CHAPTER 23

MEASURING REBELLIOUSNESS:
THE DEVELOPMENT OF THE NEGATIVISM DOMINANCE SCALE

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INTRODUCTION

Within the arena of reversal theory (Apter, 1982:196-226), negativism and conformity are central concepts which form one of a number of pairs of bistable metamotivational states, between which there are said to be switches or "reversals". Reversal theory posits that for a given pair of states, such as the negativistic and the conformist states, there is an internal bias, such that more time is likely to be spent in one state than in the other; and within the theory the degree of this bias is known as "dominance". In this way, it may be said that a given individual is "negativistic dominant" or "conformist dominant". The negativistic dominant individual can be described synonymously as "rebellious" or "oppositional" and the negativistic state can also be described as the "rebellious" or "oppositional" state.

The theory does not equate "dominance" with "preference", however, since the state in which an individual is most frequently found to be is not necessarily the one in which he or she experiences the most pleasure. The concept of dominance is said to differ from that of "trait" since the former does not assume that behaviour is consistent across situations. Rather, the notion of dominance acknowledges that an individual may spend periods of time in the state of mind which is opposite to that which is "dominant". Being in a rebellious state has been defined as "wanting, or feeling compelled, to do something contrary to that required by some external agency" (Apter, 1982:198) and can be distinguished from "felt negativism" (or, "felt rebelliousness") which refers to an individual's awareness of actually acting negativistically (as distinct from wanting or feeling compelled to do so).

Three other pairs of metamotivational states complete the conceptual framework of the theory with past research having focussed in particular upon the "telic"/"paratelic" pair. The emphasis of empirical work within reversal theory upon the telic and paratelic states has arisen in part because of the ready availability of a questionnaire, the Telic Dominance Scale (TDS) (Murgatroyd, Rushton, Apter & Ray, 1978; see Appendix B), which has been designed to determine in which of the two states an individual spends most time. The three remaining
pairs of states, however, are equally important to the complete elaboration of the theory's account of human experience. The relative absence of research on the negativism/conformity pair of states within this theoretical framework has been due in part to a lack of an appropriate psychometric instrument with which to measure negativism dominance. Thus, the research as described here focusses on the task of developing such a measure and on elaborating the structure of rebelliousness.

The development of a psychometrically sound measure of rebelliousness is based on the assumption that the construct merits investigation. The pervasiveness of rebelliousness as a fundamental process of coping with social influence suggests that the assumption is indeed well grounded. Moreover, the construct can be seen to be particularly relevant to the psychology of adolescence, for it is during this developmental period that rebelliousness is purported to be most prevalent. Thus, Balswick and Macrides (1975) asked a sample of 400 college students to indicate how rebellious they had felt as teenagers "toward parents and other authorities" and found that just over one-fifth of both males and females reported they had been either "very" or "extremely" rebellious during their teenage years. Indeed, only 14% of the males and 21% of the females replied that they were "not rebellious at all", with the majority of the sample, (nearly two-thirds of the males and over half of the females), reporting that they had been only "slightly rebellious" during this developmental period. It is perhaps remarkable that 1 out of every 5 male and female students described themselves as having been very rebellious whilst an adolescent. Such a level of incidence testifies to the high degree of importance that many individuals in later life attribute to rebelliousness as a significant feature of their formative years, and to the more general need for an examination of its structure and status as a psychological construct.

With Apter's (1982) working definition in mind, however, it is evident that rebelliousness and its contrasting opposite, "conformity" are of relevance to domains of activity which extend well beyond the confines of youth cultures into a wide range of behaviours which can be observed in people from all age-groups. Negativism can be expressed in varying degrees and ways over the course of the whole life-span. It has been implicated in the aetiology of a variety of psychological phenomena, such as disruptive behaviour in school (Rafky, 1979), expressive alienation (Stinchcombe, 1964) and obsessive-compulsive behaviour (Ingrams, 1961). Apter and Smith (1976) suggest it serves a variety of functions, for example the heightening of arousal, gaining independence and autonomy, and as a means by which a reaction to an unreasonable requirement can be expressed. In addition, Reimer (1981) argues that rebelliousness often is engaged in simply for "fun", for the pleasure of the moment.

