

STRUCTURAL TIGHTNESS/LOOSENESS
AND
EXPRESSIONS OF COGNITIVE STYLE
IN THE SOCIAL AND PERCEPTUAL DOMAINS

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Anne

ABSTRACT

Psychological differentiation theory predicts that socio-cultural tightness of a society in conjunction with other ecological and socio-cultural variables will affect the cognitive styles of individuals as expressed by perceptual field dependence and social conformity. A reconceptualization of the variable, structural tightness/looseness which recognizes that it is the imposed/proposed nature of collective role expectations that defines a society as "tight" or "loose" and an attention to the source of external influence in conformity tests, allows a clearer interpretation of the relationship between the structural variable and social conformity. Specifically, it is hypothesized that members of structurally tight societies will be more conforming to influence from the "collective" other but not to influence from "role-specific" others and that they will be more perceptually field dependent than members of structurally loose societies. The hypotheses are tested among Hutterites and University students using an experimental research design. In general, the data support the hypotheses.

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Chapter I

Introduction

Recent cross cultural research has attempted to establish the existence of an association between certain structural features of societies and the "cognitive style" of their members (e.g. Berry, 1966, 1967; Dawson, 1967; Berry and Annis, 1974; Witkin and Berry, 1975). Structural tightness/looseness has been identified as a key antecedent variable in the development of different cognitive styles. Specifically, societies which are structurally "tight" are said to encourage the development of a field dependent cognitive style, while structurally loose societies encourage a field-independent cognitive style.

Cognitive style is a concept which refers to the characteristic modes of functioning (perceiving, thinking, acting) exhibited by individuals at different levels of psychological differentiation. The field dependent cognitive style indicates low levels of differentiation; the field independent cognitive style indicates higher levels of differentiation.

Field dependence/independence manifests itself in two distinguishable domains: perceptual/cognitive and social/affective. In the perceptual/cognitive domain, field dependence/independence manifests itself in an ability "to overcome the influence of the surrounding field or to separate an item from its context" (Witkin et al., 1962:2). In operational terms, field dependence/independence in this domain is generally measured with perceptual tests such as, the Embedded Figures Test (EFT), the Rod and Frame Test (RFT), and the Body Adjustment Test (BAT). In the social/affective domain, field dependence/independence

manifests itself in a developed or undeveloped sense of separate identity. A developed sense of separate identity is indicated by independent functioning in the face of contradictions and a stable view of self in different social contexts. In operational terms, field dependence/independence in this domain is generally measured with tests of social conformity. The tests are designed to assess the extent to which persons are able to maintain independent judgments in the face of external influence which contradicts their judgments.

A. This Study

The purpose of the research reported here is to examine the relationship between structural tightness/looseness and expressions of cognitive style in the perceptual and social domains. The theoretical development begins with a brief overview of psychological differentiation theory whose concepts field dependent and field independent cognitive styles have been recently transported to the cross-cultural arena. Cross-cultural research gave rise to Berry's (1971a) ecocultural model which introduced "socio-cultural tightness" as a key antecedent variable in the inhibition of psychological differentiation in simple, subsistence-level societies. Basically, the model predicts that a classification of societies according to the values of such key variables as structural tightness/looseness (socio-cultural tightness/looseness) will lead to prediction of the levels of differentiation prevalent among members of those societies. In particular, it predicts that members of structurally tight societies will exhibit lesser levels of psychological differentiation as evidenced by low scores on perceptual tests (e.g. EFT) and by susceptibility to external influence or social conformity. In contrast,

members of structurally loose societies will exhibit greater levels of psychological differentiation as evidenced by high scores on perceptual tests and by independent judgments when faced with a contrived group majority opinion.

The literature review illustrates that empirical studies to date confirm a positive association between structural tightness/looseness and measures of field dependence/independence in the perceptual domain. That is, societies which are structurally tight tend to produce cognitively and perceptually field dependent persons, while structurally loose societies produce field independent persons (Berry, 1967; Berry and Annis, 1974; Witkin et al., 1974). The results of research relating structural tightness/looseness to field dependence/independence in the social domain, however, are ambiguous and contradictory (see Berry, 1967; Berry and Annis, 1974; Boldt, 1976). An imprecise definition of the structural tightness/looseness variable and a neglect of the potential effects of varying the source of external influence employed in tests of social conformity have been suggested as possible sources of this ambiguity.

To clarify the relationship, therefore, the structural tightness/looseness variable was reconceptualized (Boldt, 1978a) and refined (Boldt and Roberts, 1979). According to this recent reconceptualization, structural tightness/looseness refers to the nature of the bonds between and among roles, (Boldt and Roberts, 1979:225) or the imposed/proposed nature of collective role expectations. Specifically, a structurally tight society is one in which the collective role expectations are imposed and received. In contrast, a structurally loose society is one in which the collective role expectations are proposed and interpreted. This definition eliminates

the confusion between role complexity and role relatedness which exists with other definitions of the structural tightness/looseness variable, and it allows an extension of the predictions of the ecocultural model to more modern, complex societies. The reconceptualization also leads to the related methodological consideration of the source of external influence as a potential variable in measures of social conformity.

Three hypotheses were derived to test the validity of the recent theoretical and methodological considerations. Since collective role expectations are imposed in a "tight" society it is hypothesized:

that the "collective" other will exert a stronger influence on members of that society than on members of a "looser" society where the collective expectations are merely proposed.

The expectations of role-specific others are imposed or proposed depending on the situation not the "tightness" of a society and therefore,

one would expect no inter-societal differences in conformity to this source of influence.

Finally, psychological differentiation theory and the ecocultural model predict that:

members of structurally tight societies will be less differentiated in the perceptual domain than members of structurally looser societies.

These three hypotheses, therefore, are tested among groups of Hutterites ("tight") and University students ("looser").

The results of this study will have their critical implications for the future of the theory. The reconceptualized structural tightness/looseness variable has never been applied in an empirical study. This research, therefore, will test the validity of this reconceptualization and indicate its appropriateness as a source of variation among societies. In

addition, the data will indicate the importance of identifying and controlling for, the source of external influence in tests of social conformity.

B. Chapter Outlines

Chapter II summarizes psychological differentiation theory and reviews the research which has examined the relationship between psychological differentiation and expressions of cognitive style. This chapter also describes the recent reconceptualization of the structural tightness/looseness variable and introduces the question of "which others" exert influence in conformity tests. Chapter III outlines the methodology used in testing the theory among Hutterites and University students. Chapter IV analyzes the data and comments on the results. Chapter V discusses the results and their implications and suggests improvements for future research.

Chapter II

Literature Review

The literature review has been subdivided into its component parts. It begins with a discussion of psychological differentiation theory. Section 1, therefore, defines the concepts, premises, predictions, and areas of application of the theory, and identifies the ecological, cultural, and social structural variables which affect the development/inhibition of psychological differentiation. Section 2 reviews the literature which has examined the relationship between field dependence/independence in the perceptual domain and the ecological and social structural variables. Section 3 reviews the literature which has examined the relationship between field dependence/independence in the social domain and its antecedent variables. Section 3 focuses on the nature of the relationship between the variable, structural tightness/looseness, and field dependence/independence in the social domain, or social conformity. Section 4 defines and then reconceptualizes the structural tightness/looseness variable. Based on this reconceptualization, Section 5 identifies the source of external influence as a critical variable in tests of social conformity. Section 6 summarizes the argument.

Section 1

Psychological Differentiation Theory

A. Overview

Differentiation is a term borrowed from the biological sciences where it refers to the degree of complexity of structure and segregation of function which characterizes an organism. An amoeba represents an

extremely undifferentiated organism with a completely homogeneous unspecialized structure. In contrast, Homo sapiens illustrates extreme differentiation with relatively complete heterogeneity and specialization of structure and function.

Psychological differentiation, therefore, refers to the structure and complexity of a psychological system and to the degree of specialization of function which has occurred in that structure. Psychological differentiation proceeds in a similar fashion to differentiation in the biological sphere; that is, it proceeds from less differentiated to more differentiated. A new born infant represents a relatively undifferentiated psychological system as the infant's needs and wants are few and his method of attracting attention (crying) is not specific to one particular need. The adult psychological system, however, is more differentiated as this system will have attained a greater separation of the various psychological areas and a more diverse and specialized repertoire of behaviours.

Psychological differentiation theory is characterized by three important elements. Specialization or separation of function is central to the theory. Witkin and his colleagues (1962) express the nature of this specialization as follows:

[A more differentiated psychological system functions with a greater]...degree of separation of psychological areas, as feeling from perceiving, thinking from acting. ...Specific reactions are apt to occur in response to specific stimuli as opposed to diffuse reaction to any of a variety of stimuli. Parts of a perceptual field are experienced as discrete, rather than fused with their background. ...[and there is a]...clear separation of what is identified as belonging to the self and what is identified as external to the self (Witkin et al., 1962:10).

A second important aspect of psychological differentiation theory is

complexity. Complexity implies elaborate "relationships among system components and between the system and its environment" (Witkin and Berry, 1975:6). The third central element of psychological differentiation theory is that level of psychological differentiation is an organism-wide characteristic. That is, tasks which assess levels of differentiation in two or more separate domains (e.g. perceptual and social) should reveal similar levels of differentiation (Witkin et al., 1962:16).

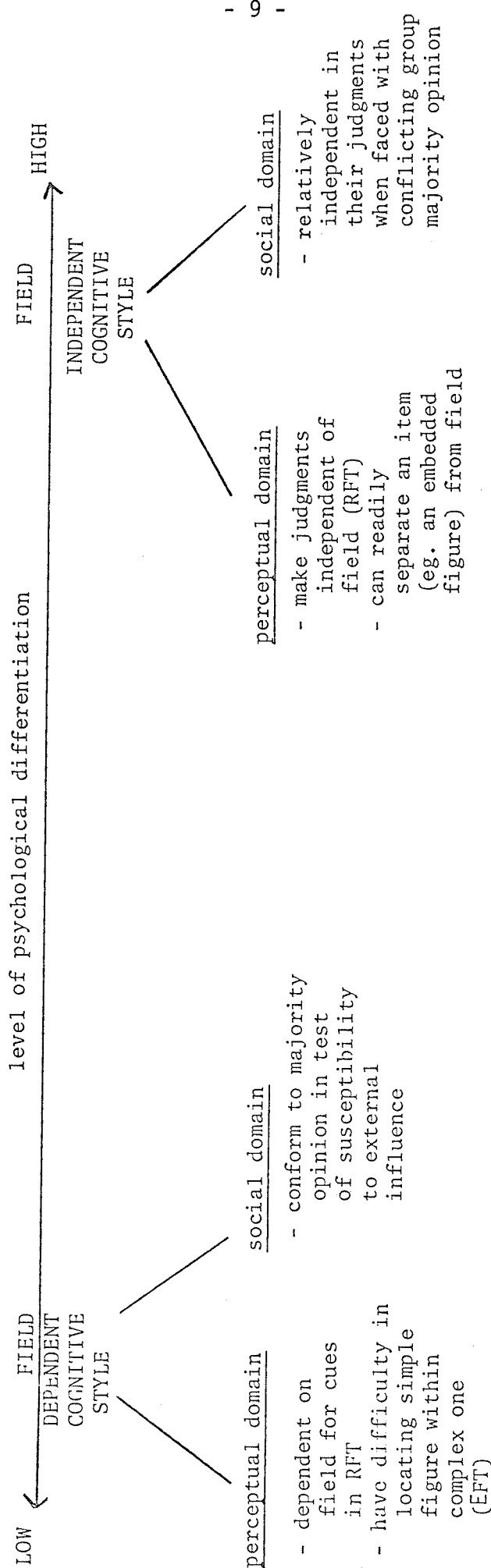
Psychological differentiation theory in its early stages focussed on the overt behaviours which indicate level of differentiation in the several domains or areas of functioning. Thus, terms such as "dis-embedding, analysis, restructuring, social distancing, a with-people orientation, and a sense of separate identity" (Berry, 1976:31) were all manifestations of a larger concept - a mode of perception and behaviour - which would characterize individuals at different levels of differentiation. The concept cognitive style was introduced to refer to these modes of functioning or different levels of differentiation and this concept now subsumes the earlier indicators of differentiation.

Basically, there are two cognitive styles - field dependent and field independent (see Figure 1). The two styles are the endpoints on a continuum of level of psychological differentiation, on which field dependent persons are less psychologically differentiated and field independent persons are more psychologically differentiated. John Berry describes the characteristics of the two cognitive styles as follows:

[T]he field dependent cognitive style includes limited analytic and structuring skills in perception and cognition, a with-people orientation and a sensitivity to social situations, [while]...the field independent cognitive style includes structuring and an analytical

Figure 1

PSYCHOLOGICAL DIFFERENTIATION
THEORY



approach to perceptual and cognitive materials, social distancing, and limited social sensitivity (Berry, 1976:31).

The concept cognitive style, therefore, refers to the modes of perceiving and behaving which characterize individuals at different levels of differentiation and which may be inferred from overt behaviours in several indicator areas or behavioural domains. The perceptual/cognitive domain includes perceptual functioning and cognitive functioning while in the social/affective domain, levels of differentiation are indicated by differences in social and affective functioning.

1. Behavioural Domains

a) Perceptual/Cognitive domain

i) Perceptual Functioning: Psychological differentiation in the perceptual domain refers to the extent to which items are experienced as discrete from the field. Individuals who have limited perceptual differentiation (field dependent persons) perceive the parts of a field in an unorganized fashion - the parts are fused with the field. Individuals who have greater levels of differentiation (field independent persons) are better able to perceive the parts of a field as separate from the field or to reorganize the structure of the field in order to achieve organization of their perceptions (Witkin et al., 1962).

Tests of field dependence/independence in the perceptual domain tap these spatial/perceptual skills. The most reliable and commonly used tests include the Embedded Figures Test (EFT), the Body Adjustment Test (BAT), and the Rod and Frame Test (RFT). All of these tests involve "disembedding" some item from its context. For example, in the RFT, the subject is required to position a rod to a true upright while cues

from the field (illuminated frame) suggest a false upright for the rod. Field dependent persons have difficulty ignoring the cues from the luminous frame, while field independent persons more easily adjust the rod to a true gravitational vertical regardless of the position of the frame. In the EFT the subject's task is to locate a simple form within a more complex figure which has been designed to obscure that simple form.

ii) Cognitive Functioning: Cognitive and perceptual functioning are extremely closely related. "Disembedding" is a requirement of both modes of functioning. Cognitive functioning, however, includes "'analysis' and 'restructuring' of cognitive materials" (Berry, 1976:28). Individuals who have higher levels of differentiation in the cognitive area are better able to analyze a problem identify the critical element and restructure the problem in such a way that the critical element may be used to solve the restructured problem (Witkin and Berry, 1975:9; Berry, 1976:28). These individuals are, therefore, field independent in the area of cognitive functioning. Individuals who are cognitively field dependent have more difficulty in disembedding an item from its context and in analyzing and restructuring materials.

