

INFORMATION PROCESSING MODES IN EGO IDENTITY STATUSES

by

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ABSTRACT

To a greater degree than orthodox psychoanalytic theory, ego psychology presents as a powerful model for generating testable hypotheses. One construct which has received a great deal of attention in this regard is that of ego identity formation, the theoretical underpinnings of which were laid by Erikson. Of many attempts to operationalize this construct Marcia's Identity Status Interview has remained most faithful to Erikson's original theoretical formulations, and it has proved most robust in terms of its construct validity.

This thesis presents two studies which examine the cognitive and interactive correlates of ego identity formation within the context of fifteen years of accumulated research involving Marcia's measure. Though they take as their independent variables ostensibly unrelated aspects of behavior, these studies are united in that they both take an information processing approach to understanding the nature of the psychological mechanisms involved in the formation of an ego identity.

A recent thrust of research on the identity statuses has involved an examination of the relationship between cognitive and ego identity development, in particular the relationship

between Piagetian cognitive development and identity development. Within the context of a general failure to empirically demonstrate the expected relationship, the first study to be reported was designed to examine the relationship between the identity statuses and integrative complexity, the latter construct conceived within the socialization process. Ninety-nine male subjects were assessed for ego identity status and integrative complexity by way of Marcia's interview and the Paragraph Completion Test respectively. A significant difference between high and low identity statuses on the P.C.T. was interpreted in light of epistemological and developmental considerations. Contrary to the expectation that Identity Achievements would appear highest on the measure of integrative complexity, it was found that Moratoriums actually scored highest. While theoretically problematic, this finding was revealed to be consistent with related observations.

The second study is exploratory in nature; it represents an attempt to derive ideal-typical interaction profiles for the four identity statuses. The interpersonal behaviors of sixty-one male subjects assessed for ego identity status and then divided into groups of three or four to participate in discussions concerning ethical conduct was categorized by the Bales' Interaction Process Analysis scoring system. While the three substantive hypotheses generated for this study were not supported, the overall pattern of findings does present

theoretically consistent pictures of the interpersonal behavior of the identity statuses. Methodological problems and relatively salient situational effects made conclusions regarding absolute response magnitudes exhibited by the identity statuses difficult to generate, however. An interesting and unexpected finding of this study was the emergence of two fairly distinct 'types' of Foreclosures, one type characterized by acquiescence and the other by aggression. It is concluded that both types of behavior represent defensive posturing in the face of potentially disconfirming information. An attempt to relate the findings of this study to Selman's notion of social role taking and to Habermas' formulation of interactive competence is finally offered as a means of augmenting the nomological validity of the ego identity construct.

The crisis consists precisely in the fact that the old is dying and the new cannot be born: in this interregnum a great variety of morbid symptoms appears.

Antonio Gramsci (Prison Notebooks)

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I. I INTRODUCTION

A) An Integrative Overview

The work reported herein is what, at first glance, might seem to be accounts of two independent studies, related only in that each study takes the construct of 'ego-identity' as its independent variable. Thus, the first study reports on the relationship between 'ego-identity' and the inferred cognitive structure 'integrative complexity', while the second reports on the behaviorally idiosyncratic styles of interpersonal communication exhibited by persons in different 'ego-identity statuses'. Although it is certainly possible to view, and to judge, each study separately, it remains advantageous to consider the two studies as forming a more or less cohesive unit, taking the theme of 'information processing' as the theoretical bridge between them.

Suedfeld (1971) has defined information processing as the identification and acquisition of potentially useful stimuli, the translation and transformation of the information received into meaningful patterns and the use of these patterns on choosing an optimal response.

Notwithstanding the fact that information processing formulations, by this definition, can be found either implicitly or explicitly in almost every psychological theory, it is just

this cognitive structural, as opposed to drive or content based, approach which has proved most problematic in the area of ego-identity research. Although the procedures involved in the two studies vary greatly, their formal characteristics converge at those points made salient in the preceding definition of information processing. Thus, in each case, the subject is presented with a stimulus item (in the first study, a written word or phrase, in the second, an utterance or gesture) from which a response is elicited (again, a written statement, or an utterance or gesture). In neither case is our concern with the response per se, but rather with extrapolating back from the response to the systemic rules governing "the translation and transformation of the information received"; in other words, back to the organizing agency (process) and its crystallized product (structure) which might most parsimoniously be presumed to have generated the response. Considered in its entirety, the present research is aimed at demonstrating that the process/structure unit generating the responses to be examined might most parsimoniously be conceived as the construct 'ego-identity'.

Taken independently, the first study is concerned with determining the relationship between an individual's relative sophistication in integrating information (integrative complexity) and the relative degree of structural integrity of conflicting motivations and identifications (ego strength).

Interest in this relationship was generated by observations indicating that individuals differing in ego strength are differentially sensitive to incoming information, particularly information hypothesized to be incongruent with existing cognitive structures (Mahler, 1969; Waterman, et al., 1974). Of primary concern, then, is the investigation of those transformational structures hypothesized to alter information input flow in such a fashion as to account for known variations in behavior correlated with differences in ego strength.

The second study examines the pragmatics of information transmission and reception exhibited by such individuals. That is, individuals would be expected to display characteristic modes of social interaction reflecting the ability of the ego to retain its structural integrity under conditions of varying information input. This study utilizes standardized process-analytic procedures to build ideal-typical profiles of individuals differing in ego strength and tests theoretically derived hypotheses concerning these differences.

In that the central theoretical construct around which both studies pivot is that of the ego, the remainder of this introduction will be directed at a theoretical elucidation of this concept. Relevant research and auxiliary constructs will be introduced in the rationale sections of the appropriate studies.

B) Ego Psychoanalytic Theory

The formulation of a tripartite structural model of mental functioning, of which the ego is one element, appeared relatively late in Freud's theorizing. In his earlier (pre 1923) writings the ego was largely neglected in favor of a libido theory of development, it being roughly equated with consciousness and conceived as but one of a number of clashing 'drive forces'. (Rapaport, 1959) It was with Freud's recognition that a relatively permanent deployment of countercathexes was necessary to prevent the return of the repressed that the ego began to assume limited structural properties. However, even with publication of The Ego and the Id (1923), where the ego was first described as being a truly cohesive organization whose function it was to synthesize the demands of the id, superego and reality, the ego remained without any autonomy of its own, was regarded only as an outgrowth of the id, and had no independent genetic roots. With his later elucidation of the ego's defensive substructures Freud (1926) once again emphasized that the ego was born in, and subsists on, drive activity and intrapsychic conflict. A. Freud (1946) elaborated upon the nature of the ego's defence mechanisms, similarly emphasizing that such defensive structures arise from conflicts experienced in ontogeny.

While retaining the basic concepts of psychoanalytic theory, psychoanalytic ego psychology was founded upon the

rejection of the ego's subservient role to the id in determining behavior. Hartmann, et al. (1946) suggested that both the ego and the id develop from a common undifferentiated matrix. The ontogenesis of the ego consists in a process of differentiation (specialization of function) and integration (the emergence of a new function out of previously non-coherent functions or reactions). In so rejecting Freud's (1923) metaphor that the ego's relation to the id "is like a man on horseback, who has to hold in check the superior strength of the horse", the ego was granted at least limited processes of its own; that is, ego functions independent of drives. These functions were seen to be reality oriented and adaptation facilitating rather than merely loss minimizing and were termed by Hartmann (1939a) the 'conflict free sphere'. One consequence of this approach was to admit positive correlates to what might appear to be negative processes; thus Kris' 'regression in the service of the ego'. (Kris, 1950b).

Related to these revisions are two classes of 'ego apparatuses' distinguished by Hartmann (1939a). The first, the 'apparatuses of primary autonomy', are those functions developing naturally (i.e., biologically guaranteed) from the undifferentiated sphere; for example, perception, motility and certain thought processes. Ego functions arising from drive conflict and defensive processes later in development are referred to as 'apparatuses of secondary autonomy'. These

defensive structures, though born of conflict, become relatively independent of their original drives and achieve 'functional autonomy' (Allport, 1937).

In his formulation of the 'complemental series' Freud (1905b) asserted the importance of the mutual interaction between maturational preparedness and environmental support. Hartmann (1939) elucidated the importance of environmental factors by predicating the successful differentiation and integration of ego functions upon the availability to the developing child of an 'average expectable environment'. Here he included family situation, the mother-child relationship and any other stimulations, or environmental releasers, which would serve to catalyse the child's inherent possibilities for adequate mental functioning. In optimal circumstances, not only would the environment exert appropriate pressures on the child's emerging capabilities, but the child would of necessity react with 'average expectable internal conflicts'. This outline of an epigenetic principle and the notion of a 'normative crisis' provides a basis upon which Erikson (1950, 1959, 1968) has elaborated his popular psycho-social theory of human development.

C) The Eriksonian Paradigm

Nowhere does the bifurcation between psychoanalysis and its ego-psychoanalytic variant become more pronounced than in their

respective treatments of adolescent development. It is not a great oversimplification to assert that the psychoanalytic orthodoxy takes its lead in analysing adolescence from A. Freud's (1958) laconic characterization of adolescence as that period in which "a relatively weak ego confronts a relatively strong id". (Although this formulation probably has its roots in the Sturm und Drang movement and in Hall's (1904) dictum that 'ontogeny recapitulates phylogeny') Implicit in this characterization is the assumption of the re-awakening of id impulses with the advent of puberty and the consequent task of the ego to restructure its defensive patterns and establish new object relations in order to replace the incestuous desires associated with the revived oedipus complex. Research testing these speculations has, however, found that characterizations of adolescents as being preoccupied with drives and their control, and consumed by oedipal anxieties, are largely untenable. (see Josselson, 1980)

Eschewing such a pathological perspective, Erikson (1950, 1959, 1968) conceived the adolescent period as being but one (albeit a strategic one) of eight normative developmental stages in the human life cycle. Each stage in the epigenetic cycle is marked by a critical phase in which the individual is expected to work through an issue, manifest as successive developmental polarities such as trust versus mistrust, autonomy versus shame and doubt etc., co-determined by his/her constitutional needs

and by corresponding social institutions. These polarities can be understood as constituting "phenomenological modalities of the experience of the relationship of self to world in terms of an ontological ambivalence between integration and differentiation" (Leiper, 1976), and it is in this ambivalence, marked at each stage by the appropriate thematic content, that Erikson's notion of a 'normative crisis' resides. In contrasting his formulation of adolescence as a critical phase with that of traditional psychoanalysis Erikson (1959) states

adolescence is not an affliction, but a normative crisis, i.e., a normal phase of increased conflict characterized by a seeming fluctuation in ego strength, and yet also by high growth potential. (p. 72)

Ego growth is a function of the adequacy with which each crisis is resolved, and, in general, this is dependent upon the extent to which the individual's needs and capabilities mesh with his society's demands and rewards at that stage.

Marcia (1976) points out two salient features of Erikson's epigenetic schema. First is that, while a particular crisis tends to become dominant at a certain phase in the life cycle, it may be played out, generally on a diminished scale, during subsequent phases. Second, the stages are not independent of one another; rather, each stage has its roots in the previous stages and each contributes to succeeding stages. Thus a successful resolution to the trust versus mistrust issue enhances the likelihood of successfully resolving the autonomy versus shame

and doubt issue.

In addition to these points, it is clear from Erikson's (1959) grid that the issue of forming an ego-identity acts as a sort of 'master motive' throughout the entire life cycle. However, it has its dominant position in the fifth, or adolescent, phase of development in which the crucial issue confronting the individual is the 'identity achievement' versus 'identity diffusion' polarity. In terms of a theory of ego development it is apparent why this stage represents a 'fulcrum' stage within Erikson's overall scheme. It is widely recognized that the period of adolescence represents a unique juncture in the individual's development; it is the first time when biological, social and psychological factors converge to place a great deal of pressure on the individual to form an identity. Erikson (1959) speaks of the process of identity formation emerging as an 'evolving configuration'.

It is a configuration gradually integrating constitutional givens, idiosyncratic libidinal needs, favored capacities, significant identifications, effective defenses, successful sublimations and consistent roles (p. 71).

Clearly, the major function of the ego during adolescence is one of integration and synthesis.

Salient in this schema is a hierarchical progression of levels of internalization: i.e., the shifts from introjection to identification to the formation of an identity. With respect to the latter shift, Erikson (1968) states "Identity

formation...begins where the usefulness of identification ends". To the extent to which the ego manages to synthesize childhood identifications into a unique 'gestalt' one is said to have a sense of identity, and "the ego may be said to be 'stronger' than before the synthesis" (Marcia, 1976).