Despite its ecological prevalence and face-validity as a psychological construct, rebelliousness has not been studied comprehensively. Why should this be so?
THE NEGLECT OF REBELLIOUSNESS

Previous work, rather than concentrating specifically upon rebelliousness per se, has focused instead upon the psychology of conformity and obedience: "the other side of the coin", wrote McDavid and Harari (1968:326), "the rejection of the influence of other individuals and groups, tended to be left behind". Even research on obedience, however, notwithstanding the work of Milgram (1963), Asch (1956) and Zimbardo, Haney and Banks (1973), has not developed into a major research tradition within social psychology. Ethical considerations arising from experiments conducted by Milgram (1974; 1977) and more latterly from Zimbardo, Haney and Bank's (1973) "Stanford Prison Experiment" may account in part for the reticence of would-be researchers to enter this area. Consequently, research on negativism has been unduly neglected. Indeed, Balswick and Macrides (1975), citing the seminal work of Mead (1928), maintain that research on conflict in adolescence has focussed mainly upon cultural conditions at large, to the exclusion of its psychological parameters. Moreover, Apter (1982:197) has stated that "studies of negativism have gone out of fashion, having reached their peak in the nineteen-twenties and thirties". The unwarranted lack of attention which rebelliousness has received is emphasised by Wenar (1982:1) who wrote that "negativism is currently the most neglected of the major personality developments", arguing that the failure to study negativism has stemmed from problems associated with its conceptualisation and measurement. Indeed, there is a notable lack of consensus as to how the construct should be defined and studied, rebelliousness having been regarded at different times as a "variety of aggression, as one aspect of autonomy and as a value judgement made by often exasperated adults" (Wenar, 1982:1). Deciding how the construct should be conceived of and quantified is of central importance in determining how a measure of rebelliousness should be developed. For the purposes of clarification in both of these areas, therefore, past attempts at conceptualising and measuring rebelliousness should be considered and evaluated.

CONCEPTUALISING AND MEASURING REBELLIOUSNESS

Problems of definition are reflected in and are confounded by the diversity of terms that have been used to describe rebelliousness: for example, "negativism", "nonconformity" and "disobedience" have all been used to refer to rebelliousness (see, respectively, Wenar, 1982; Apter & Smith, 1976; Brown, 1986). In addition, Rorschach (1921), and more latterly Braman (1982), have used the term "oppositional" to denote the rebelliousness which occurs during both infancy and adolescence. Furthermore, Apter (1982) uses the terms "negativism" and "rebelliousness" interchangeably, despite distinctions being drawn between the two, albeit in an inconsistent manner, by other authors: Choynowski (personal communication, 1987), for example, contends that "rebelliousness" is conceptually broader than "negativism", subsuming it as a subordinate concept, whilst, conversely, Buss and Durkee (1957) view rebelliousness as a subordinate construct of negativism.

The task of defining rebelliousness is made more difficult by the wide range of its behavioural forms and by the variety of psychological
functions which it serves (see Apter & Smith, 1976). For example, both Balswick and Macrides (1975) and Buss and Durkee (1957) align rebelliousness with aggressive behaviour, viewing it as a form of hostility, whilst Braman (1982) equates rebelliousness with non-compliance and defiance, as manifested by "oppositional children" (see Braman, this volume). At a more cognitive level of analysis, Stinchcombe (1964) conceptualised high-school rebellion as a complex of attitudes composed of non-utilitarianism, short-run hedonism and positive regard for group solidarity which were seen as being symptomatic of expressive alienation and to result in the breaking of social and psychological norms. This latter view has been challenged by Rafky (1979), however, who found that rebelliousness in high school occurs not as a response to alienation from unproductive conformity to social norms but rather, on a more positive note, from a belief that one's behaviour can affect socio-political and interpersonal change to produce desirable outcomes. Brown (1986), in making a careful distinction between "obedience" and "conformity" and thereby between "disobedience" and "nonconformity", implies that only disobedience can be equated with rebelliousness because it, unlike nonconformity, involves resisting "authority". Likewise, Buss and Durkee (1957:343) view rebelliousness as "usually directed against authority". Both disobedience and nonconformity, however, can be regarded as forms of resisting social influence and therefore as forms of rebelliousness, since peers as well as authority figures can act as sources of influence which can either be acquiesced to or resisted. Within social psychology, rebelliousness has been examined as a situational variable indirectly through experiments on social influence processes, a field of research which subsumes research on obedience to authority. Within personality psychology, rebelliousness has been treated as a "dispositional" variable by researchers who have used factor analytic studies to locate the construct, for example, as a second order trait of "agreeableness" (Norman, 1963). In neither a social psychological context nor within an individual difference framework has the structure of rebellious activity been investigated systematically.