The recognition-efficiency test is an example of a test of cognitive differentiation. The subject is asked to identify an object in an unfocussed projected picture. A high score indicates that the subject identified a greater number of pictures after a single presentation (Goodenough and Karp, 1961:242).

b) Social/Affective domain

i) Social Functioning: A sense of separate identity and an articulated body concept are indicative of psychological differentiation

in the social domain. Individuals who are differentiated in this area, therefore, are aware of a "structured network of attributes identified as one's own and as distinct from the attributes of others" (Witkin and Berry, 1975:9). Operationally, an individual who is field independent in the area of social functioning should:

...be capable of functioning with relatively little need for guidance or support from others...maintain more firmly his own direction in the face of contradicting attitudes, judgments and values of others ...[and]...have a relatively stable view of himself in varying social contexts...(Witkin et al., 1962: 134-35; emphasis added).

Tests of social conformity are generally used to assess levels of field dependence/independence in the social domain. For example, Solomon Asch (1952) devised an experimental procedure designed "to observe directly the interaction between individuals and groups when the paramount issue is that of remaining independent or submitting to group pressures" (Asch, 1952:451) when the group judgment is contrary to fact. Asch's experiments involved subjects facing a group of confederates whose judgments of the relative lengths of lines were contrary to fact and thus, to the subjects' own perceptions. He found that while some subjects were able to maintain their personal opinions, others consistently yielded to the consensus of the group.

Crutchfield (1955) modified the procedure to eliminate the need for confederates and to increase the time efficiency of the test. His procedure involved the use of slides to present the visual stimuli and a panel of lights for each of five individuals. The lights were controlled by the experimenter and designed to make each subject believe that the four other subjects had made a particular judgment, sometimes a wrong one. In fact, all individuals were presented,

simultaneously, with the same contrived group opinion. Crutchfield, too, found "independents" and "conformists" among the groups that he studied.

The source of influence for both the classic Asch-type conformity test and Crutchfield's modified test is discrete individual others, usually peer group members. There are generally from 3 to 9 of these individuals who constitute the "group" which exerts influence in the conformity situation. Since this "group" consists of relatively few discrete individuals, we will refer to such others as "role-specific" others. Not all tests of social conformity, however, invoke this "role-specific" other. Berry (1967), for instance, introduced a modification of the classic Asch-type test. His modified test did not require the presence of confederates or other subjects as in the Crutchfield test. The source of influence for Berry's subjects was a contrived group majority opinion supposedly emanating from the subjects' entire cultural group. Berry told his subjects that "most other" members of the cultural group thought "X". This source of influence is, therefore, termed the "collective" other, since it consists not of discrete individuals but of the whole cultural group, collectively.

These three types of conformity tests, Asch-type, Crutchfield-type, or Berry's "collective" type are the most widely used tests of conformity for cross-cultural research. There are many variations of each of the three types but generally the tests may be classified into two groups - those conformity tests which exert influence from "role-specific" others and those tests which exert influence from the "collective" other.

ii) Affective Functioning: Differentiation in this area is indicated by "the formation of specialized defensive structures for the regulation of impulse" (Witkin and Berry, 1975:10). For example, field dependent individuals are more likely to use the more primitive defenses such as denial and massive repression (Witkin et al., 1962:160). These defenses are primitive in the sense that they are the unsophisticated defenses first used by young children in their attempts to deal with conflict. Field independent individuals tend to use the more sophisticated defenses of intellectualization and isolation to deal with anxiety producing situations (Witkin et al., 1962:160).

2. Self Consistency

Psychological differentiation theory is based on the premise that individuals who exhibit specific levels of differentiation in one area of psychological functioning will exhibit similar differentiation levels in the other areas. Witkin and Berry (1975:10) note that research in western settings generally supports this premise (see also Linton, 1955; Konstadt and Forman, 1965; Solar et al., 1969). Witkin and Goodenough (1977) reviewed the literature on the relationships between differentiation in the perceptual/cognitive domain and the social/affective domain. They concluded that manifestations of differentiated/undifferentiated functioning are "linked to the use of a field independent or field dependent cognitive style in ways predicted by the theory of psychological differentiation" (Witkin and Goodenough, 1977:681).

Evidence for self consistency in psychological differentiation in cross-cultural settings is, however, less clear. Certainly, within the perceptual sphere there is considerable support for a self consistency

model of differentiation since scores on different tests of perceptual differentiation are interrelated (Witkin and Berry, 1975:21). Very few efforts have been made, however, to assess the extent to which self consistency exists across domains in the cross-cultural arena. The few attempts which have been made to relate perceptual differentiation to differentiation in the social and affective domains have achieved equivocal results. Witkin and Berry admit that the "few studies on record hardly provide substantial evidence of the self-consistency to be expected from differentiation theory" (Witkin and Berry, 1975:30) but they add that more work in the area is needed before any conclusions may be drawn.

B. Variables Affecting Levels of Differentiation

1. Characteristics of Individuals

Research in Western settings clearly indicates that there are sex differences in levels of psychological differentiation. The difference is small in magnitude but females generally tend to be more field dependent than males (Witkin and Berry, 1975:30). In cross cultural settings the difference is not always apparent. Differences between the sexes have been noted in some societies but these differences have been absent in other groups. Significant sex differences occur more frequently among sedentary, agricultural groups than in groups with a migratory, hunting and gathering lifestyle (Witkin and Berry, 1975: 37). Berry (1966) for example, found sex differences more pronounced among the Temne (a tight society) than the Eskimo (a loose society).

In addition, psychological differentiation levels are affected by age. Differentiation levels, therefore, follow a predictable

developmental sequence. In general, children are more field dependent than adults, as there is a "progressive increase in differentiation until late adolescence when there is a levelling off. There is a trend towards dedifferentiation in old age." (Witkin and Berry, 1975: 37). Both western and non-western societies exhibit this progression. In addition, studies have shown a high degree of individual stability in perceptual differentiation over time (Witkin and Berry, 1975:40). Witkin and his colleagues (1967) investigated the stability of cognitive style from childhood to adulthood. They suspected that differentiation would be relatively stable over time in individuals relative to their peers because differentiation is a "structural property of a psychological system" (Witkin et al., 1967:292). Their expectations were confirmed using both cross-sectional and longitudinal data.

Level of moral maturity and intelligence also appear to be related to field dependence/independence. Schleifer and Douglas (1973) rated children according to their awareness of an imaginary actor's intentions as opposed to the consequences of the actor's actions. This rating was based on Piaget's stages of development and was designed to measure moral maturity. They found a positive correlation between moral maturity and field independence (Schleifer and Douglas, 1973: 133). Developmental age, therefore, might be more closely related to psychological differentiation, than is chronological age.

Finally, Goodenough and Karp (1961) gave intelligence and perceptual tests to a group of pre-teens. They found a positive relationship between the two measures in individual children. They also discussed the possibility that the finding might be an artifact to some extent, because the factor "capacity to overcome an embedding

context" is common to both tests (Goodenough and Karp, 1961:245).

2. Ecological, cultural, and social structural variables.

Cross-cultural research has indicated a number of antecedent social, cultural and ecological variables which appear to be related to levels of differentiation. The four main variables are: socialization practices, sociocultural "tightness", ecological adaptation, and biological effects (Witkin and Berry, 1975:13).

a) Socialization Practices: The critical element in socialization practices which appears to be related to the different levels of differentiation is the degree to which the practices stress either compliance and adherence to authority or self reliance and assertion. The former practice tends to produce field dependent individuals while the latter practice tends to produce field independent individuals (Witkin and Berry, 1975:14).

b) Socio-cultural Tightness: Witkin and his colleagues define social tightness in terms of the "degree of hierarchical structure among sociocultural elements in a society" (Witkin and Berry, 1975:15). They borrow Pelto's anthropological definition which defines "tight" societies as those with "many different roles and an elaborate structural organization" (Witkin and Berry, 1975:15). Social conformity, they go on to say, "best captures the essence of what is stressed" in a tight society (Witkin and Berry, 1975:46). Adherence to all sources of authority is emphasized and reinforced. Witkin and Berry explain how this emphasis works to inhibit the development of differentiation as follows:

Emphasis on uniform adherence to predetermined external standards during growth is likely to work against achievement of specialization of function in an individualized way. ...Continuous reinforced orientation toward external referents also makes difficult achievement of a self differentiated from others (Witkin and Berry, 1975:46).

c) Ecological Adaptation: Berry (1966, 1971a) argues that "ecological demands placed on a group of people, plus their cultural adaptation to this ecology..." tend to produce individuals with different perceptual skills (Berry, 1971a:326). These different perceptual skills could then be indicative of different cognitive styles. The perceptual skills which are required of the hunter are the

ability to isolate slight variation in visual stimulation from a relatively featureless array...[and the organization of] small details into a spatial awareness, an awareness of his present location in relation to objects around him (Berry, 1966:212).

Individuals from hunting and gathering societies, therefore, would tend to be field independent while sedentary, agricultural societies would tend to produce field dependent individuals.

d) Biological Effects: Nutrition and genetic factors have also been considered as possible correlates of differentiation (Dawson, 1967; Witkin and Berry, 1975:16). These effects are not specifically relevant to this thesis and are, therefore, not considered.

C. Ecocultural Model

This model, originally developed by Berry (1971a) describes the relationship between psychological differentiation and the critical variables, ecology, social organization and socialization practices. Berry and Annis (1974) later elaborated the ecocultural model and defined the nature of the proposed relationships among variables. The critical

variables are all interrelated and the model is multi-directional. The model may, therefore, be viewed as a "logical tree" whose branches are probabalistic and correlational as opposed to deterministic and causal (Berry and Annis, 1974:177). The "trunk" of the tree is the known ecology of a given society. The "branches" extend in predictable directions. That is,

[K]nowledge of physical environment features allow [sic] prediction of the economic possibilities (exploitive pattern and food accumulation) which in turn allows prediction of the demographic distribution (settlement patterns and size of population units) (Berry and Annis, 1974:177).

Berry and Annis cited Pelto (1968) as evidence for ecological correlates of stratification. Pelto had argued that "tight" or highly stratified societies are generally agrarian and densely populated. On the other hand "loose" societies, or those which exhibit low levels of stratification, more often have an absence of agriculture and low population densities, features of hunting and gathering societies (Pelto, 1968:40). In addition, Berry and Annis used the work of Barry and his colleagues (1959) who found support for a positive relationship between ecological adaptation and child rearing techniques. Specifically, Barry et al., had noted that the ecological variable - high food accumulation - is significantly related to pressure toward compliance in child rearing. Conversely, low food accumulation is related to pressure toward assertion as an emphasis in child training (Barry et al., 1959:59). Berry and Annis then tied these variables into their ecocultural model:

Associated with [agricultural, pastoral groups]...
is high food accumulation, high population density,
high socio-cultural stratification and socialization

emphases upon compliance; associated with [hunting and gathering groups]...is low food accumulation, low population density, low stratification, and practices emphasizing assertion (Berry and Annis, 1974:178-79).

Given these associations, they hypothesized that individuals from agricultural, pastoral groups would exhibit low levels of differentiation as evidenced by social dependence, while members of hunting and gathering groups would exhibit high levels of differentiation as evidenced by social independence. These levels of differentiation are seen as adaptations to the ecological setting. Behaviour, therefore, is viewed "both as a function of a set of cultural factors which are in adaptation to an environmental setting, and...as a function of direct (culturally unmediated) stimulation impinging from that same environment" (Berry, 1976:15).

The ecocultural model or variations of it have been used extensively to structure cross-cultural research examining several aspects of differentiation. The literature review which follows in Sections 2 and 3 is a selective review of the research which tests relationships between psychological differentiation and ecological and socio-cultural variables. Although a number of these studies do not explicitly identify Berry's model as their theoretical framework, they all identify one or more of the model's antecedent variables as a correlate of psychological differentiation levels.

Section 2

Field Dependence/Independence in the Perceptual Domain

Cross-cultural research indicates considerable support for the ecocultural model and its predictive value with respect to levels of

field dependence/independence in the perceptual domain. John W. Berry is one of the most prolific researchers in the area of psychological differentiation and its relationship with ecological and socio-cultural variables across cultures. Berry (1966) compared an African agricultural society, the Temne, with groups of Canadian Eskimos. He hypothesized that the different visual demands of the environments could contribute to the emergence of different perceptual skills. Where the Temne are exposed to a "varied visual stimulation" with abundant colour and vegetation, the Eskimo face a "bleak, uniform" visual environment. According to Berry, then, the Eskimo must learn to "isolate slight variation in visual environment" and organize small details (Berry, 1966:212). As he had predicted, the Eskimo scored considerably higher in spatial and perceptual skills (indicating field independence) than the Temne (Berry, 1966:223-24).

Berry also noted that the socialization practices of the two groups differ widely and suggests that these differences might add to cross-cultural differences in perception. The Temne severely discipline their children and expect them to conform. Eskimo, on the other hand, avoid punishment in child training and the children generally do as they wish. Berry allowed his subjects to rate themselves according to the strictness of discipline that they faced in childhood and compared these results to results on tests of perception. He found that those rating themselves as severely disciplined had lower spatial skills scores although the relationship was weak (Berry, 1966:225). Berry's results led him to conclude that:

[E]cological demands and cultural practices are significantly related to the development of perceptual

skills; it has been shown that perceptual skills vary predictably as the demands of the land and the cultural characteristics vary (Berry, 1966:228).

Berry (1971a) attempted to clarify the relationship between ecology, culture and perception by developing a model which considered ecology and individual development to be mutually interdependent. To illustrate the model he used tests of perceptual differentiation and again tested groups of Eskimo, Temne, and members of other subsistence-level societies. Berry summarized his argument as follows:

[H]unting peoples are expected to possess good visual discrimination and spatial skill, and their cultures are expected to be supportive of the development of these skills through the presence of a high number of "geometrical spatial" concepts, a highly developed and generally shared arts and crafts production, and socialization practices whose content emphasizes independence and self-reliance, and whose techniques are supportive and encouraging of separate development (Berry, 1971a:328).

Berry and Annis (1974) elaborated the ecological model and redefined the relationships between variables. They identified "socio-cultural stratification" as a key element in the cultural variable which already included socialization practices. It is with the introduction of this element that the terms "tight" and "loose" came to be used to describe societies at opposite ends of the ecological/cultural continuum. Berry and Annis identified "tight" societies as those with high stratification, a high reliance on food crops, and with high population densities. In contrast, "loose" societies were identified as those with low stratification, the absence of agriculture, and with low population densities (Berry and Annis, 1974:177).

Berry and Annis tested their model in three Amerindian societies with varying exploitive patterns and demographic distributions. They

found support for the model in the perceptual domain of psychological differentiation where the groups were "spread significantly (by eco-cultural setting) and in the direction expected from the model" (Berry and Annis, 1974:187). Generally, their study provides evidence for the role of socio-cultural factors and ecology in the development of perceptual differentiation.

Several studies have examined the role of socialization practices in the development/inhibition of psychological differentiation. Hess and Shipman (1965) investigated the socialization of cognitive modes in children. Children with field dependent modes of functioning have more difficulty solving problems which require them to take some "critical element...out of the context in which it [is] presented" (Witkin and Berry, 1975:9). Hess and Shipman, therefore, argued that

the growth of cognitive processes is fostered in family control systems which offer and permit a wide range of alternatives of action and thought and that such growth is constricted by systems of control which offer predetermined solutions and few alternatives for consideration and choice.... [Further, they argue] that the structure of the social system and the structure of the family shape communication and language and that language shapes thought and cognitive styles of problem-solving (Hess and Shipman, 1965:870).

