terms of their being observable outcomes of self-blame, the following hypothesis is suggested:

H5: For females, the non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which their education ranking exceeds their husband's occupation ranking.

Finally, for males, Jackson (1962) noted that symptom level was closely associated with the extent that the occupational rank was superior to the educational rank. The explanation offered for this finding lies in an understanding of mobility opportunity. The poorly educated male with a high-prestige occupation cannot expect or realize further
mobility opportunities—if he does, his inconsistency will only increase as educational mobility is often impossible. The final two hypotheses therefore read as follows:

H6: For males, the non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which their occupation ranking exceeds their education ranking.

H7: For males, the non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which their income ranking exceeds their education ranking.
CHAPTER II

METHODS

Population

The selection of an appropriate population upon which to test
the research hypotheses involves consideration of three major factors.

The first factor to be considered involves the identification of
factors or variables that systematically influence the amount of alcohol
consumption. These systematic influences include such variables as
degree of urbanization, sex, age, religious affiliation, and region of
the country (Riley & Marden, 1947; Mulford, 1964; Cahalan, Cisin &
Crossley, 1969; and Chafetz, 1974). To test the general adequacy of
these research hypotheses, it is therefore desirable to select a popula-
tion that exhibits variation on all of these variables. In addition, it
is desirable to select a population in which the vertical status dimen-
sion variables also exhibit wide variation as they too systematically
affect the amount of alcohol consumption (Riley & Marden, 1946;
Mulford, 1964; Cahalan, Cisin & Crossley, 1969; and Chafetz, 1974).

The second major factor concerns the type of behavior under
study. Because of the focus of this research on the amount of alcohol
consumed by the general unrestricted population, it is necessary to
exclude cases where potential consumption is at least formally re-
stricted. For this reason, it is important to exclude all institutionalized
populations whose consumption patterns are, at best, disrupted. Also, all of those under the legal drinking age should be excluded as their access to alcoholic beverages is also limited.

Finally, because the focus of this research is on the explanation of variance in the amount of alcohol consumption as related to the variables under study, it is necessary to eliminate certain segments of the universe whose drinking patterns are determined predominately for other reasons. In particular, it seems necessary to eliminate from study those who abstain from drinking alcoholic beverages, as their behavior has a high likelihood of being determined by religious affiliation or physical health reasons (see, for example, Roebuck & Kessler, 1972; Skolnick, 1958; Preston, 1969; and Chafetz, 1974).

In sum, the most appropriate population for study in this research endeavor consists of the entire population of the United States that is noninstitutionalized, over 20 years of age, and nonabstainers.

Sample

Because of problems and limitations on resources for collection of a national sample, the current research will be conducted through the secondary analysis of a previously gathered national sample dealing with alcohol consumption. The original sample was drawn by Harold Mulford in conjunction with the National Opinion Research Center in the summer of 1963 and included 1515 respondents. Of these 1515 respondents, it was found that 1068 were nonabstainers.

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The universe sampled in this study consisted of the total non-institutionalized population of the United States, 21 years of age or older. The sampling was used based upon age, sex, race, and employment status.

The primary sampling units employed were derived from the National Opinion Research Center's 1953 master sample. These primary sampling units had been selected with probabilities proportionate to their estimated 1953 populations. Population shifts since 1953, however, have rendered that set of primary sampling units less accurate. In an attempt to update that sample yet minimize the number of sampling units that needed to be changed, the following procedure was instituted. Basically, it involved the comparison of the desired 1960 probabilities of selection for primary sampling units to their original probabilities. This method preserves the stratification based upon the 1950 classification of geographic regions, size of largest town, median family income, economic characteristics, and in the south, by race. Counties which the Census Bureau classified as non-metropolitan in 1950 but as metropolitan in 1960 were, however, shifted to the metropolitan strata.

Within each selected primary sampling unit, localities were ordered according to cities with block statistics. Other Urban Places, Urbanized Minor Civil Divisions, and the Nonurbanized Minor Civil Divisions were ordered by 1960 population within each of these
categories. Localities were selected from this list using a random start and applying a designated skip interval to the cumulative 1960 population. This provided stratification according to size and urban type of locality, and at the same time selection with probability proportionate to size.

Where available, 1960 census block statistics were used. Blocks were selected with probabilities proportionate to the population in the block. In places without block statistics, census enumeration districts were selected with probabilities proportional to the number of households. The selected districts were then divided into segments and estimated (by field counts) of the number of households within each segment. The selection of segments was then made with probability proportionate to the number of households. At the block or segment level, the interviewer begins her travel pattern at a random dwelling unit which has been previously designated and proceeds in a specified direction until her quotas have been filled. In the south, segments have been selected by race of the respondents because accuracy of response is increased when Negroes are interviewed by Negroes. Elsewhere, the interviewer is given no race quotas.

The quotas call for approximately equal numbers of men and women with the exact proportion in each location determined by the 1960 census. For women, the additional requirement was imposed that there be the proper proportion of employed and unemployed women in
the location. Again, these are based upon the 1960 census. For men, the added requirement is that there be the proper proportion of men over and under 30 years of age in the location.

These particular quotas were established because employed women and men under 30 years of age are the most difficult to find at home for interviewing.

The actual interviewing took place during the months of April, May, June and July, 1963. The interviews were conducted by trained professional interviewers working for the National Opinion Research Center. The average amount of time required for each interview dealing with drinking behavior and attitudes is unavailable as this data was collected simultaneously with data concerning magazine and book reading, pre-marital sex, and the Better Business Bureau. The average total time per interview was slightly over one hour.

The representativeness of the sample was checked against the 1960 United States census data. Only minor discrepancies were detected with regard to sex, age, residence, and income distribution. The largest discrepancies were found in relation to education. In the 1963 sample, educational attainment appeared to be overrepresented, with a maximum category discrepancy of 5.3%. If educational attainment was not overstated by some respondents, as may well have been

\[1\text{The maximum discrepancy amounted to less than 3\% variation in certain categories.}\]
the case (see Stephan & McCarthy, 1958:147), then the lower educational categories may have been underrepresented in the sample to an extent that could inflate the overall prevalence of drinking value by a maximum of three percentage points (Mulford, 1964:635).

A final point that warrants discussion in this section involves interviewer bias. It has been found in certain studies (Mulford & Miller, 1959, 1963; and Kirsch, Newcome & Cisin, 1965) that drinking interviewers reported proportionately more drinkers than did abstaining interviewers. In this particular sample, drinking interviewers interviewed 1272 respondents and found that 74% of them drink. Abstaining interviewers interviewed 243 respondents and found that 51% of them drink.

Because of the sampling procedures used in this research, certain potential explanations concerning the source of this bias appear to be controlled. Although some freedom of choice was allowed for interviewers to choose their respondents, they were instructed to start at a certain point on a certain block and go in a specific direction until the quota was filled, thus greatly limiting the amount of choice in respondent selection. Also, the likelihood of finding wide disparities in drinking behaviors within the same block seems to diminish the potential for biased respondent selection on the part of the interviewer.

Another possible source of bias could be that drinking and abstaining interviewers differentially influenced the responses of their
respective respondents. This source was, however, not testable due to the lack of appropriate data.

A third and more likely source according to Mulford (1964) involves the ecological conditions. It is likely that in surveys such as these, where the interviewers live in the same general locale as their respondents, that they tend to share similar attitudes and beliefs including those involving drinking. To test this hypothesis, Mulford noted that "within geographic regions the differences in results reported by the two groups of interviewers were reduced by approximately 10 percentage points" (1964:635). He also found similar results when he controlled for respondent's religion. Although unable to control for both variables simultaneously (because of resulting small N's), he suggests that they would explain a sizeable portion of this variation in drinking responses (1964:636).

Instrumentation

In order to measure the amount of alcohol consumption, three major factors must be considered: the number of abstainers, the frequency of consumption by drinkers, and the quantity of alcohol consumed in each drinking situation.

To measure the prevalence of abstainers, this study utilized a question similar to that repeatedly used by the Gallup Poll (see Cantril, 1951, and the American Institute of Public Opinion, Press Release 5,
1964). Although the reliability and validity for this measure was unknown, an indicator of reliability can be viewed in the comparison with other prevalence studies based upon national samples (see Riley & Marden, 1947; Cahalan, Cisin & Crossley, 1969; and Chafetz, 1974).

The actual amount or degree of alcohol consumption was measured by the use of a Quantity-Frequency (Q-F) index. This particular Q-F index was originally developed by Bacon and Strauss (1953) for use in their study of college drinking patterns. In addition, this Q-F index was subsequently adapted for studies of drinking behavior in the states of Washington (see Maxwell, 1958) and Iowa (see Mulford & Miller, 1960A). The quantity portion of this index is based upon the number of drinks ordinarily consumed at one "sitting" of the alcoholic beverage (beer, wine, or liquor) most frequently consumed by the respondent. These quantity measures and alcoholic beverage type are then converted to ounces of absolute alcohol consumed at one sitting. The absolute alcohol consumption levels are then collapsed into basically two categories: small, and medium and large amounts. Frequency is defined in terms of the average number of reported sittings during the preceding year. Historically, this Q-F index has been broken into the following five categories based upon various combinations of the quantity and frequency measures.

Type 1 Drinks infrequently (once a month at most) and consumes small amounts (not more than approximately
1.6 ounces of absolute alcohol or 1-3 bottles of beer, or 1-3 glasses of wine, or 1-2 drinks of liquor.

Type 2 Drinks infrequently and consumes medium to large amounts (more than 1.6 ounces of absolute alcohol).

Type 3 Drinks more than once a month but consumes small amounts.

Type 4 Drinks more than once a month but consumes medium to large amounts.

Type 5 Drinks more than once a week and consumes medium to large amounts.²

For this particular analysis, however, this typology was expanded to include eight categories. These eight categories can be found on the next page.