It is apparent that rebelliousness can be regarded as a socially facilitated and learned disposition to respond to social influences in what can become a characteristic and cross-situationally consistent manner. For the purposes of elaborating a novel conceptual scheme of rebelliousness, however, it is necessary to adopt a more precise definition as a point of reference from which a study of its structure can proceed. In such a vein, Apter's (1982) description of a rebellious state (as already given) merits adoption as a working definition, since it pays due attention to key experiential components of rebelliousness. Such a focus of attention is called for, since rebelliousness can present itself as either covert or overt resistance to social influence. Apter's (1982) definition emphasises appropriately an individual's own perceptions of his or her psychological state. A rebellious act can only be regarded as such by an external observer if the actor perceives that the self has acted contrary to an imposed requirement. An estimation of the actor's perceptions of behavioural events in evaluating their rebellious content is of central importance, particularly in the case of passive resistance. With such an emphasis upon the experiential nature of rebelliousness, Apter's (1982) definition suggests that procedures which involve self-report techniques and which,
therefore, facilitate access to a subject's interpretation of events, such as interviews and questionnaires, are preferable as measures of rebelliousness.

Although attempts at measuring rebelliousness in this way have been made, past research has not addressed the question as to whether rebelliousness is a uni- or multi-dimensional construct, the assumption being made by previous authors that it consists of just one dimension (for example, Buss & Durkee, 1957 and Murgatroyd & Evans, 1979). In the past other investigators have used author-devised, unstandardised scales (Clemens & Rust, 1979) and external criterion variables as measures. With regard to the latter, Rafky (1979), for example, took the number of times individuals had taken part in student strikes, participated in a sit-in, rioted in school, physically confronted a teacher and damaged school property in excess of one hundred dollars as measures of rebelliousness. Notwithstanding questions pertaining to the construct validity of these indices, the task of examining the possible multi-dimensionality of the construct was not undertaken.

It is evident that a carefully developed measure of the construct is needed in order to resolve the issue of its dimensionality and to facilitate further research. The aim of the investigation to be described here, therefore, was to clarify rebelliousness both conceptually and operationally by developing a questionnaire measure of negativism dominance, and to examine its significance in relation to other psychological constructs. The development of the questionnaire occurred in seven stages, which are outlined in the following section.

THE SEVEN STAGES OF THE STUDY

(1) Five hypothetical dimensions of rebelliousness were postulated. "Telic rebelliousness" was defined as arising in the service of goal-seeking or as a reaction to frustration during goal-directed behaviour. "Paratelic rebelliousness" was defined as arising in the service of arousal-seeking, being about experiencing excitement and stimulation, whilst tending to be provocative and proactive. "Sympathy rebelliousness" was posited as arising in response to not being sympathised with (felt to be attractive, liked or loved), or in response to not being able to sympathise with (feel attracted towards, like or love) the other with whom the interaction occurs, thus being about resentment and emotional reactions to disappointment which tend not to bring about the desired outcome. "Mastery rebelliousness" was hypothesised as arising in the service of gaining mastery, control and dominance, avoiding the loss of these and maintaining a sense of autonomy and independence (feelings of identity therefore being implicated). "Rebelliousness for its own sake" was proposed as being indulged in for the pleasure of the rebelliousness itself, being about gratuitous awkwardness and opposition for its own sake.