They drew from Bernstein's work on language and family structures which defines two types of family control systems. One system controls by appealing to "ascribed role norms." Behaviour is then "regulated in terms of role expectations" (Hess and Shipman, 1965:871-72). The other family control system emphasizes behavioural and linguistic alternatives in interpersonal interaction. Thus, in the former type of family (status-oriented), the child has rules presented to him and "compliance" is the only possibility. In the latter type of family,

(person-oriented) the child is presented with alternative choices for action with their corresponding consequences and allowed individual choice.

The two types of control systems are comparable to the two poles of the Barry et al., (1959) general socialization variable (Barry et al., 1959:55). At one end of the continuum is a socialization mode which exerts pressure toward compliance. The "status-oriented" family control system would exert similar pressure. At the opposite end of Barry's continuum is a socialization mode which emphasizes independence and assertion. The "person-oriented" family control system would have a similar emphasis.

Hess and Shipman tested mothers and their children to determine whether or not a relationship existed between maternal linguistic code and family control system and the child's cognitive behaviour. They found that the children from status-oriented families had more difficulty in problem solving and tasks requiring reflection than did the children from person-oriented families (Hess and Shipman, 1965:885). Their study, therefore, supports the ecocultural model which hypothesizes a correlation between socialization practices and type of cognitive style.

Witkin (1971) reviewed several studies which investigated the role of social influences in the development of cognitive styles. His review concluded that

[of the] social influences likely to affect differentiation...highly interrelated factors - handling of separation, regulation of impulse expression, and characteristics of mother as a person...constitute a 'socialization cluster' which influences a child's progress toward separate autonomous functioning (Witkin, 1971:690).

The general consensus of the research is that a socialization mode which "fosters separate functioning" correlates well with the development of articulated (more differentiated) cognitive styles (Witkin, 1971: 704).

Witkin et al., (1974) investigated further the role of socialization experiences in the development of field dependent/independent cognitive styles. They tested subjects from villages in Mexico, Italy and Holland and classified the societies as more or less traditional. The traditional villages were characterized by their emphases on adherence to authority and conformity. They argued that

a field dependent cognitive style is likely to be predominant in social settings characterized by insistence upon adherence to family and social authority and the use of severe or even harsh socialization practices to enforce this conformance (Witkin et al., 1974:16).

Their data support this argument for a correlation between social settings emphasizing conformity and lesser psychological differentiation (Witkin et al., 1974:25).

And finally, Dawson et al. (1974) examined "ecologically determined differences in severity of socialization" between individuals in three societies - Hong Kong, Temne and Eskimo (Dawson et al., 1974: 5). They hypothesized a relationship between these differences and perceptual field dependence/independence. They found that the Hong Kong Chinese children who face harsher socialization had lower scores on the perceptual tests than the more permissively socialized Eskimo (Dawson et al., 1974:15).

The consensus of this research is that there are certain types

of ecological, social, and cultural conditions which either enhance or inhibit the development of psychological differentiation. Agricultural, sedentary societies which have high stratification, a "tight" social organization and harsher socialization practices emphasizing compliance tend to produce individuals who are field dependent in the perceptual domain. In contrast, migratory, hunting and gathering societies which have low stratification, "loose" social organization and more lenient socialization practices emphasizing assertion and independence tend to produce individuals who are field independent in the perceptual domain.

Section 3

Field Dependence/Independence in the Social Domain

Field dependence/independence in the social domain has also been tied to ecocultural and social structural variables. The link appears weak, however, because attempts to relate social conformity to the eco-socio-cultural variables including structural tightness/looseness have achieved equivocal results. Several studies indicate that individuals from structurally "tight" societies are more conforming (e.g. Berry, 1967; Chu, 1966) while others report the opposite result or no difference between "tight" and "loose" societies in terms of social conformity (Berry and Annis, 1974; Boldt, 1976; Frager, 1970). This section, therefore, reviews a selection of this cross-cultural literature.

Again, Berry's name figures prominently as he pioneered cross-cultural comparisons of levels of psychological differentiation in the social domain. In 1967 Berry employed an "incorrect suggested group

norm" to test the conformity of Temne and Eskimo subjects. Like Asch he used the visual stimulus of a group of lines compared to one "standard" line. He did not use confederates, however, but invoked "collective" group pressure by presenting them with the statement - "Most (Temne/ Eskimo) people say this line is equal in length." Those individuals who succumbed to the contrived group opinion he labelled "conformists" and those who resisted, he called "independents." Berry found that the Temne people were more conforming to this "collective" opinion than the Eskimo (Berry, 1967:417). He interpreted this finding through the work of Barry et al., (1959) on socialization practices and degrees of food accumulation. Thus, he explained, the agricultural Temne are conforming because they are strict disciplinarians who do not allow individuality in their children. In contrast, the hunting and gathering Eskimo are more independent in their judgments because they are lenient in child training and fully supportive of individualism. Berry's data support the view that socialization practices and type of subsistence economy do "tend to produce individuals with opposing tendencies to accept group norms" (Berry, 1967:415). Barry et al., had proposed that low food accumulating societies need people who are individualistic and assertive while high food accumulating societies need people who are compliant and conservative (Barry et al., 1959:53). Berry concluded, therefore, that the "Temne and Eskimo societies have been able to produce the degree of conformity required by their respective subsistence-level economies" (Berry, 1967:418).

Berry and Annis (1974) continued Berry's investigation of the conformist tendencies of members of subsistence-level societies. They

used their ecocultural model which predicts that social independence will be found in societies with low food accumulation and therefore with low stratification ("looseness") and socialization emphasizing assertion. For their study, they chose three Amerindian groups from the same culture area to "maximize behavioural comparability and to limit alternative cultural explanations" (Berry and Annis, 1974:180). The groups ranged from high food accumulating to low food accumulating. They used the same "independence" task that Berry had used in 1967 but their data failed to indicate significant differences between the three groups in conformity to the "collective" other (Berry and Annis, 1974:187). That is, the ecological (method of food accumulation), cultural (socialization practices) and social structural (classification as "tight" or "loose") variables, taken together, did not correctly predict the conformity/independence tendencies of individuals from these societies.

Dawson et al., (1974) tested conformity among groups of middle class Hong Kong school children and discussed the results in view of the findings of other cross-cultural studies. They attempted to establish a relationship between "ecologically determined differences in severity of socialization" and social conformity. They used the same Independence/Conformity task that Berry had used in 1967 and again in 1974 and with it found a significant relationship between harsh socialization and high conformity (Dawson et al., 1974:17). That is, their Hong Kong Chinese subjects who were subjected to firm socialization were more conforming to the opinions of the "collective" other than the subjects who had more permissive socialization experiences.

Using a different conformity measure, Boldt (1976) examined social

conformity among groups of Canadian Hutterites and Old Colony Mennonites in addition to a comparison group of more "wordly" subjects from rural and urban areas near the Hutterite colonies. The independent variable for Boldt's study was structural tightness/looseness. Boldt used the traditional anthropologists' definition of structural tightness/looseness (Pelto, 1968) which Berry had used in his ecological model. By this definition, therefore, structural tightness/looseness refers to the extent to which the society is "integrated" and whether it is "rigorously formal and orderly" as opposed to "individualistic and expressive" (Boldt, 1976:24).

Hutterite society is "tight" (Pelto, 1968:49) and Old Colony Mennonite society is notably "looser." Boldt hypothesized, therefore, that there would be cross-cultural differences in "tendency to acquiesce" and he measured these tendencies using a Crutchfield-type panel of lights technique. The source of influence in this conformity test, then, was peer group members or "role-specific" others. Boldt found that the Hutterites were not more conforming than the Old Colony Mennonites. In fact, the Old Colony Mennonites conformed more than the Hutterites although the difference was not significant (Boldt, 1976:28).

The remainder of the studies included in this literature review make no specific reference to structural tightness/looseness as a predictor variable or to the ecocultural model. They do, however, predict levels of social conformity on the basis of assessments of the "strength of the cultural surround." These assessments all "point to the effect of a tight sociocultural context on the level of individual conformity exhibited" (Berry, 1979:190). The relative structural

tightness/looseness of the societies tested may, therefore, be inferred from the descriptions of their relevant features.

Chu (1966) investigated the "persuasibility" of Chinese high school students from Taiwan. He compared his data to a study of the persuasibility of American subjects (Janis and Field, 1956). Chu expected his Chinese subjects to be more conforming than the American subjects because of the "cultural difference in core value-authoritarian submission for the Chinese and self-reliance for the Americans" (Chu, 1966:170). Chinese society, therefore, leans towards the "tight" end of the structural tightness/looseness continuum and American society with its emphasis on self-reliance leans towards the "loose" end of the continuum.

The procedure for both studies was to ask subjects to answer questions on various topics. The subjects were then given written "communications" which were attributed to the mass media of the subjects' own cultural group. The conformity score was the degree of opinion change following these mass media "communications." The source of influence for this study may be regarded as a form of the "collective" other since the mass media supposedly expresses the beliefs and values of its cultural group.

Chu's results support his hypothesis (Chu, 1966:171). That is, Chinese subjects, whose society has been labelled structurally "tight" conformed more to the opinions of the mass media - the "collective" other - than the Americans whose society is structurally "looser". Chu interpreted his results as an indication of the "effect of predominant cultural norms [Chinese authoritarian submission/American self-reliance] on personality functioning" (Chu, 1966:174).

Whittaker and Meade (1967) replicated Asch's classic study of American conformity to the false opinion of a group of confederates. They tested Brazilian, Lebanese, Rhodesian, and Chinese college students and compared their data to Asch's results. No specific hypotheses were stated but they expressed an interest in the results from the Hong Kong sample since, in contrast to American society, in "Asiatic culture... independence and individualism are far less important than submission and conformity" (Whittaker and Meade, 1967:110).

Their results indicate that there was no significant difference in conformity scores for any of the five groups (i.e. including Americans) except the Rhodesians. The Rhodesians were significantly more conforming than any of the other groups (Whittaker and Meade, 1967:111). Whittaker and Meade noted that the Rhodesians were all members of the Bantu tribe which is "authoritarian, and non-conformity in tribal social situations is dealt with by stringent sanctions" (Whittaker and Meade, 1967:112).

The results of this study may be expressed in other words. Both Rhodesian and Chinese societies may be classified as structurally "tight" by the descriptions of their cultural norms. American society is "loose" and no descriptions are given for the other two groups. Whittaker and Meade, therefore, found that members of one "tight" society (Rhodesians) conformed more to "role-specific" others (peer-group confederates) than members of the "loose" society (American). In contrast, members of the other "tight" society (Chinese) conformed to the same degree as American subjects to the influence of "role-specific" others.

Claeys (1967) tested conformity among Congolese university students using a modified Crutchfield-type test and compared his results

to data from Levy's (1960) similar study of American college students' conformity. Claey's expected a higher degree of conformity from the Congolese subjects because theirs is a "traditional society...[in which]...it is considered a high value to comply with the clan norms and independence in that respect is severely punished" (Claey's, 1967: 17-18).

Claey's results do not support his expectation. He found no difference between the conformity of the Congolese subjects and American subjects' conformity (Claey's, 1967:17). In other words, the members of the "tight" society (Congolese) were no more conforming to the influence of the "role-specific" other than the members of the "looser" society (American).

Fragar (1970) tested the conformity of Japanese college students using a modified Asch-type test and compared his results to Asch's (1956) conformity scores for American college students. Fragar expected his Japanese subjects to be more conforming than the Americans because

group membership is considerably more important to Japanese than to Americans.... Japanese...relate their behavior and sense of identity to that group. ...[There is a] strong collectivity orientation in Japan...[and]...individual members would never vote on an issue but would acquiesce to the 'will of the group' even if they privately disagreed (Fragar, 1970:203).

Contrary to his expectations Fragar found that the Japanese subjects were not more conforming than the American subjects. In fact, the American conformity scores were higher than the Japanese scores (Fragar, 1970:208). In other words, the members of the "tight" society (Japanese) conformed less to the influence of "role-specific" others (3 confederates) than the members of the "looser" society (American).

Sistrunk et al., (1971) tested conformity among high school and university students in Brazil and the United States. They too, used a modified Asch-type test but they altered the source of influence along the same lines as Berry (1967). Sistrunk and his colleagues used the phrase "the majority of the others" of the subjects' cultural group (Sistrunk et al., 1971:1179). The influence source, therefore, was a "collective" other. Sistrunk et al., did not describe Brazilian society, unfortunately, but they expected to find no difference in conformity scores between the Brazilians and Americans because this was the result obtained by Whittaker and Meade (1967), (Sistrunk et al., 1971:1176). Unexpectedly, their results showed that the Brazilian subjects were significantly more conforming ($p=.001$) to the opinion of the "collective" other than the American subjects (Sistrunk et al., 1971:1180).

Meade and Barnard (1973) tested social conformity among male Chinese (Hong Kong) and American university students. They used a modified Asch-type influence situation which measured changes in "personal opinions about beliefs rather than perceptual judgments" but the source of influence was still confederates (role-specific others) (Meade and Barnard, 1973:15). Meade and Barnard noted that while Americans are "generally thought to be independent and individualistic, ...[the] Chinese...are generally considered to be more traditional and conforming" (Meade and Barnard, 1973:17).

Meade and Barnard's data reveal that while the American subjects had greater shifts in opinion than the Chinese subjects, the Chinese conformed more frequently than the Americans (Meade and Barnard, 1973:20-21). That is, the members of the "tight" society (Chinese) conformed more

frequently to the opinion of "role-specific" others than the members of the "looser" society (Americans), but the members of the "looser" society conformed more to the opinion of "role-specific" others than the members of the "tight" society.

Huang and Harris (1973) conducted a cross-cultural field experiment on conformity to a "model" among adults in Taiwan and in the United States. They expected the Chinese subjects to be more conforming than the Americans because of the results of a previous study (Chu 1966) which indicate that Chinese conformity is related to their "authoritarian submission and adherence to traditional values" (Huang and Harris, 1973:427).

Their subjects were selected from crowds in busy meeting places (e.g. shopping centre, state fair). Each subject was asked to answer questions about plants. In the experimental condition, a "model" (confederate) appeared, as if by chance, and gave his answers first. Huang and Harris introduced the variables status and competence by altering the physical appearance, stated occupation, and knowledgeability of the "model" (Huang and Harris, 1973:430-31). The influence source, therefore, was probably a "role-specific" other but the additional variables make a comparison between this method and the Asch or Crutchfield-type test, rather ambiguous.

The results of this study indicate that the Chinese subjects were significantly ($p < .01$) more conforming than the Americans (Huang and Harris, 1973:432). In other words, the members of the "tight" society (Chinese) conformed more to the opinion of the (probably) "role-specific" other than the members of the "loose" society (Americans).

Chandra (1973) used an Asch-type test to measure social conformity among two groups of subjects from Fiji. The subjects were either school teachers or university students and they belonged to either one of Fiji's

two dominant races - Indians and Figians. Of the Indian society, Chandra remarked that "conforming behaviour...is expected from them as members of an authoritarian society where priorities are given to group preferences" (tight) (Chandra, 1973:39). He compared his results to those of Asch (1952) and Whittaker and Meade (1967).