The reasoning behind this expanded typology comes from many sources. First, on theoretical grounds, it appears that the stress-reduction properties of alcohol exhibit themselves with the consumption of the first few drinks, and in many cases consumption of large amounts reintroduces a stress factor (see, for example, Sjoberg, 1969; Williams 1966; Jellinek, 1960; Greenberg, 1963; Kessel & Walton, 1965; and McNamee, Mello & Mendelson, 1968). The five-category typology of Mulford and Miller does not fully demonstrate the appropriate differ-

² See Mulford and Miller, 1960A; 27 for a more detailed description of this Quantity-Frequency Index.
ences or levels in this respect. In particular, the eight category Q-F index not only more clearly delineates the various frequency categories; it recognizes Category 7 (more than once a week/small amounts) as a separate category not to be confused with Category 4 of the five-category Q-F index which also includes less frequent medium to heavy consumers.

<table>
<thead>
<tr>
<th>Category of Q-F index</th>
<th>Frequency</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1-12 times per year</td>
<td>small (less than 1.6 ounces of absolute alcohol)</td>
</tr>
<tr>
<td>2</td>
<td>1-12 times per year</td>
<td>medium to large amounts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(more than 1.6 ounces of absolute alcohol)</td>
</tr>
<tr>
<td>3</td>
<td>2-3 times per month</td>
<td>small</td>
</tr>
<tr>
<td>4</td>
<td>2-3 times per month</td>
<td>medium to large</td>
</tr>
<tr>
<td>5</td>
<td>once a week</td>
<td>small</td>
</tr>
<tr>
<td>6</td>
<td>once a week</td>
<td>medium to large</td>
</tr>
<tr>
<td>7</td>
<td>more than once a week</td>
<td>small</td>
</tr>
<tr>
<td>8</td>
<td>more than once a week</td>
<td>medium to large</td>
</tr>
</tbody>
</table>

On methodological grounds, the five category Q-F index serves to decrease the amount of information available for analysis, and additionally functions to confuse the clarity of the quantity and frequency of use by combining potentially dissimilar categories (see Cahalan, Cisin & Crossley, 1969).
A comparison of the frequency of the two indexes can be seen below:

<table>
<thead>
<tr>
<th>Category</th>
<th>% of Drinkers*</th>
<th>Category</th>
<th>% of Drinkers*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>39.6</td>
<td>1</td>
<td>39.6</td>
</tr>
<tr>
<td>2</td>
<td>5.6</td>
<td>2</td>
<td>5.6</td>
</tr>
<tr>
<td>3</td>
<td>18.5</td>
<td>3</td>
<td>10.0</td>
</tr>
<tr>
<td>4</td>
<td>22.9</td>
<td>4</td>
<td>4.3</td>
</tr>
<tr>
<td>5</td>
<td>10.6</td>
<td>5</td>
<td>8.4</td>
</tr>
<tr>
<td>Missing</td>
<td>2.9</td>
<td>6</td>
<td>5.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7</td>
<td>13.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8</td>
<td>10.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Missing</td>
<td>2.9</td>
</tr>
</tbody>
</table>

*rounded to the nearest tenth of a percent

Although there have been no direct empirical tests of validity and reliability for the Q-F index, indirect evidence has been offered by Mulford and Miller (1959, 1960) in that they note a close relationship between the Q-F index and the number of the reported ownership of individual liquor permits, attendance at parties where liquor is served, having more liquor on hand, having more problems due to drinking, and feeling that they drink too much (Mulford & Miller, 1960A: 28). In a comparison of self-rating and quantity-frequency measures of
drinking, Garrett and Bahr found that among women the distributions were approximately similar. For men, however, there was a tendency among homeless and upper income men to perceive the extent of their drinking as being less than their reports of quantity and frequency would indicate (Garrett & Bahr, 1974:1303).

Educational level was operationalized by asking the respondent the last grade completed in school. Following the procedures suggested by Lenski (1954), education was tricotomized with a rank of 1 being high, and a rank of 3 indicating low ranking in terms of the education status dimension. Jackson (1962) and Jackson and Burke (1965), in analyzing a 1957 sample, noted that, in general, an older person holding a similar occupational and ethnic rank of a younger person would not be expected to have as much education. Therefore, they differentially ranked the education status dimension for those respondents above and below the age of 45. Following their lead, the education status dimension is also differentially ranked in the current research, although due to the fact that this data collection occurred some six years later, the age cutting point is between 39 or less and 40 or more years of age. The resulting ranking is as follows:

Rank 1  At least some college

Rank 2  Completed high school and 9 to 11 years of education
  for those 40 years of age and over
Rank 3 8 years of education and 9 to 11 years of education for those under the age of 40.

Occupation was measured in terms of the Duncan scale of occupational prestige. The Duncan scale of occupational prestige is based upon the frequency of "excellent" and "good" responses to various occupational categories found in the NORC prestige scale. These are used rather than the averages of the five-category responses (excellent, good, average, somewhat below average, and poor) utilized by the NORC prestige scale because of the lack of clarity in meaning for the latter three response categories (see Reiss, 1961:117). Occupation was then tricotomized with the occupations ranking in the top one-third as 3. The resulting ranks can basically be described as follows:

Rank 1 Professional, technical and kindred workers; and managers, officials, and proprietors except farm;

Rank 2 Farmers and farm managers, clerical and kindred workers, sales workers, and craftsmen, foremen and kindred workers;

Rank 3 Operatives and kindred workers, service workers, farm laborers and foremen, and laborers.

In cases of male and single female respondents, the respondent's

\[3\] For a more detailed description of the characteristics of the Duncan scale, see Reiss, 1961.
own occupation was utilized. For married, separated, divorced, and widowed females, the husband's occupation was used.

Income was measured in terms of total family income in 1962. Despite the fact that questions have been raised concerning the use of total family income in studies dealing with status inconsistency (see Geschwender, 1970), Treiman argues that it is more plausible to base the income measure on total family income than on individual income because of the nature of expectations of individuals with given levels of education. (Treiman, 1970:162). Income is also tricotomized in this analysis, and placement in a particular rank is based upon which one-third of the income levels the respondent fell. Thus, if the respondent's family income was in the highest one-third of all respondents, a rank of 1 was assigned. The resulting ranks are as follows:

Rank 1 $8,000 and over;
Rank 2 $5,000 to $7,999;
Rank 3 Under $5,000.

Three rank positions were established on the racial-ethnic status dimension (RER). These ranks were based upon the work of Jackson (1962) and Bogardus' (1959) study of social distance. Changes had to be made, however, because of the nature of the original data, and a concern for maintaining large enough cell sizes to make analysis possible. Ethnic background was measured in terms of father's nationality background, and multiple responses were accepted. Res-
pondents with mixed heritage were ranked according to their highest ethnic rank. The reasoning for this comes not only from a need to maintain large cell frequencies, but also from the tendency of the individual to evaluate himself in terms of his higher ranking statuses (see Lenski, 1954). The resulting ranks were established:

Rank 1 English, Welsh, and Scottish

Rank 2 Irish, Scandinavian, German, Austrian, Swiss, Dutch, French, French Canadian, Belgian and Luxembourghian

Rank 3 Negro, Jewish, Czechoslovakian, Hungarian, Rumanian, Bulgarian, Yugoslavian, Albanian, Russian, Italian, Greek, Spanish, Portuguese, Mexican and Puerto Rican.

The status inconsistency measure was then constructed from the various combinations of rankings of the particular vertical status dimensions (education, occupation, income and racial-ethnic background) being analyzed. Again, based upon the writings of Jackson (1960, 1962) and Jackson and Burke (1965), the status inconsistency variable is divided into three types or ranks. These types or ranks are as follows:

Rank 1 Status consistents--persons with similar ranks on all the vertical status dimensions being analyzed (e.g., 1111, 2222, 3333);

Rank 2 Moderate inconsistencies--persons having a one-step deviation between their tricotomized status ranks

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(e.g., 1112, 2233, 2223, 3332, etc.);

Rank 3 Sharp inconsistents—persons with a two-step deviation between their status ranks (e.g., 1113, 1233, 3311, 3331, etc.).

Control Variables

In an attempt to gain a more in-depth look at the effect of status inconsistency upon alcohol consumption, it is necessary to control certain other variables that may influence either the operation of status inconsistency effects, or alcohol consumption itself. As a consequence, the following variables will be used as control variables: age, sex, and community size.

In looking first at the relationship between age and status inconsistency, the situation warrants some consideration.

Thomas Smith (1969) indicated that the relationship between status inconsistency and stress appears to have a curvilinear relationship over one's life span. He pointed out that an inconsistent individual experiences the greatest amount of inconsistency-produced stress during the middle, most productive years (approximately 30-50 years of age) with less stress occurring during his early and late years. The reasoning behind this is that during his younger years an inconsistent may recognize or assume his current status rankings are just temporary and they will probably change in a few short years. On the other hand, the individual past 50 years of age assumes his status rankings

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have become fixed and he is no longer responsible for his situation;
he can thus place the responsibility for his inconsistent rankings upon
situations and circumstances currently outside of his control (Smith,
1969). In testing his theory, Smith found support for his formulations
in relation to citing preference.

In terms of alcohol consumption and age, however, national and
state-based samples have indicated a linear, inverse relationship
between age and those who drink (see Riley & Marden, 1947; Mulford
& Miller, 1959, 1963; Mulford, 1964; Maxwell, 1958; and Cahalan,
Cisin & Crossley, 1969), but the amount of alcohol consumed appears
to vary in a curvilinear fashion with age (see Cahalan, Cisin &
Crossley, 1969).

The variable age is subsequently broken into two categories and
subsamples created. The two categories are based upon the age in years
of the respondent: the first sample is composed of those respondents
21-30 years of age and those 50 years of age and over; the second
sample, those between 30 and 49 years of age.