(2) The latter conceptual scheme was used as a framework within which 137 items (20 to 30 items in each category) were generated to constitute an item-pool which formed the basis for the ensuing psychometric study of rebelliousness.
(3) In the third stage of the study, following the "Method of Equal-Appearing Intervals" (Thurstone & Chave, 1929), 50 female and 50 male psychology post-graduate students at the University of Illinois were asked to rate each item on an 11-point scale for the degree to which a person choosing the rebellious response would be showing rebelliousness of the type as defined. The median of the distribution of judgments ("scale score") was calculated for each item, large scale scores indicating that an item was judged as being high on the particular attribute of rebelliousness concerned. The interquartile range ("Q" scores) for each item was also calculated, the spread of the middle 50% of judgements indicating the degree of agreement amongst judges as to the amount of rebelliousness inherent in each item. Those items with high "S" scores and low "Q" scores were retained for inclusion in the next stage of the questionnaire's development.

(4) Following the "Method of Summated Ratings" (Likert, 1932), 50 male and 50 female undergraduate students taking introductory courses in psychology at the University of Illinois were asked to respond to the 73 remaining items by circling their answers on 5-point Likert scales. A "rebelliousness" score for every item by each subject, therefore, was obtained. Item analysis used, firstly, criterion groups to identify items which did not distinguish "high" from "low" scoring subjects and, secondly, item-total correlations to locate items which were not associated with those remaining in their respective conceptual item pools. These procedures led to the exclusion of 43 items from the total item pool, with the result that 6 items from each of the 5 conceptual subscale pools were retained, whilst 4 "filler" items were included in order to reduce the occurrence of response sets.

(5) At the fifth stage of the study, 55 male and 77 female, 16 to 17 year-olds attending a high school in Urbana, Illinois, in the United States of America, and 51 female and 85 male 16 to 17 year-olds from 5 high schools in Cardiff, U.K., were asked to respond to the remaining 30 items and 4 "filler" items. The underlying dimensionality of the responses was investigated in both samples by means of factor analysis and in this way empirically derived subscales were identified. An example of a question with the response format as used is as follows:

How often do you find yourself doing what you shouldn't do just for the "hell of it"?
(a) often ( )
or (b) rarely ( )
(c) not sure ( )

(6) The sum of the responses to the 30 items from the American high school sample only were rank-ordered. Those subjects in the top 27% of the rank-ordering and those in the bottom 27% (as per Kelley, 1939) of this sample were selected to form 2 criterion groups. Data from high school records for individuals in the 2 groups were collected on 4 external validation criterion variables: excused absences, number of non-excused absences, number of school referrals and grade point average. The scores as obtained for these criterion variables were representative of the 14-week period during the high school semester which
occurred prior to the day on which the questionnaires were adminis-
tered. They were collected to test the concurrent validity of the scale.

(7) Lastly, in order to examine the convergent and discriminant vali-
dity of the scale and that of its constituent empirical subscales, sub-
samples of the British subjects were asked to respond to 7 question-
naires which measured established psychological constructs: locus of
type and control (Nowicki & Strickland, 1973); need for control (Bains, 1984); psychological well-being (Goldberg & Hillier, 1979); irritability
(Billington, 1980); telic dominance (Murgatroyd, Rushton, Apter & Ray,
1978); self-monitoring (Snyder, 1974); and individualism-versus-collec-
tivism (Triandis, Leung, Villareal & Clack, 1985).

A SUMMARY OF THE ANALYSES AND FINDINGS

Separate scree analyses after Cattell (1966) (and as documented,
for example, by Harman, 1976) of the American and British responses
indicated that a 2-factor solution was appropriate for data sets from
each national culture. Separate factor analyses of American and British
responses specifying a 2-factor solution (type=PA2, rotation=varimax)
produced similar patterns of loadings in each data set. Coefficients of
congruence (after Tucker, 1951) between the American and British fac-
tors were of sufficient magnitude to support the contention that the
factorial solutions from the 2 cultures define highly similar factor
spaces. Since the matrices had been replicated across cultures, the 2
data sets were combined to maximise the ratio of subjects to items.
This combined data set was factor analysed to produce a maximally
stable factor structure, and an inspection of the loadings facilitated
the selection of items for inclusion in the final empirical subscales.
Seven items with substantive factor loadings (greater than 0.3) were
selected for the factor 1 subscale and 6 for the factor 2 subscale. A
further 1 item with a factor loading of 0.28 was selected to raise the
number of items for factor 2 to 7. The inclusion in the factor 1 sub-
cale of additional items with substantive factor loadings was not
considered worthwhile, since only a negligible increment in internal
reliability could have been gained by further increasing the number of
items (Cronbach, 1951). In the analysis for the combined sample, the
eigenvalue for factor 1 was 3.93 and accounted for 13.1% of the vari-
ance, whilst for factor 2 the eigenvalue was 1.3 and accounted for 4.4%
of the variance.

