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Authoritarianism and Integrative Complexity

By

Susan Michèle Alisat

B.A., Wilfrid Laurier University, 1992

THESIS

**Submitted to the Department of Psychology
in partial fulfillment of the requirements
for the Master of Arts degree
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1992**

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Abstract

The relationship between Right-Wing Authoritarianism (RWA) and cognitive style was examined. Consistent with social learning theory, it was hypothesized that the development of authoritarian attitudes may be accompanied by the development of certain ways of thinking about the objects of these attitudes. High and low RWAs provided solutions for social conflicts which involved authoritarian and nonauthoritarian issues. After having provided their initial solutions, students were encouraged to increase the complexity of their reasoning by means of "prodding" questions. Results suggested that, instead of thinking less complexly for only authoritarian issues, high RWAs displayed lower integrative complexity scores than low RWAs for their initial solutions to all of the vignettes. Results further indicated that high RWAs were somewhat more likely to respond to prod questions to increase their level of integrative complexity. It is suggested that the development of RWA may be associated with the development of certain patterns of problem solving, that is, while high and low RWAs may be equally capable of producing complex solutions, the initial inclination of high RWAs may be to produce simpler answers unless encouraged to reason more complexly.

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Introduction

Since the authoritarian personality syndrome was first described by Adorno, Frenkel-Brunswik, Levinson and Sanford (1950), researchers have attempted to determine what leads to the development of this personality type, as well as what other tendencies are associated with it.

A more recent theory of right-wing authoritarianism (Altemeyer, 1981, 1988) has suggested a social learning explanation for the origins of authoritarianism. It is proposed that certain patterns of reinforcement and modelling lead to the development of those specific attitudes which are associated with right-wing authoritarianism: attitudes of submission to authority, conventionalism and authoritarian aggression. It is possible that this pattern of socialization could also lead to differences in cognitive style between those individuals who do exhibit this co-occurrence of attitudes and those who do not, specifically when reasoning about issues which may involve those attitudes.

In the past, researchers have been largely unsuccessful in their attempts to illuminate differences in the cognitive styles of high and low authoritarians. In the present paper, it is suggested that the difference in the cognitive styles of high and low authoritarians is specific to authoritarian issues and, thus, would not be reflected by the *general* measures of cognitive styles used in previous studies. Integrative complexity (Suedfeld & Tetlock, 1977) is one measure of cognitive style which allows a comparison of the levels of

complexity of high and low authoritarians between issues which should involve authoritarian attitudes and issues which should not involve these attitudes.

Because past research has also indicated that an individual's initial responses to social conflicts may not necessarily reflect his or her reasoning ability (Hunsberger, Lea, Pancer, Pratt & McKenzie, 1992a), the present study will evaluate possible differences in the inclinations, as well as the abilities, of high and low RWAs to reason complexly.

Review of the Literature

The Authoritarian Personality

Interest in the study of authoritarianism grew following the publication of *The Authoritarian Personality* (Adorno et al., 1950). This work describes the personality syndrome of authoritarianism, which was thought to be a relatively stable organization of forces involving a readiness for particular types of response. In this original conceptualization, the authoritarian (or fascist) personality was thought to involve an openness to anti-democratic propaganda, as well as prejudicial attitudes. In order to study this personality type, Adorno et al. developed the F scale to measure nine traits (conventionalism, submission, aggression, anti-intraception, superstition, power orientation, cynicism, projectivity, and excessive fixation on sexuality) which were thought to be characteristic of this personality type.

Adorno et al. (1950) approached the study of authoritarianism from a psychoanalytic perspective and, as a result, hypothesized that the origins of this personality syndrome were to be found in childhood. They assumed that the authoritarian pattern of behaviour developed in the early relationship with the parents and this pattern was later transferred to other relationships. The parents of authoritarians were thought to be harsh and punitive. Because the children were punished for acting against their parents' wishes, the feelings of hostility were repressed and later transferred to more acceptable targets, such as minority groups. Negative feelings and actions against these groups were

perceived to be sanctioned by authorities, so the authoritarian no longer had to fear reprimand or guilt resulting from his or her hostile feelings.

While the findings described by these authors have stimulated a great deal of research focusing on authoritarianism, a number of weaknesses in their conceptualization and measurement of this personality type have led to a modification of the original theory. According to their theory, authoritarianism was thought to develop as a result of a poor relationship with one's parents, yet there has been no evidence to support this conclusion (Altemeyer, 1981). In fact, while the theory proposed by Adorno et al. (1950) suggests that there is a generalized attitude toward authority figures, Burwen and Campbell (1957) have shown that no such generalized "attitude" exists.

There are also a number of weaknesses with the F scale, which was the original measure of authoritarianism. For instance, the nine traits which are thought to co-occur in the authoritarian are only loosely defined, and there is a considerable amount of overlap among them. As a result, many of the items on the scale tap several of these traits (Altemeyer, 1981). It is, thus, not possible to examine the individual dimensions of this personality syndrome separately.

A more serious weakness of this scale results from the fact that all of the items are worded in the same (pro-trait) direction. As a result, it is not possible to determine whether the scale is actually revealing an individual's level of authoritarianism or merely response acquiescence (Altemeyer 1981,

1988). A number of studies have indicated that response set has a considerable influence on the individual's score on the F scale (Bass, 1955; Cohn, 1953; Leavitt, Hax & Roche, 1955).

An Alternate Conceptualization of Authoritarianism

In order to avoid the limitations associated with the F scale, Altemeyer has developed an alternate measure to the F scale proposed by Adorno et al. (1950). This Right-Wing Authoritarianism (RWA) scale was the result of a series of studies which compared new items with items from existing scales. The resulting 30-item scale was composed of a majority of items which developed as the scale was refined, as well as several items from other scales and a number of items which were modifications of items from other scales. Individuals scoring highly on the RWA scale tend to be characterized by three traits, instead of the original nine. These traits include authoritarian submission, which involves obedience to those who are perceived to be in positions of authority, authoritarian aggression, which involves hostility which is thought to be condoned by those in positions of authority towards other individuals or groups, and conventionalism, which involves obedience to social customs which are established in society and accepted by authorities (Altemeyer, 1981).

This scale measures authoritarianism of the right, that is, the degree of obedience to the authorities who are accepted in a given society. While some have posited the existence of an authoritarianism of the left (Shils, 1954), this

would seem to be unrelated to the RWA scale. As Altemeyer (1988) observes, it is unlikely that communists would strongly accept the authorities in our society (and thus score highly on the RWA scale), so communists can not be included with fascists at one pole. Yet, he also notes that there is little evidence that communists score exceptionally low on the RWA scale. This evidence would seem to indicate that scores on this scale can not be used as a single dimension on which to classify fascists, communists and democrats. The present paper will focus exclusively on authoritarians of the right, since it is blind obedience to accepted authority which is of interest for the present investigation.

RWA and Social Learning Theory

Rather than the psychodynamic influences proposed by the Berkeley researchers (Adorno et al., 1950), Altemeyer (1988, pp. 54-62) has suggested that, like other attitudes, the three characteristic attitude clusters which co-occur in authoritarians may develop as a result of social learning. According to social learning theory (Bandura, 1977), behaviours and attitudes develop in response to reinforcements which have been experienced in connection with those behaviours and attitudes. That is, if a certain behaviour was followed by pleasurable consequences, it is likely to be repeated. Similarly, if an expressed attitude meets with favourable reactions, it is more likely that that attitude will be maintained than if the reaction had been one of disapproval. Reinforcement may effectively contribute to the maintenance of a behaviour or attitude if it is

experienced directly or vicariously, through the witnessing of a model being rewarded.

Very little research has examined the possibility that social learning theory can explain the development or change of attitudes. Horsley (1977) used techniques suggested by social learning theory in order to change attitudes and behaviours towards environmental conservation. Over a 10 week period, university geography students were asked to model behaviours displaying environmental consciousness: He found that behaviours of these students towards the environment had changed over that period, but that attitudes had not. It is to be noted that the attitudes of these students towards the environment were already very positive and thus the failure to find attitude change may have been the result of a ceiling effect. It is also possible that this failure to find evidence of attitude change could have resulted from the fact that the conditioning period was limited to 10 weeks. The development of authoritarian attitudes is thought to take place over years. It is possible that, even if social learning techniques only influence the performance of authoritarian behaviours, the performance of these behaviours over an extended period could lead to the internalization of consistent attitudes. Further, it should be noted that, while the development of certain authoritarian attitudes was thought to have been reinforced by early reinforcing agents, these students were asked only to model the behaviours, and were not reinforced for performing these behaviours. As a result of these limitations, this study can

be taken as very weak evidence of the role of social learning theory in the development of attitudes. Better evidence of this comes from a study by Griffore and Schweitzer (1983) who examined the relationship between the racial attitudes of parents and children. They found that these attitudes were correlated in the range of .51 to .59 and concluded that parents do serve as models for their children's racial attitudes.

Altemeyer (1988) has suggested that because the parents are one of the earliest administrators of reinforcements, it is likely that they can contribute to the development of those attitudes which constitute the RWA personality, namely attitudes concerning authoritarian submission, conventionalism and authoritarian aggression. He has suggested that parents and other reinforcing agents may encourage obedience to authority and adherence to established practices, rather than independence and exploration, and that attitudes consistent with these behaviours may develop. It is also likely that parents who believed strongly in submission and conventionalism may have been more likely to punish those behaviours of which they did not approve. As a result of this modelling, their children may have learned to behave aggressively towards those who are unconventional or who do not obey authority. As a result of this pattern of modelling and reinforcement, the traits of authoritarian submission, authoritarian aggression and conventionalism may develop in some individuals. It is possible that the children of parents who have encouraged these attitudes may maintain these attitudes as they mature. It is these individuals who are

likely to score high on the RWA scale.

Since the original description of the authoritarian personality type by Adorno et al. (1950), researchers have established a relationship between authoritarianism and such factors as prejudice and religious beliefs (Altemeyer, 1988). However, there has been less success in establishing the existence of a relationship between authoritarianism and other factors. For instance, in spite of a great deal of research, little is known about the thought processes which are associated with authoritarianism. In order to advance knowledge regarding the thought processes of authoritarians, the relationship between cognitive style and RWA was examined.

Authoritarianism and Parenting Style

Although Altemeyer has suggested that RWA develops as a result of certain patterns of reinforcement which may have been administered by the parents during early development, Baumrind's authoritarian parenting type (Baumrind, 1968; Baumrind, 1989; Maccoby & Martin, 1983) can not be directly associated with the development of RWA. Baumrind tends to focus on the characteristics of the interactions between parents and children, rather than on the values which the children are taught, which are important when considering the development of authoritarianism. However, in spite of this, in her description of the authoritarian parent, Baumrind does note that these parents may try to shape their children's behaviour in conformity with a standard which may have been set out by some higher authority. They also

may encourage their children to respect authority and traditional values. As a result of this, children in such a family climate may learn that they should be submissive to authorities and conventional in their behaviour.

The majority of the research which has examined parenting styles does not allow an examination of the relationship between parenting style and authoritarian attitudes. Many of these studies have focused on the development of social skills which may be associated with parenting style. A computer search and a manual search have failed to reveal any research which has examined the authoritarian parenting style described by Baumrind during childhood and subsequent attitudes during adulthood, which could provide support for a link between authoritarian parenting style and the development of right-wing authoritarian attitudes.

Cognitive Style

A number of investigators have suggested that authoritarians should display patterns of thinking which are less flexible than those exhibited by nonauthoritarians (e.g., Adorno et al., 1950; Block & Block, 1951; Jones, 1955). These researchers have focused on intolerance of ambiguity and rigidity as indicators of this inflexibility. Although a number of studies have examined a variety of indicators of inflexibility, a firm relationship between these variables has not been established.

The Berkeley researchers suggested that among prejudiced individuals, rigidity acts as a defense against undesirable impulses. In support of this

suggestion, these researchers concluded, on the basis of interviews with those scoring in the high or low groups on the Anti-Semitism and Ethnocentrism scales, that nonprejudiced individuals tend to be more flexible and less rigid than those who are prejudiced. Low scorers displayed a greater willingness to consider problems and to use their own resources to arrive at a solution than high scorers, who were more likely to rely on pre-existing responses which often reflected stereotypical notions. Because the majority of those interviewees who had high prejudice scores also had high F scale scores, and the majority of those who had low prejudice scores also had low F scale scores, it is likely that these conclusions have implications for authoritarian and nonauthoritarian individuals.

Other researchers have attempted to validate the existence of the relationship between authoritarianism and rigidity, using techniques which did not rely so heavily on subjective judgements. However, in spite of a wide variety of studies, the evidence is inconclusive and often contradictory. Some studies have indicated the existence of a relationship between rigidity and Ethnocentrism, which is closely related to authoritarianism as measured by the F scale (Block & Block, 1951; Rokeach, 1948), and between intolerance of ambiguity and authoritarianism as measured by the F scale (Jones, 1955; Zacker, 1973). Using several measures of intolerance of ambiguity, however, Davids (1955) failed to reveal evidence consistent with the existence of such a relationship. Similarly, although he used a measure of rigidity comparable to

that used by Rokeach, Brown (1953) was able to find evidence of a relationship between authoritarianism and rigidity only when anxiety had been aroused by the testing situation. When the atmosphere was more relaxed, the relationship between authoritarianism and rigidity was nonsignificant.

Some studies have replicated this finding that anxiety is an important factor in the relationship between authoritarianism and rigidity (Millon, 1957; Neuringer, 1964). However, the failure of some other studies to find support for such a relationship (Davids, 1956; French, 1955) suggests that this conclusion is limited.