The second control variable in this research is sex. In relation
to status inconsistency, sex has been reported to have had significant
affects upon certain findings (see Jackson, 1962). Also, sex has been
found to be an important variable in explaining differential rates of
alcohol consumption (see Riley & Marden, 1947; Maxwell, 1952;
Mulford & Miller, 1959, 1963; Mulford, 1964; and Cahalan, Cisin &
A final control variable is community size or degree of urbanization. Parker (1963) suggested that the effects of status inconsistency are more prevalent in the larger urban communities. The reasoning here is that in the larger urban communities interpersonal relations are more impersonal and segmental than in smaller communities. In addition, community size has also been related to alcohol consumption in a similar manner (see Riley & Marden, 1947; Maxwell, 1952; Mulford & Miller, 1959, 1963; Mulford, 1964; and Cahalan, Cisin & Crossley, 1969).

Using the variable community size, the sample will be broken into three subsamples; these subsamples represent respondents in the following three types of communities: communities of under 10,000 inhabitants, communities with 10,000 to 100,000 inhabitants, and communities with over 100,000 inhabitants.

Testing of the various hypotheses will then occur not only for the total sample, but also for each subsample described above.

Although it would be desirable to test the hypotheses on certain subsamples based on the combinations of the above control variables, the resulting cell sizes restrict us from doing such analysis.

Analysis

The final concern of this chapter is the presentation of the means of analysis utilized in this study.
As discussed earlier, this study is concerned with evaluating the contributions of the status inconsistency model over the simple vertical status dimensions model in the explanation of differential alcohol consumption. This is done by comparing the explanatory power of the four variable, vertical status dimension, additive model to the nonadditive, five variable model composed of the same four vertical status dimensions plus a status inconsistency variable (in this case represented by an interaction term). If the nonadditive model does not provide significant additional explanatory power over the additive model, then parsimony dictates the lack of utility of status inconsistency as a predictor of alcohol consumption. This comparison of models will then be performed in various situations as dictated by the aforementioned hypotheses, and upon certain subsamples as dictated by the control variables.

According to past research and writing (see Jackson & Burke, 1965; Jackson & Curtis, 1972; Hodge & Treiman, 1966; Treiman, 1966; and House & Harkins, 1975), the most appropriate technique for testing the effects of status inconsistency is by the use of a nonlinear, dummy-variable regression equation. To fulfill these requirements, the technique of Multiple Classification Analysis (MCA) will be used.

MCA is essentially a multiple regression technique using dummy variables. It demonstrates the relationship of each predictor variable to a dependent variable, both before and after adjusting for
the effects of the other predictors.

The statistical model for this technique is presented below:

\[ Y_{ijk} = \bar{Y} + a_i + b_j + e_{ijk} \]

(Where: \( Y_{ijk} \ldots \) = the score (on the dependent variable) of the individual \( k \) who falls in category \( i \) of predictor A, category \( j \) of predictor B, etc.

\( \bar{Y} \) = grand mean on the dependent variable

\( a_i \) = the "effect" of membership in the \( i^{th} \) category of predictor A

\( b_j \) = the "effect" of membership in the \( j^{th} \) category of predictor B

\( e_{ijk} \) = error term of this individual


There are two major advantages in using MCA over traditional regression techniques. First, by concerning itself with the deviation in the grand mean of the dependent variable instead of the intercept of the regression line on the Y axis, its results are more easily understood. Second, by operating from the grand mean, one can now look at the effects of low scores on individual variables, where traditionally we have established a regression line based upon the combined low scores of the independent variables and only looked at the effects of medium and high scores for each individual predictor variable when using dummy variables (see Jackson & Burke, 1965; Jackson & Curtis, 1972; Hodge & Treiman, 1966; Treiman, 1966).
MCA reports the nature of the relationship of classes of predictors, complete predictors, and all predictors together to the dependent variable. 

Below is a description of the MCA output which will be presented in the next chapter:

...For each category of each predictor:
  .. Deviation of raw mean for the category from the grand mean (this indicates the gross or unadjusted effect of the predictor)
  .. Deviation of category mean from grand mean after adjusting for effects of other predictors, i.e., all other predictors have been "held constant"

...For each predictor:
  .. Eta and Eta^2: Eta is the correlation ratio and indicates the ability of the predictor, using the categories given, to explain variation in the dependent variable. Eta^2 indicates the proportion of the total sum of squares explainable by the predictor

...Beta and Beta^2: these are directly analogous to Eta statistics, but are based upon the adjusted means rather than raw means. Beta provides a measure of the ability of the predictor to explain variation in the dependent variable after adjusting for the effects of all other predictors. This is not in terms of percent of variance explained

...For all predictors considered together:
  .. A multiple correlation coefficient (adjusted for degrees of freedom). This coefficient (when squared) indicates the proportion of variance in the dependent variable explained by all predictors together (after adjusting for degrees of freedom). (Andrews, et al., 1967:21-22).

Andrews, et al. (1967:117-119), note that the beta reported in MCA when squared does not indicate the percent of variance explained. Thus the beta coefficients must be interpreted with caution and useful
only for indicating the relative importance of the various predictors. The percent of variance explained for each predictor is available by performing multiple runs of the program and observing the decrease in the total explained sum of squares. This procedure will be performed only for the status inconsistency predictor, and the percent of variance explained, over and above that explained by the additive model, recorded.

Finally, an F test will be performed upon the status inconsistency variable in an attempt to see if, all by itself, it explains a significant ($p > .05$) portion of the variance in the dependent variable.
CHAPTER III

FINDINGS

This chapter presents the major research findings based upon and organized around the hypotheses presented in Chapter I. Multiple Classification Analysis is used to analyze the specific data. First, however, the frequencies for the three status inconsistency ranks by research hypotheses is presented.

Table 1

Frequency of Status Inconsistency Ranks by Research Hypotheses

<table>
<thead>
<tr>
<th>Status Inconsistency Rank</th>
<th>Hypothesis Number</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>133</td>
<td>408</td>
<td>373</td>
<td>384</td>
<td>181</td>
<td>301</td>
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<td>3</td>
<td></td>
<td>308</td>
<td>49</td>
<td>55</td>
<td>46</td>
<td>14</td>
<td>17</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>950</td>
<td>672</td>
<td>647</td>
<td>657</td>
<td>293</td>
<td>414</td>
<td>221</td>
</tr>
</tbody>
</table>

HYPOTHESIS 1: The non-additive (status inconsistency) model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model.

In examining Table 2, two things are evident. First, neither model explains a very large amount of variance in the amount of
alcohol consumption ($r^2 = .015, .016$). Second, the non-additive (status inconsistency) model explains almost no additional variance ($r^2 = .016$) over and above the more parsimonious additive model ($r = .015$). The status inconsistency variable itself ($\eta = .059$, $\beta = .061$) offers comparatively little to the non-additive model. In addition, as indicated in Table 3, this contribution is actually operating in the reverse direction from that suggested in Chapter I.

Table 2

Comparison of the Additive and Non-additive Models as Predictors of the Amount of Alcohol Consumption in the Total Sample

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Occupation</th>
<th>Income</th>
<th>Racial-Ethnic Rank</th>
<th>Status Inconsistency</th>
<th>Multiple$^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.053</td>
<td>.137</td>
<td>.064</td>
<td>.077</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.064</td>
<td>.144</td>
<td>.025</td>
<td>.070</td>
<td></td>
<td>.015</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .053      | .137       | .064   | .077              | .059                |
| beta           | .060      | .146       | .026   | .063              | .061                |

Note. Grand Mean = 3.57; N = 950 (will vary because of missing data)

$^a$ Adjusted for the degrees of freedom

In the analysis of the subsamples based on age, sex, and community size (see Appendix A), the increased contribution of the non-additive model over the additive model was minimal at best and in many cases actually explained less variance in the dependent variable.
(when adjusted for the degrees of freedom).

### Table 3

**Comparison of Deviations from the Grand Mean by Categories of Status Inconsistency for the Total Sample**

<table>
<thead>
<tr>
<th>Status Inconsistency Rank</th>
<th>Deviations from Grand Mean</th>
<th>Deviations in Grand Mean with Controls&lt;sup&gt;a&lt;/sup&gt;</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.290</td>
<td>.300</td>
<td>133</td>
</tr>
<tr>
<td>2</td>
<td>.040</td>
<td>.043</td>
<td>509</td>
</tr>
<tr>
<td>3</td>
<td>-.190</td>
<td>-.200</td>
<td>308</td>
</tr>
</tbody>
</table>

<sup>a</sup>Controlling for all of the other variables

**HYPOTHESIS 2:** The non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the occupation ranking.

Although, as indicated in Table 4, the non-additive model does explain additional variance ($r^2 = .002$) over the additive model ($r^2 = .001$), the difference between the two along with the miniscule magnitude of the non-additive model itself tend not to support the hypothesis.

In looking at Table 5 below, additional support for rejection of the non-additive model can be found in the deviation from the grand mean in the sharply status inconsistent category (-.309).
Table 4
Comparison of the Additive and Non-additive Models as Predictors of the Amount of Alcohol Consumption when the Interaction Term is Defined as the Extent to which the Racial-Ethnic Ranking Exceeds the Occupation Ranking

<table>
<thead>
<tr>
<th></th>
<th>Racial-Ethnic Rank</th>
<th>Occupation</th>
<th>Status Inconsistency</th>
<th>$\chi^2$ Multiple$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additive Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eta</td>
<td>.054</td>
<td>.067</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.022</td>
<td>.054</td>
<td></td>
<td>.001</td>
</tr>
<tr>
<td>Non-additive Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eta</td>
<td>.054</td>
<td>.067</td>
<td>.036</td>
<td>.002</td>
</tr>
<tr>
<td>beta</td>
<td>.027</td>
<td>.054</td>
<td>.043</td>
<td></td>
</tr>
</tbody>
</table>

Note. Grand Mean = 3.57; N = 672

$^a$ Adjusting for the degrees of freedom

Table 5
Comparison of the Deviations from the Grand Mean by Categories of Status Inconsistency when Status Inconsistency is Defined as the Extent to which the Social-Ethnic Ranking Exceeds the Occupation Ranking

<table>
<thead>
<tr>
<th>Status Inconsistency Rank</th>
<th>Deviation from Grand Mean</th>
<th>Deviations in Grand Mean with Controls$^a$</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-.008</td>
<td>-.034</td>
<td>408</td>
</tr>
<tr>
<td>2</td>
<td>.086</td>
<td>.136</td>
<td>215</td>
</tr>
<tr>
<td>3</td>
<td>-.309</td>
<td>-.310</td>
<td>49</td>
</tr>
</tbody>
</table>

$^a$ Controlling for all of the other variables
The subsamples based on age, sex, and community size (see Appendix A) also failed to show any significant contribution of the non-additive model over the simpler additive model.