In order to label each factor appropriately, attention was paid to
the conceptual origin of each item. Four of the 7 items which loaded
exclusively and substantively onto factor 1 originated from the "para-
telic rebelliousness" item-pool, whilst 5 of the 7 factor 2 items
originated from the "sympathy rebelliousness" item-pool. It was evident
that the 2 subscales might be labelled accordingly. "Paratelic" and
"sympathy" rebelliousness, however, are not immediately intelligible
terms. A further consideration of the content of the items in each
subscale, therefore, led to the choice of "proactive rebelliousness"
and "reactive rebelliousness" as factor labels.
An example of an item which measures proactive rebelliousness is:

How often do you do something you shouldn't just to get some excitement?

(a) not often at all or, (b) often?

An introductory guide and complete listing of the items in the questionnaire can be found in Appendix D of this volume.

By **proactive rebelliousness** is meant that form of rebelliousness which is primarily accompanied by and is directed towards obtaining an immediately pleasurable state. With reference to this sense, proactive rebelliousness is hedonistic, having as its goals fun and excitement. It is essentially gratuitous and indulged in for its own sake. Secondary, maintenance of control over one's surroundings can be viewed as a by-product of this sensation-seeking form of rebellious activity. It is at the core proactive since the "actor" actively goes out and pursues this type of rebelliousness.

Turning now to reactive rebelliousness, an example of an item which measures this kind is:

A charity will not accept you as a volunteer. Is your first reaction to

(a) thank them for considering you or, to
(b) tell them to "go to hell"?

By **reactive rebelliousness** is meant that form of rebelliousness which can be conceived of as a reaction to an interpersonal disappointment, rebuff, frustration or affront. It is in essence an emotional reaction and may come about when one is not liked, loved or sympathised with, or when one cannot like, love or sympathise with others. This form of rebelliousness is characterised by vindictive or vengeful behaviour. Unlike proactive rebelliousness, here the rebelliousness is not actively pursued but comes about as an unpremeditated response to a situation or event, and may take the form of a retaliatory act. In this way it is "reactive" in kind.

Further analysis, in which the 268 cases' sets of responses to the 14 final items only were factor analysed, confirmed the structure of rebelliousness as revealed in prior factor analysis of the 30-item pool. The reactive factor with an eigenvalue of 2.6 accounted for 18.6% of the case-to-case variance, whilst the proactive factor with an eigenvalue of 1.04 accounted for 7.4% of the case-to-case variance. Where the first factor is the one which accounts for most of the variance, items from the subscale which correlated with this factor in previous analyses of the 30-item scale were seen to load onto the second factor in this subsequent analysis of the 14-item version. Thus, the order of the 2 factors in relation to the amount of variance explained reversed: former factor 1 items as observed in the analysis of the 30-item scale were found to load onto the second factor in an analysis of the 14-item scale and, similarly, former factor 2 items
were seen in the subsequent analysis to load onto the first factor. Despite the highly stable groupings of loadings in the factor pattern matrix, where the amount of variance accounted for by each factor is not markedly dissimilar, as was the case here, such a change in the order of factors is possible due to the presence of unavoidable random measurement errors. An acceptable level of internal consistency was obtained for each subscale, with alpha coefficients being of an appropriate magnitude for both "reactive" and for "proactive" rebelliousness. Test-retest reliability over a 3-week period for total scores from a sub-sample of British students was found also to be of an acceptable level of magnitude.

An analysis of variance of the factor scores as derived from factor analysis of responses to the 14-item scale and subsequent independent t-tests revealed a significant difference between males and females and between British and American high-schoolers on reactive rebelliousness, with males having a higher mean score than females and American 16 to 17 year-olds scoring on average higher on this factor than their British counterparts.