The measures of rigidity used in these studies can be roughly grouped into two types. The first type might be considered problem-solving abilities. These include the Einstellung (water jar) test (Brown, 1953; French, 1955; Jackson, Messick & Solley, 1957) and variations of Rokeach's map test (Neuringer, 1964; Rokeach, 1948). In both of these tests of rigidity, the individual encounters a series of problems which require a similar solution. The problem following this series can also be solved using the same solution; however, a simpler solution will also work for this problem. Individuals who do not use the simpler solution for these problems are judged as being more "cognitively" rigid.

Findings described by Jackson, Messick and Solley (1957) caution us regarding the acceptance of findings of significant relationships between the F scale and this type of measure of rigidity. After modifying the F scale so that

all of the items were worded in the reverse direction, these authors found that both authoritarians (as indicated by strong agreement with the original F scale items) and "nonauthoritarians" (as indicated by strong agreement with the reversed scale items) showed similar patterns of rigid performance on the Einstellung water jar problems. This study indicates that acquiescence is an important factor which must be taken into account in those studies which used the F scale as a measure of authoritarianism, as the majority of these studies examining the relationship with rigidity did. As a result, it is not possible to conclude from these studies whether there is any relationship between authoritarianism and cognitive style as measured using this type of problem.

The second type of problem used in these studies has focused on intolerance of ambiguity as an indicator of rigidity (Block & Block, 1951; Davids, 1955, 1956; French, 1955; Jones, 1955; Millon, 1957; Zacker, 1973). The majority of these studies have examined the perceptions of ambiguous auditory or visual stimuli. It is not clear, however, that intolerance in a perceptual sphere is related to rigidity of problem solving, or any other indicator of cognitive style. As a result, these studies can not conclusively answer the question of the relationship between authoritarianism and cognitive rigidity.

Evidence from Ray (1980) also does not clarify the relationship between authoritarianism and rigidity. Ray reported that scores on the Gough-Sanford Rigidity scale and the Budner Intolerance of Ambiguity scale were significantly positively correlated with scores on a balanced F scale. However, scores on

the same measures were found to be negatively correlated with scores on the Directiveness scale, which was also thought by Ray to measure authoritarianism. However, the findings of this study can neither confirm nor deny the existence of a significant relationship between authoritarianism and cognitive style. The positive correlation found between the measures of rigidity and the F scale is limited by the numerous weaknesses of the F scale. The findings of a negative relationship with Directiveness score are also limited since, as Rigby (1984) notes, this scale is based on a conceptualization of the authoritarian which differs from that which is commonly accepted (Adorno et al., 1950; Altemeyer, 1981). The Directiveness scale measures the tendency of an individual to inflict his or her will on others. This measure does not take into account the tendency to submit to authority, which is an important defining characteristic of the authoritarian personality.

So, it would seem that there is only limited evidence of a relationship between authoritarianism and rigidity. It should also be noted that the majority of these studies used the F scale, or some modified version of the F scale, which has been shown to be subject to psychometric and artifactual limitations. Further, many of these researchers assumed that there is a general mental rigidity factor that could be measured by a specific type of problem or perceptual task which would reflect an individual's overall level of rigidity. Several researchers have suggested that measures of rigidity of thinking in specific areas may be more useful than an overall measure of rigidity. Indeed,

it has been suggested that there is no general mental rigidity, and that individuals process information with different degrees of rigidity depending on the type of task (French, 1955; Werner, 1946).

It is possible that if a more specific measure of cognitive style were used, the expected differences between high and low authoritarians would emerge. Recent advances in the area of cognitive complexity allow an evaluation of this possibility. First, however, the predicted differences in cognitive style between high and low authoritarians will be discussed.

Based on Altemeyer's social learning explanation for the origins of RWA, it is possible that in addition to the co-occurrence of submission to authority, conventionalism and authoritarian aggression among high RWAs, these individuals may also develop characteristic ways of thinking about the objects of these attitudes. This tendency may arise from aspects of the environment that these individuals are likely to have experienced. For instance, parents who encouraged their children's obedience to authority may have discouraged or limited their access to information which would be inconsistent with this attitude. This could be done by shielding their children from evidence that the encouraged attitudes, and beliefs associated with them, are not universally accepted, or by limiting contact with other individuals who may disagree with those attitudes. The parents may also have reinforced certain attitudes by categorically dismissing or ridiculing different perspectives than those which

they consider to be proper, and by actively rewarding or modelling acceptable attitudes.

Bandura (1977) noted that social learning is a reciprocal, transitional process, such that individuals can influence their own environment which, in turn, influences their behaviour and attitudes. It is possible that, while the authoritarian attitudes of high RWAs are being reinforced, these attitudes may be having a considerable influence on the environment they experience. High RWAs may also behave in ways which lead others to treat them in a way which confirms their attitudes. Further, they may seek out environments which reinforce these attitudes. Since they are not exposing themselves to situations which could show them the inaccuracy of their beliefs and attitudes, it is unlikely that they would become more tolerant of alternatives which conflict with those which they were taught earlier.

In support of this, Altemeyer (1988) found that there was little discrepancy between the attitudes towards homosexuals of high and low RWAs who reported that they knew homosexuals. However, many more lows than highs actually reported that they knew homosexuals. This is consistent with the suggestion that the attitudes of high RWAs may be moderated by exposure to situations which contradict their attitudes, yet that these attitudes lead them to avoid situations which would be likely to permit such moderation. Altemeyer (1988) reported similar findings for attitudes towards "non-traditional" families, which would also conflict with high RWAs' ideas of what

is conventional and, thus, acceptable.

As a result of being reinforced for accepting the attitudes and beliefs of authority unquestioningly, and also because of their limited access to information, these individuals may develop cognitive styles which differ from the styles of those who were earlier exposed to less restrictive social models. It is possible that they may be unwilling to consider alternatives inconsistent with those which they have been taught. Further, because they may have had limited access to information, they may not have the resources available to even consider conflicting alternatives.

So, it is possible that the cognitive styles of high and low RWAs could differ in *at least* those domains which are associated with their authoritarian attitudes. That is, because high RWAs may have experienced different patterns of socialization in the areas of conventionalism, authoritarian submission and authoritarian aggression than low RWAs, which led to the differences in their attitudes in these areas, they may also display different cognitive styles specifically in these areas. While it is possible that the cognitive styles which have developed in response to the learning patterns which high RWAs have experienced in these areas may have transferred to other areas, it is expected that if there are cognitive style differences between high and low RWAs, these differences will be evident in areas involving authoritarian attitudes.

This could provide an explanation for the inconclusive results found in other studies. In many of these studies, the measure of rigidity tapped general

cognitive style or reasoning ability, which may have little relation to those specific areas for which high and low authoritarians may have been exposed to different patterns of learning. This being the case, it is likely that areas involving authoritarian submission, conventionalism and authoritarian aggression are those in which it is *most* likely that differences between the cognitive styles of high and low RWAs would emerge.

Integrative Complexity

In order to examine possible differences in the processing of information based on differences in the backgrounds of high and low authoritarians, it was necessary to use a measure of cognitive style which can examine issue-specific processing of information. Earlier work by Harvey, Hunt and Schroder (1961) and Schroder, Driver and Streufert (1967) on information processing has led to the development of one such measure. This technique measures "the level of the conceptual structure" (Schroder et al., 1967, p.3) with which the information is processed.

According to Harvey et al. (1961), concepts exist which filter information as it is processed. These concepts determine which responses are available in a given situation which, in turn, determines a person's level of conceptual structure. If the concepts have not sufficiently developed, as may be the case among high RWAs in particular domains, they may be expected to exhibit low levels of conceptual structure. Schroder et al. (1967) suggested that conceptual level depends on what "adaptive orientation" a child develops while

he is learning responses in a given environment. They also noted that because conceptual level is dependent on developmental conditions, which can vary across different domains, an individual's conceptual level often differs between content areas. The emphasis of this conceptualization is on the organizational and structural aspects of one's thoughts.

Cognitive complexity, which was the original technique developed for assessing conceptual level, later evolved into integrative complexity. Cognitive complexity provides a measure of *how* individuals reason about an issue, rather than *what* they think about it. This technique can, thus, measure the way an individual thinks about any issue, regardless of the content area or opinion expressed. This emphasis on the structure of thought is especially useful in this case, since it allows a comparison of the structure of thought of individuals who may express completely different opinions on an issue. Thus, even if high and low authoritarians express different opinions, their levels of complexity can be compared.

Cognitive complexity was initially used to evaluate the complexity of passages which were written to complete sentence stems. This scoring technique takes into account two cognitive stylistic variables. *Differentiation* refers to "the number of dimensions of a problem that are taken into account in evaluating or interpreting events" (Tetlock, 1985, p.268). *Integration* refers to the "development of complex connections among differentiated characteristics" (Tetlock, 1985, p.269). In this system, a simple statement

would recognize only one possible way of looking at an issue. A differentiated but not integrated response would recognize that a variety of dimensions or perspectives are equally valid, but would not develop conceptual connections between the various dimensions. A more complex, integrative statement would recognize that several different ways of looking at the issue are equally valid and would specify rules for combining or integrating these different positions in some way.

Although cognitive complexity was originally considered to be a trait variable, Suedfeld and Tetlock's (1977) introduction of the phrase "integrative complexity" was accompanied by a change in emphasis, such that the importance of the role of the environment was acknowledged. In addition the scoring technique was extended beyond the analysis of paragraph completion items. It has since been used to study a variety of materials, including archival materials (Suedfeld, Bluck, Ballard & Baker-Brown, 1990; Tetlock, 1983b; Tetlock, Bernzweig & Gallant, 1985) and interview responses (Hunsberger et al., 1992a; Pratt, Pancer, Hunsberger, & Manchester, 1990; Tetlock, 1984) as well as more traditional written responses (Hunsberger et al., 1992a; Tetlock, 1983a; Tetlock, 1986).

Integrative Complexity and Authoritarianism

Schroder et al. (1967) have reasoned that individuals who utilize higher levels of conceptual processing in a given area are more likely to consider a broader range of information relevant to the formation of an attitude within that

content domain. The attitude resulting from this level of conceptual reasoning may be more flexible than the attitudes whose level of conceptual reasoning is less complex, since these individuals would consider a more restricted range of information. Attitudes associated with integratively simple structures are likely to be concrete. Schroder et al. (1967) reported correlations of $-.25$ to $-.55$ between F scale scores and integrative complexity in several studies. They suggested that these correlations describe a tendency for those scoring highly on the F scale to be less integratively complex. However, beyond noting that the measures of complexity were based on paragraph completion tasks and impression formation tasks, these authors did not describe the type of issues on which these scores were based, nor did they describe the samples used to establish these relationships. This evidence is also limited, due to the many weaknesses of the F scale as a measure of authoritarianism noted previously. In spite of these limitations, however, it does suggest that integrative complexity may be related to authoritarianism.

In further support of the suggestion of Schroder et al. (1967) are results described by deVries and Walker (1987), who found that individuals who were either strongly in favour of, or strongly opposed to, capital punishment had lower integrative complexity scores for reasoning about capital punishment than those whose attitudes were more moderate. Since the attitudes of high authoritarians towards certain issues tend to be more extreme than the attitudes of low authoritarians (Altemeyer, 1981), it is possible that low

authoritarians may be considering a broader range of information than high authoritarians in these areas, which may reflect a higher level of conceptual processing.

The Value Pluralism model described by Tetlock (1986) would predict differences between the levels of integrative complexity of high and low RWAs. This model suggests that the complexity of thinking about an issue will be higher if the individual places an equal emphasis on several values which may be associated with the issue, and views those values as important. If the values which are associated with an issue are not viewed as being equal, this model predicts that reasoning about that issue will be simple. Because high RWAs may rate the values associated with their authoritarian attitudes much higher than they rate other values, it is possible that they would reason less complexly about issues invoking these values than about other issues, and less complexly than individuals who rate these values more equally with other values.

Findings from research in political psychology are consistent with the possibility that high RWAs may reason less complexly than low RWAs. In a number of studies using such diverse samples as U.S. senators (Tetlock, 1983b), members of the British House of Commons (Tetlock, 1984), and United States Supreme Court justices (Tetlock et al., 1985) Tetlock and his colleagues have shown that conservatives generally have lower complexity scores than those whose political position is more moderate or liberal.

Although Tetlock and his colleagues have also found that conservatives are not simpler than those whose beliefs fall to the extreme left of the political spectrum, this is consistent with the possibility that high RWAs are less complex, since this conceptualization of authoritarianism involves only authoritarianism of the right and as previously noted, low scores on the RWA scale do not indicate extreme left-wing beliefs.

As suggested previously, the content of the material may influence the relationship between RWA and integrative complexity. This may also have been a factor in these studies, since the political opinions scored by Tetlock (1983b, 1984) could involve attitudes towards conventionalism, and the judicial opinions scored by Tetlock et al. (1985) could involve attitudes of both conventionalism and authoritarian aggression.

Altemeyer (1988) has provided evidence that supporters of the Progressive Conservative party tended to score higher on the RWA scale than did supporters of either the Liberal or New Democratic parties in Canada. Further, a number of studies have indicated that both party leaders (Suedfeld et al., 1990) and supporters (Russell & Sandilands, 1973) of the Conservative party were less complex than those of the Liberal party (or, in the Russell & Sandilands study, the supporters of the New Democratic Party). Similarly, although his main focus was on political views rather than party affiliation, Tetlock (1983b) reported that American Republicans tended to be less complex than Democrats, and Altemeyer (1988) also found that Republicans scored

higher on the RWA scale than did Democrats. Thus, it seems reasonable that high RWAs may also have lower complexity scores. Caution is urged, however, since these studies did not directly examine a relationship between complexity and RWA.