In achieving an ego identity there are certain subjective concomitants to the the structural alterations that have taken place. In this regard Erikson (1959) speaks of "a sense of psychosocial well-being", "a feeling of being at home in one's body", "a sense of 'knowing where one is going'", and "an inner assuredness of anticipated recognition from those who count". At a more concrete level, in achieving an ego identity the individual makes "choices and decisions which will...lead to a more final self-definition, to irreversible role patterns, and thus to commitments 'for life'". The necessity of making 'choices' and 'decisions' reflects the fact that the individual must go through a 'crisis' in achieving an ego identity. That they come out the other side with a sense of commitment to the alternatives chosen represents the crystallized product of this experience. Two salient content areas in which 'crisis' and 'commitment' are to be exercised are occupation and ideology, both because they are critical normative concerns for the adolescent and because committed positions with respect to them are necessary for the growing ego in order to provide anchors for self-definition.

D) Ego-Identity Statuses

Taking as his point of departure the most observable concomitants of identity formation, that is, the twin criteria of crisis and commitment in the areas of occupation and ideology, Marcia (1964, 1966) has developed a measure discriminating adolescents with respect to four ego identity 'statuses'. Said to be reflective of an underlying dimension of 'ego strength' these statuses, or 'styles of coping with the identity crisis", are delineated as follows:

1) Identity Achievement individuals have experienced a period of crisis and have made commitments in the areas of occupation and ideology.

2) Moratorium individuals are currently in an identity crisis and hold only vague commitments.

3) Foreclosure status individuals are committed to occupational and ideological positions but show little or no evidence of having gone through a crisis period. Their positions have been usually parentally, rather than self, determined.

4) Identity Diffusion individuals may or may not have undergone a crisis; in either case, they have no set occupational or ideological positions.

This essentially 'filled-in' version of Erikson's Identity Achievement versus Identity Diffusion dichotomy is especially reflective of two theoretical contexts in which Erikson describes the ego-identity construct (Bourne, 1978a). First, in exploring the ways in which an individual chooses between occupational and ideological alternatives provided by society, it taps the fact that ego-identity is a social, as well as personal, self-definition. Marcia's typology also gives expression to the fact that ego-identity is an existential stance; inquiring about an individual's basic commitments is, to the extent that commitments are something one values and is invested in, tantamount to inquiring about how an individual handles the need to create a stable and meaningful world.

The majority of studies on ego-identity using Marcia's paradigm have utilized the exploration of the content areas of occupation and ideology, the latter being subdivided into religion and politics, in their determination of an individual's placement into a status. But as Marcia (1979) points out, the areas in which an individual is most involved may vary from person to person or over time within an individual, there is thus nothing sacred about any given content domain. These three areas have been consistently utilized as they seem to be particularly salient concerns for late adolescents in general, and there is some degree of variability in the way adolescents handle the issues, thus meeting two necessary requirements for a

standardized measure. Other content areas which have been utilized include attitudes toward premarital intercourse (Marcia and Friedman, 1970; Schenkel and Marcia, 1972; Orlofsky, 1977) and sex-role identity (Matteson, 1974). The present study incorporates both of these content areas into the determination of ego-identity status. Theoretical reasons for utilizing these domains include an acknowledgement of the correspondance between Erikson's fifth psycho-social stage and Freud's genital stage of psycho-sexual development, the hypothesis that the achievement of an identity is presumed to be a precursor to genuine intimacy (Erikson's sixth stage), and the assumption that the present cultural milieu makes the issues of sex-role identification and attitudes toward premarital intercourse particularly salient concerns for the growing adolescent.

The problem of assessing the nature of 'commitment' extends also to the question of what constitutes a 'crisis'. White et al. (1977) contend that Marcia departs from Erikson's original theory by implying that the identity crisis must be a conscious preoccupation, rather than pre-conscious and subtle, on the part of adolescents. This interpretation, however, rests on a misreading of Marcia who, while allowing for cataclysmic and totally preoccupying crises, is certainly aware that the norm is for a more gradual and non-conscious one. Thus crisis generally implies "a period of decision making" or "an exploration of alternatives" (Marcia, 1979). Identity gets formed in 'bits and

pieces', each decision, even though it be trivial in itself, builds upon the previous ones until "they begin to form themselves into a more or less consistent core or structure" (Marcia, 1980). And, being preconscious, these crises are, given the proper interview techniques, accessible to consciousness and thus to investigation.

In that there are numerous possible permutations of the occurrence of crisis and commitment in the three content areas, and between the four identity statuses themselves, it is not surprising that some investigators of the ego-identity construct have found atypical cases which could not be neatly fitted into the fourfold classification. For example, Marcia (1966) differentiated 'playboy' from 'schizoid' type Diffusions, Orlofsky, et al. (1973) distinguished between Achievement and Alienated Achievement types, and Donovan (1975) had to allow for a group which he called Moratorium-Diffusions. There seem to be two primary explanations for these anomalies. More particularly, it is likely that different ways of approaching the identity crisis may be associated with specific historical eras or cultural milieus; this seems to be the case with the Alienated Achievement category which was born, and may have died, with the countercultural movement in the United States in the late sixties (Orlofsky, et al., 1973). More generally, the identity status typology is just that; it is an ideal-typical, and, therefore, to a certain extent, artificial, classificatory

system which overlooks the fact that individuals have idiosyncratic styles of resolving their crises. As Marcia (1976b) states, "No one is just a Foreclosure or Identity Achiever. Each person has elements of at least two, and often all four statuses". In spite of this caveat the present studies acknowledge only the four principle identity statuses.

A further constraint on the present research, as it is with respect to the theory in general, is that Marcia's scheme applies with differential success to males and females. Women's identity seems to be predicated on different content domains than does that of men (the area of attitudes toward premarital intercourse, for instance (Marcia and Friedman, 1970; Shenkel and Marcia, 1972)), the epigenetic ordering may be altered for women (the achieving of intimacy may precede identity for women (Matteson, 1979)), and the relationships between women's identity status and dependent measures are at variance with those relationships found with men (Marcia, 1976b, 1979). In light of these observations the criteria for measuring women's identity are currently in a state of revision. The present studies thus take their theoretical basis from research on males and use only males as subjects.

Fifteen years of accumulated research on the identity statuses has afforded Marcia and his associates a considerable amount of insight into the developmental patterns and personality dynamics of each of the statuses (see Bourne, 1978a,

b, for a review). Following are brief clinical impressions of some of the more salient of these.

Identity Achievement individuals are said to be characterized by a "flexible strength" (Marcia, 1979). Their occupational and ideological commitments afford them the security of inner standards and definitional anchors, yet their period of crisis has allowed them to be introspective and open to alternative perspectives. These persons report a basically positive, though somewhat ambivalent, relationship with their parents, and they perceive themselves to be distinct from them (Jordan, 1971). The notion that to be able to enter into a close and non-exploitive relationship with another one must first be secure in one's own identity gets some support from the fact that Identity achievements, along with Moratoriums, are better able than the other statuses to enter into intimate relations with women (Orlofsky et al., 1973).

Being in an essentially transitional stage, Moratoriums appear to be the most volatile of the statuses. Commitments are either vague, or equal but opposite; in either case, Moratoriums exude a sense of "ambivalent struggle" (Marcia, 1979) in coming to a personal resolution of these conflicts. It is thus not surprising that they are reported to be the most anxious of the statuses (Marcia, 1966, 1967; Podd, et al., 1970). Moratoriums also seem to hold conflicting attitudes toward authority figures; in expressing both hostility toward, and affinity with,

these figures (Donovan, 1975), they seem to be reflecting needs for both rebellion and conformity (Podd, et al., 1970). It is likely that these attitudes are rooted in an oedipal struggle in which they are attempting to disengage themselves from their parents (Jordan, 1971; Donovan, 1975).

Blos' (1962) description of 'abbreviated adolescence' as the "pursuit of the shortest possible route to adult functioning at the expense of personality differentiation" is a succinct description of the Foreclosure status. In evading the adolescent crisis the Foreclosed individual clings to early identifications and commitments, echoing parental and community values and beliefs. Their stable belief structures leave little room for anxiety (Marcia, 1966, 1967; Marcia and Friedman, 1970), and their adherence to conventional standards makes them the most authoritarian of the statuses (Marcia, 1966, 1967; Marcia and Friedman, 1970; Shenkel and Marcia, 1972). Perhaps because they are so firmly anchored to the socially supported ground, and can thus invoke closure on ambiguity, they present as happy, self-assured and sometimes dogmatic (Marcia, 1979). In terms of familial relationships, Foreclosures are said to be "participating in a love affair with their families" (Jordan, 1971). The Foreclosure idealizes his parents child-rearing practices and is intent on reproducing this ideal in his own adulthood.

Adjectives typically used in describing persons in the Identity Diffusion category are 'shallow', 'hollow', 'inadequate' and 'withdrawn'. Clearly, if the statuses are ordered as to degree of pathology (real or potential) these persons anchor the pathological end. Empirically, 'withdrawal' seems to best characterize Identity Diffusions; they tend to withdraw in response to stress (Bob, 1968) and they are the most socially withdrawn of the statuses, both in terms of intimacy with friends (Orlofsky, et al., 1973) and in a classroom situation (Donovan, 1975). When they are engaged in social interaction they exhibit either few ideas or very many ideas lacking any depth (Marcia, 1979). Similarly, although they may be incapable of truly intimate relationships they may be involved in a large number of superficial ones. Introspection, or existential confrontation, is particularly difficult for these people, presumably because there is little of substance upon which to reflect. These qualities become intelligible within the Identity Diffusion's family context where their parents are perceived as being 'rejecting' or 'detached' (Jordan, 1971) or 'distant' and 'uncomprehending' (Donovan, 1975). As Marcia (1976b) observes, "What Identity Diffusions never had, they can neither give nor be".

II INTEGRATIVE COMPLEXITY IN EGO IDENTITY STATUSES

RATIONALE

The determination of the relationship between ego identity and cognitive structural variables has played an integral part in the construct validation of Marcia's (1964) measure of the former. Within this programme two approaches, drawn loosely from Sausseure (1916), might be distinguished: the synchronic (the relation between identity and cognitive structures as hermetic patterns) and the diachronic (the relation between identity and cognitive structures in evolutionary process).

The synchronic approach takes as its point of departure the psychoanalytic perspective that cognition constitutes a primary function within the ego's executive domain (Hartmann, 1939a). The ego's principle task, furthermore, is an integrative, or hermeneutic, one; it is concerned with the creation and maintenance of a meaningful world in the face of incoherent and/or disconfirming stimuli (Ricour, 1970; Fingarette, 1963). Recalling Suedfeld's (1971) definition of information processing ("the translation and transformation of...information into meaningful patterns"), it is clear that cognitive factors play a dominant role in the ego's drive for synchronic equilibrium, or equivalently, the avoidance of anxiety. Holtzner (1968) puts it another way when he asserts that "the maintenance of a

continuing identity is a powerful organizing principle of action". Within this theoretical context, persons assigned to different ego identity statuses would be expected to manifest characteristic styles of transforming information corresponding to the ego's ability to retain its structural integrity under varying conditions of stimulation. Broadly understood, the cognitive variables which have been used to test hypotheses of this type enter under the rubric of 'cognitive styles'.

The diachronic approach is based upon the assumption that there is an internal developmental logic to identity formation into which cognitive sophistication enters as a limiting factor. With respect to the identity statuses, one would expect a positive monotonic correlation between cognitive development and level of identity formation. Hypotheses as to the exact nature of this correlation take several forms which will be discussed subsequently.

A consistent finding in the identity status literature is that Foreclosure subjects score higher than do the other statuses on the Submission and Conventionality subclusters of the California F-Scale (Marcia, 1966, 1967; Marcia and Friedman, 1970 - with women; Schenkel and Marcia, 1972 - with women). To the extent to which these subscales are representative of the entire F-Scale, a cognitive stylistic interpretation of these results would suggest that Foreclosures exhibit conceptual rigidity and an intolerance for ambiguity (Adorno et al., 1950).

These styles would be invaluable in sustaining the pre-eminence of the parental superego introjects notable in the Foreclosures outlook on life.