HYPOTHESIS 3: The non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the income ranking.

As evidenced in Table 6, the non-additive model \( r^2 = .028 \) actually explains less adjusted variance in the dependent variable than the additive model \( r^2 = .031 \). Also, as seen in Table 7, the categories of status consistency actually reveal an inverse relationship to the alcohol consumption index.

In virtually all of the subsamples based on sex, age and community size (see Appendix A), the additive model explains more variance in the dependent variable than the more complex non-additive model.
Table 6

Comparison of the Additive and Non-additive Models as Predictors of the Amount of Alcohol Consumption when the Interaction Term is Defined as the Extent to which the Racial-Ethnic Ranking Exceeds the Income Ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple$^a$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.076</td>
<td>.186</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.060</td>
<td>.221</td>
<td></td>
<td>.031</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .076               | .186       | .127                 |             |
| beta           | .035               | .128       | .088                 | .028        |

Note. Grand Mean = 3.52; N = 647

$^a$Adjusted for the degrees of freedom

Table 7

Comparison of the Deviations from the Grand Mean by Categories of Status Inconsistency when Status Inconsistency is Defined as the Extent to which the Racial-Ethnic Ranking Exceeds the Income Ranking

<table>
<thead>
<tr>
<th>Status Inconsistency Rank</th>
<th>Deviations from Grand Mean</th>
<th>Deviations in Grand Mean with Controls$^a$</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.267</td>
<td>.167</td>
<td>373</td>
</tr>
<tr>
<td>2</td>
<td>-.268</td>
<td>-.130</td>
<td>219</td>
</tr>
<tr>
<td>3</td>
<td>-.742</td>
<td>-.614</td>
<td>55</td>
</tr>
</tbody>
</table>

$^a$Controlling for all of the other variables

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HYPOTHESIS 4: The non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the education ranking.

In Table 8 again we see a situation where the non-additive model ($r^2 = .004$) explains more variance in the dependent variable than the additive model ($r^2 = .002$) yet the total amount of explained variance is so small that the additional explained variance is inconsequential.

Table 8

Comparison of the Additive and Non-additive Models as Predictors of the Amount of Alcohol Consumption when the Interaction Term is Defined as the Extent to which the Racial-Ethnic Ranking Exceeds the Education Ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Education Rank</th>
<th>Status Inconsistency</th>
<th>Multiple $\eta^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.052</td>
<td>.065</td>
<td></td>
<td>.004</td>
</tr>
<tr>
<td>beta</td>
<td>.024</td>
<td>.052</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Non-additive Model

| eta | .052 | .065 | .025 |
| beta | .023 | .052 | .018 | .004 |

Note. Grand Mean = 3.62; N = 657

$^a$Adjusted for degrees of freedom
In looking at Table 9 below, the status inconsistency variable actually exhibits a curvilinear relationship to alcohol consumption, but even here the amount of change between categories is relatively small.

**Table 9**

Comparison of the Deviations from the Grand Mean by Categories of Status Inconsistency when Status Inconsistency is Defined as the Extent to which the Racial-Ethnic Ranking Exceeds the Education Ranking

<table>
<thead>
<tr>
<th>Status Inconsistency Rank</th>
<th>Deviations from Grand Mean</th>
<th>Deviations in Grand Mean with Controls$^a$</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.035</td>
<td>0.011</td>
<td>385</td>
</tr>
<tr>
<td>2</td>
<td>-0.087</td>
<td>-0.049</td>
<td>227</td>
</tr>
<tr>
<td>3</td>
<td>0.137</td>
<td>0.145</td>
<td>46</td>
</tr>
</tbody>
</table>

$^a$Controlling for all other variables

Subsamples based on sex, age and community size (Appendix A) provide such a minimal amount of explained variance in alcohol consumption through either the additive or non-additive model that their results are rendered useless.

**HYPOTHESIS 5:** For females, the non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which their education ranking is superior to their husband's occupation ranking.
As indicated in Table 10 below, the non-additive model, by increasing the degrees of freedom over the additive model, actually explains less variance \( r^2 = .034 \) in the dependent variable than the additive model \( r^2 = .039 \).

Table 10

Comparison of the Additive and Non-additive Models as Predictors of the Amount of Alcohol Consumption for Females when the Interaction Term is Defined as the Extent to which their Education Ranking Exceeds their Husband's Occupation Ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Husband's Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple(^a) r(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.113</td>
<td>.198</td>
<td>.113</td>
<td>.198</td>
</tr>
<tr>
<td>beta</td>
<td>.139</td>
<td>.270</td>
<td>.139</td>
<td>.270</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-additive Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
</tr>
<tr>
<td>beta</td>
</tr>
</tbody>
</table>

\(^a\)Adjusted for the degrees of freedom

Note. Grand Mean = 2.67; N = 293

Again, as exhibited in prior tables, the status inconsistency measure actually exhibits a basically inverse relationship with the amount of alcohol consumption. This relationship is demonstrated in Table 11 below.

In the analysis of the subsamples based on age and community size (see Appendix A) all of the subsamples exhibit an actual decrease
Table 11

Comparison of the Deviations from the Grand Mean by Categories of Status Inconsistency for Females when Status Inconsistency is Defined as the Extent to which their Education Ranking Exceeds their Husband's Occupation Ranking

<table>
<thead>
<tr>
<th>Status Inconsistency Rank</th>
<th>Deviations from Grand Mean</th>
<th>Deviations in Grand Mean with Controls(^a)</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.265</td>
<td>.192</td>
<td>181</td>
</tr>
<tr>
<td>2</td>
<td>-.393</td>
<td>-.313</td>
<td>98</td>
</tr>
<tr>
<td>3</td>
<td>-.669</td>
<td>-.293</td>
<td>14</td>
</tr>
</tbody>
</table>

\(^a\)Controlling for all other variables

in the amount of explained variance in the dependent variable except for one. In the subsample based upon a community size of under 10,000, there is a comparatively sizeable increase in the amount of explained variance between the additive model \(r^2 = .004\) and the non-additive model \(r^2 = .025\). Further analysis, however, reveals that the relationship between status inconsistency and the amount of alcohol consumption is again inverse in nature.

HYPOTHESIS 6: For males, the non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which their occupation ranking is superior to their education ranking.
Table 12 indicates a condition where once more the non-additive model \( r^2 = .005 \) explains additional variance in the dependent variable over that explained by the simple additive model \( r^2 = .000 \), but again the total amount of variance explained is so small that the increase in the variance explained is negligible.

Table 12

Comparison of the Additive and Non-additive Models as Predictors of the Amount of Alcohol Consumption for Males when the Interaction Term is Defined as the Extent to which their Occupation Ranking Exceeds their Education Ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Occupation</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiplea ( r^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.040</td>
<td>.090</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.059</td>
<td>.135</td>
<td></td>
<td>.000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-additive Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
</tr>
<tr>
<td>beta</td>
</tr>
</tbody>
</table>

Note. Grand Mean = 4.26; N = 414

aAdjusted for the degrees of freedom

Also, as seen in Table 13 below, the inverse relationship between status inconsistency and the amount of alcohol consumption observed in previously presented tables appears again under the test of this particular hypothesis.

The analysis of subsamples based on age and community size (see Appendix A) also fail to show any significant evidence that would
support the non-additive model over the more parsimonious additive model.

Table 13

Comparison of the Deviations from the Grand Mean by Categories of Status Inconsistency for Males when Status Inconsistency is Defined as the Extent to which their Occupation Ranking Exceeds their Education Ranking

<table>
<thead>
<tr>
<th>Status Inconsistency Rank</th>
<th>Deviations from Grand Mean</th>
<th>Deviations in Grand Mean with Controls&lt;sup&gt;a&lt;/sup&gt;</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.115</td>
<td>0.079</td>
<td>301</td>
</tr>
<tr>
<td>2</td>
<td>-0.263</td>
<td>-0.179</td>
<td>96</td>
</tr>
<tr>
<td>3</td>
<td>-0.557</td>
<td>-0.399</td>
<td>17</td>
</tr>
</tbody>
</table>

<sup>a</sup>Controlling for all other variables

HYPOTHESIS 7: For males, the non-additive model will explain a greater amount of variance in the consumption of alcohol than will the simple additive model when the interaction term is defined as the extent to which their income ranking is superior to their education ranking.

In looking at Table 14 below, when adjusting for the degrees of freedom the non-additive model ($r^2 = 0.002$) explains less variance in the dependent variable than the more simple additive model ($r^2 = 0.004$), thus leading one to reject Hypothesis 7. Table 15 provides additional evidence for rejection of Hypothesis 7 in that the
status inconsistency variable actually exhibits a curvilinear relationship with the amount of alcohol consumption.