The results of independent t-tests comparing American "high" and "low" scorers on the 30-item measure of rebelliousness, in terms of the external validating criteria, showed that significant differences could be observed between these groups in the mean number of non-excused absences, number of school referrals and grade point average as obtained for the semester in which the questionnaires were completed. As was to be expected, no difference was observed between high and low scorers on the number of excused absences, since there were presumably good reasons (for example, medical ones) for these instances of non-attendance. In addition, significant correlations for non-excused absences, school referrals and grade point average with reactive rebelliousness for males and with reactive and proactive rebelliousness for females were found. These were in the expected directions and testify to the concurrent validity of the final subscales. Associations of reactive and proactive rebelliousness with the number of excused absences were non-significant, again as would be expected, with the exception of that for the reactive form for females.

Despite the varimax method of rotation having been specified in the factor analyses, further correlational analyses showed that in both American and British samples, for both males and females, there are significant relationships between scores on reactive and proactive rebelliousness. It was evident, therefore, from the correlation between scores on the two subscales that orthogonal factors were not produced by the use of this procedure. The varimax method of rotation, however, seeks only to maximise the amount of unique variance accounted for by each factor and in this way, the two rebelliousness dimensions can be and are related. Thus, in order to assess if the correlations for females between the proactive subscale and three of the external criteria were due to indirect associations through the correlation of proactive with reactive rebelliousness, regression analyses using the method of "backward" elimination of independent variables were performed on the data. It was found that, when the degree of association between non-excused absences, school referrals and grade point average with reactive rebelliousness was partialled out of each regression equation,
that left due to the relationship of proactive rebelliousness with the criteria was non-significant. For males and females, therefore, it is only the scores on the reactive rebelliousness subscale which independently predict those on the external criteria, thus supporting the concurrent validity of this factor.

With regard to the convergent and discriminant validity of the subscales, an examination of the correlations for measures of 7 established psychological constructs with reactive and proactive rebelliousness showed the following pattern of associations for sub-samples of British males and females:

(a) Males who score highly on reactive rebelliousness were likely to be "individualistic" and thus unlikely to subordinate their needs to those of others. They may tend to maintain a belief in an external locus of control (as per total scores after Wolf, Sklov, Hunter & Berenson, 1982), having a generalised belief that positive and negative outcomes are not necessarily contingent upon efforts. Also, reactive rebelliousness in males was found to be associated with a high "need for power" over the environment and with a preference for spontaneity rather than planned action.

(b) Reactive rebelliousness in females was found to be associated with irritability.

(c) Proactively rebellious males are more likely than their conformist counterparts to report experiencing severely depressed mood, anxiety and insomnia and somatic symptoms (as after Goldberg & Hillier, 1979). They are likely to believe that outcomes are the product of fortuitous events, proactive rebelliousness having been found to correlate with scores on the "chance" factor (Wolf et al, 1982). They are more likely to be "paratelic dominant" (after Apter, 1982), that is to say to prefer "playfulness" as opposed to "seriousmindedness" and to seek, rather than to avoid, highly arousing experiences. This form of rebelliousness in males is associated also with the tendency to monitor the situational appropriateness of their own actions and with that of putting on socially extraverted shows of behaviour ("extraversion" self-monitoring, as described by Briggs, Cheek & Buss, 1980).

(d) Proactive rebelliousness in females was found to be associated with "individualism" (Triandis, Leung, Villareal & Clack, 1985) with an external locus of control (Wolf et al's 1982 total score) and with a feeling of "helplessness" and a lack of "personal control" (likewise, Wolf et al's 1982 factor). Also, proactively rebellious females may be likely to seek high arousal experiences but to be low on self-monitoring and not to engage in situationally appropriate shows of extraverted social behaviour.
The final scale is composed of 14 test items and 4 "filler" items. Within the theoretical context of reversal theory, the scale can be referred to as either the "Negativism Dominance Scale" (NDS; see Appendix D) or the "Rebelliousness Dominance Scale". A high scorer on the scale may be said to be highly negativistic dominant (or "rebellious dominant"). Conversely, a low scorer on the scale may be said to be highly conformist dominant. Equally well of course, within such a context the scale could have been scored in the opposite direction and have been called the "Conformist Dominance Scale". Outside the domain of such a theoretical perspective, however, it is suggested that the 14-item scale can be called the "McDermott and Apter Rebelliousness Questionnaire" and that, for the purposes of test administration and to make the objectives of the questionnaire less apparent to respondents, it can be presented to subjects as "The Social Reactivity Scale".