Interpretations drawn from F-Scale performance were buttressed by Bob (1967, 1968) who correlated the identity statuses with two cognitive controls, 'equivalence range' and 'constriction-flexibility'. Cognitive controls, in general, are said to be "principles of cognitive organization which emerge early in development and which may serve as preconditions for the emergence of particular defences" (Gardner, et al., 1959). Equivalence range, operationally defined as the general width of categories used in an object sorting task, is equivalent to conceptual differentiation, or the extent to which differences between stimuli are stressed or overlooked ('accomodated to' or 'assimilated'). Constriction-Flexibility refers to the extent to which persons are susceptible to the effects of distracting stimuli and thus use the most salient external cues as bases for evaluation. The obvious affinity between this construct and Witkin's dimension of field articulation has been noted elsewhere (Gardner, et al., 1959).

In her first study Bob (1967) used the Goldstein-Scheerer Object Sorting Task to measure equivalence range and the Stroop Color Word Test to measure constriction-flexibility. Her only notable findings were that subjects higher in ego identity (Achievements and Moratoriums) tended to be more flexible on the

Stroop Color Word Test. In her second study Bob (1968) again used an object sorting task but, in order to make use of material that would be personally relevant, rather than the affectively neutral material used in the Goldstein-Scheerer Task, she changed the objects to pictures of people from the Schneidman Make-A-Picture-Story-Task. She also replaced the Stroop Test with the Concept Attainment Test (Bruner, et al., 1956) used by Marcia (1964) in his original study. Reasoning that differences in cognitive style emerge only under stressful conditions, she augmented this study by adding a stress (ego-threat) condition. With respect to Concept Attainment performance she now found that Foreclosure subjects tend toward increasing cognitive constriction under stress and that Identity Diffusions tend to withdraw under this condition. On the object sorting measure she found that subjects in both Foreclosure and Identity Diffusion statuses utilized fewer (that is, broader) categories than did the other statuses in the stress condition. Identity Diffusions were singular, however, in that they tended to use more categories than the other statuses in the non-stress condition. The convergence of these results with the authoritarianism data is most striking for the Foreclosure subjects who, inclined toward broad stereotypes as indicated on F-Scale performance, also tend toward faster and more rigid structuring of novel stimuli in the equivalence range task.

This is also consistent with studies carried out by Mahler (1969) and Waterman et al., (1974). Mahler found that Foreclosure subjects scored toward the 'Repressor' end of Byrne's (1961) Repressor-Sensitizer Scale, indicating a reliance on perceptual defences when confronted with conflicting stimuli. Moratoriums, by contrast, scored in the 'Sensitizer' direction, reflecting extreme vigilance in the face of such stimulation. Waterman, et al. investigated the decision making styles of the ego identity statuses by relating them to the reflection-impulsivity dimension (Kagen et al., 1964). As predicted, the high identity statuses (Identity Achievements and Moratoriums) exhibited a reflective style, while Foreclosure subjects were typically impulsive, reflecting a rigid conceptual system characterized by the rapid exclusion of alternatives. Identity Diffusion subjects were also impulsive, which, according to the authors, is consistent with their attempt to avoid the risks involved in dealing with the problem of identity formation. Marcia (1976) has speculated on how these experimental results might translate into the day to day functioning of the identity statuses. Reflecting on how the Foreclosed individual manages to attend university for four years, being constantly exposed to novel and potentially disconfirming ideas and, indeed, retaining them at least for examination purposes, yet coming out apparently untouched, Marcia states that this individual "likely sticks very closely

to his work, perhaps letting in just a few disturbing messages, but not permitting them to become personally relevant. If, for some reason, they do distress him, he 'forgets' them". The Moratorium, on the other hand, "seems hypersensitive to dissonance and takes many issues personally, thereby exacerbating his feeling of crisis". The Identity Diffusion's strategy for avoiding firm commitments may be to pull out of situations where there is pressure to act definitely. It would appear, as a generalization, that Identity Achievements are the most 'balanced' of the statuses, scoring 'optimally', rather than in any extreme direction, on these measures.

There is some indirect evidence that persons in the high identity statuses are more inclined to have an internal locus of evaluation and to perceive themselves as causative agents than are those in low identity statuses. Recalling that the field-articulation principle is isomorphic with the constriction-flexibility control it can be inferred that Identity Achievements and Moratoriums are more field-independent than are Foreclosures and Identity Diffusions. Foreclosure's high Submission-Dominance scores on the F-Scale and the fact that they have close parental ties would also indicate a lack of autonomy on their part.

Studies by Marcia (1966), Waterman, et al. (1972) and Orlofsky, et al. (1973) have lent direct support to this notion. In the first study, Marcia reported that Identity Achievement

and Moratorium subjects were least susceptible to self-esteem manipulation. Foreclosure subjects, conversely, were the most vulnerable to the effects of negative feedback. Waterman et al. compared the identity statuses on Rotter's (1966) Internal-External Scale and found Identity Achievement and Moratorium subjects to score in the internal direction, implying a 'sense of autonomy' on their part. Orlofsky et al. found that Foreclosure subjects scored lowest on the Autonomy scale of the Edwards Personality Preference Schedule and highest on Ford's (1964) Social Desirability Questionnaire.

A measure of ego-autonomy couched in terms of the socialization process is Kohlberg's (1958) scale of moral development. Taking as its prototype the Piagetian theory of cognitive development (with all of its attendant assumptions) this scale marks the progression from preconventional through conventional to postconventional modes of moral thought. This development is predicated on the progressive de-centering of the ego; in this case, from egocentrism through heterocentrism to ego-autonomy. The autonomy of the ego is identical with Inhelder and Piaget's (1958) formulation of 'Personality' ("Personality is the decentered ego") which is defined as "the eventual adoption of a social role, not ready made in the sense of an administrative function, but a role which the individual will create in filling it" (p 349). This is clearly a restatement of Marcia's existential criterion for Identity Achievement. This

theoretical relationship has found strong support. Podd (1972) found high ego identity subjects tending to cluster around the postconventional stage of moral reasoning whereas Foreclosure and Identity Diffusion subjects tended to be at the preconventional or conventional stages. These results were directly replicated by Rowe, et al. (1980), although Cauble (1976) found no such relationship. As noted in Rowe et al., however, there are enough methodological flaws in this last study to allow us to retain confidence in the studies exhibiting the expected relationship.

The logic tying the development of moral reasoning with identity formation extends syllogistically to an inferred relation between the latter construct and 'pure' cognitive development as formalized by Piaget (1950). That is, decentration in the ego sphere is predicated on the achievement of certain cognitive capacities- in the limit, formal operational thought. According to Inhelder and Piaget (1958) the modifications of thinking which typify adolescence are manifestations of these deep-structure logical transformations. The two specific modes of thought said to emerge in adolescence are: 1) metacognition, or the ability to reflect on one's thoughts, and 2) hypothetico-deductive reasoning, or the ability to subordinate the real to the possible. It is only with the development of propositional logic capabilities (i.e., formal operations) that these modes of thought become possible; in the

former case, allowing for a second-order operational system, and in the latter, allowing for the 16 binary operations of the INRC group, only a subset of which may be empirically demonstrable.

Recalling that the crucial variable differentiating high from low identity statuses is the presence or absence of a 'crisis period' respectively, the following statement from Elkind (1970) serves to close the theoretical circle between ego identity and formal operations.

One consequence of the capacity for combinatorial logic is that, particularly in social situations, the adolescent now sees a host of alternatives and decision making becomes a problem. He now sees, to illustrate, many alternatives to parental directions and is loath to accept the parental alternatives without question.

This naturally leads to the strongest of the hypotheses posed concerning the expected relation between the two constructs; that formal operations is a necessary but not sufficient condition for identity achievement. From the point of view of finding a common ground between Piagetian and psychoanalytic thought, this is a potentially remunerative hypothesis. The results, however, have failed to substantiate this linkage.

Of four studies explicitly designed to test this, only one, by Rowe (1980), has claimed to have supported it, although this author has cast doubts on the methodological appropriateness of the other studies. He criticizes Wagner (1976) for having used an ad hoc modification of the identity interview and for using a younger than standard sample. But after re-analysing her data by

restricting the subject pool to those over 17 years of age, limiting analysis to but one of Wagner's measures of formal operations, and collapsing Identity Achievement and Moratorium subjects, he still found 28% of the high identity group to be at the level of concrete operations (albeit, with a barely significant chi-square for independence of distributions). The Berzonsky, et al. (1975) study is criticized for having used only women to whom the proper identity status interview was not administered and for having used an unorthodox measure of formal operations. With regard to the first point, that only women were used, we agree that the relation between cognitive and identity development may take a different form for women than for men. It is therefore surprising that Rowe was able to draw any conclusions from his own study which included 23% women assessed by the standard identity status interview. It is true that Berzonsky et al. used a test of 'isolation of variables' other than one used by Inhelder and Piaget (1958) and no validity and reliability data were supplied by these authors. The second criticism was also applied to a study by Cauble (1976); in both cases ego identity development was broken down into two broad categories, 'crisis' subjects and 'non-crisis' subjects ('identity questioners' and 'non-questioners' in the Cauble study). We note, however, that Rowe combined Identity Achievements and Moratoriums in order to support his thesis with respect to the Wagner data. Turning to the one study which has

tended to support the notion that ego identity progresses only as cognitive abilities allow, Rowe (1980) points out in one place that its small sample size (N=26) constrains it from being more than exploratory in nature. The fact that 3 out of 3 Identity Achievement subjects were at formal (versus concrete) operations could happen 12.5% of the time by chance only (based on a binomial probability). That 6 of 7 high identity subjects happened to be at formal operations (binomial probability = .055), considering opportunities for measurement error, is used as more substantial support for the hypothesis (Marcia, 1980), but, once again, there would be little validity for criticizing Cauble (1976) and Berzonsky, et al. (1975) for collapsing statuses.

Rather than merely correlating ego identity and cognitive development, Leiper (1979) has attempted the more ambitious task of building a Piagetian model of ego development. He has isolated four structural stages of identity formation which, he claims, form a universally invariant hierarchy. Important here is the fact that Leiper's hierarchy is, at least formally, orthogonal to Marcia's ego identity statuses. This has resulted in a relaxation of the 'necessary but not sufficient' contingency presumed to hold between Piagetian cognitive development and identity formation in order to take into account developmental anomalies (i.e., persons confronted with a non-average expectable environment). Taken together, then, these

studies cast serious empirical doubt on the notion that identity formation is predicated on Piagetian cognitive sophistication. The theoretical constraints on this supposed relationship are no less challenging.

While a full-scale critique of Piagetian theory is beyond the scope of this thesis, a brief discussion is necessary in order to make intelligible the findings reviewed above. First there is the methodological problem of operationally specifying formal operations, particularly the fact that standardized tasks are seldom used across researchers. Also problematic in this regard is that researchers have tended to employ formal operations tasks assuming that they ipso facto guarantee their own construct validity (Keating, 1980). This is especially important for research on the identity statuses in light of Piaget's (1972) caveat that formal operations may be manifest in ways other than those ascertained in tasks used by Inhelder and Piaget (1958). With respect to the subject pools typically employed by Marcia and his associates, the student of English or history would certainly be at an artifactual disadvantage when compared to the logician or analytical chemist. A more serious criticism hinges on the essentially asocial nature of the Piagetian cognitive structures. Blasi and Hoeffl (1974) have argued cogently for a qualitative disjunction between the Piagetian notion of 'operations on operations' and the reflectivity that adolescents show when thinking about

themselves. Further, they argue that thinking about the possible has little in common with the perfectly compensatable INRC group manipulations manifest in formal operations. In general, the author agrees with Blasi and Hoeffel's contention that the properties of intrapsychic and interpersonal open systems can not be extrapolated from the perfectly regulated and autonomously bounded conception of structure advanced by Piaget (see also, Wilden, 1972). At one point Marcia (1976b) appeared to entertain this thesis- "To search for pure cognitive variables, unreflected in at least minimal social interaction, began to appear as a waste of time". However, his recent (1980) call to again open up the search for the Piagetian underpinnings to identity formation is, in the author's view, to predicate identity achievement on a

...cold blooded detached quality (of mind), separate from but still monitoring action as a spectator, (emphasizing) a domain of second order derivatives; that is, a universe of discourse...in which words, signs and notations not only stand for things but can be manipulated within their own boundary system without respect for things" (Price-Williams, 1975- quoted in Hogan, 1980).

With these points in mind it is felt that it is to the credit of Marcia's paradigm that the identity statuses have not correlated well with formal operations.