Table 14

Comparison of the Additive and Non-Additive Models as Predictors of the Amount of Alcohol Consumption for Males when the Interaction Term is Defined as the Extent to which their Income Ranking Exceeds their Education Ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Income</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.117</td>
<td>.080</td>
<td>.117</td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.126</td>
<td>.019</td>
<td>.122</td>
<td>.004</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .117   | .080      | .122                 |               |
| beta           | .026   | .084      | .131                 | .002          |

Note. Grand Mean = 4.14; N = 221

Table 15

Comparison of the Deviations from the Grand Mean by Categories of Status Inconsistency for Males when Status Inconsistency is Defined as the Extent to which their Income Ranking exceeds their Education Ranking

<table>
<thead>
<tr>
<th>Status Inconsistency Rank</th>
<th>Deviations from Grand Mean</th>
<th>Deviations in Grand Mean with Controls $^a$</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-.159</td>
<td>-.181</td>
<td>161</td>
</tr>
<tr>
<td>2</td>
<td>.604</td>
<td>.661</td>
<td>51</td>
</tr>
<tr>
<td>3</td>
<td>-.585</td>
<td>-.506</td>
<td>9</td>
</tr>
</tbody>
</table>

$^a$Controlling for all other variables

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Although the subsample based upon those males with ages between 30 - 49 does show a relatively large increase in the explained variance by the non-additive model \( r^2 = .039 \) over the additive model \( r^2 = .015 \), and the status inconsistency variable does exhibit the largest beta score in the non-additive equation (see Appendix A), extreme caution should be taken in drawing any conclusions as the status inconsistency variable exhibits a curvilinear relationship to the amount of alcohol consumption. All other subsamples based upon age and community size fail to show much support for Hypothesis 7 (see Appendix A).

In summary, the analyses presented in this chapter indicate the need to reject all seven hypotheses. Not only do the non-additive models fail to explain a significantly greater amount of variance in the dependent variable over and above the more parsimonious additive models, but also, in those cases where the non-additive model does explain slightly more variance, the effects of the status inconsistency variable are in non-theorized directions.
CHAPTER IV
CONCLUSIONS AND IMPLICATIONS

Summary of Theory, Methods, and Findings

The scientific study of the nature of alcohol consumption is replete with conclusions indicating that alcohol consumption serves an important function of anxiety reduction. Yet the concern with the nature and sources of this anxiety as it relates to differentials in alcohol consumption has received only selected attention. This work attempts, through the utilization of status inconsistency theory, to look at one potential source of anxiety and its resultant relationship to the nature of alcohol consumption. Utilizing the theoretical work of Lenski and Jackson in the area of status inconsistency, this work attempts to assess the utility of this theoretical framework to provide additional information concerning differentials in alcohol consumption.

According to the works of Lenski, Jackson, and others, the configuration of the grouped dimensions represents an important source of information involving human behaviors in areas ranging from voting behaviors to psychosomatic illnesses. Their major theoretical framework suggests that in situations where there is a low degree of consistency between the dominant vertical status hierarchies, individuals will experience a greater degree of anxiety as a result of increased difficulties with social interaction. Individuals who have
rather large inconsistencies among their status rankings present conflicting expectations upon which to base social interaction, and as a result, many times find themselves operating on a different set of status-based expectations than those viewed by others in the interaction situation. Increased anxiety in the status inconsistent individual thus represents an outcome of the interaction situation.

Following from the theoretical implications of status inconsistency theory plus the recognition of alcohol consumption as an anxiety-reducing agent, the question arises: do individuals with inconsistent status consume more alcohol? If in fact they do, the status inconsistency variable should provide additional explanatory power in relation to alcohol consumption. Working from a set of hypotheses developed by Jackson (1962), based upon various types of status configurations, the current work attempts to assess the importance of status inconsistency as it relates to alcohol consumption.

In order to accurately test the importance of status inconsistency, it is necessary to control for the independent effects of the vertical status rankings. This is accomplished in this work by comparing the simple additive model (one containing only the vertical status dimensions) to a non-additive model (containing both the vertical status dimensions and the status inconsistency term) in terms of their ability to explain variance in the dependent variable. If the non-additive model does not provide a significant improvement in explanatory
ability over the additive model, parsimony dictates the use of the more simple additive model.

To test the relative contributions of the two models with the status inconsistency term in the non-additive model being based on a series of status configurations, secondary analysis was conducted on a 1963 national probability sample of the noninstitutionalized population. After removing from the sample all of those who abstain from alcohol consumption, the resulting sample contained an N of 1068.

Education, occupation, income, and racial-ethnic rank represented the four vertical status dimensions utilized. These were then tricotomized to have high, medium, and low ranks for each dimension. Alcohol consumption was operationalized by slightly altering a quantity-frequency index resulting in an eight-category index. Status inconsistency was defined in terms of the magnitude of the rank deviations between the particular vertical status dimensions.

The data were then analyzed in relation to the two models using Multiple Classification Analysis (MCA). The explanatory power of these two models was also tested on a series of subsamples based on sex, age, and community size using the same analytic technique.

An investigation of the findings renders three conspicuous points.

First, neither the additive nor the non-additive model explain a very large amount of variance in the dependent variable. The
analyses conducted on the total sample, using both models, explained only a maximum of just under 4% of the variance. Even when broken down into various subsamples based on age, sex, or community size, the maximum amount of variance explained by either model was only 7.5%.

Secondly, when controlling for the degrees of freedom, the majority of tests indicated that the non-additive status inconsistency model actually explained less variance than did the more parsimonious additive model. In those cases where the non-additive model did explain additional variance over and above the additive model, the amount of additional explained variance was so small as to render it non-significant both in a statistical and practical sense.

Finally, in a sizeable number of the tests, the status inconsistency variable exhibited a curvilinear relationship with alcohol consumption. These curvilinear relationships were, however, at variance with those suggested by status inconsistency theory; although there was also wide variation between tests as to the nature of this curvilinear relationship. There were no tests conducted as the total sample in which the status inconsistency variable affected the dependent variable in the theorized direction. Those not exhibiting a curvilinear relationship indicated, instead, an inverse relationship between status inconsistency and alcohol consumption.

In sum, the current research indicates that all seven hypotheses
should be rejected, particularly in light of Blalock's methodological criticisms, that suggests that the interaction term represents an upper limit or maximum estimate of status inconsistency effects. It therefore must be concluded that status inconsistency theory as it relates to differentials in alcohol consumption is of very little value.

Implications

The theoretical implications of the above findings can be seen in basically two areas.

The first of these areas involves the sociocultural nature of alcohol consumption. Robert Bales (1945), in attempting to explain cultural differences in rates of alcoholism, outlined three major factors that influence the rates of alcoholism:

1. The degree to which the culture operates to bring about acute needs for adjustment, or inner tensions in its members (e.g., culturally induced anxiety, guilt, etc.).

2. The sort of attitudes toward drinking which the culture produces in its members . . . . The crucial factor seems to be whether a given attitude toward drinking positively suggests drinking to the individual as a means of relieving his inner tensions, or whether such a thought arouses a strong counteranxiety.

3. The degree to which the culture provides suitable substitute means of satisfaction. In other words, there is reason to believe that if the inner tensions are sufficiently acute certain individuals will become compulsively habituated in spite of opposed social attitudes unless substitute ways of satisfaction are provided. (Bales, 1945:482)

Looking at the first factor and, in particular, its possible relationship to status inconsistency and its tension-producing effects, we
may have the following situation occurring. In viewing the cultural
context of status hierarchies and their inconsistencies, the actual
frequency of status inconsistent individuals as compared to the fre-
quency of status consistent individuals should be noted. If, in fact, the
proportion of status inconsistent individuals is relatively high, the
general population may be more prepared and adjusted to not only
interact with, but also to accept the phenomenon of status inconsis-
tency. In extreme cases, status inconsistent individuals may actually
represent the norm and consistent individuals the extremes. This
could create a situation where the occupying of consistent statutes may
create tension because of their abnormality, or, at least, nullify the
tension-producing effects of status inconsistency.

If the above were true, then we should also take into account
those cultural conditions that create a high degree of status inconsis-
tency. One such condition might be the nature or phase of the economic
cycle. If, at a given point in time, there exists a high percentage of
the population that is either unemployed or underemployed, inconsis-
tent statuses would tend to reflect more of a norm.

Bales' second factor may indicate that, although alcohol con-
sumption does serve a recognized tension reduction function, certain
types of attitudes toward drinking and resultant social controls may
restrict an individual from using alcohol for tension-reduction pur-
poses. Although this proposition dealing with attitudes toward drinking

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may seem questionable in terms of its generalizability to a sample
based upon the general population of the United States, there does exist
some evidence that at least may indirectly support it. As discussed
before, many studies (see Sjoberg, 1969; Williams, 1966; Jellinek,
1960; Greenberg, 1963; Kessel & Walton, 1965; and McNamee, Mello
& Mendelson, 1968) indicate that upon consuming large amounts of
alcohol a stress factor is reintroduced into the drinking situation. It
appears as a plausible explanation for the source of this stress may
very well be cultural attitudes governing the drinking situation. ¹ If
this is true, then the Q-F scale utilized in this research may serve to
bias the results because it represents an interval measure based in
part on the quantity of alcohol consumed.

The third factor in Bales' analysis also provides valuable in-
sight into the understanding of this phenomena. We may have a situa-
tion where status inconsistency is indeed stress producing, however,
the culture may provide a wide variety of other stress-reduction
mechanisms available to the individual. Alternative stress-reduction
mechanisms in this society may take the form of increased uses of
both legal and illegal drug use, an increase in recreational activities
and time available for recreation, various religious and other cere-
monial activities, and child and spouse abuse to name a few. Also,

¹ Possibly we have a general attitude toward drinking that states
drinking is acceptable, yet excessive drinking is not.
if factors two and three of Bales' article are taken together, we might find a situation operating where there are stress-reduction substitutes available that have fewer negative sanctions placed upon them than those placed upon alcohol consumption.

The second area of theoretical consideration in light of the present findings involves the adequacies of status-inconsistency theory.