Chandra reported that the Figians (Indians plus Figians) scored significantly higher in conformity than any of the other groups tested by Asch and Whittaker and Meade, except for the Rhodesians (Chandra, 1973:38). The Rhodesians had similar conformity scores to Chandra's Figians. When Chandra's results are broken down by ethnic origin it becomes clear that it is the Indians and not the Figians who conform more than the other groups (Chandra, 1973:38). The Figians (ethnic origin) have similar (insignificant differences) conformity scores to the Americans, Brazilians, Lebanese and Chinese while the Indians have similar conformity scores to the Rhodesians. The members of the "tight" society, (Indians) therefore, were more conforming to the opinion of "role-specific" others than the members of the "looser" society (Figians).

Kagan (1974) tested groups of Mexican and American children in a modified Asch-type experimental situation. He expected the Mexicans to be more conforming because "passivity is one of [their] defining characteristics" and their "authoritarian" child-rearing practices emphasize "[p]arental restrictiveness, obedience training, and punishment" (Kagan, 1974:765,769).

Kagan's results indicate support for his hypothesis as the Mexican children conformed more often to the group than the American children (Kagan, 1974:767). If Mexican society can be labelled "tight", the result becomes: members of the "tight" society conformed more often to the opinion of the "role-specific" other than the members of the "loose" society.

Bronfenbrenner (1967, 1970) conducted an experiment in conformity with Soviet and American school children. This experiment was repeated comparing Soviet with Israeli school children (1975). Soviet society is clearly structurally "tight" because of the "strong emphasis" in that society, "on the development of conventional virtues such as obedience and propriety" (Bronfenbrenner et al., 1975:479). Israeli society is more difficult to classify although Bronfenbrenner and his colleagues regarded it as "essentially Western in orientation" with child rearing practices which encourage autonomy (Bronfenbrenner et al., 1975: 479, 487).

These studies used a very different measure of conformity from any of the studies already reviewed. The procedure was designed to test the children's reactions to pressure from peers versus adults.

The adult score is presumed to reflect most directly the child's view of his parents' norms for the appropriateness of his behaviour. The peer score is interpreted as a function of the expectations of age-mates (Bronfenbrenner et al., 1975:478).

The pressure from adults score may therefore, be seen as a response to a kind of "collective" other since parents' norms very often reflect cultural norms. In contrast, the pressure from peers score is a response to "role-specific" others.

The subjects were asked to answer a series of questions about their proposed behaviour in conflict situations. In the base (B) condition the subjects were told that their responses would be confidential. In the adult condition (A) they were told that their responses would be shown to all of their parents; and in the peer condition (P) the children were told that their classmates would see their responses. The adult condition, therefore, exerts influence from the "collective" other, while the peer condition exerts influence from "role-specific" others.

The results of Bronfenbrenner's comparison of Soviet and American children's responses are reported in Table I.

TABLE I
Comparison of Soviet and American Conformity Scores

Society	Tight/Loose	Conformity to Collective Other (A-B)	Conformity to Role-Specific Others (P-B)
Soviet	Tight	1.78	1.2
American	Loose	.53	-1.16*

*the negative sign indicates that the responses were less moralistic than in the base condition. It does not indicate degree of conformity.

As the Table illustrates, the Soviet children were influenced more by the adult pressure than the American children ($1.78 - .53 = 1.25$). In contrast, except for the direction of opinion shift which has no specific bearing on degree of influence effect, the Soviet children were no more influenced by the peer group than the Americans ($1.2 - 1.16 = .04$). The within-society comparisons are also important. The Soviet children were influenced more by the adult pressure than by the peer pressure while the reverse was true for American children.

These results may be summarized as follows:

1. Members of the "tight" society (Soviets) conformed more to the influence of the "collective" other than the members of the "loose" society (Americans).
2. There was no difference between societies in the subjects' conformity to role-specific others.
3. The members of the "tight" society conformed more to the influence of the "collective" other than to the influence of "role-specific" others.

4. The members of the "loose" society conformed more to the influence of "role-specific" others than to the influence of the "collective" other.

When the experiment was repeated with Israeli subjects, similar results were obtained. Bronfenbrenner and his colleagues did not present their data in the form of "adult minus base" shift and "peer minus base" shift. These figures represent the degree of opinion change when others (either the adult group [collective other] or the peer group [role-specific others]) were to be informed of the responses. These data may be calculated, however, from the simple base, adult, and peer scores which Bronfenbrenner et. al., do report. Table II summarizes these data.

TABLE II
Comparison of Soviet and Israeli Conformity Scores

Society	Tight/Loose	Conformity to Collective Other (A-B)	Conformity to Role-Specific Others (P-B)
Soviet	Tight	1.78	1.22
Israeli	Looser?	- .46*	-1.64*

* again, the negative signs indicates the responses were less moralistic. They do not indicate less conformity - only a different direction of conformity.

These data indicate that the Soviet children are more influenced by the "collective" other than the Israeli children ($1.78 - .46 = 1.32$). Israeli children are slightly more influenced by role-specific others than the Soviet children although this difference is very small ($1.64 - 1.22 = .42$). Within society comparisons reveal that Soviet children are more influenced by the collective other than by role-specific others ($1.78 - 1.22 = .56$) and the reverse is true of Israeli children ($1.64 - .46 = 1.18$). It is unlikely that any of these differences are statistically significant but the consistent directional trends indicate that if the experiment were redesigned to measure these trends purposefully, instead of in an ad hoc fashion, significant statistics would be more likely to occur.

This literature review reveals the impossibility of drawing any firm conclusions regarding the direction or degree of correlation between socio-cultural features of societies and the levels of social differentiation of their members. Structural tightness, socialization practices emphasizing compliance, and an agricultural setting were all related to low levels of differentiation in the perceptual domain. Cross-cultural research consistently indicated this relationship. In the social domain, however, it is unclear whether any relationship exists particularly between the structural tightness/looseness variable and social conformity. A summary of the research reveals that a complete range of relationships has been calculated. That is,

in a number of studies, the members of the "tighter" society conformed more than the members of the "looser" society (Berry, 1967; Chu, 1966; Huang and Harris, 1973; Chandra, 1973). In a number of other studies, the members of the "looser" society conformed more than the members of the "tighter" society (Frager, 1970; Meade and Barnard, 1973; Bronfenbrenner et al., 1975). Other researchers found no significant differences in the conformity scores of members of "tight" and "loose" societies (Berry and Annis, 1974; Claeys, 1967; Boldt, 1976).

The remainder of this theoretical discussion is devoted to clarifying the nature of the relationship between structural tightness/looseness and social conformity. The discussion shall attempt to show that the ambiguity is a result of both theoretical and methodological inconsistencies. Specifically, the conceptualization of the structural tightness/looseness variable is lacking in clarity which makes it difficult to classify societies on this dimension, especially societies which are relatively more complex. The methodological consideration which is related to the theoretical one, is that researchers have neglected to attend sufficiently to the particular source of external influence as a potential variable in their tests of social conformity. Several tests invoke "role-specific" others; and a number of tests invoke a "collective" other influence source. This thesis argues that these tests are not comparable in terms of the conformity they measure. In fact, they measure two very different types of conformity and it is, in part, this difference which leads to confusion in interpretation of the various data.

Section 4, therefore, presents a reconceptualization of the structural tightness/looseness variable. Section 5 discusses the question of "what others" are employed as a source of influence.

Section 4

Structural Tightness/Looseness

Until recently, the concept structural tightness/looseness has been ill-defined and often only implicitly used in research because of the difficulty encountered in forming an explicit operationalization. Pelto (1968) offered the most precise definition. He classified subsistence-level societies on a twelve-point scale of tight/loose and attempted to demonstrate that all societies may be placed somewhere on the continuum. Pelto used a Guttman scaling technique to rank-order the societies. His scale consists of 12 items ranging from:

such rudimentary criteria of social organization as the mere presence of recognized political authority... to, at the tightest extreme, theocracy.... The more of these traits present and the higher the code numbers of the traits, the tighter the organization of the society (Pelto, 1968:40).

Pelto's definition was the best classification tool available for cross-cultural research among subsistence-level societies but it is of limited use in classifying more modern, industrial societies.

Pelto's definition of structural tightness/looseness was borrowed by the cross-cultural psychologists who attempted to relate the variable to levels of psychological differentiation. Witkin and Berry's (1975) review of the psychological differentiation literature identifies structural tightness/looseness as one of four key antecedent

variables in differentiation effects. Their interpretation of the definition of structural tightness/looseness led them to see tightness as a variable relating to the "degree of hierarchical structure among socio-cultural elements in a society.... [S]ocieties which have many different roles and an elaborate structural organization are referred to as tight..." (Witkin and Berry, 1975:16). Thus, they operationalize the "tightness" variable in terms of the number of roles and degree of stratification. This definition actually classifies societies according to degree of complexity. When they discuss the mechanics of tightness, however, (that is, how "tightness" affects levels of differentiation), they refer to the "emphasis on uniform adherence to [sources of authority]" (Witkin and Berry, 1975:46). That is, they are actually conceptualizing "tightness" in terms of role relatedness or the nature of the expectations which govern role relationships. As Boldt (1978a) pointed out, this conceptualization is ambiguous because it does not separate two important dimensions of role relationships - their diversity and their "relatedness" (Boldt, 1978a:156).

Witkin and Berry's (1975) discussion of the structural tightness/looseness variable and its relationship to psychological differentiation, specifically social differentiation, is useful, however, particularly because it attempts to tie diverse findings into a theoretical unity. In their review of the literature on psychological differentiation, Witkin and Berry (1975) found that the evidence suggests

that a relatively field-dependent cognitive style, and other characteristics of limited differentiation, are likely to be prevalent in social settings characterized by insistence on adherence to authority both in society and in the family, by the use of strict or even harsh socialization practices to enforce this conformance, and by tight social organization. In contrast, a relatively field-independent cognitive style and greater differentiation are likely to be prevalent in social settings which are more encouraging of autonomous functioning, which are more lenient in their child-rearing practices, and which are loose in their social organization. The term "social conformity" perhaps best captures the essence of what is stressed in the first kind of social setting....[It] encompasses adherence to familial, social, religious, and political authority (Witkin and Berry, 1975:46).

At first glance, their argument may appear to be tautological, or at best, self-evident. They seem to have said that societies whose structures stress social conformity tend to produce individuals who are less differentiated, one indicator of which is susceptibility to external influence, or social conformity. It is important, therefore, to clarify the types of social conformity to which the terms refer. The conformity which a social structure might stress is conventionality or "the concurrence with the tenets, attitudes, and mores of a subject's culture or subculture." (Beloff, 1958:99). In contrast, the social conformity which is an indicator of lesser psychological differentiation is acquiescence or the "agreement with expressed group opinion in a particular experimental situation involving pressure from others" (Beloff, 1958:99). What Witkin and Berry have said, therefore, is that individuals from societies where conventional behaviour is stressed, tend to be more acquiescent than individuals from societies where conventional behaviour is not emphasized.

Boldt (1978a) offered a more precise definition of the concept structural tightness/looseness which is based on a recognition that there are two "analytically distinct dimensions" of role relationships- namely numbers (role complexity) and kinds (role relatedness) (Boldt, 1978a:155). One may, therefore, describe role relationships in terms of role complexity and with this tool classify societies on a continuum from simple to complex. In addition, one may describe role relationships in terms of the "connections" - or role expectations of the various role partners. It is this latter dimension to which "role relatedness" refers and it is in the nature of role relatedness that structural tightness/looseness inheres. Pelto's and others' definitions of the structural tightness/looseness variable fail to distinguish between these two dimensions. This failure not only weakens the definitions, it makes it more difficult to predict or explain behaviour which is related to the structural tightness/looseness variable. The preceding literature review has illustrated this difficulty.

Boldt's (1978a) definition of structural tightness/looseness makes a clear distinction between role complexity and role relatedness. This definition "recognizes role relatedness (rather than diversity)" as the "major structural referent" of the structural tightness/looseness variable (Boldt, 1978a:151). The particular dimension of role relatedness to which structural tightness/looseness refers is the "degree to which role expectations are 'imposed and received' as opposed to 'proposed and interpreted'" (Boldt, 1978a:156). The definition of a structurally tight society, therefore, is one in which the role expectations are imposed and received while a structurally

loose society is one in which the role expectations are proposed and interpreted.

Boldt's definition clearly indicates that the role expectations which are either imposed and received (as in a tight society) or proposed and interpreted (as in a loose society) emanate from an external rather than an internal source. In fact, Boldt specifically points out that "received" does not necessarily mean "internalized." Internalization implies "conscious reflection and evaluation" and in structurally tight societies where opportunities to interpret role expectations are restricted, one would expect such reflection and evaluation to be minimal (Boldt, 1978a:157). His definition, however, fails to state explicitly what exactly is the source of those expectations from the external environment. Boldt and Roberts (1979) subsequently made explicit an important implication in Boldt's definition. Specifically, they emphasize that it is "the collective expectations of the entire cultural group" which are imposed in a tightly structured society (Boldt and Roberts, 1979:226). In a loosely structured society, these collective role expectations are merely proposed and interpreted. The definition of a structurally tight society, therefore, is one in which the collective role expectations are imposed and received. A structurally loose society is one in which the collective role expectations are merely proposed and interpreted.

It is now proposed that the ambiguity of results relating structural tightness/looseness to levels of social conformity is, in part, due to the failure to distinguish clearly between role complexity

and role relatedness when defining structural tightness/looseness. These two structural features have different behavioural consequences which are particularly apparent in terms of social conformity and independence.