In general, it would seem that the relationship between ego identity and cognitive development becomes more determinate as the latter construct is conceived within the psycho-social

sphere. Conversely, the relationship breaks down to the extent that cognitive development is tied to an in vitro proficiency in logico-physical operations. One line of research which takes a psycho-social perspective on cognitive capabilities yet retains the notion of a purely structural substratum stems from the work of Kelly (1955) who used the two variables 'differentiation' and 'integration' to describe an individual's 'personal construct system'. These two variables have been studied and elaborated upon in two separate lines of research, both of which purport to be examining a transformational or cognitive structure termed 'cognitive complexity'.

Bieri (1955) introduced the concept of cognitive complexity-simplicity to reflect the idea that the cognitively complex person has available more construct dimensions than does the cognitively simple person. One study of cognitive complexity and the identity statuses which has already been reviewed is Bob's (1968) investigation of equivalence range where it will be recalled that, in the non-stress condition, Identity Diffusion subjects used more categories than did the other statuses. That Identity Diffusion subjects are more psychologically differentiated than the other statuses has been supported by Cote (1977 - with Kelly's REP test) and Kirby (1977 - with Barron's cognitive complexity scale). These authors also found that Foreclosure subjects score in the opposite direction of cognitive simplicity. Both studies, plus one by Tzuriel and

Klein (1977), using the REP test and Rasmussen's (1964) ego identity scale, have reported that high identity subjects scored as moderately complex. These findings are consistent with others reviewed in that Foreclosures tend to see the world in a simple, undifferentiated way, and Identity Diffusions, almost by definition, are characterized by a 'loose construct system'. Though consistent, however, the curvilinear relationship between cognitive complexity and ego identity precludes the complexity construct from being the most theoretically parsimonious variable with respect to finding a cognitive developmental hierarchy as a basis for identity formation. Our own research is derived from the alternative formulation which emphasizes an individual's integrative capacity rather than his proclivity to use multiple dimensions in judgement.

The notion of 'integrative complexity' was formalized by Harvey et al., (1961) under the rubric of 'conceptual systems theory' and greatly refined and expanded upon by Schroder et al. (1967). Rather than inquiring into the number of dimensions used in cognitive functioning, this perspective focusses upon the combinatorial rules and the degree of connectedness between these rules. The authors define four illustrative points, or levels, on what they regard as a continuous dimension of 'abstractness'. Initially dimensions are arranged in a fixed way and there are only single rules for stimulus placement. At this level, stimuli which do not fit with existing schemata are either

'assimilated' or excluded from consideration and the person is thus incapable of holding contradictory beliefs. This becomes less determinate as alternative rules of judgement become available. When this occurs there is a reaction against absolutism and there is an avoidance of dependency on external imposition. But this involves an instability until these rules are themselves related. As the ability to generate a set of organized alternatives increases so do the degrees of freedom necessary to generate functional information. When this happens resolutions are less fixed and the system remains open to the perception and effects of alternatives. This system is potentially self-reflective. The highest level of abstraction is characterized by an ability not only to compare and relate various constructions but also to integrate these constructions in various ways. Here theories can be generated by the resolutions of conflicting perceptions.

There are definite points of correspondence between this formulation and Piaget's (1950) cognitive structural theory. System evolution is marked by stage transitions corresponding to the disequilibrium/equilibration dialectic in Piagetian theory and to advance beyond an adaptation characterized by fixed rules the system must itself generate conflict and ambiguity; that is, it must be labile enough to 'accomodate' to new information. It has even been suggested that integrative complexity, in as much as it postulates 'emergent' possibilities through hierarchical

integration, "is what Piaget is talking about" (Leiper, 1976).

The self-reflective quality of higher levels of integrative complexity provides an intuitive link with the ego identity construct. It is, for example, only with a greater awareness of alternatives that choice, and the internal causation that that implies, becomes possible. Schroder et al. (1967) assert that "conceptual level defines awareness of self as agent and thus provides an objective measure of self development", and Loevinger (1965) included conceptual systems theory as an immediate forerunner to her own general theory of ego development.

We conceive the assessment of integrative complexity to be a parsimonious and expedient way of circumventing the theoretical and practical difficulties involved in examining the contribution of cognitive factors to identity development. To the extent that the measure of the construct elicits responses from the psycho-social arena it should avoid the logical difficulties inherent in extrapolating from logico-physical tasks to the (qualitatively different) tasks involved in adolescent personality development. And to the extent that the scoring of the responses avoids reality content and concentrates upon the purely structural qualities, we have a potentially 'purer' measure of cognitive functioning than, say, Kohlbergian moral development or authoritarianism.

In sum, there seems to be an isomorphy of organizational structures existing between ego and cognitive functioning. Erikson (1959) conceived identity formation as an evolving configuration, the result of the ego's synthesizing functions. This conception is now seen to have parallels in the mechanisms of the cognitive sphere. 'Crisis', as a conscious process, becomes possible only with the adolescent's increased ability to symbolize self attributes and to generate alternative constructions of his environment. 'Commitment' has both cognitive and motivational properties; it is reflective of the individual's need for a consistent structure or framework through which to interpret experience. All this is not to say that integrative complexity accounts for ego-strength- any more than ego mechanisms determine cognitive functioning. On the basis of the research and theory reviewed here we would conclude that ego-strength and integrative complexity are opposite faces of the same coin - to quote Leiper (1976) "the ego is integration".

Hypotheses

Based on the research and theoretical orientations that have been reviewed we expect to observe the following relationships between the ego identity statuses and level of integrative complexity.

one: Degree of integrative complexity is related to identity status. Analysis of variance will be used to test the null hypothesis of no mean differences in the population.

two: Subjects high in ego identity (Identity Achievement and Moratorium subjects) will attain significantly higher scores on the measure of integrative complexity than will subjects low in ego identity (Foreclosure and Identity Diffusion subjects). This follows from observations that the high identity statuses tend to behave in a homogeneous way relative to the low identity statuses (i.e., on measures of authoritarianism, moral development and formal operations). Having been through, or being currently in, a crisis period entails a corresponding level of cognitive sophistication.

three: Identity Achievement subjects will attain the highest

scores on the measure of integrative complexity. In conjunction with the logic of the second hypothesis the achievement of an identity presumes a more highly integrated conceptual system which the Moratorium will not have attained owing to the conflict-ridden nature of his identity crisis.

four: Subjects lacking commitment (Moratorium and Identity Diffusion subjects) will exhibit more variance of integrative complexity scores as a group than will subjects attaining commitment (Identity Achievement and Foreclosure subjects) due to the inherent instability of the former statuses.

METHOD

Subjects

Subjects were young adult males (mean age = 22 yrs. 1 mo.; SD = 1 yr. 8 mo.) solicited from academically heterogenous third and fourth year classes at Simon Fraser University and paid \$6.00 to participate in a study involving "student values and decision making". The sample was limited to males as the criteria for the identity statuses are currently under revision with respect to females. A slightly older sample than is typically used was employed in the hope that these individuals would have stabilized somewhat in their identity formative process. The 99 subjects retained for the study were distributed as follows: 19 Identity Achievements; 17 Moratoriums; 28 Foreclosures, and; 35 Identity Diffusions.

Measures

The 'Identity Status Interview' (see Appendix I) is a semi-structured interview developed by Marcia (1964, 1966) in order to classify late adolescent males into four types which represent distinctive ways of handling the need to form an identity as formulated by Erikson (1959). The interview used in this study covers the three standard areas of occupation, religion and politics, plus two new areas: sex role attitudes and personal standards for engaging in sexual intercourse. In

addition, subjects were asked for their own self-evaluations of the importance of each content area to their personal identity. Inter-rater reliability using the three standard areas is reported to be about .80 (Marcia, 1976), and subsequent work has established a strong measure of validity for the distinctiveness of the statuses (see Bourne, 1978a, b, for a review). Correlations with various measures of intelligence have proved non-significant (Marcia, 1976). An analysis of the relationship between the three standard areas and the two new areas has revealed a phi-prime correlation of .55 in the present study. Scoring was carried out by three trained judges (2 female, 1 male). Agreement between two blind judges as to the final identity status assignment was achieved on 23 of 29 randomly selected interviews (79 % inter-rater reliability). Disagreements and particularly difficult assignments were submitted to an additional trained scorer for adjudication. Three of 102 original subjects were eliminated for lack of reliability on this measure.

The 'Paragraph Completion Test' (P.C.T.) (Schroder, et al, 1967) was designed to assess levels of integrative complexity in the 'interpersonal-uncertainty' domain. The test presents the subject with a total of six stems in the interpersonal area representing structure (e.g., Rules...), conflict (e.g., When I am criticized...) and uncertainty (e.g., When I am in doubt...). In the present study the subject is to write at least three

sentences within 120 secs. in response to each stem. Inter-rater reliability of the measure is reported to range from .80 to .95 and the construct validity of the measure has been established in a variety of experimental contexts (Schroder, et al., 1967; Gardiner, et al., 1972). Performance is reported to be largely unrelated to intelligence test scores, social desirability and verbal fluency (Gardiner, et al., 1972). Scoring is on a 7-point scale, odd numbers corresponding to the four principle conceptual levels and even numbers representing transitional stages of development. Following standard procedure each subject's overall score on the P.C.T. was taken to be the mean of his two highest scoring responses (Schroder, et al., 1967). P.C.T.s were scored blind by a trained scorer and a random selection of 30 P.C.T.s was submitted to a second trained scorer for inter-rater reliability. An acceptable correlation ($r=.87$, $p<.01$) was obtained. In terms of absolute differences between scorers judgements, there was a 77% probability of scores to be within .25 of each other.

Procedure

All subjects received both the Paragraph Completion Test and the Identity Status Interview in a single session lasting approximately one hour. The interviews were administered by one of three trained interviewers (2 female, 1 male) and tape recorded for subsequent scoring. After the interview the tapes

were coded to insure blind scoring. Before initiating the interview the subject was read the following statement from Whitborne (1979).

Thank you for agreeing to participate in this research. We hope that you will find it to be an interesting experience. I will be asking you some questions about your school, family, religion, politics and sex roles. This should take about a half hour or so. I will be tape recording this interview but I want to reassure you that your answers will be kept confidential. If there are any questions you do not wish to answer, or if you wish to discontinue the interview, you may feel perfectly free to do so.

The Paragraph Completion Test was administered under standard conditions (Schroder et al., 1967) and subjects were read the following before beginning to write their responses.

In this portion of the study you are to give your views on a few topics. You will have a total of two minutes to think about, and write down at least three sentences in response to each topic. There are a total of six topics in all and I will tell you when to proceed to the next topic. Your answers will be held in strict confidence. Do you have any questions?

The administration of the two measures was counterbalanced.

At the end of the session the subject was paid \$6.00 for his participation and told that he would be contacted shortly in order to arrange a time to participate in a second session of the experiment.

RESULTS

Table 1a presents the mean scores and standard deviations for the identity statuses on the measure of integrative complexity.

As is evident from Table 1b, a two way analysis of variance revealed no effect for the order in which the P.C.T. was administered nor for the order by identity status interaction. Order was thus eliminated from further analyses. The effect for identity status was highly significant.

Table 1

Comparison of Means for Integrative Complexity Scores for the
Four Identity Statuses

a. Means and Standard Deviations

Identity Status	N	Mean	SD
Identity Achievement (A)	19	3.000	.9789
Moratorium (M)	17	3.3382	1.0076
Foreclosure (F)	28	1.7411	.5672
Identity Diffusion (D)	35	1.9571	.5800

b. Analysis of Variance

Source of Variation	SS	df	MS	F-Ratio
Status	162.160	3	54.053	24.919*
Order	4.791	1	4.791	2.208
Status X Order	12.266	3	4.089	1.885
Residual	197.392	91	2.169	

* $p < .001$

Because of the mixed a priori and post hoc analyses on the same factor set, and the fact that factors were combined for some contrasts it was decided to take a conservative approach to the testing of the contrasts by using Scheffe's multiple comparison method for controlling experiment-wise alpha. A t-test (see Table 2) revealed that individuals in the high identity statuses (achievements and moratoriums) had higher integrative complexity scores than did low ego identity status individuals (foreclosures and diffusions). There were no significant differences between achievements and moratoriums or foreclosures and diffusions. Comparing the t-value for achievements versus the other statuses combined with the t-value for moratoriums versus the other statuses combined it is apparent that there is a tendency for moratorium subjects to appear highest on the measure.