There are several studies which have directly investigated the relationship between RWA and integrative complexity (Hunsberger et al., 1988; Lea et al., 1988). These studies reported correlations of complexity with RWA ranging from $-.22$ to $.11$ for paragraph completion tasks which involved such content areas as traditional religion (e.g., "When someone challenges my beliefs about God..."), existential issues (e.g., "When I am trying to decide whether to do something that may be morally wrong..."), and nonreligious matters (e.g., "When someone disagrees with me..."). However, because neither of these studies scored the complexity of passages focusing on issues which would draw directly upon those attitudes which are characteristic of high authoritarians, these studies can not conclusively clarify the relationship between authoritarianism and complexity if it is indeed a content specific relationship, as proposed here. On a more promising note, Pratt, Hunsberger, Pancer and Roth (in press) reported a significant correlation of $-.29$ between RWA and integrative complexity of religious reasoning.

A number of studies (e.g., Hunsberger et al., 1992a; Hunsberger et al., 1992b; Peterson & Scott, 1975) have demonstrated that level of complexity is somewhat content-specific. DeVries and Walker (1987) found that

complexity of a discussion about capital punishment was related to attitude towards capital punishment more strongly than complexity of discussion in response to standard paragraph completion stems, even though the complexity scores of the two types of materials were themselves correlated. These findings suggest that, because integrative complexity is more related to a given attitude when it is based on a discussion involving that attitude, it is important to consider the content area when evaluating integrative complexity. Since integrative complexity of thought about an issue is related to one's attitude toward that issue, it is important to take content area into account when evaluating differences in cognitive style between high and low RWAs. If high and low RWAs were exposed to different patterns of learning about attitudes involving authoritarian aggression, conventionalism and authoritarian submission, then it may be these specific content areas across which their cognitive styles differ.

Prod Effects on Complexity

It has been shown that an individual, with support, is often able to reason at a level which is more complex than that which is initially revealed (Hunsberger et al., 1992a; Hunsberger, 1992b). According to the cognitive miser model (Fiske & Taylor, 1991), the capacity for cognitive processing is limited, so people often adopt shortcuts for solving problems. People may provide the simplest responses which they think are adequate in a given situation. This may result in a less complex statement than one is capable of,

simply because a more complex response is not required. Research has indicated that, when encouraged, people may produce more complex responses than when they have not been encouraged. This encouragement has taken the form of either an explanation of what "complexity of thinking" is or, in an interview situation, prod questions (Hunsberger et al., 1992a; Hunsberger et al., 1992b). Participants were prodded to higher levels of complexity using questions which asked whether other alternatives to the given solution are possible, whether there is any compromise among the various alternatives, and whether there is some kind of overall system or philosophy that links the various alternatives.

This difference between the complexity of the initially elicited responses, and that which individuals are finally capable of, suggests that the difference between the inclination and ability of high and low RWAs might illuminate important differences in their cognitive styles. It could be expected that low RWAs would respond to prods to increase their reasoning complexity with responses of greater complexity on all issues, because they are expected to have the knowledge available to produce more complex responses than those which are initially given. For high RWAs, there should be no difference in the increase in integrative complexity from that of low RWAs on issues which do not involve authoritarian attitudes, such as those used in the above studies, since it is thought that high and low RWAs experienced similar learning patterns for these types of issues. However, for authoritarian dilemmas, the level of

complexity of low RWAs is expected to benefit more than that of high RWAs from prods to increase complexity. Because authoritarian attitudes may have been learned in a different manner than other attitudes, one which discouraged flexibility and the consideration of other alternatives, it is likely that high RWAs do not have the resources to reason complexly about specifically authoritarian topics. Hunsberger et al. (1992b) did not find any difference in the increase in complexity between high and low RWAs for a variety of domains. However, the domains examined in this study did not involve authoritarian content. In the present study, to evaluate the possibility that high and low RWAs may respond differently to prods to increase complexity, individuals were prodded with questions intended to increase the differentiation and integration of their solutions to the dilemmas. It was expected that high RWAs would show less increase in response to prods for higher complexity when discussing authoritarian issues, than either high RWAs for nonauthoritarian issues or low RWAs discussing either type of issue.

Summary

The present study examined the possibility that patterns of cognitive style differ between high and low RWAs. Based on a social learning model of the origins of RWA, it has been proposed that high RWAs are exposed to different patterns of learning for those attitudes which are associated with authoritarianism. That is, for attitudes involving submission to authority, conventionalism and authoritarian aggression, it has been suggested that high

RWAs have been encouraged to accept the views of their parents and other authority figures, and not to question the judgement or reasoning of these individuals. For this reason it was expected that, for issues which directly tap these attitudes, high RWAs would display different cognitive styles from low RWAs. They were expected to be less able to consider a variety of possible alternatives when reasoning about such issues, and to be less able to integrate alternatives. Further, it was anticipated that, as a result of these different learning patterns, high RWAs would also be less able to increase their complexity of reasoning on these "authoritarian" issues than they were for other issues or than low RWAs were able to do for these issues.

In the present study, high and low RWAs responded, in a structured interview, to a number of dilemmas. These dilemmas included several which involve authoritarian attitudes (i.e., submission to authority, conventionalism, and authoritarian aggression) as well as several for which the attitudes of high RWAs do not differ significantly from those of low RWAs. Participants were also asked three "prodding" questions intended to increase the differentiation and integration revealed in their initial responses.

The responses were scored for integrative complexity. While no differences in the integrative complexity scores for high and low RWAs were anticipated for the dilemmas which did not involve authoritarian attitudes, on those dilemmas which do involve authoritarian attitudes, high RWAs were expected to reason less complexly than low RWAs both before and after prods

to increase their complexity.

Hypotheses

1. As has been found in the past (Hunsberger et al., 1992b), it was hypothesized that there would be no difference between the integrative complexity of high and low RWAs when they consider issues which are not directly associated with authoritarian attitudes (i.e., issues for which the attitudes of high RWAs do not differ markedly from those of low RWAs).
2. Consistent with the findings of Hunsberger and his colleagues (1992a), for those issues which are not related to authoritarian attitudes, both high and low RWAs were expected to benefit equally from prod questions designed to increase the integrative complexity of their responses.
3. For those issues which are related to authoritarian attitudes, the integrative complexity level of high RWAs was expected to be lower than that of low RWAs.
4. For those issues which are related to authoritarian attitudes, the increase in integrative complexity in response to prod questions was expected to be greater among low RWAs than among high RWAs. The increase among low RWAs in response to prods for these issues was not expected to differ from

that for issues not involving authoritarian attitudes. The increase among high RWAs was expected to be lower than that among high RWAs in response to prods for issues which did not involve authoritarian attitudes.

Method

Participants

Participants included 372 male and female introductory psychology students at Wilfrid Laurier University. These students were contacted during regular class time to complete a survey about "student attitudes." Students were asked to indicate on a sign-up sheet their survey number, name and telephone number in order that they could be contacted, if selected, for a follow-up interview.

Of 58 students who were contacted by telephone to participate in a follow-up study, based on their RWA scores from the initial survey, 52 consented to participate. The reason given by most students who did not participate was that they were too busy. These students were selected on the basis of their RWA scores. Twenty-five (12 male and 13 female) scored within the top quartile and 27 (12 male and 15 female) scored in the bottom quartile. These became the high and low groups, respectively. Participation was voluntary.

Materials

The survey used in the initial testing session is included in Appendix E.

In addition to several background items, this survey included the RWA scale (Altemeyer, 1988).

The RWA scale contains 30 items which measure the tendency to agree with statements involving submission to authority, authoritarian conventionalism and authoritarian aggression. Participants respond to these items on a seven-point scale, ranging from strongly disagree to strongly agree. Altemeyer (1981) provides abundant evidence of the reliability and validity of this measure. Cronbach's alpha is typically above .85 and the inter-item correlations range between .15 to .21 in student populations (Altemeyer, 1988) which, as Altemeyer (1981) notes, is considerably higher than that of other scales which have been used to measure authoritarianism. Evidence has also indicated that the scale provides a valid measure of authoritarianism (Altemeyer, 1981). Factor analysis showed that nearly all of the items loaded highly on a single factor, which accounted for 23% of the scale's variance. As Altemeyer (1981) notes, this indicates that most of the common variability among the items comes from just one thing, which he suggests is the covariation of the three authoritarian attitudinal clusters, authoritarian submission, conventionalism and authoritarian aggression. Scores on this scale have also been shown to be related to factors which would be expected to vary with RWA, such as orientation to authority, willingness to punish lawbreakers, continued acceptance of the home religion, and preference for right-wing political parties.

The second part of this study consisted of participants' responses to six dilemmas in a follow-up interview. A pilot study was conducted to ensure that the attitudes of high and low RWAs towards the authoritarian vignettes used in the interview did differ, and that their attitudes towards the nonauthoritarian vignettes did not differ. In this pilot study, a different group of participants from those used in the interviews rated twelve vignettes on a number of issues (see Appendix A). Based on the attitudes of high and low RWAs, three authoritarian vignettes and three nonauthoritarian vignettes were selected. The nonauthoritarian vignettes selected were those vignettes on which the personal attitude ratings given by high and low RWAs did not differ significantly and which did not appear to contain issues which involve attitudes which are characteristic of RWAs. The authoritarian vignettes were selected such that the content of each seemed to reflect one of the three attitudes which are characteristic of RWAs. In addition, the personal attitudes of high and low RWAs differed significantly on these issues. The ratings given by high and low RWAs on a number of other measures, including familiarity, importance and the knowledge of parental opinion were compared. Of these 42 comparisons, only two were found to be significant¹, suggesting that there are not great differences between high and low RWAs in the awareness of the vignettes used in this study.

¹For the vignette involving minority rights, the rating of low RWAs for the importance to society was higher than that given by high RWAs, and for the vignette involving the student appearance and dress code, low RWAs indicated that they had thought about the issue more.

The dilemmas and interview schedule for the main study are included in Appendix F. Three of these dilemmas concerned issues which are thought to tap authoritarian attitudes: submission (obedience to a government ruling to outlaw Communism), conventionalism (student appearance and behaviour) and aggression (police using force to control minority protesters). The remaining three tapped "neutral" (nonauthoritarian) content: allocation of a scholarship fund, need for water in North Africa and a conflict between business and the environment. For each dilemma, participants first responded on a seven-point scale to a number of general questions about the issue involved in the vignette. These included how much they had thought about the issue, how important they thought the issue was, how much they had discussed similar issues with their parents, and how certain they were of their parents' stand on the issue. Then participants were asked about their solution to the dilemma (BASE) and responded to three prod questions intended to elicit increased complexity of reasoning about the issue. The first prod question attempted to elicit greater differentiation by encouraging participants to consider other alternatives to their own solution (DIFF). The second and third prod questions were intended to encourage integration of the various perspectives or dimensions (INT1 and INT2). A final question, not relevant to the present study, examined the participants' perceptions of how "good" they thought their solutions were in the given situation.

Scoring Integrative Complexity

Complexity scoring was based on the guidelines set out by Baker-Brown, Ballard, Bluck, deVries, Suedfeld and Tetlock (1992). Past research using this technique has indicated that this measure is both reliable and valid. In the past, scorers who are familiar with this technique have been able to achieve inter-rater reliabilities above .80 (Gardiner & Schroder, 1972). Gardiner and Schroder (1972) note that complexity scores generated by paragraph completions related to other measures of complexity as well as intellectual flexibility, openness and differentiation.

Based on the degree of differentiation and integration, each response is allocated a score ranging from one to seven. A score of 1 is given when there is no differentiation or integration. The response would acknowledge only one valid way of approaching the problem or idea. A score of 3 indicates that there is moderate to high differentiation but no integration. Several different solutions or ways of looking at the problem are acknowledged, but no connections are drawn between the various dimensions or perspectives. A score of 5 indicates that there is differentiation as well as low to moderate integration. Two or more dimensions or perspectives to the problem are accepted and links are seen between them. A score of 7 indicates that there is both high differentiation and high integration. A variety of dimensions or perspectives are recognized and are linked in complex ways. Scores of 2, 4, and 6 are transition points between these scores.

Procedure

In the first part of the study, participants were approached during regular introductory psychology class time to complete a survey of student attitudes.

This survey was included among a number of other questionnaires which are not relevant for the present study. While the survey was being completed, a sign-up sheet was circulated for students to record their names, student numbers and phone numbers. Completion of the survey took approximately 15 minutes. The instructions are included in Appendix G.

Some participants whose scores were either in the top or bottom quarter of RWA scores in the survey were contacted by telephone to participate in a follow-up study. The high RWA group involved those whose RWA scores were above 154 and the low RWA group involved those whose RWA scores were below 104² Because three classes were involved in the pretesting for this study, and because it was not possible to test all the classes within a brief span of time, it was not possible to interview only those students with the most extreme RWA scores. A telephone list was compiled for each class as the class was pretested which consisted of all of those students whose scores fell within either the top or bottom quarter of the distribution for that class list. In order to ensure that the interviewer was unaware of the level of RWA of each participant, the names were randomized on the list. These telephone lists were used one by one as each class was tested. As a result, the majority of the students from the first and second class, who met the selection criteria, were

²The mean RWA score was 127.54.

contacted for the study, with only a few students being contacted from the third class. The telephone contact script is included in Appendix H. Participants were told that this study would involve a discussion of their solutions to a number of social conflicts. If they were interested in participating, a mutually convenient time was arranged for an interview.

In order to control for order effects, 3 different orders of presentation of the dilemmas were used in the interviews. The interviews were tape recorded for later transcription. The interview format was similar to that used by Hunsberger et al. (1992).