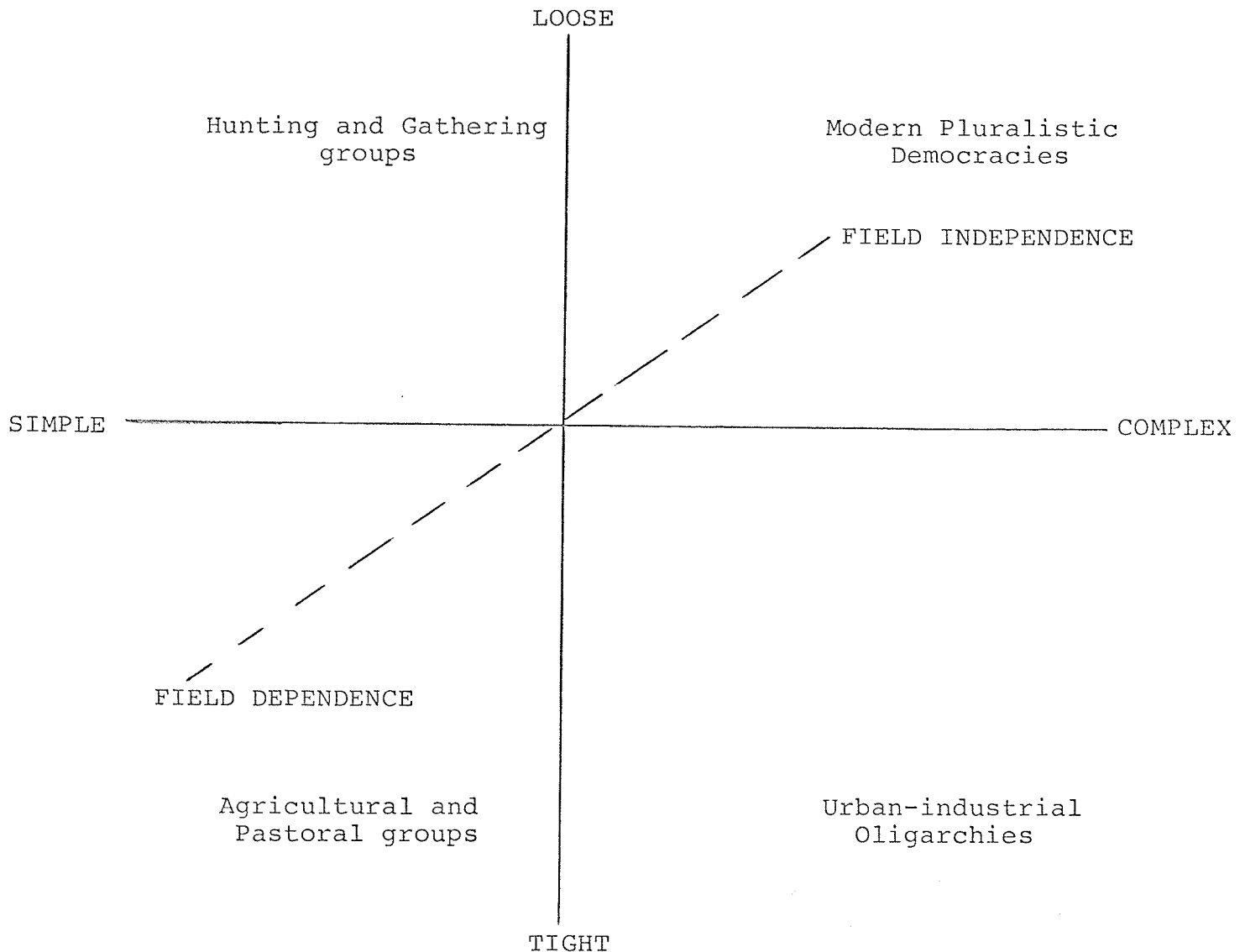
Boldt (1978b) cites the work of Coser (1975) which indicates that "it is primarily role complexity that is seen as influencing individual autonomy" (Boldt, 1978b:355). That is, where the number and diversity of roles is greater, there is a greater number of alternative courses of action available to the actors. A definition of structural tightness/looseness which is based on role complexity, therefore, would predict that in a tight society (complex - numbers and diversity of roles is greater) individual autonomy would increase and levels of social conformity would decrease.

A substantially different prediction results, however, from a definition of structural tightness/looseness based on role relatedness. Role relatedness or the imposed/proposed nature of collective expectations crosscuts the simple/complex dimension (See Figure 2). Role relatedness, therefore, is independent of the simple/complex dimension although the two dimensions are related by their common reference to the relationships between and among roles.

The relationship between role relatedness and autonomy is clarified by Ford et al., (1967) who examined the nature of role expectations in working class as compared to middle class homes. The working class culture is of the "received" type and adults from this background, consequently, "are cognitively unprepared to consider the possibility of improvisation in responding to role expectations"

Figure 2 *

Structural Tightness/looseness and Complexity -
Two Separate but Related Dimensions -
And Their Relationship to Field Dependence/independence



* adapted from Boldt, 1978a:158.

(Boldt, 1978b:355). The "received" nature of collective role expectations, therefore, reduces individual autonomy. In contrast, individuals from societies which permit the "interpretation" of these collective role expectations will be better prepared to take advantage of the opportunities for choice which do arise. Structural tightness/looseness defined in terms of role relatedness or the imposed/proposed nature of collective expectations, therefore, has clear implications for the behavioural patterns of conformity/autonomy. A structurally tight society where the collective role expectations are imposed and received should restrict the development of individual autonomy and tend to produce individuals who exhibit higher levels of social conformity. In contrast, a structurally loose society where the collective role expectations are proposed and interpreted should enhance the development of individual autonomy and tend to produce individuals who are less socially conforming.

In summary, then, a definition of structural tightness which is based on role complexity emphasizes the "enhanced autonomy that role complexity brings," while a definition of structural tightness which is based on role relatedness (imposed/proposed role expectations) emphasizes "how increased tightness (i.e. role relatedness) reduces autonomy" (Boldt, 1978a:159). This apparent contradiction illustrates the importance of separating the two dimensions of role relationships - role complexity and role

relatedness - before one attempts to define the structural tightness/looseness variable and its effects on social conformity. Clearly, it is structural tightness defined in terms of role relatedness which is the structural variable that has been identified as an important inhibitor of psychological differentiation. Definitions of structural tightness/looseness which are based on a combination of role complexity and role relatedness (Witkin and Berry, 1975), therefore, will not isolate the important structural referent (imposed collective expectations) which inhibits the development of psychological differentiation as evidenced by increased levels of social conformity. Failure to isolate this important structural referent will seriously impair the variable's predictive capacity as the literature review has illustrated.

Section 5

The Source of External Influence - Which Others?

A. Varying the Source of External Influence - The Theory

Boldt and Roberts specified both the nature of two sources of external others - "role-specific" and "collective" - and also the types of societies in terms of structural tightness/looseness which would tend to produce conformity to, or independence from, these different "others". They noted that the expectations of others in at least some situations must be noted and taken into account to some degree in all societies. No individual can be truly independent of all "others" and still be a "social being" (Boldt and Roberts, 1979:226). There

are two general categories of "others" to whom individuals differentially refer. These categories are:

1. those discrete others whose expectations influence the individual in the immediate context of an ongoing interaction situation, and
2. the members of one's larger cultural group collectively, whose expectations of our behaviour transcend the situational demands of the moment and individual self-interest in favour of group interests (Boldt and Roberts, 1979:226).

The first category refers to "role-specific" others; the second category refers to the "collective" other. As Section 4 has illustrated, it is the role expectations of the "collective" other which are "imposed and received" in a structurally tight society. These "collective" expectations are merely proposed and interpreted in a structurally loose society (Boldt and Roberts, 1979:226).

This refined definition makes it clear that any test of social conformity must be carefully assessed in terms of the type of external influence it invokes. If the test invokes the "collective other" (i.e., the trans-situational role expectations of the entire cultural group), then one would expect members of structurally tight societies (where such expectations are imposed) to be more susceptible to influence than members of looser societies (where such expectations are merely proposed). But if the test invokes the situated expectations of discrete individual others (role-specific others), then one would expect the situation to be reversed. That is,

[w]here collective expectations are only proposed (as in loose societies) their influence in constraining

interaction will be diminished and individuals will of necessity attend more assiduously to the expectations of discrete others in specific situations, while a reverse priority obtains in tightly structured societies (Roberts and Boldt, 1979:226).

Simply stated, they hypothesize that subjects from "tight" societies will obtain higher conformity scores than subjects from "loose" societies when conformity to the "collective" other is tested. Opposite results will be obtained if conformity to "role-specific" others is tested.

B. Varying the source of external influence - The Research

Research to date has ignored this distinction in the specific source of external influence, with some researchers employing conformity tests which invoke the collective other (e.g. Berry, 1967), while others employ a more traditional Asch-type test which exposes subjects to the influence of a few peer group members temporarily assembled to perform a specific task (e.g. Chandra, 1973). A number of these studies were reviewed in Section 3. The results, in terms of a relationship between structural tightness/looseness and conformity/independence, are ambiguous and contradictory. The Boldt/Roberts hypothesis suggests that attention to the source of external influence should clarify the relationship to some degree as long as the societies are defined as structurally tight or loose in terms of the imposed/proposed nature of collective role expectations. Most of the studies do not explicitly define their societies in these terms. The definition, however, is often implicit in their descriptions of the authority structures, socialization practices, or relative "traditionalism" of the various

societies.

These studies and their results, therefore, are reported in Tables III and IV. This presentation is designed as an initial test of the Boldt/Roberts (1979) hypothesis. The studies are grouped according to the source of external influence which was invoked to produce conformity responses. Table III presents the studies which invoked some form of the "collective" other as a source of influence; Table IV presents the studies which invoked some form of "role-specific" other. The designations of societies as "tighter" or "looser" are estimates of this variable based on the often brief descriptions available from the texts.

1. Table III - Conformity to the "Collective" Other

The majority of these studies found at least a directional difference (in the predicted direction) between structurally tight and structurally loose societies. Only one study (Berry and Annis, 1974) reported no difference in conformity scores. The descriptions of the societies designated as "tight" and "loose" in this study, however, reveal that the Tsimshian do not represent a very extreme example of a structurally tight society (Berry and Annis, 1974:181-82). This failure to maximize differences between the societies on the structural tightness/looseness dimension may account, at least in part, for their findings of insignificant conformity differences.

The Bronfenbrenner studies (1967, 1975) used a "conformity" measure which was very different from the measures used in any of the other studies reported (see Section 3). The comparative "conformity

TABLE III

Differences Between "Tight" and "Loose" Societies
In Terms of Conformity to "Collective" Other

Study	Ages of Subjects	Type of Test	"Tighter" Society	"Looser" Society	Conformity Findings
Berry, 1967	10 to over 40	"Lines" test	Temne (simple)	Eskimo (simple)	Temne > more conforming than Eskimo (significant difference)
Berry and Annis, 1974	18 to over 40	"Lines" test	Tsimshian	Cree	No significant conformity differences
Dawson et al., 1974	11 to 13 years	"Lines" test	Hong Kong Chinese (harsh socialization)	Hong Kong Chinese (more lenient socialization)	"Tighter" > "Looser" society more conforming than (significant difference)
Chu, 1966	High School students	"Mass media" Communications	Chinese (Taiwan)	American	Chinese > more conforming than Americans (significant difference)
Sistrunk et al., 1971	9 to 21 years	Asch-type "Lines" test (majority of others - influence source)	Brazilian?	American	Brazilians > more conforming than Americans (significant difference)
Bronfenbrenner, 1967	11 to 13 years	Pressure from "Adults"	Soviet	American	Soviets > more conforming than Americans
Bronfenbrenner et al., 1975	12 years	Pressure from "Adults"	Soviet	Israeli?	Soviets > more conforming than Israelis

TABLE IV

Differences Between "Tight" and "Loose" Societies
in Terms of Conformity to "Role-Specific" Others

Study	Ages of Subjects	Type of Test	"Tighter" Society	"Looser" Society	Conformity Findings
Boldt, 1976	10 to 15 years	Modified Crutchfield Panel-of-lights Technique	Hutterites	1. Old Colony Mennonites 2. Rural and urban Albertans	No significant differences between "tight" and "loose" societies
Whitaker and Meade, 1967	18 to 25 years (college)	Classic Asch-type test	1. Hong Kong Chinese 2. Rhodesians 3. Lebanese? 4. Brazilians?	American	1. Rhodesians more conforming than Americans (significant difference) 2. No significant differences between Chinese, Lebanese, or Brazilians compared to Americans
Claeys, 1967	19 to 32 years (college)	Modified Crutchfield Panel-of-Lights Technique	Congolese (male)	American	No significant differences between "tight and "loose" societies
Frager, 1970	college students	Modified Asch-type test	Japanese	American	Americans more conforming than Japanese
Meade and Barnard, 1973	male college students	Modified Asch-type test (changes in stated beliefs)	Hong Kong Chinese	American	1. Americans more conforming than Chinese in terms of amount of change (significant difference) 2. Chinese more conforming than Americans in terms of frequency of changes (significant difference)
Huang and Harris, 1973	Adults	Field experiment (conformity to a model)	Chinese (Taiwan)?	American	Chinese "imitated" more than Americans (significant difference)

TABLE IV (continued)

Study	Ages of Subjects	Type of Test	"Tighter" Society	"Looser" Society	Conformity Findings
Chandra, 1973	School teachers, or university students	Asch-type Test	Figian Indian	Figians?	Indians more conforming than Figians (significant difference)
Kagan, 1974	7 to 9 years	Modified Asch-type test	Mexican (rural)	American	Mexicans more conforming than Americans (significant difference)
Bronfenbrenner, 1967	11 to 13 years	Pressure from "Peers"	Soviet	American	No significant differences between "tight" and "loose" societies
Bronfenbrenner et al., 1975	12 years	Pressure from "Adults"	Soviet	Israeli?	Israelis more conforming than Soviets (directional, not significant)

scores were not reported as such by the authors and, therefore, only directional differences can be inferred. Their studies are significant, however, because they tested two types of societies - one structurally tight and the other structurally loose - and they used two separate sources of influence. They are, thus, the only studies prior to the present effort which have examined, across cultures, the differential effects of "role-specific" others and the "collective" other on conformity scores. Their findings, although only directional, may be interpreted as support for the Boldt/Roberts hypothesis.

2. Table IV - Conformity to "Role-Specific" Others

This table clearly illustrates the ambiguity and confusion which has surrounded attempts to correlate structural tightness/looseness with conformity/independence. The results range from:

a) significant differences between structurally "tight" societies and structurally "loose" societies which indicate that members of "tight" societies are more conforming to "role-specific" others than members of "loose" societies; through

b) significant differences between structurally "tight" and structurally "loose" societies which indicate that members of "loose" societies are more conforming to "role-specific" others than members of "tight" societies; to

c) no significant differences in conformity scores.

Results which fall into categories b and c lend support to the Boldt/Roberts hypothesis while results which fall into category a contradict

their hypothesis.

There are serious problems in comparability between many of these studies. There is a wide variation in types of conformity tests employed and the differences between "tight" and "loose" societies are often only implicit differences. A comparison of Table III with Table IV, however, reveals that more consistent results are obtained when researchers attempt to correlate structural tightness/looseness with conformity to the "collective" other than when the structural variable is related to conformity to "role-specific" others. On the basis of these studies, therefore, one may conclude that members of structurally tight societies appear to be more conforming to the "collective" other than members of structurally looser societies. The relationship between structural tightness/looseness and conformity to "role-specific" others is ambiguous, however, and further research is required to define the relationship more clearly.

Section 6

Summary

Psychological differentiation theory and Berry's ecocultural model provide the theoretical background for this thesis. Berry's model was never designed for application to modern, complex societies as he explicitly states that its domain is limited to subsistence-level societies. This limitation is mainly due to its ecological variable - degree of food accumulation. The model is useful, however, because its structural tightness/looseness variable can make the leap to describe societies beyond a subsistence level, when the variable is

reconceptualized as described in Section 4. That is, by separating the two dimensions of role relationships and defining structural tightness/looseness solely in terms of role relatedness, complex societies may be classified as "tighter" or "looser".

The literature review has revealed that there is considerable support for a relationship between structural tightness and field dependence in the perceptual domain but no clear support for this relationship in the social domain. We have proposed that this latter ambiguity is the result of a confused definition of the structural variable and an inattention to the source of external influence in conformity tests. The research which was conducted as part of this thesis attempts to gather empirical support for this proposal and, more generally, to clarify the relationship between structural tightness/looseness and cognitive style.