Table 2

Contrasts Among the Identity Statuses on Integrative Complexity Scores

Contrast	t ¹	Contrast	t ¹
AM vs FD	8.383**	A vs MFD	3.383*
A vs M	-1.349	M vs AFD	5.491**
F vs D	-1.134		

¹ df =95, all t-values evaluated against Scheffe critical F statistics

* p<.025

** p<.001

Finally, an F-test of homogeneity of sample variances revealed no differences in the variances of moratorium and diffusion subjects combined (Var=.5583) versus identity achievement and foreclosure subjects combined (Var=.5790) (F=1.037, df=50/45, NS).

DISCUSSION

The results of this study strongly support the hypothesis that identity achievements and moratoriums are more integratively complex than are foreclosures and identity diffusions. Taking the mean integrative complexity scores of the identity statuses as indicative of typical to optimal conceptual functioning we can say that high identity status individuals are more inclined to simultaneously generate alternative and different interpretations of the same event while low identity status individuals are more likely to operate under fixed rules, using inclusion/exclusion criteria to fit an event into a category. That these latter individuals tend toward the first transitional stage of integrative complexity implies, however, that qualifications of absolute rules are not uncommon in their conceptual functioning. Overall, the identity statuses occupied only the lower two structural stages of integrative complexity; that is, none of the statuses evinced functioning that would include the ability to consider joint outcomes of different events or to generate functional relations between alternatives, although a few individuals did produce such responses.

These data are consistent with, and thus buttress the validity of, the results of investigations into the cognitive styles of the identity statuses. The cognitive rigidity implied in foreclosures high F-Scale scores is paralleled here in the rule-bound nature of their P.C.T. responses, and the impulsive

decision styles of the low identity statuses is matched in their integratively concrete response patterns of seeking fast and unambiguous closure in order to reduce incongruity or dissonance. Consider, for example, the following responses to the stimulus item "When I am in doubt...", where both of these tendencies are seen to be manifest:

What an uncomfortable feeling this is. Especially when you shouldn't be in doubt. Being in doubt reflects an unprepared person and I try to be as aware and prepared as I can.

I would talk to my friends and parents or going [sic] away for a while in order to let myself forget about it.

I just logically think through the problem, formulate a solution, and stick by it until the problem is solved...if everyone else did this, the world would be more efficient and people would get more things done.

When I am in doubt, I kneel down and pray faithfully to God. After my prayer, I usually study and meditate on God's word. I can then develop positive attitudes with the help of the Holy Spirit and the guidance of his word. My doubt is usually cleared very soon.

Integratively concrete persons are also characterized by their acquiescence to a salient norm, a quality which is consistent with research showing low identity status individuals to be externally controlled, cognitively constricted and susceptible to self-esteem manipulation. What the present research adds to these rather obvious isomorphies is an empirical demonstration that identity formation can be conceived within the context of a structural hierarchy of cognitive functioning following an internal developmental logic and which is independent of

specific psycho-social content factors.

This is, of course, exactly what research employing Piagetian measures has attempted to demonstrate. With regard to the process of identity formation, the distinction between the two approaches is a functional one. Arguing from Hogan (1980), the Piagetian approach to cognitive development presumes an increasing isomorphy between structure of the world and structure of the mind--formal operations being the closest of these successive approximations. But this necessarily divorces knowledge and meaning from specific cultural systems of reference; that is, structure as independent of function. Structural levels of integrative complexity, on the other hand, are seen to subserve definite functions which have arisen from the negotiated meanings of concepts rather than being simple reflections of nature. In this conception, knowledge of reality is socially constructed and, at the level of intra- and inter-personal affairs, is instrumental in maintaining the continuity and cohesion of self. In our view it is this functional, or motivational, significance of levels of integrative complexity that has afforded it its high degree of correspondence with the identity statuses where the Piagetian approaches have proved equivocal.

Our results showing that persons who have gone through, or are presently in, a crisis period are more integratively complex than are those who have not been through such a period are

explicable even without recourse to the theoretical subtleties of identity formation, for there is a methodological isomorphy in the procedures used to assess the two theoretical constructs. In both the Paragraph Completion Test and the Identity Status Interview we are essentially presenting the subject with a stimulus item drawn from the psycho-social domain (in the former case, 'Policemen', 'Rules' etc., and in the latter, 'yourself') and assessing him on, among other things, his proclivity to produce alternative constructions of that 'item'. Thus, the foreclosure who states that he has 'always been a Catholic and would never consider any other religious orientation' is exhibiting the same structural properties with respect to the 'self' as is the integratively concrete person who maintains that 'Rules are always to be followed' with respect to the stimulus item 'Rules'. Conversely, the moratorium who envisions alternative constructions of his own future life history is structurally similar to the more integratively complex person who generates multiple interpretations of other psycho-social stimulus items. While this relationship tends to support our hypothesis that integrative complexity is salient in the criteria for 'crisis', it also points out a possible methodological flaw in the present study. The author, though blind to the P.C.T. results, was not blind to the hypotheses when scoring for identity status; thus, he may have been influenced by the level of integrative complexity expressed

verbally in the interviews. To the extent that this overlapped with crisis related material, the criteria may have amounted to the same thing anyhow- as argued above. However, the extent to which assignment was related to the integrative complexity of non crisis-relevant material, the results would have been compromised. In view of the fact that only the author was trained in scoring for integrative complexity, the acceptable degree of inter-rater reliability for identity status assignment mitigates against this being a major problem in the present study. Nevertheless, we suggest that future studies into this relationship employ identity interview raters blind to both differential conditions and to hypotheses in any way connected with the integrative complexity construct.

In spite of having established an empirical relationship between ego identity development and integrative complexity, possibilities for the practical application of this relationship presently remain open only to some informed speculation. From a therapeutic perspective we might point out the correspondence between certain features of Korzybski's (1933) General Semantics, or theory of sign processes, and the integrative complexity construct. An important aspect of integratively simple functioning is the rigid classification schemes for fitting stimuli or events into categories; that is, in order for an event (significate) to have any meaning it must be situated in a one to one correspondence with an appropriate concept (sign).

Depending on the degree of correspondence, new events are either included or excluded in toto. This is essentially what Korzybski means by 'intensional' thinking, where subject and predicate are so intertwined that, to invert his phrase, the map becomes the territory. This type of thinking precludes the ability to hold alternative perceptions of the same event or to think in terms of functional relationships between alternative perceptions. These latter qualities are characteristic of 'extensional' thought, and, obviously, of integratively complex functioning.

A development from intensional to extensional modes of thinking would thus imply a development in level of integrative complexity. According to Korzybski, intensional thinking can easily lead to imprecisions in sign-significate relations and relativities in meaning, and thus to communication breakdowns and pathological states. One of the aims of Rogers' (1959) client-centered therapy is to induce a movement from intensional to extensional modes of thinking as part of the programme toward self-actualization. From this analysis it would also appear that Rogers is laying the cognitive foundations for identity formation, which, in any case, is certainly not orthogonal to self-actualization. Before returning to this point we will digress to consider the developmental similarities between the identity statuses and levels of integrative complexity.

According to Schroder et al. (1967) it is assumed that every child starts out as integratively concrete, and in

Marcia's (1976) scheme every child is, under average expectable environmental conditions, initially a foreclosure. Development out of these initial stages depends on the environmental conditions confronted by the growing individual. The central characteristic of training procedures predisposing to structural arrest in both spheres is the presence of overly nurturant parents who provide ready-made rules and schemata to the child on a reliable basis. From either perspective the consequences of such a training procedure is equally maladaptive: "'Ideal' child rearing practices may not produce 'ideal' children, if ideal is understood to mean the ability to cope with a world of myriad values and pressures" (Marcia, 1976b) and; "Unilateral training...unrealistically over-simplifies the environment to which one is adapting" (Schroder et al., 1967). Neither theorist, of course, advocates parental negligence; in terms of the identity statuses this type of environment would predispose to identity diffusion, and Schroder et al. maintain that isolation or excessive pressure will serve to similarly truncate conceptual development. Vulnerability to stress would appear to be the immediate heir to either unilateral or negligent parental training. An interdependent training environment in which a certain amount of independence between parents and children exists and which encourages exploratory action appears to be necessary for optimal cognitive and personality growth. By interacting with the environment and experiencing the

consequences of this interaction directly, the child comes to define and integrate the dimensions of his/her experience on his/her own terms. These self-generated, rather than externally imposed, conceptual structures would be more flexible and provide greater resistance to stress.

Returning to therapeutic implications, we note that Rogers' non-directive therapy is fashioned on just this type of interdependent training environment. The imposition of external structure is explicitly eschewed, and the process encourages the client in his/her exploratory behavior and the valuation of direct experience over socially mediated criteria for class inclusion of that experience. In this way extensional thinking is promoted. Obviously, a more direct approach would consist in developing a method for increasing levels of integrative complexity not mediated by a plethora of auxiliary constructs such as is found in Rogers' system.¹ Longitudinal research will be needed to see the extent to which identity formation does track increasing integrative complexity under therapeutic conditions. Based on this research, however, it would seem that training programs, whether they be parental, educational or therapeutic, which hope to facilitate growth in either the ego or conceptual sphere at the expense of the other may find their efforts to be futile.

¹ A program of just this type is presently being developed at the University of British Columbia.

Our third hypothesis, that identity achievements would score highest on the measure of integrative complexity, was not supported. In fact, although the difference between the two high identity statuses is not significant, there is a tendency for moratoriums to appear highest on the measure when all the other statuses are combined. One tempting explanation for this reversal is that it is the moratorium who, by virtue of working the hardest at sorting out the vicissitudes of conflicting ideologies and potential life histories, is the most cognitively precocious, while the identity achievement, having now attained the security of a stable weltanschauung, has actually regressed somewhat in his conceptual capacity. Positing a transition of this type is by no means a novel observation: according to Inhelder and Piaget (1958) "...adolescence is a metaphysical age par excellence, an age whose dangerous seduction is forgotten only with difficulty at the adult level" (p. 340), and Becker (1973) contends that "the adolescent becomes, of necessity, a philosopher for the first time and must, like all humans, find a way of silencing a too keen perception of man's (and his own) condition" (in Josselson, 1980). One is even reminded of Erikson's (1968) observations on the German youth who, in their wandervogel years looked with such disdain and incomprehension on the bürgerliche mentality of their elders, but eventually completed the cycle by following in their footsteps. Inhelder et. al. and Becker do not specifically explain the transition in

terms of cognitive regression, and the matter of exactly how one 'silences' a keen perception, or 'forgets' the seduction of metaphysical speculation, is left an open question. All we can say here, and our data support this notion, is that a reduction in level of integrative complexity, as a way of reducing ambiguity and environmental complexity, is one way in which this transition might be accomplished.

This interpretation, of course, compromises the honorific view that is generally held toward the identity achievement status. But the premium placed on identity achievement, at least as operationalized in this study, was compromised when Marcia (1976a), in a follow-up study, found that over forty percent of those classified as identity achievements in his original study had made the formally impossible 'regression' to the foreclosure status. This finding adds to our conjecture that the identity achievement does indeed compromise his conceptual capacities for the 'luxury' of a stable structure through which to interpret experience. A follow-up to the present study is currently being planned to investigate whether Marcia's (1976a) results can be replicated and the extent to which integrative complexity covaries with regressions and progressions in ego identity.

As an addendum, though identity achievements tend to come out worse than expected in terms of integrative complexity, we do expect them to distinguish themselves relative to moratoriums on measures of psycho-social effectiveness. Commitments, in a

sense, provide the identity achievement with the tools to negotiate life from a position of strength. When in a demanding situation, they can give a little, secure in their knowledge that there is still plenty in reserve (Marcia's "flexible strength"). Lacking such commitments, moratoriums are in a more psychologically precarious position, and it is an open question whether their conceptual capacities can make up for the flexibility of action lost by not having some firm commitments to fall back upon.

Our finding that the committed statuses are just as variable in their integrative complexity scores as are the uncommitted statuses is explainable by one of two possible theoretical perspectives; that is, the identity achievement and foreclosure statuses are just as heterogeneous in their responses as are the moratorium and identity diffusion statuses or the latter two statuses are just as homogeneous in their responses as are the former two statuses. To opt for the latter interpretation is to assert a static, unidimensional view of what the statuses represent, and, in view of the discussion above concerning the regressive tendency in identity achievements, as well as what has been argued elsewhere (Marcia, 1976a, 1980), this interpretation would appear to be untenable. Contrary to our hypothesis it would seem that, regardless of commitment, all of the identity statuses are best conceived as "coming from somewhere and going to someplace" (Marcia, 1976a),

and this dynamic, idiographic, component is going to make some status-independent difference on dependent measures.