Results

Manipulation Check

T-tests were used to test for differences between the responses of high and low RWAs to each of the four questions which measured awareness of the issues and familiarity with parental views on the issues. These questions included "how much have you thought about issues like this one", "how important do you consider this issue to be", "how much have you discussed this issue with your parents" and "how certain are you of your parents' stand on this issue." With two exceptions, there were no significant differences in the ratings of high and low RWAs for any of these questions for any of the vignettes. High RWAs were more certain of the opinion of their parents than low RWAs for the vignette involving the student appearance and dress code. Also, for this vignette, the rating given by high RWAs for the importance of the

issue was significantly higher than that given by low RWAs. The results of these analyses are included in Appendix J. Because there were few differences between the ratings of high and low RWAs, it is likely that these factors alone can not explain any differences between the integrative complexity scores of high and low RWAs.

Scoring Integrative Complexity

All of the transcribed responses were scored by a principal scorer who was unfamiliar with the purpose and hypotheses of the study. Each of the responses to the prod questions for each vignette was scored separately for the highest level of complexity demonstrated. A "carry-down rule" was used, such that an individual's prior responses on a given vignette were taken into account for each of the prod questions. That is, if an individual was able to articulate several perspectives for an issue when asked to solve the dilemma, he or she would be given credit for having articulated those perspectives in the later prod questions, even if they were not restated. In this case, the individual would then receive at least a score of three for each of the prod questions for that vignette unless he or she later said something which dismissed one of the perspectives and so lowered the complexity score. A second scorer who was familiar with the coding procedure scored the responses from 22 participants. This scorer was also unaware of the purpose of the study. The overall correlation between these scorers was .88. Reliability scores for each vignette ranged from .67 for the vignette involving the conflict between business and

the environment, to .87 for the vignette involving the scholarship fund. For the prod questions, the lowest reliability was .55, for BASE, and the highest was .79, for INT1.

Gender Effects

T-tests examined possible differences in integrative complexity of the responses of male and female students, for each of the four prod questions for each vignette. Of the 24 comparisons which were done, only two were found to be significant. For the vignette involving the communist posse, females were found to reason more complexly than males with respect to the INT2 question, $t(48) = -2.20$, $p < .05$, and on the vignette involving minority protesters, males were found to reason more complexly than females in response to the BASE question, $t(50) = 2.30$, $p < .05$. Because there were no systematic differences between the levels of integrative complexity of males and females, and because gender was found to not interact with a variety of other variables, the data for the male and female participants were combined in all further analyses.

Mean Integrative Complexity Scores for Authoritarian and Nonauthoritarian Vignettes

For each of the prod questions, a mean integrative complexity score was computed across the nonauthoritarian vignettes and across the authoritarian vignettes. These means, for both high and low RWAs, are displayed in Figure 1. (Mean integrative complexity scores broken down for each vignette are

included in Appendix K.) Correlations among the mean integrative complexity scores for each of the vignettes are displayed in Table 1.

Table 1: Correlations of Integrative Complexity Scores for Each Vignette

	Skin Heads	Minority Groups	Scholarship Fund	N. Africa Channel	Business vs Env't
Communism Posse	.385*	.134	.079	.309*	.330*
Skin Heads		.431*	.105	.343*	.409*
Minority Groups			.289*	.323*	.065
Scholarship Fund				.139	.029
N. Africa Channel					.298*

* $p < .05$

While the correlations among the authoritarian and among the nonauthoritarian vignettes are relatively weak, it should be noted that all of the correlations were in a positive direction. In spite of these moderate correlations, the scores were combined to generate one overall mean which was thought to be more representative of the participant's thinking about authoritarian and nonauthoritarian issues, more generally, rather than thinking about specific issues.

Prod Effects for Nonauthoritarian Vignettes

Table 2 displays the mean integrative complexity scores of the

nonauthoritarian vignettes for each prod question. To test Hypothesis 2, these means were compared in a mixed model analysis of variance. In this analysis, prod question was a within variable and RWA was a between variable. This analysis indicated that, as predicted, the main effect for prod was significant, $F(3,141) = 152.27$, $p < .001$. A post hoc analysis using the Newman-Keuls range test indicated that the mean integrative complexity score for the BASE response was significantly lower than that for the other prod questions, $p < .05$, and also that the average complexity score for INT2 was significantly higher than for the other prod questions, BASE, DIFF and INT1. Neither the main effect for RWA, $F(1,47) = 2.53$, $p = .118$, nor the interaction between prod and RWA, $F(3,141) = 2.35$, $p = .075$, was found to be significant.

Table 2: Mean Integrative Complexity Scores of Nonauthoritarian Vignettes by Prod Question

Prod Question	Mean I.C. Score	
	Low RWA	High RWA
BASE	2.1	1.78
DIFF	2.75	2.65
INT1	2.80	2.73
INT2	3.00	2.85

RWA and Integrative Complexity

The BASE integrative complexity scores were analyzed using a two (RWA) by two (type of vignette) analysis of variance. RWA was a between

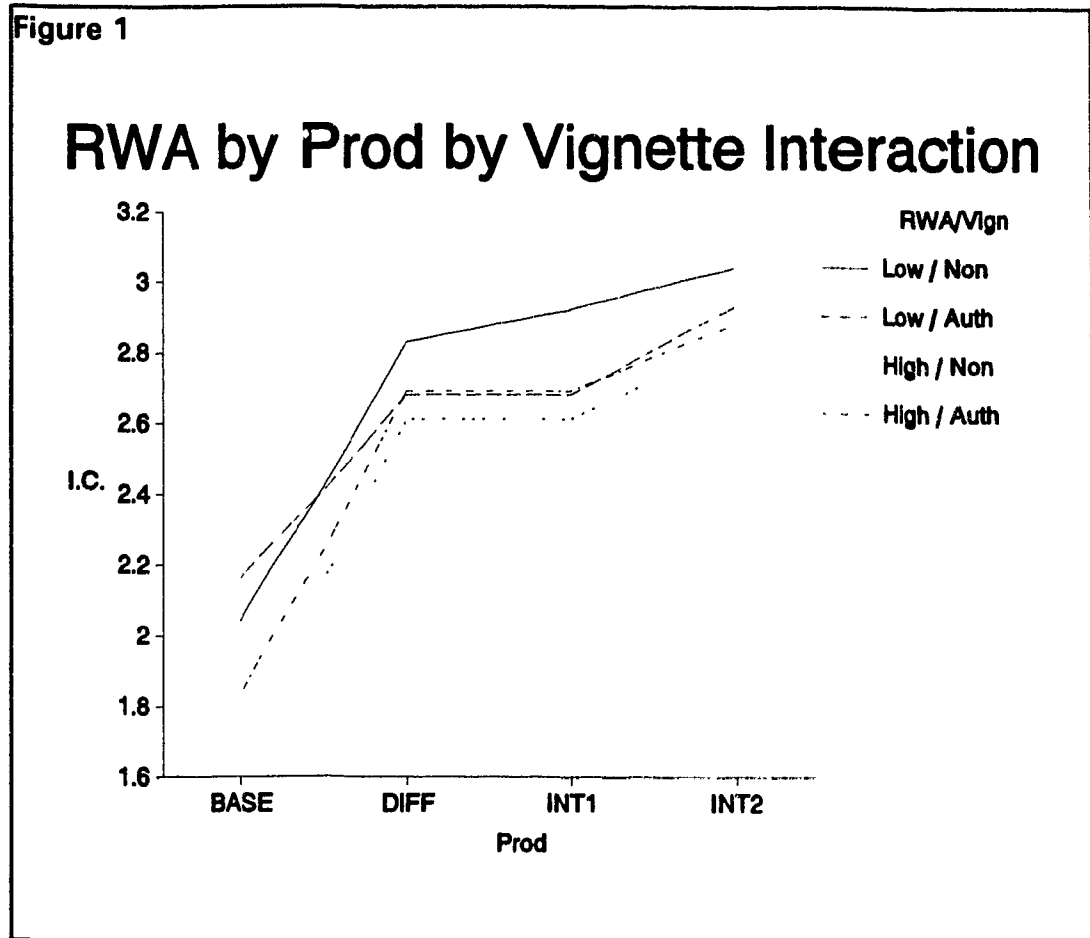
factor while vignette was a within factor. This analysis revealed a significant main effect for RWA, $F(1,47) = 4.63$, $p < .05$. Neither the main effect for type of vignette, $F(1,47) = 1.42$, $p > .2$, nor the interaction between RWA and vignette, $F(1,47) = .02$, $p > .9$, was found to be significant. Because of the failure to find a significant interaction, it was not necessary to test the levels of complexity for high and low RWAs for each of the vignette types separately.

In order to test the fourth hypothesis, a 2 (level of RWA) by 2 (vignette type) by 4 (prod) mixed model analysis of variance examined integrative complexity scores. Level of RWA was a between factor, and vignette and prod were within factors. The complete results of this analysis are shown in Appendix L. This analysis revealed a significant main effect for prod, $F(3,141) = 152.27$, $p < .001$. A post hoc comparison using the Newman-Keuls range test indicated that the mean integrative complexity score for the BASE was significantly lower than each of the complexity scores for the other prod questions, $p < .05$, and that the mean integrative complexity score for INT2 was significantly higher than that for each of the other prod questions, $p < .05$. The integrative complexity scores for DIFF did not significantly differ from those for INT1.

The main effect for RWA, $F(1,47) = 2.50$, $p > .1$, the main effect for vignette, $F(1,47) = .01$, $p > .9$, and the interaction of RWA with vignette type, $F(1,47) = 2.42$, $p > .1$, were found not to be significant. The interaction of RWA with prod approached significance, $F(3,141) = 2.35$, $p = .075$.

The RWA by vignette by prod interaction also approached significance, $F(3,141) = 2.38$, $p = .072$. Figure 1 depicts this interaction.

This triple interaction was examined more closely by analyzing the two-way interaction for each of the high RWA and the low RWA groups. These analyses indicated that, for low RWAs, the interaction between vignette type and prod question was significant, $F(3,72) = 4.65$, $p < .01$, whereas for high RWAs, the interaction between vignette type and prod question was not significant, $F(3,69) = .26$, $p > .8$. This suggests that while the high RWAs benefitted almost equally from the prod questions on the two types of vignettes, the low RWAs benefitted more from the prod questions on the nonauthoritarian vignettes than on the authoritarian vignettes.



Discussion

Findings Relevant to Hypotheses

Hypotheses 1 and 3

It was expected that, consistent with past findings, there would be no difference between the integrative complexity scores of high and low RWAs when discussing issues which do not involve authoritarian content and that there would be a difference between the two groups when discussing issues which do involve authoritarian content. However, the comparison of the integrative complexity scores for the initial solutions to all vignettes indicated

vignettes indicated that the difference between high and low RWAs was significant, ($p < .05$), with low RWA responses tending to be more complex than high RWA responses, overall. Because the interaction between RWA and vignette type was not found to be significant, it can not be concluded that the high and low RWAs were responding differently to the two types of vignettes.

The difference in the integrative complexity scores of the high and low RWAs suggests that RWA may have some relationship to the complexity of thinking about *all* issues. Although this conclusion is inconsistent with past studies which have failed to reveal evidence of a relationship between integrative complexity and RWA, it may shed some light on those few cases in which the two have been found to be negatively related (e.g., Hunsberger et al., 1988; Lea et al., 1988; Pratt et al., in press). The variance in the integrative complexity scores was high. For the mean BASE score of the nonauthoritarian vignettes, the standard deviation was .58 and for the authoritarian vignettes, it was .64. This large variability, coupled with the limited range of integrative complexity scores requires considerable differences in mean scores in order for significance to be achieved.

Hypothesis 2

It was expected that, in agreement with past research, both high and low RWAs would benefit from prod questions intended to increase the levels of integrative complexity. The results were supportive of this conclusion. Higher levels of integrative complexity were apparent when participants were prodded

with questions to encourage them to consider other alternatives or to integrate them, and because RWA did not interact with prod question, it can be concluded that the prod questions had a similar effect for high and low RWAs.

Hypothesis 4

It was expected that for authoritarian vignettes, high RWAs would benefit less from prod questions intended to increase their complexity than low RWAs and than high RWAs on the nonauthoritarian issues. Although the 3-way interaction approached significance, the pattern of means was not consistent with this hypothesis. Rather, the simple effects analysis indicated that high RWAs benefited equally from the prod questions on both the authoritarian and nonauthoritarian vignettes, and the low RWAs appeared to benefit less from the prod questions for authoritarian vignettes than for the nonauthoritarian vignettes.

Implications

Based on the present findings, it seems unlikely that high RWAs develop characteristic ways of thinking in certain content areas as they are developing authoritarian attitudes in those areas. Rather, the present findings revealed that integrative complexity of thinking about issues involving authoritarian attitudes is very similar to that for issues which do not involve authoritarian attitudes, for both high and low RWAs. An examination of the correlations displayed in Table 2 supports this conclusion. The correlations among complexity of the authoritarian issues or among the complexity of the nonauthoritarian issues did

not differ greatly from the correlations between the authoritarian and the nonauthoritarian issues. This suggests that the level of integrative complexity with which issues are reasoned about is more dependant on the actual topic involved than on some more general typological characterization which may apply to a much wider variety of topics, such as the authoritarian classification used in the present study.