The results of the study indicate that the original five-part conceptual scheme (in terms of which items for the scale were generated) cannot be supported, but rather that in both North American and British samples a two-dimensional model of negativism emerges which specifies "reactive" and "proactive" forms of rebelliousness. These two empirically derived dimensions accord well with previous authors' assertions about the nature of rebelliousness. In particular, the conceptual and operational definition of the "reactive" form is consistent with Clemens and Rust's (1979) observation that rebelliousness in children results from an inability to sympathise with the parental value system. Furthermore, the conceptual and operational definition of the "proactive" form is in agreement with Reimer's (1981) view of rebelliousness as "fun" and with Apter and Smith's (1976) assertion that it can be to do with high arousal, excitement and immediate pleasure.

Two alternative explanations can be given of the sex difference on reactive rebelliousness, males in both cultures scoring more highly on average than females. Firstly, possible sex biases in the content of the scale items themselves may account for such a difference, though inspection of the content of items in the reactive subscale does not support such a view. Also, since 48% of the combined American and British sample were female, the assertion that the observed difference may be a product of sampling error is not tenable. A second more plausible and preferable explanation would be that it is more socially acceptable and sex-appropriate for males than females to express opposition to a requirement. Supporting such a view, Zillmann (1979), for example, found that angry men are more likely than women to be aggressive and retaliatory even when it is clear that it is counter-productive to be so. In addition, Nicholson (1984) notes that such a sex difference becomes more marked in answers to questionnaires than in actual behaviour. Furthermore, a notable deficiency in the number of significant correlates of reactive rebelliousness with other psychological constructs for females as compared with males, also suggests that this form of rebelliousness is not as phenomenologically relevant for girls as it is for boys, at least for those in the 16 to 17 year-old age group.
With regard to the difference between cultures on reactive rebelliousness, two possible explanations can be offered to account for why American youths score on average more highly than do their British counterparts. Firstly, the observed difference may be an artifact of sampling error: 17 year-olds in the British sample attend high school by choice, being at liberty by law to leave after their 16th birthday; they are more likely, therefore, to be conformist and to adhere more willingly to the dictates of the high school ethos than 17 year-olds in the United States of America, where attendance at high school until the age of 18 is the minimum statutory requirement. Secondly and alternatively, the American adolescents may have reported more readiness to rebel reactively than British youths due to greater value being placed by United States culture upon "individualism" (see Triandis, Leung, Villareal & Clack, 1985). Such a personal and societal orientation involves the encouragement of the ability to confront others and to assert the needs of the self over those of others. Thus, the high value placed upon these social practices in North American culture is likely to facilitate readiness to rebel reactively against the perceived imperatives of aversive interpersonal requirements. Such an interpretation is made more tenable by the finding of a correlation between scores for American males on Triandis et al's (1985) measure of individualism and scores on the reactive subscale. Such an explanation is also supported conceptually by Mead's (1928) view that adolescence is not necessarily a time of strain, upheaval and rebellion for all individuals in all cultures, but rather is the product of specific socio-cultural conditions which contrive to make it so in some cultures more than in others. It is contended that both explanations, as given, of the cultural difference are plausible, so it is left as a task for further research to explore empirically the degree to which each can be supported by relevant data.

Positive correlations with the number of non-excused absences and school referrals and a negative correlation with grade point average in the American sample support the concurrent validity of the reactive subscale. Proactive rebellion, however, is not predictive of these school-based criterion variables. Such a relationship with the reactive subscale is consistent with the view that persistent school absenteeism in particular is associated with difficulty in socially significant relationships (see for example, Jones, 1974; Corrigan, 1979; and Galloway, 1982). These three school-based variables, however, are not independent criteria and therefore it is likely, given the significant correlations with school referrals and grade point average, that a lack of reciprocal "sympathy" between pupils, peers and teachers is implicated in the processes which account for disruptive behaviour and low academic achievement in high school.