The most pressing subsequent research need appears to be further replicational and longitudinal studies to back up the conclusions and tentative conjectures we have drawn from the present study. Once a theoretically parsimonious measure of ego identity for use with women has been refined it would be of value to see if the relationships we have observed hold up for that population as well. Finally, we suggest that future studies in this area concentrate on assessing the dialectically reinforcing nature of the interaction between cognition and identity formation. Until the development to formal operations is itself adequately explained, conclusions drawn from studies of the 'necessary but not sufficient' relationship between the two constructs will be merely descriptive, and therefore of questionable scientific import.

III EGO IDENTITY STATUS AND STYLE OF INTERACTION

RATIONALE

Salient in Erikson's notion of identity formation is the fact that an ego identity is the product of both psychological and social factors: "The feeling of ego identity is the accumulated confidence that corresponding to the unity one has in the eyes of others, there is an ability to sustain an inner unity and continuity" (1959). To a large degree, then, ego identity consists in a competence that is formed in social interaction. To the same degree, it is to be expected that the ability of the ego to maintain its structural integrity would be reflected in idiosyncratic styles of social interaction. Despite the theoretical significance of this aspect of ego identity, there has been a relative paucity of empirical research into the social-interactive correlates of identity formation. The present study represents one attempt to fill this void.

Aside from Erikson's provisional and little pursued formulation there exist two more or less comprehensive theories of social interaction as it relates to ego development: these are, Selman's (1971b) stage theory of social role-taking abilities, and Habermas' (1979) notion of interactive competence.

According to Selman, an individual's social behavior is directly related to his/her level of social-cognitive understanding, where the latter is to be conceived in terms of

Piagetian cognitive abilities applied to social relationships. Thus, proficiency in social judgement is predicated upon the progressive decentering of the ego and on the eventual attainment of formal operational thinking abilities. Selman (1976) distinguishes five qualitatively different and universally invariant stages of role-taking ability:

1. Egocentric role-taking- The child at this stage is unable to differentiate between self and other as entities, and thus between differing points of view. Social judgement is based on actions rather than intentions.
2. Social informational role-taking- Although the child is now able to see him/herself and the other as actors with potentially different interpretations of the same social situation he/she is still unable to accept a relativity of perspectives.
3. Self reflective role-taking- At this stage the individual is able to take the perspective of either party in a dyadic relationship, but can do so only sequentially.
4. Mutual role-taking- The individual at this stage is capable of a simultaneous coordination of perspectives. He/she can thus take the perspective of an impartial spectator able to maintain a disinterested point of view.
5. Social and conventional system role-taking- Because persons at this stage realize that mutual perspective taking does not always lead to complete understanding there develops an

appreciation for the normative structure of social interactions. In cases of disagreement there is an appeal to the perspective of the generalized other (the social system) for a resolution.

Clearly, each stage of social-cognitive understanding has potential consequences for interpersonal behavior. At the lower stages meaningful interactions are impossible, for without the ability to acknowledge the other's perspective or to coordinate the viewpoints of the self and other, there can be no basis for mutual understanding eventuating in a consensus. Alternative viewpoints are met with incomprehension, anger or even aggression. With the development of perspectival relativity and the ability to take the viewpoint of the generalized other, an increased tolerance for others' points of view, exhibited in concurrence, suspension of judgement, disinterested appeals to external normative guidelines and other pro-social behaviors, should be in evidence.

It is apparent, however, that Selman's stage sequence stops short at the heteronomous level of ego decentration, and the social-interactive correlates of ego autonomy are thus left unspecified. A more crucial shortcoming of Selman's scheme, as it is with all Piagetian based theories which attempt to extrapolate the properties of personality and social systems from those of rigidly compensated physical or mathematical systems, is the lack of motivational parameters for bridging the

gap between social-cognition and social-action.

For Habermas (1967, 1979) the ability to communicate competently in interpersonal situations is the sine qua non of ego identity. His notion of communicative competence, based as it is on elements of analytic ego psychology, cognitive developmentalism, symbolic interactionism, and speech-act theory, goes beyond Selman's stages of social-cognitive understanding in that it places a premium on the autonomy of the ego, and it attempts to breach the cognition/motivation duality of the ego identity construct. On the cognitive side, role behavior is distinguished according to levels of reflexivity, the development from egocentric to heterocentric role-taking coinciding with an ability to understand reflexive behavioral expectations (norms). Habermas supercedes Selman, however, in that ego autonomy is introduced at the point where the reflexivity of the heteronomous level itself becomes reflexive (i.e., norms can be normed). It is only at this level that the identity of the ego can assert itself, for people are no longer merely role-bearers tied to concrete roles and particular systems of norms, they are autonomous and responsible individuals by virtue of their ability to engage actively in the principled generation of norms. It is clear, however, that without recourse to the generalized other for a source of normative behavior, a different strategy must be invoked by which opposing norms can be judged. According to Habermas, this

entails an entrance into discourses in which practical questions can be argumentatively clarified. On this requisite hinges his theory of communicative competence and the supposition of the 'ideal speech situation'.

The importance of the act of speaking to ego development was noted by Erikson:

Speech defines him [the child] as one responded to by those around him...a spoken word is a pact: there is an irrevocably committing aspect to an utterance remembered by others...This intrinsic relationship of speech, not only to the world of communicable facts, but also to the social value of verbal commitment and uttered truth is strategic among the experiences which support (or fail to support) a sound ego development." (1959)

Habermas (1967), in his attempt to formalize these relationships, goes so far as to assert that ego identity and communication in ordinary language are complementary concepts, for "from different aspects they designate the conditions of interaction at the level of reciprocal recognition". This is not an automatic process, however, for four 'validity claims' must be satisfied prior to successful communication (Habermas, 1979). These are: 1) comprehensibility- the ability to utter something understandably; 2) truth- giving the hearer something to understand (the propositional content of which is existentially redeemable); 3) rightness- that the speaker's utterance is appropriate to a recognized normative background, and; 4) truthfulness- the speaker must be sincere in expressing his/her intentions so that the hearer can believe the utterance. When

all four validity claims are capable of being redeemed there exists an 'ideal speech situation', which carries with it the supposition that genuine agreement is possible. This situation is characterized by the absence of constraint; that is, the absence of either systematically distorted communication (i.e., neurotic distortions) or strategic action (in which a participant consciously manipulates the interaction for ends other than that of reaching a consensus).

The speech situation outlined by Habermas is 'ideal' in the sense that the conditions obtaining in actual speech are rarely, if ever, those outlined above. The reason for this is that seldom have all participants in discourse achieved an ego identity, and those who have not are incapable of fulfilling all four validity claims, particularly the fourth, or 'truthfulness', condition. Habermas arrives at this conclusion by way of reference to the semiotic model latent in Freud's topographic and structural models of mental functioning. A corollary of Freud's notion that the systems PCS and UCS can be distinguished by the fact that the word presentations connected to thing presentations in the former system are unavailable to the latter is the formulation that the lifting of repression consists in making available to the public domain (i.e., potential expression in ordinary language) those parts of internal nature that have been alienated and neutered (the id). Because of repression, not only is the subject's communication

with him/herself interrupted (i.e., as expressed in symptom formation) but interpersonal communication is also pathologically distorted.

The privatized language of unconscious motives is rendered inaccessible to the ego, even though internally it has considerable repercussions upon that use of language, and the motivations of action that the ego controls (Habermas, 1967).

This perspective clearly goes beyond the cognitive side of communicative competence and shows that ego identity requires the ability to give one's own needs their due in these structures of communication. One manifestation of the differential development of cognitive and motivational structures, lying in range of the normal, is the frequent discrepancy between social judgement and social behavior. According to Habermas (1967) "...'wrong' behavior means every deviation from the model of the language game of communicative action, in which motives of action and linguistically expressed intentions coincide". (In this regard it is interesting to note the skeptical attitude toward verbally expressed beliefs and intentions built into Marcia's Identity Status Interview (see Appendix 1). Stress is placed not so much on the attitudes elicited from the subject, but upon how these attitudes are manifest in behavior- in status assignment the latter typically overrides the former.)

In order to thematize the relations into which speaker and hearer enter Habermas (1979) draws on speech-act theory. From

this perspective every utterance has both a propositional content and an illocutionary force. In the expressive use of language the illocutionary force of an utterance indicates the extent to which a speaker is willing to enter into a bond (or what Erikson called a 'pact') with the hearer and prove trustworthy; that is, that intentions expressed by the speaker actually guide his/her behavior. As indicated above, this obligation to prove trustworthy is compromised when the speaker adopts an objectivating attitude toward him/herself. An engagement where all the participants meet as autonomous egos and thus fulfill the sincerity requirements necessary to reach understanding (the ideal speech situation) is characterized by a pragmatic structure involving complete reciprocity between these participants. According to McCarthy (1976) this involves: 1) equality of chances to initiate and perpetuate a discourse; 2) equality of chances to consider and criticize all opinions; 3) equality of chances to employ representative speech-acts (i.e., to make their 'inner nature' transparent to others), and; 4) equality of chances to employ regulative speech-acts, so that unilaterally binding norms are excluded from the dialogue. What is left after these conditions have been satisfied is that the 'force of the better argument' will prevail in discourse. It follows that that these conditions will not obtain when participants are irrationally motivated (i.e., low in ego development) and interactively maladaptive behavior will ensue.

The present study utilizes process analytic procedures in order to empirically examine the relation between ego identity formation and social-interactive style. It does not emanate directly from the theoretical formulations of either Selman or Habermas, although it will be seen to have affinities with both. Rather, it has developed within the narrower context of issues raised in previous research on Marcia's four ego identity statuses. Our concern is one of exploring the idiosyncratic styles of social interaction which may have given rise to, and continue to sustain, the particular dynamic organization of drives, belief structures, defenses etc. associated with each of the identity statuses.

Bales' Interaction Process Analysis scoring system was chosen as a means of compiling ideal-typical interactive profiles of the identity statuses. This system employs 12 mutually exclusive and jointly exhaustive categories by which to classify interactive behavior. These categories and their criteria are briefly delineated as follows:

1. Shows Solidarity- Included here are initial and responsive acts of solidarity and affection, such as acts of acceptance, camaraderie, identification, entrustment etc. Also included are status raising acts (i.e., rewarding or praising), offers of assistance, altruistic behavior and acts of mediation or pacification.
2. Shows Tension Release- Spontaneous indications of relief,

elation, joking, laughing and enthusiasm are included here.

3. Agrees- This includes indications of modesty or humility, giving assent to others' suggestions or endorsement of their opinions. It also includes admitting errors or oversights and a permissive attitude or passive submission toward others' actions.
4. Gives Suggestion- Includes suggesting methods to attain goals, the delegation of authority or initiative and attempts to guide or persuade the other.
5. Gives Opinion- Included here are indications of thought-in-process and its verbal expression, which must include an evaluative or inferential component (i.e., diagnoses, interpretations, hypotheses).
6. Gives Orientation- Includes giving information, repeating, clarifying, summarizing etc. with the purpose of making communication more effective. Non-inferential statements about the self or other are also included.
7. Asks for Orientation- Includes acts which express a lack of knowledge or recall. Requests for clarification, definition or other types of non-inferential information.
8. Asks for Opinion- Includes any type of question which attempts to encourage an inferential or interpretive statement or reaction on the part of the other.
9. Asks for Suggestion- All questions or requests as to how action shall proceed are included here.

10. Disagrees- This category includes acts showing passive rejection, undue formality or withholding of resources. Rebuffing suggestions, rejecting interpretations, indications of suspicion or hesitancy, ignoring the other or restating points that have been previously been rejected by the other.
11. Shows Tension- Includes indications of nervousness, frustration, unhappiness, shame or guilt (i.e., vigilance, tension, self-effacement, brooding etc.). Also includes requests for permission or help which are emotionally laden, and any indication that the actor is attempting to withdraw from the field.
12. Shows Antagonism- Includes attempts to: autocratically control the interaction (e.g., arbitrary attempts to lay down principles of conduct, standards or laws); show an active autonomy (e.g., in non-compliance, disrespect or obstinacy); deflate the status of the other (e.g., by interrupting, belittling, obstinacy); defend one's own status (e.g., acts of self-vindication, protecting one's own opinions against assault); to seek status (e.g., showing-off, dramatizing his/her own uniqueness); and any other indications of aggressive intent.