Rather than emphasizing the importance of content of the material being considered, the present findings point to a general relationship between RWA and integrative complexity across topic. In addition to the finding that the difference between the BASE scores of high and low RWAs was significant, an examination of the raw means for each vignette indicates that, for their initial solutions, the means for low RWAs were consistently higher than those of high RWAs. (See Table 3)

Table 3: Mean BASE Integrative Complexity Scores for High and Low RWAs for Each Vignette

Vignette	BASE I.C. Score	
	Low RWA	High RWA
Communism Posse	2.16	1.75
Skin Heads	2.04	1.75
Minority Groups	2.28	2.00
Scholarship Fund	1.72	1.63
N. Africa Channel	2.28	1.75
Business vs Environment	2.12	1.83

This tendency might suggest that, rather than being associated with a certain cognitive style for only specific content areas, RWA may be more generally associated with a "simpler" cognitive style in a variety of different content areas. The learning pattern associated with the development of Right-Wing Authoritarian attitudes might lead to a general inclination to be satisfied with one's initial reaction to a problem, rather than to analyze it in depth. Although the initial, unprodded responses of high RWAs received lower integrative complexity scores than did those of low RWAs, the high RWAs benefitted more from questions intended to increase their integrative complexity scores. This suggests that it is inclination and not capacity which leads to this initial difference. This could reflect a difference in cognitive style between high and low RWAs.

This suggested inclination to be satisfied with one's initial solution in social situations might be adaptive for high RWAs, given the hypothesized origins of this personality type. Attitudes of submission to authority, conventionalism, and authoritarian aggression are thought to have been reinforced among these individuals. Because some of the resulting opinions may be in conflict with broader societal values, it may arouse less conflict in these individuals to simply accept their initial reactions, and not consider too closely the implications of their opinions. Because this response could be used in a variety of content areas, it is possible that high RWAs simply employ it as a general approach to conflicts or disagreements in social situations. This is

consistent with Altemeyer's (1988) finding that high RWAs were likely to agree that free speech should be limited. This reaction from highs could be the result of accepting their initial reaction, and not considering the possible outcomes of the situation. This reaction would, to them, seem consistent with societal norms of obeying the government, even though it is in direct conflict with a fundamental right and eventually, this could result in a limitation of one's own rights.

Limitations

It should be cautioned, however, that the evidence supporting the relationship between cognitive style and RWA is limited. As noted previously, past studies which have examined both integrative complexity and RWA (Hunsberger et al., 1988; Lea et al., 1988; Pratt et al., in press) have found only sporadic evidence of a relationship between the two. Further, the difference in the present study was found only for the BASE scores. In spite of this, however, these trends do suggest that the relationship can not be dismissed entirely.

Certain aspects of the present study may have interfered with finding the hypothesized relationships. Because students were discussing their solutions with an interviewer, the interview was not completely anonymous. A number of researchers have indicated that people often modify what they say or do to please their audience (Meyers, 1987; Tetlock, 1993a). This being the case, high RWA students may have moderated their responses in order to not appear

closed-minded or prejudiced. As a result, high RWAs may have been forced to reason more complexly about their responses than they might otherwise have been inclined to do.

The tendency for high RWAs to benefit from the prod questions in this study may be related to the submissive nature of this personality type. It is possible that when a person in a position of authority, that is, the graduate student who interviewed them, asks them if they can consider other alternatives or integrate them in some way, high RWAs may try harder than low RWAs out of a desire to obey this authority figure. Future research could evaluate this possibility by either measuring their perceptions of the interviewer or by manipulating the status of the interviewer. This has interesting implications since it is possible that by merely having an authority figure ask them to consider other alternatives to their solutions, high RWAs may be very willing to comply and come up with other possible solutions, and yet, it is also possible that some of these alternatives may not be consistent with their authoritarian attitudes. Yet cognitive dissonance (Festinger, 1957) would predict that a shift in attitude could follow this statement of other possible solutions. Is it possible that by merely having an authority figure ask high RWAs to come up with alternatives, that their RWA attitudes could be moderated?

A second aspect which may have contributed to the weak relationship between RWA and integrative complexity is the common experience of

university students, and the fact that they are all attending an institution which encourages the acceptance of new ideas. In such an environment, high RWAs may be unable to avoid being exposed to ideas which differ from their own. This type of environment may reward individual thinking, thus diminishing the patterns which had previously been rewarded. It is possible that even though students may hold authoritarian attitudes, their patterns of thinking may have been modified by exposure to a liberal, intellectual environment. In support of this, Altemeyer (1988) reports that the RWA scores of one group of students decreased during their four years in university. This suggests that being in such an institution may modify one's attitudes. It is possible that an early step in that process of attitude change could be a change in the way that all types of issues are thought about. Also, if there are differences among high RWAs in their openness to new information, it is possible that only those who are somewhat open to new information chose to come to university. Perhaps high RWA individuals can more effectively limit their contact with ideas which conflict with their authoritarian attitudes after they are no longer a part of a university environment. Research examining RWA and complexity among a nonstudent sample could allow an evaluation of the possibility that attendance at a university could modify one's attitudes as well as their complexity of reasoning about the objects of those attitudes.

The scoring technique which was used could also have obscured differences in the cognitive styles of high and low RWAs. Because the

integrative complexity scoring technique takes into account both perspectives and dimensions, it is possible that high and low RWAs could have received similar scores for very different responses. That is, a high RWA who was able to articulate several independent reasons for believing that minority protests should be banned could receive the same score as a low RWA who was able to recognize that there were both benefits and drawbacks to allowing minority groups to protest without limitation. As a result, even if high RWAs were more narrow in their reasoning, in the sense of considering alternative views, these differences might not be illuminated clearly with the integrative complexity technique.

It is also possible that the varied context of the vignettes may have obscured differences between high and low RWAs. Recent studies (Hunsberger et al., 1992) have indicated that overall some content areas are thought about more complexly than others. Although it was established that the vignettes were similar in terms of their familiarity, the authoritarian and nonauthoritarian vignettes were not matched in terms of the topics involved. It is possible that differences in the topics discussed may have had an influence on integrative complexity which obscured the influence of RWA.

Another question raised by the present study is the role of social learning theory in the development of RWA. Because the difference in the integrative complexity of high and low RWAs did not seem to depend on the authoritarian versus nonauthoritarian nature of the vignettes, it is not possible to say that the

differences in cognitive style are due to differences in learning in these areas. However, it is possible that differences learned in these areas may have been transferred to problem solving, more generally, over time. An examination of the role of social learning theory in the development of adult attitudes, in general, could contribute to the understanding of this personality type.

In relation to this issue, if the development of RWA is thought to have taken place as a result of reward and punishment patterns experienced in childhood, it may prove useful to link this research to the parenting styles described by Baumrind (1968). This could contribute both to a further understanding of the consequences of these parenting styles and also to an increased knowledge of the origins of authoritarianism.

Summary

While the present study was unable to resolve the question of whether authoritarianism is related to cognitive style, it was able to provide further knowledge in this area. The present findings indicated that the cognitive style of high RWAs does not seem to depend on whether the issue involves authoritarian attitudes. Rather, their cognitive style seemed to differ slightly but consistently from that of low RWAs across a variety of social issues. That is not to say, however, that content did not have an impact on cognitive style. Instead, that impact was similar for high and low RWAs.

Finally, the difference between the integrative complexity of high and low RWAs would seem to apply to their inclination rather than to their abilities.

When prodded for greater levels of complexity, the difference between the integrative complexity scores of high and low RWAs was diminished somewhat, as shown by a borderline interaction among RWA, prod question and vignette type. This suggests that although high and low RWAs have the knowledge and ability to reason with similar levels of complexity, high RWAs may choose to present a simpler solution unless urged to say more. This may be a result of having learned to not consider a variety of alternatives when confronted with controversial issues.

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Appendix A

Pilot Study

Pilot Study

In order to ensure that high and low authoritarians did have different attitudes to the authoritarian issues and not to the nonauthoritarian issues that would be discussed in the interviews, it was necessary to first test a number of vignettes. A sample of students separate from that which would be used to test the main hypotheses was asked to respond to several questions for a number of vignettes. In addition to providing an evaluation of the attitudes of high and low RWAs, this pilot study also allowed an examination of a number of other factors which could influence integrative complexity of reasoning about the issues.

Participants

Participants in this pilot study were 20 male and 52 female introductory psychology students.

Materials

The survey consisted of three parts. The first part of this survey was the RWA scale.

The second part of the survey consisted of a number of background items concerning sex, age and major area of study.

The final part of this survey consisted of 12 vignettes. Five of these vignettes involved issues which it was felt did not tap authoritarian attitudes. Seven of the vignettes involved issues which could tap authoritarian attitudes. Of these seven vignettes, two involved authoritarian aggression, two involved

authoritarian submission and three involved conventionalism. For each vignette, students were asked, on a seven-point scale ranging from "not at all" to "a great deal", to rate how much they had heard about and thought about the issue, how important they thought the issue to be to themselves and to society, how much they had discussed the issue with their parents, how certain they were of their parents' stand on the issue and how much they thought they would agree with their parents' stand. Finally, students were asked to provide ratings of their own stand on the issue, and what they thought that of their parents and Canadians in general would be. The survey is shown in Appendix B.

Procedure

The students were approached during regular class time and asked to voluntarily complete a survey. It was explained that their responses would help to evaluate the usefulness of the vignettes for another study, but they were not told the details of that study. The instructions to the class are shown in Appendix C. Half of the class responded to the vignettes in one order, while the other half responded to them in reverse order. Completion of the survey took between 30 and 40 minutes.

Results and Discussion

Responses were compared for students scoring in the top and bottom thirds of the RWA scale. The low RWAs were those scoring below 110, while the high RWAs were those scoring above 157. Table A-1 shows the

comparison between the attitudes of high and low RWAs for each vignette. T-tests compared the mean ratings of high and low RWAs for each issue.

Table A-1: Comparison of Attitudes of High and Low RWAs Towards Each of the Issues

Dilemma	Mean (n)		t	prob.
	Low RWA	High RWA		
African Channel (nonauthoritarian)	4.59 (17)	4.40 (20)	.30	.768
Business vs Environment (nonauthoritarian)	5.28 (18)	5.00 (18)	.47	.639
Scholarship Fund (nonauthoritarian)	5.72 (18)	4.82 (17)	1.52	.14
Minority Protesters (authoritarian-agg)	3.00 (17)	5.15 (20)	-4.12	.000
Appearance Code (authoritarian-conv)	2.11 (18)	3.94 (16)	-3.16	.004
Communism Posse (authoritarian-subm)	1.64 (17)	4.31 (16)	-5.61	.000
Genetic Choice (nonauthoritarian)	5.7 (17)	6.7 (20)	-2.05	.055
Search for Parents (nonauthoritarian)	2.00 (18)	3.06 (18)	-2.49	.018
Criminal Reform (authoritarian-agg)	3.95 (19)	5.72 (18)	-3.01	.005
Conscription (authoritarian-subm)	5.75 (16)	5.10 (19)	.98	.33
Disobedient Son (authoritarian-conv)	3.18 (17)	3.60 (15)	-.73	.473
Censorship (authoritarian-conv)	5.69 (16)	4.58 (19)	1.96	.059

Based on these analyses, six vignettes were selected. Those vignettes for which the attitudes of high and low RWAs differed very little and thus apparently did not involve "authoritarian" content, were chosen as the

nonauthoritarian vignettes. These were the vignettes involving the African channel, business versus the environment, and the scholarship fund. For the authoritarian vignettes, three vignettes for which the attitudes of high and low RWAs differed significantly were selected, such that each involved one of the three attitude clusters which are central to Right-Wing Authoritarianism. These were the vignettes involving minority protesters (aggression), the abolition of communism (submission) and the appearance code (conventionalism).

Mean ratings given for the other questions for these vignettes are included in Appendix D. For each of these variables, a 2 (level of RWA) by 2 (type of vignette) mixed model analysis of variance was used to evaluate the ratings given. The results of these analyses are included in Appendix D. None of the two-way interactions was found to be significant. This would indicate that if differences are found in the cognitive styles of high and low RWAs for one type of vignette and not for the other, these differences can not be accounted for by such factors as familiarity, importance or familiarity with parents' opinions.

Two significant main effects did emerge. The nonauthoritarian vignettes were rated as being more important personally than the authoritarian vignettes, $F(1,23) = 6.36, p < .05$. Students also thought they would be more likely to agree with the opinions of their parents on the nonauthoritarian vignettes than on the authoritarian vignettes, $F(1,22) = 29.32, p < .001$. These significant differences are not expected to have bearing on the main hypotheses since the differences were the same for high and low RWAs, and so, if these factors

influence integrative complexity, they are likely to effect both high and low RWAs similarly.

The main effect for the difference between the amount which high and low RWAs had discussed the issues with their parents approached significance, $F(1,22) = 4.13$, $p = .054$. The low RWAs indicated that they discussed the issues with their parents more than high RWAs.

In conclusion, while high and low RWAs seem to feel differently about the authoritarian vignettes and not about the nonauthoritarian vignettes, their ratings of a variety of other variables for these vignettes seem to be similar. As a result it is unlikely that any differences which emerge in the cognitive styles of high and low RWAs can be accounted for by these factors. Based on these considerations, these vignettes were chosen to be discussed in the interviews to test the main hypotheses.

Appendix B

Pilot Survey

KEY

Part I:

1 = RWA filler item

2-31 = RWA scale (reverse scoring for items 3, 5, 8, 9, 11, 12, 14, 16, 19, 21, 22, 25, 26, 28, 30)

Part II: Background Information

Part III:

Vignettes:

1, 8: Authoritarian Submission

2, 11, 12: Conventionalism

5, 10: Authoritarian Aggression

3,4,6,7,9: Nonauthoritarian issues

Attitudes Survey

In this survey, we are investigating the attitudes of university students. You will be asked to indicate the extent of your agreement with a variety of attitude statements.