CHAPTER III

Methodology

A. The Problem

This study proposes to demonstrate that when a distinction between the "collective" other and "role-specific" others is maintained, psychological differentiation theory's hypothesized relationship between structural tightness/looseness and type of cognitive style will be more clearly supported than it has in the past. Incorporating both the theoretical consideration of the proper structural referent for the structural tightness/looseness variable and the related methodological consideration of "which others" are imposed as a source of influence, the theory's hypothesized relationship becomes:

Societies which are structurally tight (i.e. the collective role expectations are imposed and received) will tend to produce individuals who have field dependent cognitive styles and who therefore have a greater susceptibility to influence from the "collective" other; and societies which are structurally loose (i.e. the collective role expectations are proposed and interpreted) will tend to produce individuals who have field independent cognitive styles and who therefore, have a lesser susceptibility to influence from the "collective" other.

The purpose of this research therefore, is to examine the relationship between structural tightness/looseness and cognitive style using a research design which incorporates the methodological and theoretical changes suggested by the foregoing theoretical development. Specifically, the following hypotheses are tested:

Hypothesis 1: Subjects from a structurally tight society will be more susceptible to the influence of the "collective" other than subjects from a looser society.

Hypothesis 2: Subjects from a structurally tight society will not be more susceptible to the influence of "role-specific" others than subjects from a looser society.

Hypothesis 3: Subjects from a structurally tight society will be more field dependent in the perceptual domain than subjects from a looser society.

B. Independent Variable - Structural Tightness/Looseness

The independent variable for the purposes of this research is structural tightness/looseness. This variable has a long history of use and abuse in both psychological and sociological literature. The abuse stems from a failure to specify proper structural referents in its definition. Structural tightness/looseness is conceptualized here, therefore, as referring to the quality of the role relationships within a given society. At issue is - how are the roles related to one another? In all societies, there are at least two types of expectations which govern the relationships between and among roles. These expectations may be those of "role-specific" others or they may be the expectations of the "collective" other. While both types of expectations operate in all societies, it is the nature of the "collective" expectations which defines the structural tightness/looseness of societies. Specifically, it is the degree to which collective role expectations are "imposed and received" as opposed to "proposed and interpreted" which distinguishes a tight society from a loose one (Boldt, 1978b:354).

A tight society, therefore, is operationalized as one in which the collective role expectations are imposed and received. A loose society is operationalized as one in which the collective role expectations

are merely proposed and interpreted.

C. Dependent Variables

1. Field Dependence/Independence

a) Perceptual Domain - Field dependence/independence in the perceptual domain manifests itself in an ability "to overcome the influence of the surrounding field or to separate an item from its context" (Witkin et. al., 1962:2). Persons who are field dependent in this domain tend to see the whole more clearly than its parts and thus, have difficulty in separating an item from its context. Persons who are field dependent in the perceptual domain are better able to "disembed" an item from its context and ignore any false cues from the surrounding field.

For the purposes of this research, therefore, field dependence/independence in the perceptual domain is operationalized using the Group Embedded Figures Test.

b) Social Domain - Field dependence/independence in the social domain manifests itself in a developed or undeveloped sense of separate identity. A developed sense of separate identity is indicated by independent functioning in the face of contradictions and a stable view of self in different social contexts. Persons who are field dependent in this domain have difficulty in maintaining their judgments in the face of contradictory opinions. Persons who are field independent in this domain maintain their independent judgments in the face of social (external) influence which contradicts their judgments.

For the purposes of this research, field dependence/independence in the social/affective domain is operationalized using Berry's (1979) modified Asch-type conformity test. This conformity test or Lines Test

has two versions:

i) "Collective" Lines Test: This version is identical to that used by Berry in his cross-cultural research in subsistence-level societies. The source of external influence is a contrived "collective" (most other) opinion of the subject's own cultural group.

ii) "Role-Specific" Lines Test: This version is identical to that used by Berry except that there are no permanent X's on the conformity cards and the source of external influence is different from Berry's. The X's are removable to lend credibility to the source of influence. The source of external influence is a contrived "role-specific" (last two others) opinion of the subject's own cultural group.

2. Accuracy

Accuracy scores reflect the subject's ability to choose the correct line on the Lines Test independent of any influence from others. This variable allows one to identify any individual or group differences in basic line discrimination ability.

D. Samples

1. Hutterites

The group chosen to represent a tightly structured society for the purposes of this research, is the Hutterites of Manitoba. Hutterite society is widely acknowledged to be extremely tight in structure. The Hutterites practice communal living in an agricultural setting, have little private property, and socialization of children is essentially a community effort. Their community organization is rigid with a "Preacher" who tends their spiritual needs and a "Boss" who manages their business affairs (Boldt, 1978b).

In Hutterite society, each individual is truly his brother's keeper as "...each member is expected to watch over his fellows and admonish anyone who commits a fault" (Hostetler, 1974:147). Respect for hierarchy and authority pervades their thought and practice as their

religion teaches that "all authority, whether inside or outside the colony, originate[s] with God" (Hostetler, 1974:162). Persons in positions of authority are not above reproach however, and even the actions of the Head Preacher are subject to review by the colony council. Authority, then is "group centred" and ideally, at least, "group decisions are impartial and have higher priority than those made by an individual" (Hostetler, 1974:162). Hutterite children learn early in life that the colony must take precedence over the individual. Their school setting minimizes their individuality and self assertion and maximizes their identity with, and dependence upon the group (Hostetler, 1974:214-218).

This brief review indicates that the expectations governing role relationships among Hutterites are uncompromising. In other words, collective role expectations are imposed and received in Hutterite society. Boldt describes the dynamics of the imposition of these expectations as follows:

Role expectations are imposed by a central authority with the means to administer meaningful sanctions, and individual interpretation of these expectations is actively discouraged. If changes in expectations seem warranted, this is typically achieved through an officially authorized change in policy, equally as "imposed" as the previous policy was (Boldt, 1979b: 22).

Hutterite society, thus, is clearly "tight" in terms of the "imposed and received" nature of the collective role expectations.

Hutterite subjects¹ were obtained from six colonies within a forty mile radius of Winnipeg. The colonies were selected on the basis of:

a) Proximity and ready accessibility to Winnipeg. In addition, since word travels quickly between some colonies, an effort was made to ensure that we did not visit colonies where word of the nature of our experiment would obviously have travelled.

b) Willingness to participate once contacted. Permission was required from the Head Preacher on each colony selected for study before subjects could be tested. This permission was almost always granted but with varying degrees of enthusiasm.

c) Size of colony. Large colonies (over 100 people) were preferred. In these colonies, 10-16 adults were generally willing to participate in an evening.

Seventy-five Hutterites participated in the study. Participation was on a voluntary basis. Subjects usually appeared at the testing site (school or colony kitchen) in groups of twos or threes. A good response was the rule rather than the exception and we often turned away a few potential subjects who appeared late in the evening. Subjects ranged in age from 18 to 43. The mean age was 26.5. There were 36 males and 39 females. Thirty-six of the subjects were married and forty-eight had been baptized. Most of the men were general labourers on the farm, although a few were carpenters, mechanics or managers of specific areas (e.g., hog man, chicken man).

2. University of Manitoba Students

Ideally, this research would have examined field dependence/independence within a loose, and simple society such as the Eskimo society. This approach would have controlled for complexity which may obscure differences between societies which differ in role complexity as well as in role relatedness (the crucial referent for structural tightness/looseness). The relative inaccessibility of Eskimo groups, however, made such a comparison impossible.²

Therefore, the University of Manitoba student population was

selected to represent the best available alternative example of a looser society. This choice is based on the assumption that the student population constitutes a socio-cultural group and that the students recognize it as such. One may argue that the mere fact that one needs to state this assumption demonstrates the relative looseness of the University student population. Clearly, the collective role expectations cannot be as imposed and received in the student population, as they are in a tight society. These expectations are probably proposed more than imposed, and interpreted more than received. The University of Manitoba student population, therefore, represents the looser end of the structural tightness/looseness continuum for the purposes of this research.

University of Manitoba students from an Introductory Sociology class were asked to participate in this research project. Fifty-one students volunteered for the study. Subjects ranged in age from 17 to 37. The mean age was 19. There were 12 males and 39 females. All but one subject were full time students and only one student was married.

E. Data Collection

The data were collected during the fall of 1981. A standard Group Embedded Figures Test (GEFT) measured the variable field dependence/independence in the perceptual domain. An experimental technique employing a modified Asch-type conformity test (Lines Test) measured field dependence/independence in the social/affective domain. The GEFT was administered first, followed by the Lines Test. This order gave added credibility to the Lines Test as a perceptual test similar to the GEFT.

1. Group Embedded Figures Test

Subjects were asked to complete the Group Embedded Figures Test

(GEFT) (see Witkin et. al., 1971). The GEFT assesses the individual's degree of psychological differentiation in the perceptual domain. Since most subjects would not have understood the technical terms, they were told that the test was designed to measure how people see things - not how well they see, but how they see.

The GEFT is a paper and pencil test and can be administered to any number of subjects at one sitting. The test was administered to subjects alone or in small groups depending on how quickly new arrivals appeared at the test location. The GEFT is an individual effort, however, and the presence of others does not interfere with, or alter, a person's performance.

The subject's task is to find simple forms within larger, more complex figures. The simple forms are always available for viewing on the booklet's back cover but they cannot be seen in conjunction with complex figure test items. The complex figures are designed to obscure the simple forms (see Appendix 1 for e.g.). There are three sections in the standard booklet. Section I contains relatively simple practice items and is used as an instructional and informational tool. Sections II and III are matched for item difficulty and are interchangeable as measures of field dependence/independence in the perceptual domain. Therefore, subjects were required to complete only Sections I and II. Once the instructions were understood, subjects were allowed 5 minutes to complete Section I and another 5 minutes for Section II. Only Section II was scored.

Total score on the GEFT indicates degree of perceptual field dependence/independence. The range of possible scores is from zero to

nine. A low score indicates field dependence in the perceptual domain, while a high score indicates field independence in this domain.

2. Lines Test

The Lines Test is a modified Asch-type conformity test. It was designed by Berry (1979) for his cross-cultural studies of psychological differentiation. The Lines Test assesses the individual's degree of psychological differentiation in the social/affective domain. Since revelation of the true purpose of the test would have invalidated results, subjects were told that it was another kind of eye/perceptual test, like the GEFT.

a) Format: The Lines Test consists of ten cards. Each card has 9 horizontal lines on it. The top line, the standard, is set apart from the others. Each of the eight bottom lines is a different length (the lines are progressively shorter or longer) but one of them is exactly the same length as the standard. The first two cards are practice items and, therefore, were not scored. The next four cards are test items which are designed to establish the subject's accuracy in choosing the correct line. The last four cards are the conformity items (see Appendix 2 for e.g.). When these cards were presented to the subjects, an X was beside one of the eight lines. The X was always placed beside a line which was 5 lines away from the correct one. In the "collective" version of the test, the X was permanent, but in the "role-specific" version, the X was removable. The following table summarizes the format of the cards:

TABLE V
Lines Test Format

Card #	difference between lines (mm.)	length of standard	line designated (rank order)	length of designated line	line correct (rank order)
P1	3	9.9	--	--	6
P2	2	9.7	--	--	4
A	0.5	9.4	--	--	2
B	1	9.6	--	--	3
C	2	9.4	--	--	5
D	3	9.3	--	--	4
1	0.5	9.4	7	9.15	2
2	1	10.3	3	9.8	8
3	2	10.1	7	9.1	2
4	3	10.4	3	8.9	8

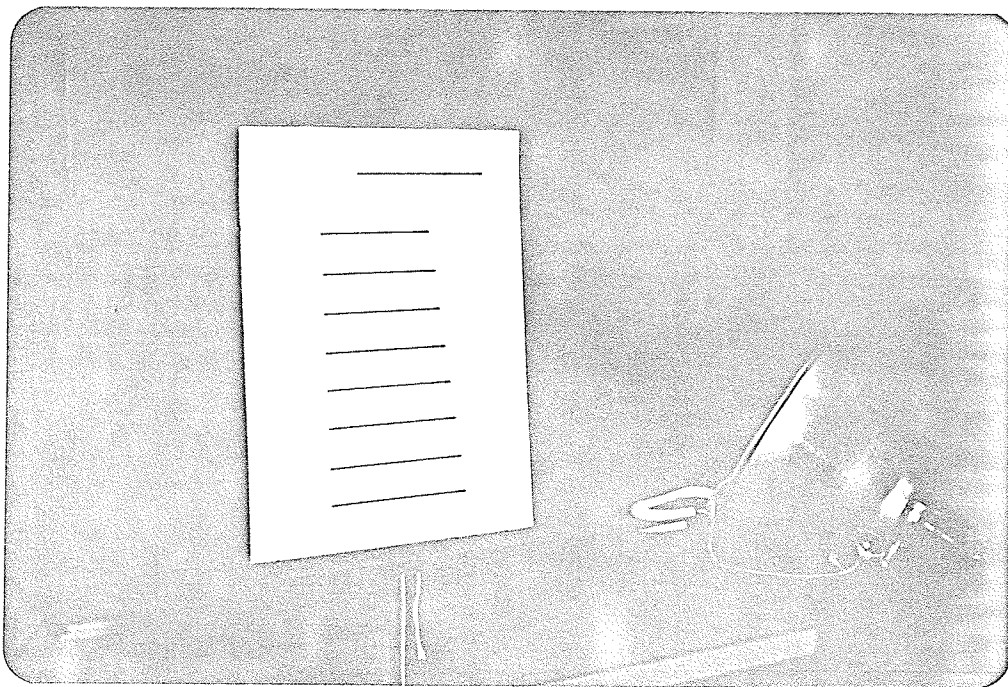
b) Administration of Test: The Lines Test was administered to subjects in isolation from the group. The cards were presented, one at a time, on an adjustable height music stand (Figure 3). The subject was seated exactly four feet away from the stand. The stand was then adjusted for height of the subject by ensuring that the centre line on each card was at eye level.

The first card, P1, was presented with the introduction:

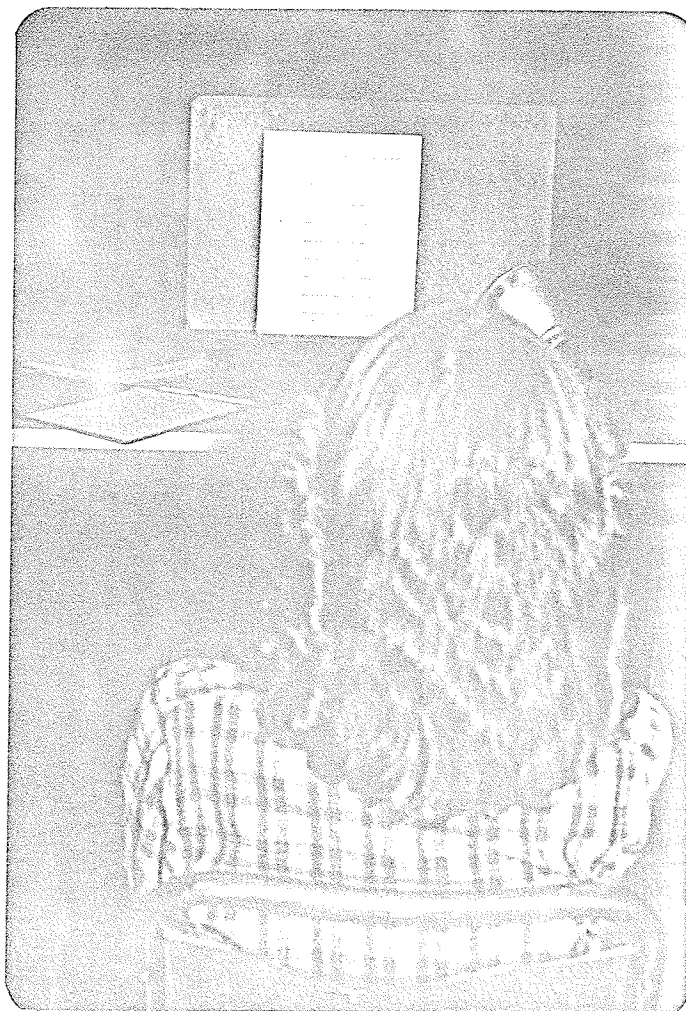
This test is another type of eye (Hutterites)/perceptual (U. of M.) test. This time the task is to choose the right line from a set of lines. Each card is like this one with 9 lines on it. The line at the top is set apart from the others and there are eight lines below. These eight lines are all different lengths - but one of them is exactly the same length as the one at the top. I want you to tell me which one you think it is.