Several additional indices are calculable from formulae in Bales (1950). Two of which are relevant for this study are: Relative Inquiry, or the proportion of Questions (categories 7, 8 and 9

combined) to Questions plus Answers (categories 4,5 and 6 combined) and; Expressive-Malintegrative Behavior, or the proportion of Negative Reactions (categories 10, 11 and 12 combined) to Negative Reactions plus Positive Reactions (categories 1, 2 and 3 combined). By this method the spontaneous verbal and non-verbal reactions which both reflect and augment the personality and cognitive styles by which the identity statuses deal with varieties of information and its sources will be specified.

One of the most intriguing issues in the identity status literature concerns the means which a Foreclosure employs to successfully complete four years of university, frequently encountering views different from his own, yet never seriously considering changing his opinion. On the cognitive side, there is evidence to indicate that they become constricted under ego-threatening conditions (Bob, 1968) and invoke fast closure on alternative interpretations (Waterman et al., 1973). There is also evidence that they are adept at employing perceptual defences under conflicting stimulation (Mahler, 1969). This study is directed at showing what Foreclosures actually do behaviorally when in direct contact with such stimulation. There is similar interest in the interactive correlates of Moratoriums' hypersensitivity to dissonance (Mahler, 1969) and their intense psychological efforts to disengage themselves from their parents (Jordan, 1971; Donovan, 1975); of the proclivity

for identity diffusions to pull out of stressful situations (Bob, 1968); and, more positively, of the Identity Achievement's stability of self-concept and flexible cognitive system (Marcia, 1966, 1967; Bob, 1968).

A study similar in part to the present one was conducted by Donovan (1975). Among other things, his 22 subjects were observed and tape recorded over 39 class sessions, each of which was scored for interpersonal style using the Process Analysis Scoring System which reflects the affect beneath each sentence spoken. Using this procedure Donovan was able to extract the following profiles of interpersonal behavior for the identity statuses. Identity Diffusions were withdrawn and lacked any real involvement in the interactions. They spoke seldom and seemed wary of both peers and the teacher. When they did speak they were both diplomatic and agreeable, perhaps protecting themselves from the aggressive feelings they projected onto the other participants. When they could no longer contain their anger or frustration, however, their behavior occasionally approached the inappropriate. In contrast, Foreclosure subjects appeared responsible and benevolent in their interactive behavior and they were actively engaged with peers. They were at their best when the interaction was highly structured but became distressed when the rules and goals became ambiguous. Most striking about the interpersonal behavior of the Foreclosures was the lack of expressed emotion, either positive or negative,

toward teacher and peers. Moratoriums were the most talkative of the statuses and expressed their feelings immediately and articulately. They were also competitive in the interactions, frequently vying for a leadership position within the group. This competitiveness precluded them from creating deeper, warmer relationships from otherwise intense engagements. Identity Achievement subjects seemed little concerned with competition for leadership. Like Foreclosures they were active in seeking out engagements with other participants and seldom exhibited hostile reactions. Rather, they were particularly non-defensive and rational in their interactive behavior.

The present study introduces more experimental control over the interactions than was possible in Donovan's study. The interactions, involving groups of 3 or 4 subjects, were limited to a half hour, and a standard problem solving task (Rest's (1973) Defining Issues Test) was given to all groups. This task, dealing as it does with issues of morality and proper conduct, was chosen so as to facilitate personal involvement and affective expression in the interactions. Unlike Donovan's study, there is no a priori identifiable authority figure in these interactions. This is seen to be advantageous to the extent that interpersonal behavior has been reported to be influenced by an interaction between identity status and degree of authority of the other participant (Podd et al., 1970). There is no doubt, however, that the degree of control exercised in

this study introduces some constraints on the interactions not apparent in Donovan's study. It is recognized, for example, that the time limit makes for a minimal opportunity for group development and thus for establishing anything more than superficial relations among the participants. Also, the contrived nature of both the task and the circumstances under which the participants enter into discourse introduces a degree of artificiality into the interactions which was not inherent in Donovan's study. Within the context of our domain of inquiry, however, these factors are not expected to seriously compromise the results.

Hypotheses

As the major purpose of this study is exploratory, all possible inter-relationships between the identity statuses and dependent variables (the 12 Bales' categories plus two indices calculable from these categories) will be examined. This will involve separate analyses of variance on each of the dependent variables to test for no mean differences between the identity statuses. Post-hoc t-tests will then be computed to test specific contrasts inferred to be remunerative from the results of the analyses of variance. Finally, a step wise discriminant analysis with all 12 Bales' categories entered as predictor variables will be conducted in order to derive a discriminant function and differential hit-rates for the identity statuses.

Despite the essentially exploratory nature of the study, the following hypotheses will be tested:

one: Identity Achievement subjects will attain significantly higher scores on the index of Relative Inquiry than will Foreclosure subjects. The stable sense of identity and cognitive flexibility exhibited by Identity Achievements will enable them to probe the positions of the other members, whereas Foreclosures' cognitive rigidity and impulsive decision styles will preclude such evocations.

two: Identity Achievement subjects will attain significantly higher scores than will Identity Diffusion subjects with respect to the Gives Opinion category. Diffusions, lacking a cohesive belief structure and a secure sense of self, will refrain from subjecting their opinions to the scrutiny of the group. Identity Achievements will be less wary of making themselves transparent to others.

three: Subjects high in ego identity (Identity Achievement and Moratorium subjects) will attain significantly lower scores on the index of Expressive-Malintegrative Behavior than will subjects low in ego identity (Foreclosure and Identity Diffusion subjects). Persons low in ego identity, having previously exhibited repressive tendencies (Donovan, 1975) and an inability

to establish deep and non-exploitive relationships with others (Orlofsky et al., 1973), will be unable to engage in demanding interpersonal contact without defensive posturing. Persons high in ego identity will exhibit fewer negative reactions and more frequent support of the other members.

METHOD

Subjects and Group Composition

Subjects were young adult males (mean age = 22 yrs. 3 mos.; SD = 1 yr. 7mos.) solicited from academically heterogenous third and fourth year classes at Simon Fraser University and paid \$6.00 to participate in a study involving "student values and decision making". The sample was limited to males as the criteria for the identity statuses are currently under revision with respect to females. A slightly older sample than is typically used was employed in the hope that these individuals would have stabilized somewhat in their identity formative process. The 61 subjects retained for this study represent a subset of 99 subjects who participated in a first session of the experiment. They were distributed as follows: 15 Identity Achievements; 11 Moratoriums; 15 Forclosures, and; 20 Diffusions. These subjects were divided into 17 groups for testing purposes.

Subjects were selected for group inclusion on the basis of their previously assessed membership in one of the four ego identity statuses. An attempt was made to have each group ultimately consist of one member from each identity status so as to maximize the variance and representativeness of the groups. This attempt was unsuccessful for two reasons: 1) a subject in an appropriate status would be unavailable to complete a group so that a subject in an alternative status was employed, and 2)

a subject would fail to show up for the testing session. For these reasons only 7 groups were of optimal composition, the others being composed of 3 members and/or more than one member of a particular identity status. This resulted in a non-orthogonal design, and consequently places rather severe constraints on the interpretation of the results.

Measures

The 'Identity Status Interview' (see Appendix 1) is a semi-structured interview developed by Marcia (1964, 1966) in order to classify late adolescent males into four types which represent distinctive ways of handling the need to form an identity as formulated by Erikson (1959). The interview used in this study covers the three standard areas of occupation, religion and politics, plus two new areas: sex role attitudes and personal standards for engaging in sexual intercourse. In addition, subjects were asked for their own self-evaluations of the importance of each content area to their personal identity. Inter-rater reliability using the three standard areas is reported to be about .80 (Marcia, 1976b), and subsequent work has established a strong measure of validity for the distinctiveness of the statuses (see Bourne, 1978, for a review). Correlations with various measures of intelligence have proved non-significant (Marcia, 1976b). An analysis of the relationship between the three standard areas and the two new

areas has revealed a phi-prime correlation of .55 in the present study. Scoring was carried out by three trained judges (2 female, 1 male). Agreement between two blind judges as to the final identity status assignment was achieved on 23 of 29 interviews randomly selected from the original pool of 99 (79% inter-rater reliability). Disagreements and particularly difficult assignments were submitted to an additional trained scorer for adjudication. Three of 102 original subjects were eliminated for lack of reliability on this measure.

'Interaction Process Analysis' (Bales, 1950) is not a measuring instrument as such, but a system for categorizing the interactive behavior of group members with each other. Interaction in a small group is divisible into 12 mutually exclusive and jointly exhaustive categories (e.g., Raises other's status, gives help, reward). On the basis of these categories several indices are calculable (e.g., degree of control, expressive malintegrative behavior). In one study reporting inter-observer reliability rank order correlations averaged .98 with trained observers (in Lake et al., 1973). As per Bales (1950) the number of responses scored within a given category was transformed to a proportion of the total number of responses scored for that member.

In the present study there were two attempts to obtain inter-observer reliability estimates. In the first, chi-square tests for independence of distributions were applied to

distributions of scores obtained from two scorers, one blind and one familiar with the hypotheses. In this instance, phi-prime coefficients obtained for each group were of an acceptable level (Mean = .141; SD = .025).² However, subsequent analyses of variance taking raters as repeated measures revealed that three response categories had significant rater by identity status interactions, presumably due to a scoring bias with respect to the non-blind rater. In order to correct for this, the non-blind rater was eliminated and a new, blind scorer employed to provide a third set of observations. The data presented here are thus the product of two blind scorers, inter-rater reliabilities for whom will be presented with the substantive results.

The 'Defining Issues Test' (D.I.T.; Rest, 1973) is used in conjunction with the interaction process analysis. It serves, not as a dependent measure, but as a problem solving task in the group interactions. It was hypothesized that in order for individual differences (re. identity statuses) to become manifest the task must carry some personal relevance for the subjects; that is, the subjects must be confronted with some content area to get intrigued with, defensive about etc. Issues related to moral judgements and proper conduct were felt, in light of previous theory and research, to meet this criterion.

²

A low chi-square value indicates that a distribution of responses across the Bales' categories was not dependent upon the particular rater involved.

The D.I.T. consists of 3 moral dilemmas (see Appendix 2), each followed by 12 statements defining the issues presented by the dilemma in various ways. The standard administration of the test involves having the subject rate and rank the 12 statements in terms of their importance in resolving the dilemma in order to assess level of moral maturity. In the present study each group of subjects was asked to arrive at a consensus as to the ordering of the statements. Since it is the behaviorally idiosyncratic styles in which the subjects arrive at the consensus, rather than the ordering of the statements per se, that is of interest, previous validity and reliability data are of little consequence for this study. Reliability coefficients and validity studies have been reported in the test manual (Rest, 1974) and elsewhere (Rest, 1975), however.

Procedure

The study was conducted over two sessions. In the first, subjects received the Identity Status Interview and a cognitive measure. The interviews were administered by one of three trained interviewers (2 female, 1 male) and tape recorded for subsequent scoring. Before initiating the interview the subject was read the following statement from Whiteborne (1979).

Thank you for agreeing to participate in this research. We hope that you will find it to be an interesting experience. I will be asking you some questions about your school, family, religion, politics and sex roles. This should take about a half hour or so. I will be tape

recording this interview but I want to reassure you that your answers will be kept confidential. If there are any questions you do not wish to answer, or if you wish to discontinue the interview, you may feel perfectly free to do so.

After this session the subject was paid \$6.00 and told that he would be contacted shortly to arrange a time to participate in a second session of the experiment.

The second session, involving groups of 3 or 4 subjects, was held approximately two weeks after the first. On arrival the subjects were ushered into a comfortable room containing three or four chairs forming either a triangle or square respectively. The chairs were situated approximately one meter equidistant from one another. Subjects were seated and told not to converse between themselves until cued to do so by the experimenter. In order to video-tape the interactions for later scoring, four television cameras, noticeable, but not conspicuously so, were located in the upper corners of the room. When all subjects were seated they were told the nature of the exercise (a verbatim transcript of the instructions is given in Appendix 3); that is, that they would be discussing socially oriented problems in order to arrive at a consensus as to a rank ordering of the issues felt to be most important in the protocol. The experimenter also took the subjects through a sample problem (see Appendix 2) so as to insure that they understood what was expected of them. Three dilemmas were provided the subjects and they were told that the interactions

would last about 30 minutes, although it was emphasized that there was no time limit for solving individual problems. The experimenter was not present in the room for the duration of the interaction.