All of your responses will be kept in the strictest confidence. Participation is voluntary. When you hand in your completed questionnaire, we will take that as your permission to include your responses in our data analyses.

The results of this investigation will be available from the investigator after its completion (January 31, 1992). If you have any questions or wish to obtain further information about the study, please contact the investigator or her supervisor:

Investigator: Susan Alisat
M.A. Psychology Student
Wilfrid Laurier University

Supervisor: Dr. Bruce Hunsberger
Psychology Department
Room 3-113, CTB
Wilfrid Laurier University
Telephone: (519)884-1970, ext. 2219

Part I: Social Attitudes

Below you will find a variety of statements related to different social attitudes. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please mark your opinion on the line to the left of each statement, according to the amount of your agreement or disagreement by using the following scale:

Write a **-4** in the space provided if you very strongly disagree with the statement.
Write a **-3** in the space provided if you strongly disagree with the statement.
Write a **-2** in the space provided if you moderately disagree with the statement.
Write a **-1** in the space provided if you slightly disagree with the statement.
Write a **+1** in the space provided if you slightly agree with the statement.
Write a **+2** in the space provided if you moderately agree with the statement.
Write a **+3** in the space provided if you strongly agree with the statement.
Write a **+4** in the space provided if you very strongly agree with the statement.

If you feel precisely neutral about an item, write "0" in the space provided.

You may find that you sometimes have different reactions to different parts of a statement. For example, you might very strongly disagree ("-4") with one idea in a statement, but slightly agree (" + 1") with another idea in the same item. When this happens, please combine your reactions, and write down how you feel "on balance" (that is, a "-3" in this example).

1. _____ The way things are going in this country, it's going to take a lot of "strong medicine" to straighten out the troublemakers, criminals and perverts.
2. _____ Our country will be great if we honor the ways of our forefathers, do what the authorities tell us to do, and get rid of the "rotten apples" who are running everything.
3. _____ It is wonderful that young people can protest anything they don't like, and act however they wish nowadays.
4. _____ It is always better to trust the judgement of the proper authorities in government and religion, than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds.
5. _____ People should pay less attention to the Bible and other old traditional forms of religious guidance, and instead develop their own personal standards of what is moral and immoral.
6. _____ What our country really needs, instead of more "civil rights," is a good stiff dose of law and order.
7. _____ Our country will be destroyed someday if we do not smash the perversions eating away at our moral fibre and traditional beliefs.
8. _____ The sooner we get rid of the traditional family structure, where the father is the head of the family and the children are taught to obey authority automatically, the better. The old-fashioned way has a lot wrong with it.
9. _____ There is nothing wrong with premarital sexual intercourse.

- | | |
|-----------------------------|--------------------------|
| -4 = very strongly disagree | +4 = very strongly agree |
| -3 = strongly disagree | +3 = strongly agree |
| -2 = moderately disagree | +2 = moderately agree |
| -1 = slightly disagree | +1 = slightly agree |
| 0 = neutral | |

10. _____ The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order.
11. _____ There is nothing immoral or sick in somebody's being a homosexual.
12. _____ It is important to protect fully the rights of radicals and deviants.
13. _____ Obedience is the most important virtue children should learn.
14. _____ There is no "one right way" to live your life. Everybody has to create his own way.
15. _____ Once our government leaders condemn the dangerous elements in our society, it will be the duty of every patriotic citizen to help stomp out the rot that is poisoning our country from within.
16. _____ Government, judges and the police should never be allowed to censor books.
17. _____ Some of the worst people in our country nowadays are those who do not respect our flag, our leaders, and the normal way things are supposed to be done.
18. _____ In these troubled times laws have to be enforced without mercy, especially when dealing with the agitators and revolutionaries who are stirring things up.
19. _____ Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.
20. _____ Some young people sometimes get rebellious ideas, but as they get older they ought to become more mature and forget such things.
21. _____ There is nothing really wrong with a lot of the things some people call "sins".
22. _____ Everyone should have a right to his own life-style, religious beliefs, and sexual preferences even if it makes him different from everyone else.
23. _____ The situation in our country is getting so serious, the strongest methods would be justified if they eliminated the troublemakers and got us back to our true path.
24. _____ Authorities such as parents and our national leaders generally turn out to be right about things, and the radicals and protesters are almost always wrong.
25. _____ A lot of our rules regarding modesty and sexual behaviour are just customs which are not necessarily any better and holier than those which other people follow.

- | | |
|-----------------------------|--------------------------|
| -4 = very strongly disagree | +4 = very strongly agree |
| -3 = strongly disagree | +3 = strongly agree |
| -2 = moderately disagree | +2 = moderately agree |
| -1 = slightly disagree | +1 = slightly agree |
| 0 = neutral | |

26. _____ There is absolutely nothing wrong with nudist camps.
27. _____ The real keys to the "good life" are obedience, discipline, and sticking to the straight and narrow.
28. _____ We should treat protestors and radicals with open arms and open minds, since new ideas are the lifeblood of progressive change.
29. _____ What our country really needs is a strong, determined leader who will crush evil, and take us back to our true path.
30. _____ Students must be taught to challenge their parents' ways, confront the authorities, and criticize the customs and traditions of our society.
31. _____ One reason we have so many troublemakers in our society nowadays is that parents and other authorities have forgotten that good old-fashioned physical punishment is still one of the best ways to make people behave properly.

Part II: Background Information

Please check (or write in) the appropriate answer in the space provided.

1. Sex: Male _____ Female _____
2. Age: _____
3. Year of studies: 1 _____ 2 _____ 3 _____ 4 _____ Other _____
4. What is your major? _____

Part III: Reactions to Dilemmas

In the next part of the survey, you will read a number of social dilemmas. After you read each dilemma, you will be asked a series of questions.

First, you will be asked several questions about the issue described in the dilemma. Second, you will be asked for your own personal reaction to each dilemma. Finally, you will be asked to indicate the solutions which you believe that a variety of other individuals would give.

Dilemma #1

The use of conscription during times of national conflict has been the subject of much controversy. Imagine that the government had determined that it is necessary to reintroduce conscription (compulsory military service) in order to boost national security. Even though a great number of people are opposed to conscription and many people have moral objections to killing, the Prime Minister has declared that it is necessary for all males and females to spend a minimum of 2 years in the armed forces before they reach the age of 25.

How can individuals to whom this applies resolve the conflict between their moral objections and the demands of the government?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-conscription			neutral			anti-conscription

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #2

Various groups in Canada have been placing increasing pressure on the government to increase censorship. They insist that the present censorship laws are too lenient and demand that the government place stricter regulations on the publication of offensive materials. Although others claim that this violates our right to free speech, these groups maintain that the publication of such rubbish is corrupting our youth.

How can the government resolve the conflict between the demands of these groups for stricter censorship with the press's right of freedom to publish?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-censorship			neutral			pro-freedom of speech

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #3

It seems probable that recent discoveries in biology will ultimately allow people to determine various characteristics of their children, before they are born. Colour of skin, eyes, hair, etc., could all be altered so that couples could (within limits) have a child with characteristics they feel are desirable. However, some people believe we should let nature take its course, and not interfere.

How can we resolve this conflict over whether to allow people to choose "surface" characteristics of their children in advance?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-genetic choice			neutral			pro-nature's choice

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #4

A huge channel is currently under construction in North Africa, which would dramatically change the water flow of part of the white Nile River. This will provide a huge quantity of desperately needed water for Sudan and Egypt, but will virtually destroy nearby floodplains along with the plant and animal life which depend on those plains.

How can we resolve this conflict between need for water and destruction of the environment?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-build channel			neutral			pro-save floodplains

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #5

In a number of cities in Canada a variety of minority groups (e.g., racial groups, homosexuals) have begun to use nonviolent protest as a means to demand more equal treatment from the government. These protests have been disruptive to the businesses in the area. In some cases, protestors have ignored police requests to disperse, and police have had to resort to the use of force to control the demonstrators. Recently, several protesters were seriously injured by police when a protest became violent. How can the local authorities resolve the conflict between the rights of these individuals and the rights of the local businesses?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-rights of protesters			neutral			pro-increase force to end protests

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #6

A large mining company in northern Ontario has been having a tough time financially the last few years. Now, as part of a government clampdown on polluters, the company president has been ordered to make costly changes in order to reduce pollution. Unfortunately, this requirement will likely push the company into bankruptcy, cause the company to go out of business and the entire operation to be shut down, and this will result in thousands of workers losing their jobs.

How can our society resolve this kind of conflict between business and the environment?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-business			neutral			pro-environment

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #7

Recently, a small university has received a large sum of money with which to establish a scholarship fund. There is some conflict among various members of the committee concerning the nature of scholarships. Some individuals have suggested that it be set aside for promising athletes in order to increase the school's visibility in the media, while others say that it is important to encourage academic excellence.

How can this committee resolve the conflict over the allocation of this scholarship fund?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-athletic scholarship			neutral			pro-academic scholarship

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #8

Suppose the Canadian government, sometime in the future, passed a law outlawing the Communist party in Canada. Government officials then stated that the law would only be effective if it were vigorously enforced at the local level and appealed to every Canadian to aid in the fight against Communism. Some people are protesting that this is a violation of human rights. Others, however, recognize the importance of protecting Canadians against the influence of such a subversive group

How can Canadians resolve this conflict between desire for political freedom with the Government's decision to outlaw the Communist party?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-political freedom			neutral			pro-government decision

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #9

A high school student has known for years that she was adopted. She has a good relationship with her adoptive parents, but lately she has been curious about her biological parents. She realizes that to seek out these people could disrupt their life as well as her own, and could damage the relationship that she has with her adoptive parents. Nevertheless, she is curious.

How can this student resolve the conflict between her curiosity and not wanting to disrupt the lives of so many people?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-search for biological parents			neutral			anti-search for biological parents

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #10

Recently, a number of citizens groups have begun to criticize the courts for their leniency on criminals. These groups disagree with those who believe that criminals can be reformed, and insist that the only way to save our society from complete corruption is to harshly punish those who break the law.

How can the courts resolve the conflict between their belief that criminals can be reformed and the demands for harsher punishment?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-criminal reform			neutral			pro-harsher punishment

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #11

A number of students at one high school have joined a gang of "skin-heads." This particular group is nonviolent, the most destructive behaviour being the shaving of their heads and the wearing of torn clothing, resulting in a very unconventional appearance. The principal of this school is concerned that this behaviour could cause problems. Specifically, he believes that because these students no longer look tidy, they may become sloppy and irresponsible in other areas, including their school work, or their appearance may be distracting to other students. To prevent this from happening, the principal is considering implementing an appearance and dress code.

How can the principal reconcile this conflict between wanting to give the students freedom and wanting them to look respectable?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-student freedom			neutral			pro-appearance code

_____ You
 _____ Your parents
 _____ Canadians in General

Dilemma #12

The parents of a 15 year old boy are growing increasingly concerned. Before this year, he was well mannered and obedient, but lately they find that he is coming in later and later, and refuses to help around the house. They are worried that the new friends that he has been spending time with are turning him against them. They want their son to have a certain amount of freedom, but also want to ensure that he grows up to be a responsible adult.

How can this couple resolve the conflict between wanting to give their son freedom and yet believing that he should respect their wishes?

1. How much have you *heard about* issues like this one? (Circle the appropriate number)

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How important do you consider this issue to be *to you personally*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How important do you consider this issue to be *for society in general*?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

6. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

7. To what extent do you think you would agree with your parents on the resolution of this dilemma?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

8. Indicate for each of the following people, to the best of your knowledge, what stand the person would take on this dilemma:

-3	-2	-1	0	+1	+2	+3
pro-increase freedom			neutral			pro-increase restrictions

_____ You
 _____ Your parents
 _____ Canadians in General

Appendix C
Instructions for Pilot Survey

- My name is Susan Alisat, I am an MA student in psychology here at WLU.
- My advisor is Dr. Bruce Hunsberger
- We are examining the attitudes of university students towards a variety of social issues and would appreciate it if you would help us out in our study.
- If you are willing to participate, you will be asked to complete this three-part survey.

In the first part, there are a variety of attitude statements. You will be asked to indicate the level of your agreement or disagreement with each statement.

In the second part, you will encounter a number of brief social dilemmas. After you have read each dilemma, you will be asked a number of questions. These will involve things such as your familiarity with the situation described and how important you think it is, as well as your solution to the dilemma. You will also be asked how you think a variety of other people would solve the dilemma. Your responses to these dilemmas will help me to decide which of these dilemmas I should include in an interview study.

- All of your responses on this survey will be kept in the strictest confidence. No one will see the completed surveys except for myself, my advisor, Dr. Hunsberger, and a small research team. Please do not record your name, or any other identification, anywhere on your survey.
- Participation in this survey is entirely voluntary. You may withdraw at any time. You may also omit any questions with which you do not feel comfortable, although it is a big help to us if you complete all parts of the survey. When you hand in your completed questionnaire, we will take that as your permission to include your responses in our data analyses.

- As you get to each section of the survey, please read the instructions carefully before proceeding.
- Questions?
- After you have completed your survey, please wait quietly until the rest finish. All of the surveys will be collected when everyone has finished.

Feedback at Time of Testing

- Questions?
- As I said, we're looking at how attitudes are related to thoughts on a number of social issues. As a part of this study, I'm going to be interviewing a number of students from other classes (not this one). The information I've gathered from you today will help me decide what types of questions I need to include in my interviews.
I can't really tell you more about what I'll find until I've completed the interviews and analyzed the data.
- Information on the results of this study will be presented to the class after I've finished collecting my data.
- Thanks for your help.