That reactive rebelliousness is not associated for males with the "control" criterion, number of "excused absences", is as predicted, since where legitimate evidence (such as a letter from a parent or medical doctor) is produced for non-attendance, such absence is unlikely to be nonconformist in kind. It is apparent from the correlation of reactive rebelliousness with excused absences for girls however, that if female school absenteeism arises similarly in conjunction with difficulty in social relationships, then subsequent rebellion for girls is more covert and in keeping with the rules of the educational system
than for boys. Such an interpretation, which assumes parental collusion in female absenteeism, is supported by Galloway (1982) who found that, amongst high-school children in the north of England, significantly fewer girls than boys go absent without parental knowledge or consent.

Although proactive rebelliousness is not predictive of school-based criteria, correlations with other psychological variables indicate that the subscale has convergent validity: for males it is of utility in predicting scores on indices of psychological well-being, sub-dimensions of telic dominance (playfulness and arousal seeking) and "extraversion" self-monitoring; and, for females, it is predictive of scores on individualism, locus of control, arousal-seeking and "extraversion" self-monitoring. In particular, it is notable that high arousal-seeking is associated with this form of sensation-seeking rebelliousness. Such a relationship is in keeping with the conceptual and operational definitions of proactive rebellion.

Interestingly, many of the correlates of both kinds of rebelliousness are socially undesirable: for males, proactive rebellion is associated in the research as described here with poor psychological health and arousal-seeking, whilst in females it is related to an external locus of control and to individualism, the latter having been shown to correlate in turn with high rates of social pathology (Cobb, 1976; Naroll, 1983). Similarly, reactive rebelliousness in females is related to high irritability, whilst in males it is associated with high individualism, with an external locus of control and with a high need for power, the latter two correlations suggesting that feelings of helplessness (which Seligman, 1975, has shown to be implicated in the aetiology of depression) accompany the male reactive form. That reactively rebellious males, however, have a preference for spontaneity, whilst proactive males enjoy "playfulness" and social extraversion, indicates that not all of the connotations of rebelliousness are necessarily pejorative. Indeed, a longitudinal study of the functions of rebelliousness might hypothesise that nonconformity often precedes a period of personal reconstruction and openness to new experiences which can lead in the long term to a more internally consistent and stable sense of self. Nevertheless, the correlates of reactive and proactive rebelliousness as described here, when considered in conjunction with the pattern of associations with the school-based variables, strongly suggest that, for 16 to 17 year-old adolescents, both forms of rebelliousness constitute behavioural coping strategies which, in the short-term at least, have maladaptive consequences.

It is contended that the "reactive" and "proactive" dimensions represent an important and fundamental distinction which should be drawn between types of strategy for coping with social influence. The bi-dimensionality of rebelliousness has been firmly established by the empirical investigations reported here, and the assumption of unidimensionality discarded. As dispositional variables, scores on the two dimensions reflect a readiness to rebel in individuals which may, as Brown (1986) maintains, turn out to be pivotal in determining the rebellion of groups. Both dimensions of rebelliousness have been found to be predictive of different sets of psychological constructs. With the development of cross-culturally replicated subscales, the way is therefore clear for further researchers to extend the systematic inves-
tigation of rebelliousness, or "negativism", which until now has been neglected due to problems associated with its conceptualisation and measurement. It is contended that both of these problems have been confronted and surmounted by the research which has been described. It is hoped that the resolution of these problems will act as a spur to the endeavours of other psychologists who likewise are drawn to the study of rebelliousness.

As well as being of direct relevance to hypotheses derived from reversal theory, the two subscales can be applied in other theoretical contexts. For example, the reactive subscale, being concerned with responses to aversive interpersonal requirements, is of potential value to the study of "reciprocity of negative affect" (Gottman, 1979) in personal relationships. In addition, it is suggested that the two empirically derived subscales can be utilised to examine the role of nonconformity in the genesis of delinquency and aggression and that, with reference to youth subcultures, they can be used to investigate the role of rebelliousness in social identity development during adolescence and young adulthood.

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