One of the first questions in this area involves the saliency of one's position on various "objective" status dimensions. Box and Ford (1969), in their theoretical critique of status inconsistency, argue that in order for status inconsistency to be a complete theory, additional assumptions must be made. One of their suggested additional assumptions is that "'objective' statuses are salient to the actors and considered relevant to the interaction situation" (p. 198). In other words, although an individual may experience inconsistency among his objective status rankings, this does not necessarily mean these statuses are relevant or salient to either him or those with whom he interacts. Situations may very well exist where individuals are evaluated on their ranking in a single status hierarchy and their relative placement on others is of no concern.²

Also, it may be the case where, by using somewhat artificial objective measures of status, we are overlooking the more relevant

²See also, Hyman, 1967.
subjective realities of status positioning. As suggested by both Meyer and Hammond (1972) and Nelson (1973), the arbitrary objective status positions assigned to a particular individual may not reflect the true nature of the normative expectations (subjective statures) of that individual's status positions. The existence of inconsistencies between the objective status rankings may not necessarily reflect the normative expectations which may, in fact, cluster in a very consistent manner. Both of these criticisms of status inconsistency theory indicate the need for increased knowledge of both the antecedent and concurrent conditions surrounding the status inconsistent individual (see Anisef & Basson, 1968).

In sum, these findings suggest the relationship between status inconsistency and alcohol consumption may represent an area of theoretical concern that is too isolated, artificial and simplistic to warrant a significant contribution to knowledge of alcohol consumption. The large body of negative findings in research dealing with status inconsistency theory, along with the criticisms presented above, appear to suggest that the theory itself may suffer from some serious theoretical oversights. Possibly the appeal of such a relatively simplistic formulation has created an overemphasis on its potential explanatory abilities. Unquestionably, additional insights are needed in both the areas of alcohol consumption and status inconsistency theory.

The practical implications of this research can be summed up

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in the following manner. This particular research indicates that neither the four vertical status dimensions nor the status inconsistency measure go very far in explaining the differential rates of alcohol consumption. Also, when looking at past research on the nature of alcohol consumption, do we find any single variable that provides very much information concerning the differentials in rates of alcohol consumption? The implication of this, plus the fact that the nature of alcohol consumption in the United States is a complex array of widely varying behaviors, leads us to conclude that alcohol consumption is not a simple, easily understood phenomena.

In order for us to gain a better understanding of the nature of alcohol consumption, we need to greatly expand both the size and the variety of explanatory models used in attempts to understand these differential rates of consumption. Models based upon three or four "commonplace" variables appear to assume a too simplistic picture of alcohol consumption. We need to construct larger and more varied models, if we are going to better understand this phenomena.

If, for example, we were to focus in on the tension-reduction explanation for differentials in alcohol consumption we should necessarily expand the scope of our analysis. There has been a very large volume of work in the area, yet very few systematic attempts to pull this information together in the form of an explanatory model. An important preliminary state in model building involves the construction
of a framework into which previous research can be placed, organized, and understood.

One such potentially useful framework might be constructed using the writings of Bales (1945) and Jessor et al. (1968). Taking Bales' three variables: amount of tension created in the environment, attitudes toward alcohol consumption, and alternative means of acceptable tension-reduction and combining them with Jessor et al.'s three levels of analysis: the Personality System, the Socialization System, and the Sociocultural System, we can develop the following three by three framework:

<table>
<thead>
<tr>
<th></th>
<th>Personality System</th>
<th>Socialization System</th>
<th>Sociocultural System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of tension created</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes toward alcohol consumption</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Acceptable alternatives for tension-reduction</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

By then assigning past research findings and other relevant information to the appropriate cells of the above table, we may then be able to more easily identify areas needing more information and research, the existence of conflicting research, the primary versus secondarily important variables, the interrelationships between the cells and the variables within them, and hopefully, a more clear under-
standing of one segment of a complex phenomena. It is only with such a framework as this that research in the area of alcohol consumption could make significant contributions in the practical realm.

Suggestions for Further Research

In light of the above discussions, one of the first suggestions for further research in this area involves the use of a Q-F index as a measure of alcohol consumption. Because of the complex nature of the phenomena, future research should also be concerned with or look into such factors as the variability of the quantity consumed at one sitting, the impact of others in the drinking situation upon quantity, frequency, and variability, and the differences in drinking situations based upon type of beverage consumed.

In addition, when utilizing the type of Q-F index as exemplified in this research, it appears to carry with it an important implied assumption. As noted earlier, such a summative measure serves to describe the nature of alcohol consumption as basically a linear phenomena based upon approximately equal weighting for both the quantity and frequency factors. It seems plausible, based upon past research dealing with the curvilinear relationship between the quantity of alcohol consumed at one sitting and its stress-reducing effects that such a linear measure is inappropriate. If, indeed, drinkers recognize this curvilinear relationship and do have at least a certain amount of control over the drinking situation, the status inconsistency
model might more appropriately be tested in terms of the frequency of drinking situations when only small amounts of alcohol are consumed.

Utilizing the three by three framework presented above, the status inconsistency variable should be retested. It may be that, in general, the status inconsistency factor existing in the Sociocultural System column may be rendered useless as a result of conditions existing in the Personality or Socialization Systems. It may be, however, that it is useful under certain conditions dictated by these two systems. If so, we need to identify those relevant conditions.

Another area of concern for further research involves the further exploration of stress-producing conditions which, following the tension-reduction assumption, would tend to increase alcohol consumption. Although this research did not indicate that status inconsistency as a stress producer lead to increased alcohol consumption, there may very well be other stress-producing social situations (e.g., cognitive dissonance) that do lead to increased alcohol consumption.

Also, in an attempt to gain a better understanding of differentials in alcohol consumption, research similar to this work are much needed. Potential explanatory variables, based upon recognized sociological theories, should be increasingly tested as to their contribution to the understanding of alcohol consumption. Only through
such a process can we focus in on more accurate understanding of
factors that affect alcohol consumption.

Following Bales' (1945) model, further research is needed in
three additional areas. The first involves the need for more specific
testing regarding the saliency of the tension-reduction properties of
alcohol consumption. Is the relationship curvilinear in nature, does
it operate only under certain conditions, what are those conditions,
is there a difference between the actual ability of alcohol to reduce
tension and the perceived ability of alcohol to reduce tension?

Secondly, assuming the tension reduction properties of alcohol
consumption are operating, what are the major sources of the initial
stress? Are, for example, only certain types of stress originating
from specific sources those that are relieved by alcohol consumption?
What is the relationship between "free floating" anxiety versus parti-
cular source (e.g., stressful life events) stress as they relate to
alcohol consumption?

Third, are there alternative stress-reduction mechanisms
available to an individual in a particular social setting? If yes, what
are they, and why is one type of stress reduction mechanism chosen
over another?

A final research emphasis for future consideration involves
the expansion of our explanatory models dealing with alcohol consump-
tion. Traditionally, we have attempted to utilize explanatory models
dealing with only a small number of variables. Given the complex nature of alcohol consumption, these models have generally fallen short in their explanatory abilities. In an attempt to better our understanding of this phenomena, we need to increasingly expand both the size and scope of these models in order to better comprehend the actual nature of alcohol consumption.

Summary

This study attempted to test the utility of status inconsistency theory as an explanatory tool for the further understanding of the differential rates of alcohol consumption. Recognizing the tension-reduction properties of alcohol consumption, status inconsistency was suggested as a potential source of increased stress which, in turn, would lead to increased alcohol consumption. It was hypothesized that the non-additive (status inconsistency) model would explain a significantly greater amount of variance in alcohol consumption than the more parsimonious additive (vertical status dimensions) model.

The hypotheses were tested using a 1963 probability sample of the noninstitutionalized population of the United States over 20 years of age. Using a Multiple Classification Analysis technique, it was found that the status inconsistency model does not add significantly to the understanding of differential rates of alcohol consumption over and above the additive model.

In conclusion, despite the fact that this particular research

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endeavor did not support the possibility of status inconsistency theory as a contributor to the understanding of alcohol consumption, it does represent a good example of the type of theoretical concerns that should be dealt with in the area of differential alcohol consumption. This research will, hopefully, guide further research in the area of alcohol consumption into the exploration of other potentially fruitful insights originating from current sociological knowledge.
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## APPENDIX A

Table 1. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for males only

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Occupation</th>
<th>Income</th>
<th>Racial-Ethnic</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; r&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>0.070</td>
<td>0.046</td>
<td>0.171</td>
<td>0.111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>0.037</td>
<td>0.061</td>
<td>0.179</td>
<td>0.063</td>
<td></td>
<td>0.014</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | 0.070     | 0.046      | 0.171  | 0.111         | 0.050               |
| beta           | 0.032     | 0.038      | 0.191  | 0.109         | 0.046               | 0.022            |

Note. Grand Mean = 4.30; N = 519
<sup>a</sup>Adjusted for the degrees of freedom

Table 2. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for females only

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Occupation</th>
<th>Income</th>
<th>Racial-Ethnic</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; r&lt;sup&gt;2&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>0.050</td>
<td>0.178</td>
<td>0.147</td>
<td>0.120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>0.076</td>
<td>0.127</td>
<td>0.124</td>
<td>0.104</td>
<td></td>
<td>0.030</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | 0.050     | 0.178      | 0.147  | 0.120         | 0.062               |
| beta           | 0.072     | 0.148      | 0.100  | 0.084         | 0.050               | 0.023            |

Note. Grand Mean = 2.79; N = 431
<sup>a</sup>Adjusted for the degrees of freedom

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Table 3. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for those 21-29 and 50 and over years of age

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Occupation</th>
<th>Income</th>
<th>Racial-Ethnic Rank</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.033</td>
<td>.072</td>
<td>.132</td>
<td>.042</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.062</td>
<td>.095</td>
<td>.145</td>
<td>.053</td>
<td></td>
<td>.010</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .033      | .072       | .132   | .042               | .124                 |               |
| beta           | .031      | .063       | .132   | .042               | .139                 | .014          |