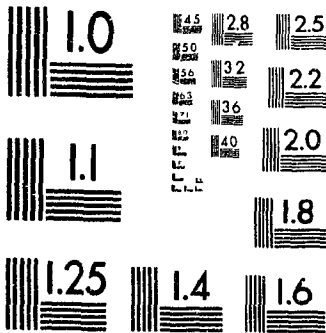
Appendix D
Mean Ratings and Results of Analyses of Variance
for Control Questions in Pilot Survey

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PM-1 3½" x 4" PHOTOGRAPHIC MICROCOPY TARGET
NBS 1010a ANSI/ISO #2 EQUIVALENT



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Table D-1: Mean Responses to "How much have you heard about the issue?"

Vignette	RWA	
	Low	High
African Channel (nonauthoritarian)	3.56 (18)	3.50 (20)
Business vs Environment (nonauthoritarian)	5.50 (18)	5.17 (18)
Scholarship Fund (nonauthoritarian)	3.78 (18)	3.88 (17)
	4.28	4.16
Minority Protesters (authoritarian-agg)	4.71 (17)	4.85 (20)
Appearance Code (authoritarian-conv)	4.89 (18)	4.31 (16)
Communism Posse (authoritarian-subm)	4.00 (17)	3.00 (16)
	4.54	4.11

Table D-2: Results of 2 (level of RWA) by 2 (type of vignette) Mixed Analysis of Variance for "How much have you heard"

Effect	df	F	p
RWA	1,23	.45	.508
Vignette	1,23	.06	.802
RWA by Vignette	1,23	.06	.803

Table D-3: Mean Responses to "How much have you thought about the issue?"

	RWA	
	Low	High
African Channel (nonauthoritarian)	3.94 (19)	3.35 (20)
Business vs Environment (nonauthoritarian)	4.83 (18)	4.72 (18)
Scholarship Fund (nonauthoritarian)	3.83 (18)	3.47 (17)
	4.20	3.83
Minority Protesters (authoritarian-agg)	4.24 (17)	3.75 (20)
Appearance Code (authoritarian-conv)	4.72 (18)	3.75 (16)
Communism Posse (authoritarian-subm)	3.47 (17)	2.44 (16)
	4.15	3.35

Table D-4: Results of 2 (level of RWA) by 2 (type of vignette) Mixed Analysis of Variance for "How much have you thought"

Effect	df	F	p
RWA	1,23	2.31	.142
Vignette	1,23	.61	.442
RWA by Vignette	1,23	.26	.617

Table D-5: Mean Responses to "How important is this issue to you personally?"

	RWA	
	Low	High
African Channel (nonauthoritarian)	3.39 (18)	3.00 (20)
Business vs Environment (nonauthoritarian)	5.11 (18)	4.94 (18)
Scholarship Fund (nonauthoritarian)	4.44 (18)	4.12 (17)
	4.31	3.98
Minority Protesters (authoritarian-agg)	3.00 (17)	3.20 (20)
Appearance Code (authoritarian-conv)	3.44 (18)	3.19 (16)
Communism Posse (authoritarian-subm)	3.29 (17)	3.25 (16)
	3.25	3.21

Table D-6: Results of 2 (level of RWA) by 2 (type of vignette) Mixed Analysis of Variance for "How important is the issue to you personally?"

Effect	df	F	p
RWA	1,23	.29	.594
Vignette	1,23	6.36	.019
RWA by Vignette	1,23	.09	.771

Table D-7: Mean Responses to "How important is this issue to society?"

	RWA	
	Low	High
African Channel (nonauthoritarian)	5.17 (18)	4.45 (20)
Business vs Environment (nonauthoritarian)	6.11 (18)	5.78 (18)
Scholarship Fund (nonauthoritarian)	4.28 (18)	3.76 (17)
	5.19	4.67
Minority Protesters (authoritarian-agg)	6.00 (17)	5.10 (20)
Appearance Code (authoritarian-conv)	4.72 (18)	4.50 (16)
Communism Posse (authoritarian-subm)	4.88 (17)	4.81 (16)
	5.19	4.83

Table D-8: Results of 2 (level of RWA) by 2 (type of vignette) Mixed Analysis of Variance for "How important is the issue to society?"

Effect	df	F	p
RWA	1,23	1.49	.234
Vignette	1,23	.15	.704
RWA by Vignette	1,23	.44	.515

Table D-9: Mean Responses to "How much have you discussed this issue with your parents?"

	RWA	
	Low	High
African Channel (nonauthoritarian)	2.59 (17)	1.95 (20)
Business vs Environment (nonauthoritarian)	4.06 (18)	3.44 (18)
Scholarship Fund (nonauthoritarian)	3.06 (18)	2.06 (17)
	3.25	2.47
Minority Protesters (authoritarian-agg)	3.41 (17)	2.90 (20)
Appearance Code (authoritarian-conv)	3.29 (18)	2.44 (16)
Communism Posse (authoritarian-subm)	2.47 (17)	1.94 (16)
	3.10	2.46

Table D-10: Results of 2 (level of RWA) by 2 (type of vignette) Mixed Analysis of Variance for "How much have you discussed this issue with your parents?"

Effect	df	F	p
RWA	1,22	4.13	.054
Vignette	1,22	.03	.859
RWA by Vignette	1,22	.29	.596

Table D-11: Mean Responses to "How certain are you of your parents' stand on this issue?"

	RWA	
	Low	High
African Channel (nonauthoritarian)	2.76 (17)	2.20 (20)
Business vs Environment (nonauthoritarian)	4.33 (18)	3.39 (18)
Scholarship Fund (nonauthoritarian)	3.56 (18)	3.24 (17)
	3.56	2.91
Minority Protesters (authoritarian-agg)	3.41 (17)	3.40 (20)
Appearance Code (authoritarian-conv)	3.94 (19)	4.13 (16)
Communism Posse (authoritarian-subm)	3.59 (17)	2.56 (16)
	3.65	3.37

Table D-12: Results of 2 (level of RWA) by 2 (type of vignette) Mixed Analysis of Variance for "How certain are you of your parents' stand on this issue?"

Effect	df	F	p
RWA	1,22	.23	.637
Vignette	1,22	.23	.639
RWA by Vignette	1,22	.34	.567

Table D-13: Mean Responses to "How much do you think you agree with your parents's stand on this issue?"

	RWA	
	Low	High
African Channel (nonauthoritarian)	3.53 (17)	3.65 (20)
Business vs Environment (nonauthoritarian)	4.17 (18)	3.83 (18)
Scholarship Fund (nonauthoritarian)	4.67 (18)	4.24 (17)
	4.13	3.89
Minority Protesters (authoritarian-agg)	3.35 (17)	3.85 (20)
Appearance Code (authoritarian-conv)	3.50 (18)	3.50 (16)
Communism Posse (authoritarian-subm)	3.88 (18)	3.44 (16)
	3.58	3.62

Table D-14: Results of 2 (level of RWA) by 2 (type of vignette) Mixed Analysis of Variance for "How much do you think you agree with your parents' stand on this issue?"

Effect	df	F	p
RWA	1,22	.17	.680
Vignette	1,22	29.32	.000
RWA by Vignette	1,22	.09	.771

Appendix E
Background Information Questionnaire

KEY

1 = RWA scale buffer

2-31 = RWA scale (reverse scoring for items 3, 5, 8, 9, 11, 12, 14, 16, 19, 20, 21, 22, 25, 26, 28, 30)

Survey Number: _____

Attitudes Survey

In this survey, we are investigating several aspects of the attitudes of university students. You will be asked to indicate the extent of your agreement with a variety of attitude statements.

All of your responses will be kept in the strictest confidence. Participation is of course voluntary. When you hand in your completed questionnaire, we will take that as your permission to include your responses in our data analyses.

The results of this investigation will be available from the investigator after its completion in April 1992. If you have any questions or wish to obtain further information about the study, please contact the investigator or her supervisor:

Investigator: Susan Alisat
M.A. Psychology Student
Wilfrid Laurier University
Supervisor: Dr. Bruce Hunsberger
Psychology Department
Room 3-113, CTB
Wilfrid Laurier University
Telephone: (519)884-1970, ext. 2219

Below you will find a variety of statements related to different social attitudes. You will probably find that you agree with some of the statements, and disagree with others, to varying extents. Please mark your opinion on the line to the left of each statement, according to the amount of your agreement or disagreement by using the following scale:

Write a **-4** in the space provided if you very strongly disagree with the statement.

Write a **-3** in the space provided if you strongly disagree with the statement.

Write a **-2** in the space provided if you moderately disagree with the statement.

Write a **-1** in the space provided if you slightly disagree with the statement.

Write a **+1** in the space provided if you slightly agree with the statement.

Write a **+2** in the space provided if you moderately agree with the statement.

Write a **+3** in the space provided if you strongly agree with the statement.

Write a **+4** in the space provided if you very strongly agree with the statement.

If you feel precisely neutral about an item, write "0" in the space provided.

You may find that you sometimes have different reactions to different parts of a statement. For example, you might very strongly disagree ("-4") with one idea in a statement, but slightly agree (" + 1") with another idea in the same item. When this happens, please combine your reactions, and write down how you feel "on balance" (that is, a "-3" in this example).

1. _____ Spanking a child only teaches him resentment and fear and does nothing to teach him right from wrong.
2. _____ The way things are going in this country, it's going to take a lot of "strong medicine" to straighten out the troublemakers, criminals and perverts.
3. _____ It is wonderful that young people today have greater freedom to protest against things they don't like, and to "do their own thing."
4. _____ It is always better to trust the judgement of the proper authorities in government and religion, than to listen to the noisy rabble-rousers in our society who are trying to create doubt in people's minds.
5. _____ People should pay less attention to the Bible and other old traditional forms of religious guidance, and instead develop their own personal standards of what is moral and immoral.
6. _____ It would be best for everyone if the proper authorities censored magazines and movies to keep trashy material away from the youth.
7. _____ It may be considered old fashioned by some, but having a decent, respectable appearance is still the mark of a gentleman and, especially, a lady.

8. _____ The sooner we get rid of the traditional family structure, where the father is the head of the family and the children are taught to obey authority automatically, the better. The old-fashioned way has a lot wrong with it.
9. _____ There is nothing wrong with premarital sexual intercourse.
10. _____ The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order.
11. _____ There is nothing immoral or sick in somebody's being a homosexual.
12. _____ It is important to protect fully the rights of radicals and deviants.
13. _____ Obedience and respect for authority are the most important virtues children should learn.
14. _____ Rules about being "well-mannered" and respectable are chains from the past which we should question very thoroughly before accepting.
15. _____ Once our government leaders and the authorities condemn the dangerous elements in our society, it will be the duty of every patriotic citizen to help stomp out the rot that is poisoning our country from within.
16. _____ "Free speech" means that people should even be allowed to make speeches and write books urging the overthrow of the government.
17. _____ Some of the worst people in our country nowadays are those who do not respect our flag, our leaders, and the normal way things are supposed to be done.
18. _____ In these troubled times laws have to be enforced without mercy, especially when dealing with the agitators and revolutionaries who are stirring things up.
19. _____ Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.
20. _____ Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
21. _____ The self-righteous "forces of law and order" threaten freedom in our country a lot more than most of the groups they claim are "radical" and "godless."

22. _____ Everyone has a right to his/her own life-style, religious beliefs or disbeliefs, and sexual preferences so long as it doesn't hurt others.
23. _____ If a child starts becoming unconventional and disrespectful of authority, it is his parents' duty to get him back to the normal way.
24. _____ In the final analysis the established authorities, like parents and our national leaders, generally turn out to be right about things, and all the protestors don't know that they're talking about.
25. _____ A lot of our rules regarding modesty and sexual behaviour are just customs which are not necessarily any better and holier than those which other people follow.
26. _____ There is absolutely nothing wrong with nudist camps.
27. _____ The real keys to the "good life" are obedience, discipline, and sticking to the straight and narrow.
28. _____ It is best to treat dissenters with leniency and an open mind, since new ideas are the lifeblood of progressive change.
29. _____ Our country will be great if we honour the ways of our forefathers, do what the authorities tell us to do, and get rid of the 'rotten apples' who are ruining everything.
30. _____ Students in high school and university must be encouraged to challenge their parents' ways, confront established authorities, and in general criticize the customs and traditions of our society.
31. _____ One reason we have so many troublemakers in our society nowadays is that parents and other authorities have forgotten that good old-fashioned physical punishment is still one of the best ways to make people behave properly.

Appendix F
Interview Schedule

Fall 1991 Interview Study

Respondent # _____

Introduction:

I'm Susan, and I spoke to you on the phone about participating in this interview which is part of my Master's thesis, under the supervision of Dr. Hunsberger. I really appreciate your willingness to participate in this study - I think you will find the interview quite interesting. Of course, you do not have to answer anything you do not want to, and you may withdraw from the research at any time - we would not include your answers in any data analyses if you did not want us to. Your responses are confidential - that is, we will not identify you by name or any other information which could give away your identity, in any reports we write. The university does require that you sign a form indicating your willingness to participate in this study - this does not obligate you to complete the interview. You may still withdraw at any time. So if you would please sign this form, we can begin the interview.

[sign consent form]

The interview itself usually takes less than an hour. We are quite interested in how students resolve various social conflicts, how they feel about other attitudes on the issues, and so on. So I will be giving you some brief vignettes to read, each describing a conflict situation, and I will then be asking you some questions concerning how you feel about it all - essentially the same questions for each vignette. In order to keep the interview moving along, and to ensure we have a complete record of responses, we prefer to tape record the interviews. We need the tapes so later, we can transcribe people's responses - so I won't have to try to write everything down right now. The tapes will be identified by number only, and will be kept in a locked room. Is it okay with you if we record this session? Do you have any questions before we get started?