Figure 3

a) Equipment set-up for "Lines" test



b) Subject viewing
"Conformity" card



If the subject did not respond within a short time, he or she was prodded with the comment:

Your first impression is probably best. It gets more confusing the longer you look.

Each succeeding card was presented with the question.

Which line do you think is the same length as the one at the top?

Before the first conformity card was presented, subjects were told:

There are four cards left. We're going to do these a little bit differently and give you a chance to compare your answers with how other people have answered.

i) Collective Version: When the first conformity item was placed on the stand, subjects were told:

We've tested hundreds of other Hutterites/University of Manitoba students. You can see that there is an X beside one of the lines. We've put that X beside the line that most other Hutterites/University of Manitoba students chose. That is, most other Hutterites/University of Manitoba students think that this line (point to one with X) is the same length as the one at the top. Which line do you think it is?

The other three conformity items were presented in the same way. That is, the experimenter would point to the line with the X and say:

Most other Hutterites/University of Manitoba students think that this line is the same length as the one at the top. Which line do you think it is?

ii) Role-Specific Version: When the first conformity card was placed on the stand, subjects were told:

I am going to put an X beside one of the lines. (Experimenter places removable X beside designated line as in collective versions). This X means that the last two people that I

tested before you chose this line (points to line with X). That is, the last two people I tested thought that this line is the same length as the one at the top. Which line do you think it is?

The other three conformity cards were presented in the same way. That is, the experimenter would (in full view of the subject and after appearing to consult previous data) place an X beside the designated line, point to this line and say:

The last two people I tested thought that this line is the same length as the one at the top. Which line do you think it is?

c) Scoring

i) Conformity cards: Scoring was identical on the two versions of the Lines Test. The incorrect line, designated as the group (collective or role-specific) norm, was always a shorter line, five lines away from the correct one. Thus, if this designated line were chosen, a conformity score of +5 was recorded. If the subject chose the correct line, a conformity score of 0 was recorded. Scores between 0 and 5 were recorded for choices which fell between the designated and the correct lines. If the subject chose a line longer than the correct one, a score of -1 was recorded. Table VI summarizes the possible values for each of the conformity cards.

TABLE VI

Possible Values for Conformity Cards

Card #	Possible Values
1	+5 → 0 → -1
2	+5 → 0
3	+5 → 0 → -1
4	+5 → 0

Since there are four conformity cards, total score on the Lines Test can range from 0 to 20. To achieve comparability with Berry's data³, however, only the last three conformity scores are used to calculate total conformity scores. Therefore, the conformity variable is operationalized as the sum of the values of the scores on cards 2, 3 and 4 ($2 + 3 + 4$). (Values of -1 were recoded to 0 to compute the conformity scores). The range of possible scores is from 0 to 15.

Total score on the three conformity cards indicates degree of field dependence/independence in the social/affective domain. In order to compare these results with Berry's and to have the conformity scores reflect the "appropriate conceptual direction", (Berry, 1979:193) with a high score indicating greater independence, the score is reversed⁴ and then expressed in percentage form. A conformity score of 15 therefore, becomes 0 ($15 - 15 = 0$) or 0% and indicates field dependence, the lowest possible point on the field dependence/independence continuum. A conformity score of 0 becomes 15 ($15 - 0 = 15$) or 100% and indicates field independence, the highest point on the field dependence/independence continuum in the social/affective domain.

ii) Accuracy cards: Cards A, B, C, and D are presented without any influence being given. A score of 0 was recorded if the subject chose the correct line. If a shorter line were chosen, the appropriate score from +1 to a maximum of +5 was recorded. If a longer line were chosen, the appropriate score from -1 to -5 was recorded. The accuracy variable is operationalized as the sum of the absolute values of the scores on cards A through D ($[(ABS A) + (ABS B) + (ABS C) + (ABS D)]$).

Table VII summarizes the possible values for each of the "Accuracy" cards:

TABLE VII

Possible Values for "Accuracy" Cards

Card #	Possible Values
A	+5 → 0 → -1
B	+2 → 0 → -5
C	+3 → 0 → -4
D	+3 → 0 → -4

The range of possible scores is from 0 to 18. A score of 0 indicates a high degree of accuracy. A score of 18 indicates a low degree of accuracy. These scores may also be expressed in percentage form by dividing the score by the maximum (18) and multiplying by 100.

Notes to Chapter III

1. Professor E. D. Boldt received permission from the Rev. Jacob Kleinsasser, Crystal Springs Hutterite Colony, to conduct this research among Manitoba colonies.
2. These data, however, are comparable to Berry's (1967, 1979) data which report the relative conformity scores of several societies, including the Eskimo. See Chapter IV, for a comparison of Hutterite and Eskimo conformity scores.
3. Berry had used an earlier version of the Lines Test with a number of subsistence level societies. This early version had only 3 conformity items. These three items were identical to the last three conformity items (2, 3, 4) on his later version. To ensure comparability of his results regardless of which test were used, he ignored the first conformity item in his calculation of conformity scores. Although this method of scoring renders the first conformity item somewhat useless, this same scoring method has been retained in this project in order to maximize comparability.
4. Percentage score = $\frac{15 - (\text{conformity score})}{15} \times 100$

Chapter IV

Data Analysis

Data analysis was performed using a comparison of means approach. Mean scores on the two major dependent variables - perceptual field dependence/independence and social conformity - were compared between societies and several within society comparisons are reported. One-tailed tests of significance were used to assess the extent to which these differences could have occurred by chance alone. In addition, cross-tabular analysis was used to separate out the effects of sex on conformity scores. And finally, the correlation coefficient - r , was calculated to examine the relationship between individual conformity scores and GEFT scores.

- A. Hypothesis 1: Subjects from a structurally tight society will be more susceptible to the influence of the collective other than subjects from a looser society.

Table VIII illustrates the mean conformity scores for Hutterites and University of Manitoba students. The conformity scores are conformity to the collective mode of influence. A high mean score indicates greater conformity and a low mean score, lesser conformity.

TABLE VIII

Mean Cross-Cultural Conformity to the "Collective" Other Scores

Society	N	Mean	S.D.
Hutterites	41	6.76	2.82
University students	28	5.57	3.19

one-tailed t-test results: $t=1.59$, $d.f.=53$, $p=.059$

As predicted, subjects from a structurally tight society are more susceptible to influence from the collective other than subjects from a looser society. A T-test of differences between means, however, reveals that the difference between mean conformity to the "collective" other scores fails to reach statistical significance at the .05 level. The significance level is .059. This level is very close to the .05 significance level and this proximity suggests that with larger sample sizes and greater inter-societal variation in structural tightness/looseness, a significant difference in conformity scores may occur. The University student population is not an ideal example of a loose society although the larger Canadian society represents a loose society in which collective role expectations are merely proposed and interpreted. The student population, however, represents a subculture within the larger Canadian context. For this subculture, therefore, the collective role expectations may be more restricting, particularly given the average age of the students. Adolescents often have an outward desire to be "unique" and an inward desire to be "one of the crowd." These considerations suggest that the University student sample may represent a "middle-range" society in terms of structural tightness/looseness.

Although the difference in conformity scores did not reach statistical significance, these data do lend support to the theoretical reconceptualization of the structural tightness/looseness variable (Boldt and Roberts, 1979). This reconceptualization emphasized that it is the collective role expectations which are imposed and received in structurally tight societies. In contrast, these collective

expectations are merely proposed and interpreted in a structurally loose society. If this reconceptualization is valid, therefore, one would expect members of "tight" societies to conform more to the "collective" other than members of "looser" societies. The data reported in Table VIII confirm at least the direction of this expectation and therefore, offer support for the validity of the reconceptualization of the structural tightness/looseness variable.

The data in Table VIII also support psychological differentiation theory which identifies "social tightness" as a key antecedent variable in the development of differentiation (Witkin and Berry, 1975:15). The theory predicts that members of "tight" societies will be less differentiated (more conforming) than members of "loose" societies because of the nature of social control in the two types of societies. In "tight" societies there is a "high level of pressure to conform... [and the society]... maintains a continuous socialization of the individual" (Witkin and Berry, 1975:15). In other words, the "collective" role expectations are imposed and received in "tight" societies. This imposition of "social control" or role expectations, the theory predicts, leads to decreased differentiation as demonstrated by higher levels of social conformity.

The data reported in Table VIII reveal that, as psychological differentiation theory predicts, members of structurally tight societies are less differentiated (exhibit more conformity to the collective other) than members of loose societies. The members of loose societies are more differentiated (make judgments which are relatively more independent of the expectations of the collective other)

than members of tight societies. It is clear from the data, therefore, that a good indicator of psychological differentiation in the social domain is conformity to the collective other.

A comparison of the data reported in Table VIII with Berry's (1967) data is warranted because in both studies, subjects were tested using a version of Berry's "Lines Test" which invokes the "collective" other.¹ Berry (1967) reports the relative levels of social conformity among the Temne and the Eskimo. Berry did not specifically label Temne society as tight and Eskimo society as loose according to the nature of the collective expectations governing role relationships within these societies. His descriptions (Berry, 1976; and others, e.g., Barry et. al., 1959) of these societies, however, permit such classifications. Authority and stratification patterns in Temne society are formal and rigid which suggests that the collective expectations are imposed and received (Berry, 1976: 72-74). In Eskimo society, authority structures are almost nonexistent and individuality is highly regarded (Berry, 1976:77-78). The collective expectations in Eskimo society, therefore, are presumably merely proposed and interpreted. The data reported in Table IX lend further support to this classification of Temne society as "tight" and Eskimo society as "loose." Table IX illustrates the mean conformity to the "collective" other scores for each of the societies tested by Berry (1967) as well as for the Hutterites and University of Manitoba students.

The tightest society according to the degree to which collective expectations influence behaviour in the experimental situation, is the

traditional Temne group of Sierra Leone. The percentage score reflects degree of field dependence and indicates that the Temne are the most field dependent. The transitional and traditional Eskimo groups both

TABLE IX
Conformity to "Collective" Scores for Temne, Eskimo,
Hutterites and University Sample

Society	Tight/Loose	Mean Conformity to Collective Score	S.D.	% Score**
Temne (1)	Tight	9.04	3.3	39.7
Temne (2)*	Tight	8.61	3.2	42.6
Hutterites	Tight	6.76	2.8	54.9
U. of M.	Loose	5.57	3.2	62.9
Eskimo (1)	Loose	2.75	2.9	81.7
Eskimo (2)*	Loose	2.25	2.5	85.0

* Berry tested two groups from each society. The groups differed in terms of degree of acculturation. One group was traditional (1), the other transitional (2).

* The % score reflects levels of psychological differentiation. That is, the Eskimo have a higher % score (85) and they are, therefore, more differentiated than the Temne (see Methodology - Chapter III for computation formula).

exhibit low conformity to the influence of the collective other and are therefore, the most field independent group. Hutterites are not quite as high in conformity to the collective as the Temne but they are considerably more conforming than the Eskimos. University of

Manitoba students conform in the middle range. In terms of structural tightness/loosness, therefore, the university sample appears to represent a "society" which is not particularly "tight" or "loose" but which falls in between the two extremes.

- B. Hypothesis 2: Subjects from a structurally tight society will not be more susceptible to the influence of the role-specific other than subjects from a looser society.

Table X illustrates the mean conformity scores for Hutterites and University of Manitoba students. The conformity scores are conformity to the role-specific other.

TABLE X

Comparison of Conformity to Role-Specific Others -
Hutterites and University Students

Society	N	Mean	S.D.
Hutterite	34	4.5	2.74
U. of M.	23	5.0	3.35
one-tailed t-test results: $t=.059$, $d.f.=41$, $p=.279$			

A T-test of differences between means reveals that the mean conformity to the role-specific scores are not significantly different ($p = .279$). As predicted, subjects from a structurally tight society are not more susceptible to influence from the role-specific other than subjects from a structurally looser society. In fact, University students (loose society) were slightly more susceptible to influence from the

role-specific other than Hutterites (tight society).

These results are consistent with a classification of the university sample as a middle-range "society" in terms of structural tightness/looseness. Members of an extremely "loose" society, it has been hypothesized, (Boldt and Roberts, 1979) would conform more to the expectations of role-specific others than members of a very "tight" society. The difference in conformity to role-specific others narrows, however, as the inter-societal differences in structural tightness/looseness narrow. The data in Table X reflect the impression that the University sample represents a middle-range "society" rather than a structurally loose society. The members of the "tight" society, therefore, are not more conforming to role-specific others than the members of the "loose" society but neither are the members of the "looser" society more conforming to role specific others than the members of the "tight" society because the "looser" society in this case is not extremely "loose."

C. Hypothesis 3: Subjects from a structurally tight society will be more field dependent in the perceptual domain than subjects from a looser society.

Table XI illustrates the mean scores on the GEFT for Hutterites and for University of Manitoba students. A low mean score indicates field dependence in the perceptual domain; a high mean score indicates field independence in the perceptual domain.

TABLE XI

Mean GEFT Scores - Hutterites and University Students

Society	N	Mean GEFT Score	S.D.
Hutterite	75	2.92	2.35
U. of M.	51	4.96	2.38
one-tailed t-test results: $t=4.76$, $d.f.=106$, $p=.000$			

A T-test of differences between means reveals that the mean scores are significantly different beyond the .001 level. As predicted, subjects from a structurally tight society are more field dependent in the perceptual domain than subjects from a looser society. The level of significance is so high and the sample sizes large enough, that one would not expect this difference to be due to chance alone.

Psychological differentiation theory predicts that members of "tight" societies will exhibit lower levels of differentiation in the perceptual domain than members of "loose" societies. Although the prediction has been based on a rather confused notion of structural tightness/looseness, the bulk of the research supports the theory's proposition that "tight" societies tend to inhibit psychological differentiation and to produce persons with a field dependent cognitive style while "loose" societies tend to enhance psychological differentiation and to produce persons with a field independent cognitive style (Berry, 1979:185). The data presented in Table XI add support to this proposition.