Note. Grand Mean = 3.35; N = 484

$^a$Adjusted for the degrees of freedom

Table 4. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for those 30-49 years of age

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Occupation</th>
<th>Income</th>
<th>Racial-Ethnic Rank</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.074</td>
<td>.078</td>
<td>.168</td>
<td>.151</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.070</td>
<td>.043</td>
<td>.171</td>
<td>.078</td>
<td></td>
<td>.018</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .074      | .078       | .168   | .151               | .003                 |               |
| beta           | .090      | .036       | .164   | .132               | .625                 | .023          |

Note. Grand Mean = 3.78; N = 466

$^a$Adjusted for the degrees of freedom

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Table 5. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption of those living in communities with under 10,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Occupation</th>
<th>Income</th>
<th>Racial-Ethnic Rank</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>0.080</td>
<td>0.114</td>
<td>0.181</td>
<td>0.107</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>0.024</td>
<td>0.140</td>
<td>0.220</td>
<td>0.066</td>
<td></td>
<td>0.038</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | 0.080     | 0.114      | 0.181  | 0.107              | 0.040                |              |
| beta           | 0.016     | 0.112      | 0.193  | 0.076              | 0.027                | 0.014        |

Note. Grand Mean = 3.26; N = 321

$a$ Adjusted for the degrees of freedom

Table 6. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for those living in communities with between 10,000-100,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Occupation</th>
<th>Income</th>
<th>Racial-Ethnic Rank</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>0.126</td>
<td>0.127</td>
<td>0.169</td>
<td>0.116</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>0.088</td>
<td>0.050</td>
<td>0.201</td>
<td>0.140</td>
<td></td>
<td>0.034</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | 0.126     | 0.127      | 0.169  | 0.116              | 0.067                |              |
| beta           | 0.125     | 0.073      | 0.161  | 0.110              | 0.061                | 0.024        |

Note. Grand Mean = 3.52; N = 311

$a$ Adjusted for the degrees of freedom

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Table 7. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for those living in communities with over 100,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Occupation</th>
<th>Income</th>
<th>Racial-Ethnic Rank</th>
<th>Status Inconsistency</th>
<th>Multiple $^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.069</td>
<td>.075</td>
<td>.123</td>
<td>.138</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.050</td>
<td>.041</td>
<td>.116</td>
<td>.064</td>
<td></td>
<td>.017</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-additive Model</th>
<th>Education</th>
<th>Occupation</th>
<th>Income</th>
<th>Racial-Ethnic Rank</th>
<th>Status Inconsistency</th>
<th>Multiple $^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.069</td>
<td>.075</td>
<td>.123</td>
<td>.138</td>
<td>.095</td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.093</td>
<td>.074</td>
<td>.140</td>
<td>.118</td>
<td>.085</td>
<td>.008</td>
</tr>
</tbody>
</table>

Note. Grand Mean = 3.92; N = 318

$^a$Adjusted for the degrees of freedom

Table 8. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the occupation ranking for males only

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple $^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.056</td>
<td>.069</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.054</td>
<td>.078</td>
<td></td>
<td>.003</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple $^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.056</td>
<td>.069</td>
<td>.049</td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.052</td>
<td>.043</td>
<td>.039</td>
<td>.008</td>
</tr>
</tbody>
</table>

Note. Grand Mean = 4.22; N = 387

$^a$Adjusted for the degrees of freedom
Table 9. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the occupation ranking for females only

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Occupation Status Inconsistency</th>
<th>Multiple(^a) (r^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.152</td>
<td>.155</td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.086</td>
<td>.103</td>
<td>.015</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .152               | .155                           | .083              |
| beta           | .063               | .126                           | .088              |

Note. Grand Mean = 2.69; N = 285
\(^a\)Adjusted for the degrees of freedom

Table 10. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the occupation ranking for those 21-29 and 50 and over years of age

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Occupation Status Inconsistency</th>
<th>Multiple(^a) (r^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.089</td>
<td>.055</td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.094</td>
<td>.056</td>
<td>.001</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .089               | .055                           | .060              |
| beta           | .089               | .030                           | .075              |

Note. Grand Mean = 3.35; N = 354
\(^a\)Adjusted for the degrees of freedom
Table 11. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the occupation ranking for those 30-49 years of age

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.164</td>
<td>.120</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.143</td>
<td>.047</td>
<td></td>
<td>.016</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .164               | .120       | .053                |               |
| beta           | .097               | .101       | .054                | .010          |

Note. Grand Mean = 3.82; N = 316

$^a$Adjusted for the degrees of freedom

Table 12. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the occupation ranking for those living in communities with under 10,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.119</td>
<td>.112</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.094</td>
<td>.072</td>
<td></td>
<td>.001</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .119               | .112       | .033                |               |
| beta           | .062               | .094       | .053                | .005          |

Note. Grand Mean = 3.22; N = 239

$^a$Adjusted for the degrees of freedom
Table 13. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the occupation ranking for those living in communities with between 10,000-100,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.114</td>
<td>.149</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.071</td>
<td>.132</td>
<td></td>
<td>.008</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .114               | .149       | .075                 |                           |
| beta           | .094               | .083       | .051                 | .001                      |

Note. Grand Mean = 3.56; N = 213
<sup>a</sup>Adjusted for the degrees of freedom

Table 14. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the occupation ranking for those living in communities with over 100,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.060</td>
<td>.034</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.060</td>
<td>.005</td>
<td></td>
<td>.015</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .060               | .034       | .075                 |                           |
| beta           | .019               | .032       | .071                 | .020                      |

Note. Grand Mean = 3.97; N = 220
<sup>a</sup>Adjusted for the degrees of freedom

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Table 15. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term in defined as the extent to which the racial-ethnic ranking exceeds the income ranking for males only

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Income</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.091</td>
<td>.169</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.086</td>
<td>.200</td>
<td></td>
<td>.024</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .091              | .169   | .125                 |               |
| beta           | .093              | .110   | .097                 | .021          |

Note. Grand Mean 4.07; N = 366

$^a$Adjusted for the degrees of freedom

Table 16. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the income for females only

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Income</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.106</td>
<td>.236</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.063</td>
<td>.268</td>
<td></td>
<td>.045</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .106              | .236   | .128                 |               |
| beta           | .069              | .184   | .084                 | .038          |

Note. Grand Mean = 2.81; N = 281

$^a$Adjusted for the degrees of freedom
Table 17. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the income ranking for those 21-29 and 50 and over years of age

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Income</th>
<th>Status Inconsistency</th>
<th>Multiple $^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.054</td>
<td>.190</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.104</td>
<td>.232</td>
<td></td>
<td>.035</td>
</tr>
<tr>
<td>Non-additive Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eta</td>
<td>.054</td>
<td>.190</td>
<td>.143</td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.007</td>
<td>.160</td>
<td>.112</td>
<td>.030</td>
</tr>
</tbody>
</table>

Note. Grand Mean = 3.36; N = 375
$^a$Adjusted for the degrees of freedom

Table 18. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the income ranking for those 30-49 years of age

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Income</th>
<th>Status Inconsistency</th>
<th>Multiple $^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.166</td>
<td>.227</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.021</td>
<td>.230</td>
<td></td>
<td>.038</td>
</tr>
<tr>
<td>Non-additive Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>eta</td>
<td>.166</td>
<td>.227</td>
<td>.096</td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.051</td>
<td>.186</td>
<td>.054</td>
<td>.032</td>
</tr>
</tbody>
</table>

Note. Grand Mean = 3.75; N = 269
$^a$Adjusted for the degrees of freedom

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Table 19. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the income ranking for those living in communities with under 10,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Income</th>
<th>Status Inconsistency</th>
<th>Multiple$^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.155</td>
<td>.258</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.011</td>
<td>.264</td>
<td></td>
<td>.051</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .155               | .258   | .147                 |                     |
| beta           | .070               | .181   | .085                 | .044                |

Note. Grand Mean = 3.24; N = 246

$^a$Adjusted for the degrees of freedom

Table 20. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the income ranking for those living in communities with between 10,000-100,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Income</th>
<th>Status Inconsistency</th>
<th>Multiple$^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.098</td>
<td>.160</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.013</td>
<td>.153</td>
<td></td>
<td>.005</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .098               | .160   | .080                 |                     |
| beta           | .065               | .101   | .055                 | .005                |

Note. Grand Mean = 2.38; N = 195

$^a$Adjusted for the degrees of freedom

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Table 21. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the income ranking of those living in communities with over 100,000 inhabitants.

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Income</th>
<th>Status Inconsistency</th>
<th>Multiple $^{a}$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>0.083</td>
<td>0.186</td>
<td></td>
<td>0.027</td>
</tr>
<tr>
<td>beta</td>
<td>0.130</td>
<td>0.257</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | 0.083              | 0.186  | 0.162               | 0.023                |
| beta           | 0.052              | 0.153  | 0.125               |                      |

*Note. Grand Mean = 4.00; N = 206  
$^{a}$Adjusted for the degrees of freedom

Table 22. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the education ranking for males only.