Okay, let's begin.

Vignette 1

Suppose the Canadian government, sometime in the future, passed a law outlawing the Communist party in Canada. Government officials then stated that the law would only be effective if it were vigorously enforced at the local level and appealed to every Canadian to aid in the fight against Communism. Some people are protesting that this is a violation of human rights. Others, however, recognize the importance of protecting Canadians against the influence of such a subversive group.

How can Canadians resolve this conflict between desire for political freedom with the Government's decision to outlaw the Communist party?

1. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How important do you consider this issue to be?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How do you personally feel this dilemma should be resolved?

6. Overall, how good do you think your solution is in this situation?

-3	-2	-1	0	+1	+2	+3
very bad			not good or bad			very good

7. Can you think of any other alternatives in this case? That is, are there any other solutions to the dilemma? (If one alternative is suggested, ask if there are others.)

8. Is there any chance of compromise or reconciliation here? That is, instead of choosing one alternative or another, would it be possible to work out a compromise? (If yes, how?)

9. Is there any way in which some different approaches to this problem are really part of an overall system or philosophy? That is, how do all the alternatives you have talked about fit together into a bigger picture? (explain?)

Vignette 2

A number of students at one high school have joined a gang of "skin-heads." This particular group is nonviolent, the most destructive behaviour being the shaving of their heads and the wearing of torn clothing, resulting in a very unconventional appearance. The principal of this school is concerned that this behaviour could cause problems. Specifically, he believes that because these students no longer look tidy, they may become sloppy and irresponsible in other areas, including their school work, or their appearance may be distracting to other students. To prevent this from happening, the principal is considering implementing an appearance and dress code.

How can the principal reconcile this conflict between wanting to give the students freedom and wanting them to look respectable?

1. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How important do you consider this issue to be?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How do you personally feel this dilemma should be resolved?

6. Overall, how good do you think your solution is in this situation?

-3	-2	-1	0	+1	+2	+3
very bad			not good or bad			very good

7. Can you think of any other alternatives in this case? That is, are there any other solutions to the dilemma? (If one alternative is suggested, ask if there are others.)

8. Is there any chance of compromise or reconciliation here? That is, instead of choosing one alternative or another, would it be possible to work out a compromise? (If yes, how?)

9. Is there any way in which some different approaches to this problem are really part of an overall system or philosophy? That is, how do all the alternatives you have talked about fit together into a bigger picture? (explain?)

Vignette 3

In a number of cities in Canada a variety of minority groups (e.g., racial groups, homosexuals) have begun to use nonviolent protest as a means to demand more equal treatment from the government. These protests have been disruptive to the businesses in the area. In some cases, protestors have ignored police requests to disperse, and police have had to resort to the use of force to control the demonstrators. Recently, several protesters were seriously injured by police when a protest became violent.

How can the local authorities resolve the conflict between the rights of these individuals and the rights of the local businesses?

1. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How important do you consider this issue to be?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How do you personally feel this dilemma should be resolved?

6. Overall, how good do you think your solution is in this situation?

-3	-2	-1	0	+1	+2	+3
very bad			not good or bad			very good

7. Can you think of any other alternatives in this case? That is, are there any other solutions to the dilemma? (If one alternative is suggested, ask if there are others.)

8. Is there any chance of compromise or reconciliation here? That is, instead of choosing one alternative or another, would it be possible to work out a compromise? (If yes, how?)

9. Is there any way in which some different approaches to this problem are really part of an overall system or philosophy? That is, how do all the alternatives you have talked about fit together into a bigger picture? (explain?)

Vignette 4

Recently, a small university has received a large sum of money with which to establish a scholarship fund. There is some conflict among various members of the committee concerning the nature of scholarships. Some individuals have suggested that it be set aside for promising athletes in order to increase the school's visibility in the media, while others say that it is important to encourage academic excellence.

How can this committee resolve the conflict over the allocation of this scholarship fund?

1. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How important do you consider this issue to be?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How do you personally feel this dilemma should be resolved?

6. Overall, how good do you think your solution is in this situation?

-3	-2	-1	0	+1	+2	+3
very bad			not good or bad			very good

7. Can you think of any other alternatives in this case? That is, are there any other solutions to the dilemma? (If one alternative is suggested, ask if there are others.)

8. Is there any chance of compromise or reconciliation here? That is, instead of choosing one alternative or another, would it be possible to work out a compromise? (If yes, how?)

9. Is there any way in which some different approaches to this problem are really part of an overall system or philosophy? That is, how do all the alternatives you have talked about fit together into a bigger picture? (explain?)

Vignette 5

A huge channel is currently under construction in North Africa, which would dramatically change the water flow of part of the white Nile River. This will provide a huge quantity of desperately needed water for Sudan and Egypt, but will virtually destroy nearby floodplains along with the plant and animal life which depend on those plains.

How can we resolve this conflict between need for water and destruction of the environment?

1. How much have you *thought about* issues like this one?

1 2 3 4 5 6 7
not at all some quite a bit a great deal

2. How important do you consider this issue to be?

1 2 3 4 5 6 7
not at all some quite a bit a great deal

3. How much have you discussed this kind of issue with your parents?

1 2 3 4 5 6 7
not at all some quite a bit a great deal

4. How certain are you of your parents' stand on this issue?

1 2 3 4 5 6 7
not at all some quite a bit a great deal

5. How do you personally feel this dilemma should be resolved?

6. Overall, how good do you think your solution is in this situation?

-3 -2 -1 0 +1 +2 +3
very bad not good or bad very good

7. Can you think of any other alternatives in this case? That is, are there any other solutions to the dilemma? (If one alternative is suggested, ask if there are others.)

8. Is there any chance of compromise or reconciliation here? That is, instead of choosing one alternative or another, would it be possible to work out a compromise? (If yes, how?)

9. Is there any way in which some different approaches to this problem are really part of an overall system or philosophy? That is, how do all the alternatives you have talked about fit together into a bigger picture? (explain?)

Vignette 6

A large mining company in northern Ontario has been having a tough time financially the last few years. Now, as part of a government clampdown on polluters, the company president has been ordered to make costly changes in order to reduce pollution. Unfortunately, this requirement will likely push the company into bankruptcy, cause the company to go out of business and the entire operation to be shut down, and this will result in thousands of workers losing their jobs.

How can our society resolve this kind of conflict between business and the environment?

1. How much have you *thought about* issues like this one?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

2. How important do you consider this issue to be?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

3. How much have you discussed this kind of issue with your parents?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

4. How certain are you of your parents' stand on this issue?

1	2	3	4	5	6	7
not at all		some		quite a bit		a great deal

5. How do you personally feel this dilemma should be resolved?

6. Overall, how good do you think your solution is in this situation?

-3	-2	-1	0	+1	+2	+3
very bad			not good or bad			very good

7. Can you think of any other alternatives in this case? That is, are there any other solutions to the dilemma? (If one alternative is suggested, ask if there are others.)

8. Is there any chance of compromise or reconciliation here? That is, instead of choosing one alternative or another, would it be possible to work out a compromise? (If yes, how?)

9. Is there any way in which some different approaches to this problem are really part of an overall system or philosophy? That is, how do all the alternatives you have talked about fit together into a bigger picture? (explain?)

Debriefing After Interview

- This is the end of the formal interview
- I appreciate you taking the time to share your solutions to these dilemmas with me. There is probably one thing which I should tell you about these dilemmas. They were all created for this study. None of these exact situations exist. We were interested in your reactions to these types of dilemmas and so we created the vignettes to examine those reactions.
- Do you have any questions?
- Further information on the findings from this study will be available by April, 1992 on the research feedback bulletin board.
- Thank you for your time.

Appendix G
Instructions for Completion of Background Survey

Instructions

- My name is Susan Alisat, I am an MA student in psychology here at WLU.
- My advisor is Dr. Bruce Hunsberger
- We are examining the attitudes of university students towards a variety of social issues and would appreciate it if you would help us out in our study
- If you are willing to participate, you will be asked to complete this survey. It contains a variety of attitude statements. You will be asked to indicate the level of your agreement or disagreement with each statement.
- Later this term, I will need to contact many of you for a follow-up interview. In this interview, you will be asked your opinions on a number of social issues. The purpose of this interview will be to see how your attitudes on these issues are related to your thoughts on the social issues.

In order that I will be able to contact you for this follow-up interview, a sign-up sheet will be circulated around the class while you are completing the survey. Please print your first and last name, student number, and telephone number on the sign-up sheet.

- All of your responses on this study will be kept in the strictest confidence. No one will see the completed surveys except for myself, my advisor, Dr. Hunsberger, and a small research team. Please do not record your name anywhere on your survey.
- Participation in this survey is entirely voluntary. You may withdraw at any time. You may also omit any questions with which you do not feel comfortable, although it is a big help to us if you complete all parts of the survey. When you hand in your completed questionnaire, we will take that as your permission to include your responses in our data analyses.
- As you get to each section of the survey, please read the instructions carefully.
- Questions?
- After you have completed your survey, please wait quietly until the rest finish. All of the surveys will be collected when everyone has finished.

Feedback at Time of Testing

- Questions?
- As I said, we're looking at how attitudes are related to thoughts on a number of social issues. I won't really know more than that until I've completed the interviews and analyzed the data.
- Information on the results of this study will be posted on the "Feedback Bulletin Board", on the third floor of the CTB by April 1, 1992.
- Thanks

Appendix H
Script for Telephone Contact

- Hi [name]. I'm Susan Alisat. You recently completed an attitude survey for me in your psychology class. I'm calling to see if you'd be interested in completing an interview.
- If you decide to participate, the interview will take between [40-70??] minutes. During it, you will be asked to consider a number of social conflicts. You will be asked how you would solve each of the dilemmas, and a number of questions about your solutions. Students in the past have said that they enjoy the interview.
- Would you be interested in being interviewed?
- [Set up convenient time]
- Interviews are being conducted in [room] {describe location}.
- I'll see you on [day] at [time].

Appendix I
Consent Form

Agreement to Participate in Research Interview

I agree to participate in the research study on views about social issues, conducted by Susan Alisat under the direction of Dr. Bruce Hunsberger of Wilfrid Laurier University. I understand that my responses are confidential, and that I may withdraw from participation at any time.

Signature: _____

For more information, contact:

Susan Alisat, Psychology Department, WLU

or

Dr. Bruce Hunsberger, at (519) 884-1970, extension 2219

Appendix J
Comparison of High and Low RWA Responses to
Manipulation Check Questions

Table J-1: Responses to Manipulation Check Questions

Vignette	Question	Mean Rating		t	Prob
		Low RWA	High RWA		
Communism Posse	Thought	3.44	2.88	1.33	.19
	Importance	4.59	4.28	.73	.47
	Discuss with Parents	2.59	2.16	1.02	.32
	Certainty of Parents' Pos.	3.14	3.12	.06	.95
Appearance Code	Thought	4.74	4.32	1.05	.30
	Importance	4.74	3.92	2.29	.03
	Discuss with Parents	3.14	3.60	-.95	.34
	Certainty of Parents' Pos.	3.22	4.84	-3.32	.002
Minority Protest	Thought	4.41	4.48	-.17	.87
	Importance	5.74	5.36	1.36	.18
	Discuss with Parents	3.59	3.68	-.18	.86
	Certainty of Parents' Pos.	3.44	4.40	-1.89	.07
Scholarship Fund	Thought	3.74	4.08	-.72	.47
	Importance	4.03	4.48	-1.17	.25
	Discuss with Parents	2.67	2.89	-.47	.64
	Certainty of Parents' Pos.	2.70	2.76	-.13	.90
Business vs Env't	Thought	4.04	3.44	1.51	.14
	Importance	5.44	5.72	-1.00	.32
	Discuss with Parents	2.51	2.60	-.21	.84
	Certainty of Parents' Pos.	2.85	2.96	-.23	.82
African Channel	Thought	4.44	4.44	.01	.99
	Importance	5.96	5.80	.57	.57
	Discuss with Parents	2.778	3.16	-1.05	.30
	Certainty of Parents' Pos.	3.07	3.40	-.73	.47

Appendix K

Means IC Scores for Each Prod Question for Each Vignette

Means for RWA X Prod X Vignette

Vignette	Prod	Low Mean	High Mean
Communism Posse	BASE	2.16	1.75
	DIFF	2.64	2.417
	INT1	2.52	2.542
	INT2	2.88	2.50
Skin Heads	BASE	2.04	1.75
	DIFF	2.64	2.79
	INT1	2.64	2.95
	INT2	3.04	3.083
Minority Groups	BASE	2.28	2.00
	DIFF	2.76	2.875
	INT1	2.88	2.917
	INT2	3.000	3.042
Scholarship Fund	BASE	1.72	1.625
	DIFF	2.72	2.75
	INT1	2.72	2.75
	INT2	2.88	2.792
N. Africa Channel	BASE	2.28	1.75
	DIFF	3.04	2.5
	INT1	3.08	2.583
	INT2	3.16	2.667
Business vs Env't	BASE	2.12	1.833
	DIFF	2.72	2.583
	INT1	2.96	2.625
	INT2	3.08	3.04

Appendix L

Analysis of Variance Results for RWA by Prod by Vignette

RWA by Prod by Vignette ANOVA

Effect	df	F	p
RWA	1,47	2.53	.118
Vignette	1,47	.01	.928
RWA by Vignette	1,47	2.42	.127
Prod	3,141	152.27	<.001
RWA by Prod	3,141	2.35	.075
Vignette by Prod	3,141	1.50	.218
RWA by Vignette by Prod	3,141	2.38	.072