In addition, the reconceptualization of the structural tightness/

looseness variable identifies the specific structural property of societies which contributes to the development or inhibition of psychological differentiation. It is the nature of the collective expectations governing role relationships that defines societies as structurally tight or loose. When these collective expectations are imposed and received as they are in tight societies, the development of psychological differentiation is inhibited. This inhibition is indicated in the perceptual domain by the low scores obtained by Hutterites on the GEFT. In a looser society, where these collective expectations are not imposed but merely proposed and interpreted, the development of psychological differentiation is enhanced. This enhancement is indicated by the higher scores on the GEFT obtained by university students.

D. Additional Findings

1. Intra-Societal Differences in Conformity Scores

In addition to the inter-societal differences already reported (Hypotheses 1 and 2) the data reveal several relevant intra-societal differences. The within society differences between conformity to the collective other and conformity to the role specific other were examined and these differences are reported below:

a) Hutterites

Table XII illustrates the mean conformity scores for Hutterites. There are two conformity scores - conformity to the collective other and conformity to role specific others.

TABLE XII

Hutterites: Comparison of Conformity to Collective and
Conformity to Role-Specific Scores

Type of Conformity Test	N	Mean	S.D.
Collective	41	6.76	2.82
Role-Specific	34	4.50	2.74
one-tailed t-test results: $t=3.49$, $d.f.=73$, $p=.0005$			

A T-test of differences between means reveals that the mean scores are significantly different at the .001 level. Subjects from a structurally tight society are more susceptible to influence from the collective other than to the influence from role specific others. This difference is highly significant and indicates that the differences is real and not due to chance alone.

b) University of Manitoba students

Table XIII illustrates the mean conformity scores for University students. Again there are two separate conformity scores depending on the source of external influence to which the subject was exposed.

TABLE XIII

University Students: Comparison of Conformity to Collective and
Conformity to Role-Specific Scores

Type of Conformity Test	N	Mean	S.D.
Collective	28	5.57	3.19
Role Specific	23	5.00	3.35
one-tailed t-test results: $t=.62$, $d.f.=49$, $p=.270$			

A T-test of differences between means reveals that the mean scores are not significantly different. The one-tailed probability that these differences could have occurred by chance alone was .269. Subjects from a structurally loose society, therefore, are not more susceptible to the influence of either source of external influence.

The data presented in Table XII and XIII clearly indicate that the source of external influence is a critical variable to consider when measuring social conformity. The significant difference between conformity to the "collective" other and conformity to "role-specific" others among Hutterites (Table XII) supports the reconceptualization of the structural tightness/looseness variable. That is, because the collective role expectations are imposed in "tight" societies such as the Hutterite society, this source of influence (collective) carries considerably more weight than the opinions of discrete individual others. The data in Table XIII also support the reconceptualization since university students did not succumb more to the influence of the collective other than to the influence of role-specific others. This finding is consistent with a classification of the university student "society" as a middle range "society" on the structural tightness/looseness continuum.

2. Sex Differences

There is strong empirical support for the existence of sex differences in levels of psychological differentiation in the perceptual domain. The difference is small but females tend to be more field dependent than males (Witkin and Berry, 1975:30). The difference is

more pronounced in Western settings but it has been noted in non-Western societies as well. Cross-cultural studies show that sex differences occur more frequently in tight societies (sedentary, agricultural) than in loose ones (migratory, hunting) (Witkin and Berry, 1975:33). Witkin and Berry (1975) suggest that the reason for a greater prevalence of sex differences in tight societies may be that females in these societies are placed in relatively more dependent positions than females in looser societies where the female role is evaluated more highly (1975:33). They admit, however, that the reason or reasons for the non-uniformity of sex differences is elusive.

Apparently no studies have examined cross cultural sex differences in levels of field dependence/independence in the social/affective domain. One would expect to find, however, that whatever differences exist in the perceptual domain would also be found in the social/affective domain. The research reported here provides a test of this expectation using cross-tabular analysis.

a) Hutterites

For both modes of conformity there was a greater percentage of males than females with low conformity scores and a greater percentage of females than males, with high conformity scores. The percentage differences were almost equal (10% difference on the collective test, 12% difference on the role specific test) for the two types of conformity tests. Since low conformity scores indicate field independence and high scores, field dependence, the data indicate that among Hutterites (structurally tight) females exhibit slightly more

TABLE XIV

Hutterite Conformity to "Collective" Scores by Sex

		Sex		Row Total
		Male	Female	
Conformity	Low	37%	27%	13
	High	63%	73%	28
	Column Total	19	22	41

TABLE XV

Hutterite Conformity to "Role-Specific" Scores by Sex

		Sex		Row Total
		Male	Female	
Conformity	Low	76%	64%	24
	High	24%	36%	10
	Column Total	17	17	34

field dependence in the social domain than males. This sex difference therefore, is in the expected direction. Caution must be exercised in interpreting these results, however, since the number of cases was low in several cells of the table and the differences were not statistically significant.

b) University of Manitoba Students

The number of males in the university sample was only twelve. This small number of cases precludes any worthwhile cross tabular analysis of sex differences in conformity scores.

3. GEFT and Conformity Scores

Since level of psychological differentiation is an organism-wide characteristic, the theory predicts that individuals who are field dependent in the perceptual domain will exhibit field dependence in the other domains. Similarly, perceptually field independent individuals are expected to be field independent in other domains. Very few cross cultural studies have compared cognitive styles across several domains. Berry (1967) Dawson et. al., (1974) and Berry and Annis (1974) all attempted to show a relationship between field independence in the perceptual domain and a sense of separate identity or field independence in the social/affective domain. Using Berry's conformity to the collective task, all three studies failed to relate individual conformity scores to levels of perceptual differentiation.

The present study fares no better in attempting to establish support for a relationship between conformity scores and GEFT scores at the individual level.

Among Hutterites, GEFT scores and conformity scores were not related regardless of type of conformity test (GEFT and conformity to collective, $r = .009$; GEFT and conformity to role specific $r = -.16$). Similarly, for university students GEFT scores and conformity to role specific scores were unrelated ($r = .038$). A very low correlation exists ($r = -.27$) between GEFT scores and conformity to collective scores for the university population. This correlation is not significant.

NOTES TO CHAPTER IV

1. Berry used the first version of his Lines Test to test the Temne and the Eskimo. The conformity items on this first version and the version we used, however, are identical and therefore the results are comparable.

CHAPTER V

Discussion

This thesis has argued that structural tightness/looseness is related to the development/inhibition of psychological differentiation. A structurally tight society where the collective role expectations are imposed and received will tend to produce individuals who exhibit a field dependent cognitive style. This field dependence will be indicated in the social domain by increased conformity to the "collective" other and in the perceptual domain by low scores on the GEFT. In contrast, a structurally loose society where the collective role expectations are proposed and interpreted will tend to produce individuals who exhibit a field independent cognitive style. This field independence will be indicated in the social domain by judgments made independently of the "collective" other and in the perceptual domain by higher scores on the GEFT.

A. Results and Conclusions

This research has, in general, supported the theory. Hutterites were found to be more conforming to the opinion of the collective other than University students. This difference did not quite reach statistical significance ($p = .059$) but this failure has been explained by the small sample size and the questionable "looseness" of the University student "society." It appears that the student population is closer to a "middle-range society" in terms of structural tightness/looseness. A "looser" and "simpler" society compared to the Hutterites would be more likely to give rise to statistically significant differences.

The difference, however, lends support to the reconceptualization of the structural tightness/looseness variable. The Hutterites were highly conforming to the opinion of the collective other. This result is expected in a society in which the collective role expectations are imposed and received. In contrast, the University students were less conforming to this source of influence as was expected of members of a "looser" society where the collective expectations are merely proposed and received.

These results also lend support to psychological differentiation theory's prediction that members of "tighter" societies will be less differentiated than members of "looser" societies. It appears that degree of conformity to the influence of the "collective" other is a good indicator of level of differentiation in the social domain. Scores on tests of conformity to a "collective" other, therefore, may be interpreted as expressions of cognitive style or field dependence/independence.

An inter-societal comparison of scores on the conformity to "role-specific" others test, revealed that there was no significant difference between members of "tight" and "loose" societies on this variable. That is, Hutterites were no more influenced by the opinion of role-specific others than the University students. A comparison of this result with the nearly significant difference between the two societies on conformity to the "collective" other supports the suggestion that source of external influence is a critical variable in tests of social conformity. That is, when the source of influence is "role-specific" others, there is no apparent difference in social

conformity between members of "tight" and "loose" societies. The difference is revealed however, when conformity to a "collective" other is measured. Attention to this variable is important when attempting to establish support for a relationship between structural tightness/looseness and social conformity.

The data analysis also indicates support for the third hypothesis. Psychological differentiation theory predicts that members of "tight" societies will be less perceptually differentiated than members of "looser" societies and these data support this prediction. Hutterites achieved significantly lower scores on the GEFT than University students which indicates that Hutterites are field dependent in the perceptual domain and University students are field independent in this domain.

Psychologists have been unable to identify clearly the structural features of societies which may inhibit or enhance the development of psychological differentiation. They have, therefore, selected a cluster of antecedent variables, including socialization practices and degree of socio-cultural tightness, which various cross-cultural studies have identified as socio-cultural correlates of psychological differentiation. The present study points to the imposed nature of collective role expectations as a key factor, perhaps the key variable, in the inhibition of differentiation. The nature of collective role expectations is critical because this structural variable will affect socialization techniques, family control systems, and authority structures within societies which have all been implicated in the development of individuals'

cognitive styles.

B. Implications

This study has attempted to demonstrate, empirically, the validity of the reconceptualized variable, structural tightness/looseness. In addition, it has attempted to demonstrate, empirically, the existence and nature of a critical variable in tests of social conformity - the source of external influence. These attempts have been made in order to assess critically a recent theoretical formulation concerning the nature of the relationship between structural tightness/looseness and cognitive style. In other words, this research has been designed as a "crucial" test of a theory (Platt, 1964). The results of this study, therefore, have their critical implications for the future of the theory.

The data have given strong support to the validity of the structural tightness/looseness variable, reconceptualized in terms of the imposed/proposed nature of collective role expectations. This dimension is clearly an important source of variation among societies. The anthropologists' definition of structural tightness/looseness (in terms of role complexity and role relatedness) essentially limited classifications to relatively simple, subsistence-level societies. Since the notion of role complexity is eliminated from the refined definition, cross-cultural researchers have available to them, a classification tool which may be applied to more complex, modern societies as well as to simple societies.

In addition, the data have clearly indicated that the source of external influence is a critical variable to control in measures of social conformity. Social conformity, therefore, has been too broadly defined and must be conceptualized in terms of the "others" to whom individuals are conforming in specific social situations. That is, social conformity to "role-specific" others is conceptually and operationally different from social conformity to the "collective" other. The maintenance of this distinction between the two types of social conformity and the reconceptualization of the structural tightness/looseness variable clarifies the relationship between the structural variable and expressions of cognitive style in the social domain. The ambiguity of this relationship is relieved when structural tightness is defined in terms of imposed role expectations and when social conformity (field dependence in the social domain) is defined in terms of conformity to the "collective" other. These data have therefore, indicated a clear association between structural tightness/looseness and expressions of cognitive style in the social and perceptual domains.

C. Epilogue

A post-mortem examination of the research design reveals several inadequacies in the procedures used to measure or to assign values to variables. These inadequacies are noted at this point, not to discredit the results already achieved, but to assist future research in perfecting the experimental design for this particular type of analysis.

The results would be more meaningful if the sample chosen to represent the "loose" end of the structural tightness/looseness continuum had been "looser." Maximizing the inter-societal differences would increase the variation in the dependent variables - perceptual field dependence and social conformity - and, therefore, give stronger support to the hypothesized relationships.

The GEFT is a widely used indicator of perceptual field dependence/independence but it has been criticized as a valid perceptual measure because of its correlation with tests designed to measure general intelligence (Irvine and Carroll, 1980:187). Many of the perceptual tests do correlate with measures of intelligence because both kinds of test involve tasks such as disembedding and restructuring. A portable rod and frame test (PRFT) is a possible alternative for cross-cultural use and perhaps a better test of perceptual field dependence/independence.

The Lines Test was employed to achieve comparability with Berry's (1967) results but this test could be improved to create a more accurate and powerful conformity measure and one with greater credibility. The pretest or accuracy items could be used to standardize results across cultures. That is, conformity scores would more accurately reflect cross-cultural differences if scores on the "accuracy" items were subtracted from scores on the "conformity" items to result in a "net conformity" score. This approach would effectively control for accuracy as a potential source of cross-cultural

variability in conformity scores. This method would be even more effective if the "accuracy" and conformity items were made equivalent. In other words, each conformity item would actually be a "recycled" accuracy item, the difference being that for the conformity item a line would be designated as the correct one.

To improve its credibility, the Lines Test should include two or three "conformity" items on which the designated line is actually the correct line. These additional cards could be interspersed with the true conformity items to maintain credibility of the contrived group opinion throughout the test. In addition, on the conformity items in Berry's version of the Lines Test, the designated line was always a shorter line than the correct one. A better design might be to have some conformity items with a longer designated line and others with a shorter designated line. Both of these suggestions could enhance the credibility and thus, the power of the Lines Test as a measure of social conformity.

Another problem with the Lines Test is in the operationalization of the "collective" other versus "role-specific" others as sources of influence. It was necessary to have the two tests equivalent except for the source of external influence. The "collective" other had already been operationalized by Berry (1967) in terms of "most others" and this technique was retained to maximize comparability. It was difficult to conceptualize a method of invoking influence from role-specific others without having them physically present which would have created an additional variable that could not have been added to the "collective" test. The stimulus "the last two people" is admittedly

rather inadequate. The operationalization of the two sources of influence, therefore, is an area which certainly needs refinement.

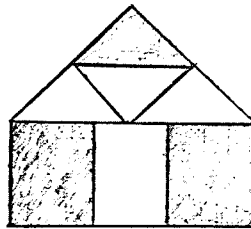
Finally, since age, sex, and possibly formal education level and intelligence may affect levels of psychological differentiation, these variables should be controlled and matched between societies to ensure that their effects are not confounding the relationship between structural tightness/looseness and levels of psychological differentiation. In addition, an obvious, although difficult, necessary change in the research design would be to test subjects selected at random from the different societies. This change would allow the discovered relationships to be generalized validly to other groups.

In conclusion, therefore, although this research was conducted according to a carefully planned and controlled experimental design, technical improvements are possible and warranted. Further research is called for, therefore, to improve our understanding of the nature of the relationship between structural tightness/looseness and expressions of cognitive style in the social and perceptual domains.

APPENDIX 1

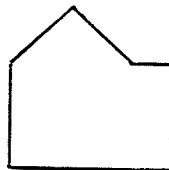
GEFT Sample Question

Example of a question on the Group Embedded Figures Test:



Find Simple Form "D"

The simple forms are reproduced on the back cover of the GEFT booklet and cannot be seen in conjunction with the complex figures. In this example the simple form looks like:



from: Philip K. Oltman, Evelyn Raskin, and Herman A. Witkin, Group Embedded Figures Test. Palo Alto: Consulting Psychologists Press, 1971. (Question 8, p. 19).

APPENDIX 2
Conformity Card # 4 in Lines Test



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