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple $^{a}$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>0.078</td>
<td>0.079</td>
<td></td>
<td>0.000</td>
</tr>
<tr>
<td>beta</td>
<td>0.070</td>
<td>0.083</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | 0.078              | 0.079     | 0.070               | 0.005                |
| beta           | 0.058              | 0.045     | 0.040               |                      |

*Note. Grand Mean = 4.20; N = 376  
$^{a}$Adjusted for the degrees of freedom
Table 23. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the education ranking for females only

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial Ethnic Rank</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple$^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.156</td>
<td>.082</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.159</td>
<td>.072</td>
<td></td>
<td>.010</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .156               | .082      | .065                 |                 |
| beta           | .036               | .052      | .067                 | .006            |

Note. Grand Mean = 2.85; N = 281

$^a$Adjusted for the degrees of freedom

Table 24. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the education ranking for those 21-29 and 50 and over in years of age

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial Ethnic Rank</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple$^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.050</td>
<td>.076</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.079</td>
<td>.109</td>
<td></td>
<td>.001</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .050               | .076      | .080                 |                 |
| beta           | .036               | .052      | .067                 | .006            |

Note. Grand Mean = 3.46; N = 367

$^a$Adjusted for the degrees of freedom
Table 25. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the education ranking for those 30-49 years of age

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple$^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.125</td>
<td>.054</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.163</td>
<td>.077</td>
<td></td>
<td>.006</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .125               | .054      |                      | .110            |
| beta           | .836               | .064      |                      | .111            |

Note. Grand Mean = 3.84; N = 288

$^a$Adjusted for the degrees of freedom

Table 26. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the education ranking for those living in communities with under 10,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple$^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.113</td>
<td>.142</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.073</td>
<td>.145</td>
<td></td>
<td>.009</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .113               | .142      |                      | .084            |
| beta           | .090               | .093      |                      | .063            |

Note. Grand Mean = 3.35; N = 246

$^a$Adjusted for the degrees of freedom

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Table 27. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the education ranking for those living in communities with between 10,000-100,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.098</td>
<td>.095</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.120</td>
<td>.123</td>
<td></td>
<td>.003</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .098               | .095      | .064                 |               |
| beta           | .105               | .130      | .064                 | .003          |

Note. Grand Mean = 3.61
$^a$Adjusted for the degrees of freedom

Table 28. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption when the interaction term is defined as the extent to which the racial-ethnic ranking exceeds the education ranking for those living in communities with over 100,000 inhabitants

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Racial-Ethnic Rank</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.042</td>
<td>.024</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.089</td>
<td>.080</td>
<td></td>
<td>.015</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .042               | .024      | .147                 |               |
| beta           | .066               | .017      | .156                 | .006          |

Note. Grand Mean = 3.97; N = 199
$^a$Adjusted for the degrees of freedom
Table 29. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for females 21-29 and 50 and over years of age when the interaction term is defined as the extent to which their education ranking exceeds their husband's occupation ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Husband's Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple^a r^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.168</td>
<td>.229</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.197</td>
<td>.298</td>
<td></td>
<td>.053</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .168      | .229                 | .159                 |               |
| beta           | .183      | .189                 | .105                 | .038          |

Note. Grand Mean = 2.42; N = 126

^AAdjusted for the degrees of freedom

Table 30. Comparison of the additive and non-additive models as the amount of alcohol consumption for females 30-49 years of age when the interaction term is defined as the extent to which their education ranking exceeds their husband's occupation ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Husband's Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple^a r^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.121</td>
<td>.204</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.099</td>
<td>.257</td>
<td></td>
<td>.024</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .121      | .204                 | .155                 |               |
| beta           | .099      | .142                 | .120                 | .018          |

Note. Grand Mean = 2.84; N = 164

^AAdjusted for the degrees of freedom

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Table 31. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for females living in communities with under 10,000 inhabitants when the interaction term is defined as the extent to which the education ranking exceeds their husband's occupation ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Husband's Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.107</td>
<td>.188</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.090</td>
<td>.256</td>
<td></td>
<td>.004</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-additive Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
</tr>
<tr>
<td>beta</td>
</tr>
</tbody>
</table>

Note. Grand Mean = 2.35; N = 96
<sup>a</sup>Adjusted for the degrees of freedom

Table 32. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for females living in communities with between 10,000-100,000 inhabitants when the interaction term is defined as the extent to which the education ranking exceeds their husband's occupation ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Husband's Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.231</td>
<td>.251</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.239</td>
<td>.309</td>
<td></td>
<td>.075</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-additive Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
</tr>
<tr>
<td>beta</td>
</tr>
</tbody>
</table>

Note. Grand Mean = 2.88; N = 104
<sup>a</sup>Adjusted for the degrees of freedom
Table 33. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for females living in communities with over 100,000 inhabitants when the interaction term is defined as the extent to which the education ranking exceeds their husband's occupational ranking.

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Education</th>
<th>Husband's Occupation</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.069</td>
<td>.175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.189</td>
<td>.275</td>
<td></td>
<td>.012</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .069      | .175                 | .181                 | .010                    |
| beta           | .113      | .151                 | .144                 |                         |

Note. Grand Mean = 2.75; N = 93
<sup>a</sup>Adjusted for the degrees of freedom

Table 34. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for males 21-29 and 50 and over years of age when the interaction term is defined as the extent to which their occupation ranking exceeds their education ranking.

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Occupation</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.056</td>
<td>.045</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.068</td>
<td>.068</td>
<td></td>
<td>.011</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .056       | .045      | .042                 | .019                    |
| beta           | .056       | .034      | .039                 |                         |

Note. Grand Mean = 4.04; N = 245
<sup>a</sup>Adjusted for the degrees of freedom

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Table 35. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for males 30-49 years of age when the interaction term is defined as the extent to which their occupation ranking exceeds the education ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Occupation</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiplea r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.070</td>
<td>.134</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.162</td>
<td>.243</td>
<td></td>
<td>.008</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .070       | .134      | .113                 |              |
| beta           | .126       | .149      | .086                 | .003         |

Note. Grand Mean = 4.60; N = 168

Table 36. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for males living in communities with under 10,000 inhabitants when the interaction term is defined as the extent to which their occupation ranking exceeds their education ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Occupation</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiplea r²</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.137</td>
<td>.111</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.164</td>
<td>.175</td>
<td></td>
<td>.004</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .137       | .111      | .152                 |              |
| beta           | .160       | .074      | .151                 | .008         |

Note. Grand Mean = 3.62; N = 147

aAdjusted for the degrees of freedom
Table 37. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for males living in communities with between 10,000-100,000 inhabitants when the interaction term is defined as the extent to which the occupation ranking exceeds the education ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Occupation</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple$^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.129</td>
<td>.098</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.133</td>
<td>.066</td>
<td></td>
<td>.011</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .129       | .098      | .056                 |                   |
| beta           | .074       | .102      | .064                 | .026              |

Note. Grand Mean = 4.35; N = 134

$^a$Adjusted for the degrees of freedom

Table 38. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for males living in communities with over 100,000 inhabitants when the interaction term is defined as the extent to which the occupation ranking exceeds the education ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Occupation</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple$^a$ $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.098</td>
<td>.093</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.267</td>
<td>.277</td>
<td></td>
<td>.015</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .098       | .093      | .149                 |                   |
| beta           | .192       | .146      | .138                 | .002              |

Note. Grand Means = 4.88; N = 133

$^a$Adjusted for the degrees of freedom
Table 39. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for males 21-29 and 50 and over years of age when the interaction term is defined as the extent to which their income ranking exceeds their education ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Income</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; (r^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.151</td>
<td>.155</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.103</td>
<td>.116</td>
<td></td>
<td>.011</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .151   | .155      | .061                 |                  |
| beta           | .088   | .141      | .077                 | .006             |

Note. Grand Mean = 4.70; N = 195

<sup>a</sup>Adjusted for the degrees of freedom

Table 40. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for males 30-49 years of age when the interaction term is defined as the extent to which the income ranking exceeds the education ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Income</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; (r^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.186</td>
<td>.205</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.063</td>
<td>.158</td>
<td></td>
<td>.015</td>
</tr>
</tbody>
</table>

Non-additive Model

| eta            | .186   | .205      | .191                 |                  |
| beta           | .033   | .192      | .207                 | .039             |

Note. Grand Mean = 3.89; N = 139

<sup>a</sup>Adjusted for the degrees of freedom

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Table 41. Comparison of the additive and non-additive models as predictors of the amount of alcohol consumption for males living in communities under 10,000 inhabitants when the interaction term is defined as the extent to which the income ranking exceeds the education ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Income</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; &lt;br&gt; $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.219</td>
<td>.116</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.277</td>
<td>.110</td>
<td></td>
<td>.025</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-additive Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
</tr>
<tr>
<td>beta</td>
</tr>
</tbody>
</table>

Note. Grand Mean = 4.39; N = 40
<sup>a</sup>Adjusted for the degrees of freedom

Table 42. Comparison of the additive and non-additive model as predictors of the amount of alcohol consumption for males living in communities with between 10,000-100,000 inhabitants when the interaction term is defined as the extent to which the income ranking exceeds the education ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Income</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple&lt;sup&gt;a&lt;/sup&gt; &lt;br&gt; $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.208</td>
<td>.104</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.266</td>
<td>.96</td>
<td></td>
<td>.20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-additive Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
</tr>
<tr>
<td>beta</td>
</tr>
</tbody>
</table>

Note. Grand Mean = 4.45; N = 57
<sup>a</sup>Adjusted for the degrees of freedom

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Table 43. Comparisons of the additive and non-additive models as predictors of the amount of alcohol consumption for males living in communities with over 100,000 inhabitants when the interaction term is defined as the extent to which the income ranking exceeds the education ranking

<table>
<thead>
<tr>
<th>Additive Model</th>
<th>Income</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.134</td>
<td>.073</td>
<td></td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.167</td>
<td>.114</td>
<td></td>
<td>.005</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-additive Model</th>
<th>Income</th>
<th>Education</th>
<th>Status Inconsistency</th>
<th>Multiple $r^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>eta</td>
<td>.134</td>
<td>.073</td>
<td>.032</td>
<td></td>
</tr>
<tr>
<td>beta</td>
<td>.175</td>
<td>.096</td>
<td>.051</td>
<td>.018</td>
</tr>
</tbody>
</table>

Note. Grand Mean = 4.93; N = 137

*Adjusted for the degrees of freedom