After completing the task the subjects were thanked and told that, if they wished, debriefing letters would be sent to them when all subjects had been run.

RESULTS

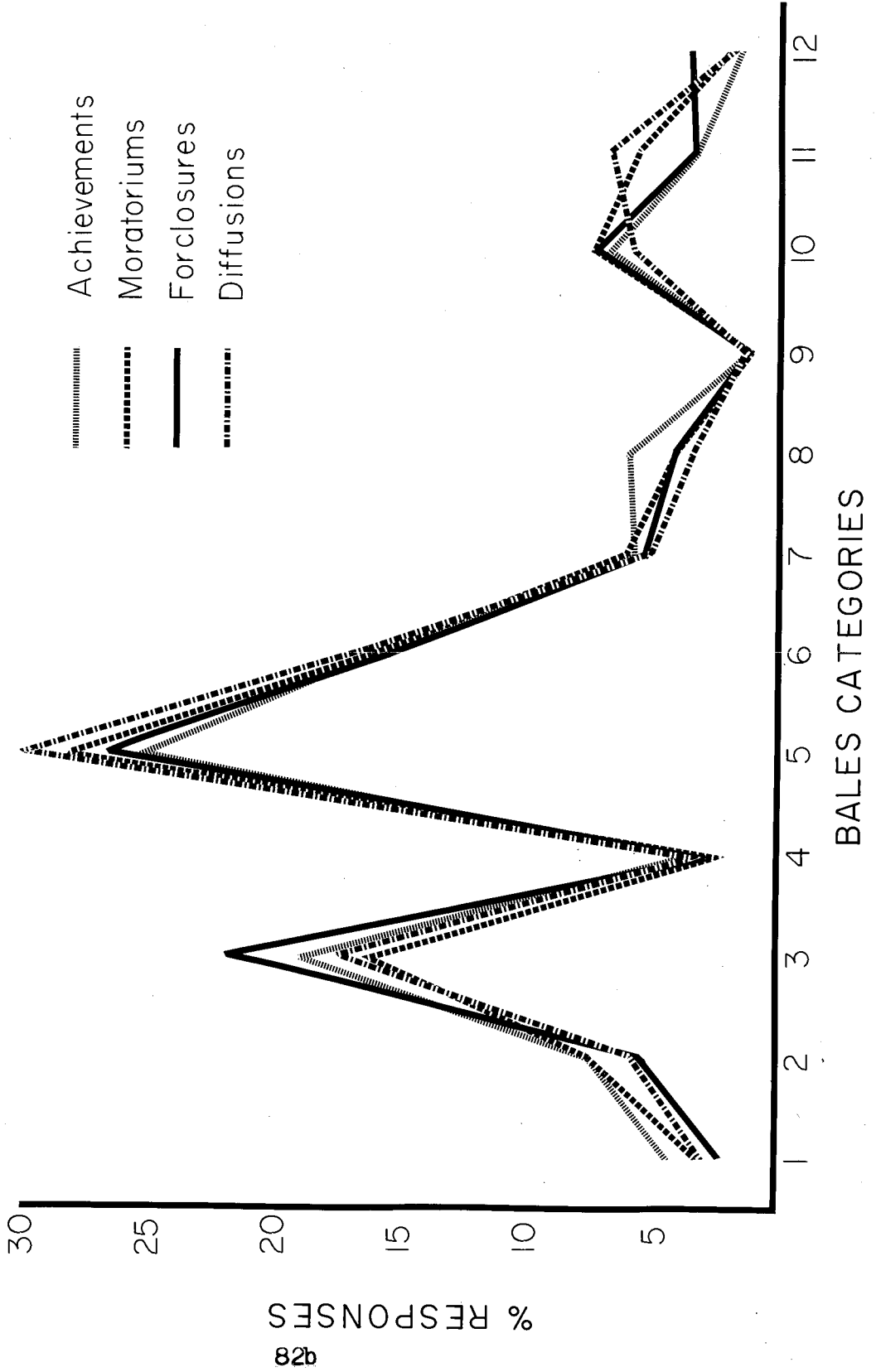
Figure 1 presents graphically the interaction profiles of the identity statuses. The means and standard deviations appear in Table 3. The following analyses are aimed at separating out the variance due to raters, groups and individual differences so as to ascertain the extent to which these 'ideal-typical' plots of the interactive styles of the identity statuses are indeed distinct.

Methodology Check. Repeated measures analyses of variance, taking the two raters as the repeated measures, were performed on the fourteen dependent variables. The results appear in Tables 4 through 17. Of importance here are the rater main effects, the rater by group interactions and the rater by status interactions. It is apparent that the two raters were at considerable variance regarding their scoring criteria on seven of the categories and one of the indices (Shows Solidarity, Releases Tension, Agrees, Gives Opinion, Gives Orientation, Asks

Figure 1

Interaction Profiles of the Four Identity Statuses

Figure 1



for Opinion, and Disagrees all differ at $p < .001$; the Relative Inquiry index differs at $p < .05$). The analyses also revealed five rater by group interactions and one rater by status interaction, indicating that raters were differentially sensitive to groups on the Raises Status, Releases Tension, Gives Opinion, Gives Orientation and Asks for Orientation Categories, and differentially sensitive to statuses with respect to the Gives Orientation category. These results would appear to reflect the fact that the raters had no opportunity for personal contact in order to establish mutually acceptable scoring criteria for ambiguous acts or to resolve extreme scoring differences after the fact. This is in addition to the fact that, for lack of time and expertise, the raters were not particularly well trained (according to Bales (1951) criteria) to begin with. As a result, few unambiguous statements regarding the absolute magnitudes of either status or group performance can be generated. However, except for the Gives Orientation category in which a significant rater by status interaction was found, hypotheses concerning the relative performance of the identity statuses remain unconstrained by raters for testing and discussion. The rater by group interactions preclude unqualified statements concerning group effects for the five categories in which these were evident, but statements of this type are of minimal concern here.

Group Effects. Styles of interaction for which group main

effects and group by rater interactions were found include Shows Solidarity, Releases Tension, and Asks for Orientation. Interpretations of group effects for these categories are thus difficult to assess and, as indicated above, will not be pursued here. More parsimonious are the significant group main effects for Agrees, Disagrees, Shows Antagonism and the index of Expressive-Malintegrative Behavior, where there is no rater contamination. The index of Expressive-Malintegrative Behavior evinces a group effect primarily because the former three categories all contribute to its variance. As these three categories all represent negative or positive reactions a straight-forward interpretation of these results suggests that, for whatever reasons, some groups are more positively toned than are others. This result would seem to be a relatively status-independent phenomenon, although the unbalanced nature of the design precludes a strong conclusion to this effect. A more conservative conclusion is that, in addition to the effects of raters, the group effects further attenuate the possibility of considering identity status performance in terms of absolute response magnitudes.

Status Effects. Significant mean differences between the identity statuses were found with respect to the following five styles of interaction: Shows Solidarity, Releases Tension, Asks for Opinion, Shows Tension and Shows Antagonism. Significant differences were also found on the indices of

Expressive-Malintegrative Behavior and Relative Inquiry, a not surprising occurrence considering the extent to which these indices share variance with the former categories. That there was no significant status effect for the Gives Opinion category indicates that the second hypothesis (i.e., that identity achievements would exhibit a greater proportion of expressed opinions than would identity diffusions) was not supported. In the present study these results are interpretable only in light of two qualifications; they are revealed after the variance attributable to groups has been accounted for, and, because of the unbalanced design, there is no term for a group by status interaction, this variance being pooled with the residual.

Table 3

Means and Standard Deviations for the Four Identity Statuses on the Bales Categories

		Achievement	Moratorium	Foreclosure	Diffusion
1	M	4.366	3.182	2.333	2.950
	SD	2.819	1.585	0.859	1.495
2	M	7.467	7.545	5.433	5.775
	SD	3.805	4.065	4.452	4.309
3	M	19.033	16.318	21.867	17.500
	SD	6.263	4.064	12.285	5.855
4	M	3.367	2.455	2.900	3.400
	SD	2.395	1.214	1.478	1.997
5	M	25.133	28.273	26.667	29.850
	SD	6.659	8.183	5.492	5.079
6	M	16.000	15.864	15.400	16.200
	SD	5.036	4.377	4.603	6.313

Table 3 (continued)

		Achievement	Moratorium	Foreclosure	Diffusion
7	M	5.700	6.091	5.334	5.125
	SD	3.104	2.558	1.729	2.580
8	M	6.000	4.182	4.267	3.475
	SD	2.699	2.148	2.267	1.682
9	M	1.200	1.136	1.233	1.275
	SD	0.316	0.323	0.417	0.499
10	M	6.833	7.455	7.333	5.925
	SD	2.980	4.156	4.341	2.672
11	M	3.200	5.591	3.300	6.750
	SD	3.881	4.449	2.520	4.210
12	M	1.567	2.000	3.633	1.875
	SD	0.842	1.628	2.482	1.723

Table 4
Analysis of Variance for Shows Solidarity

Source of Variation	SS	df	MS	F Ratio
Group	254.916	16	15.932	5.29***
Status	54.610	3	18.203	6.05**
Residual	123.390	41	3.009	
Rater	216.524	1	216.524	84.07***
Rater X Group	196.464	16	12.279	4.77***
Rater X Status	5.899	3	1.967	0.76
Residual	105.600	41	2.576	

** p<.01

*** p<.001

Table 5
Analysis of Variance on Shows Tension Release

Source of Variation	SS	df	MS	F Ratio
Group	1629.855	16	101.866	10.68***
Status	97.001	3	32.334	3.39*
Residual	391.207	41	9.542	
Rater	53.961	1	53.961	14.93***
Rater X Group	214.511	16	13.407	3.71***
Rater X Status	24.057	3	8.019	2.22
Residual	148.152	41	3.613	

* p<.05

*** p<.001

Table 6
Analysis of Variance for Agrees

Source of Variation	SS	df	MS	F Ratio
Group	3028.184	16	189.261	1.98*
Status	508.328	3	169.443	1.77
Residual	3925.922	41	95.754	
Rater	464.262	1	464.262	39.52***
Rater X Group	208.636	16	13.040	1.11
Rater X Status	17.156	3	5.719	0.49
Residual	481.594	41	11.746	

* $p < .05$

*** $p < .001$

Table 7
Analysis of Variance for Gives Suggestion

Source of Variation	SS	df	MS	F Ratio
Group	124.100	16	7.756	1.15
Status	29.086	3	9.695	1.44
Residual	276.497	41	6.744	
Rater	0.808	1	0.808	0.67
Rater X Group	21.544	16	1.347	1.12
Rater X Status	3.101	3	1.034	0.86
Residual	49.482	41	1.207	

Table 8
Analysis of Variance for Gives Opinion

Source of Variation	SS	df	MS	F Ratio
Group	1680.280	16	105.017	1.58
Status	391.991	3	130.664	1.96
Residual	2727.093	41	66.514	
Rater	3778.778	1	3778.778	264.17***
Rater X Group	503.093	16	31.443	2.20*
Rater X Status	27.271	3	9.090	0.64
Residual	586.479	41	14.304	

* $p < .05$

*** $p < .001$

Table 9
Analysis of Variance for Gives Orientation

Source of Variation	SS	df	MS	F Ratio
Group	1125.195	16	70.325	1.38
Status	39.106	3	13.035	0.26
Residual	2091.019	41	51.000	
Rater	1179.411	1	1179.411	131.000***
Rater X Group	395.121	16	24.695	2.74**
Rater X Status	109.650	3	36.550	4.06*
Residual	369.142	41	9.003	

* $p < .05$

** $p < .01$

*** $p < .001$

Table 10
Analysis of Variance for Asks for Orientation

Source of Variation	SS	df	MS	F Ratio
Group	413.061	16	25.816	3.16**
Status	19.876	3	6.625	0.81
Residual	335.165	41	8.175	
Rater	10.501	1	10.501	2.91
Rater X Group	154.128	16	9.633	2.67**
Rater X Status	10.807	3	3.602	1.00
Residual	148.068	41	3.611	

** $p < .01$

Table 11
Analysis of Variance for Asks for Opinion

Source of Variation	SS	df	MS	F Ratio
Group	170.210	16	10.638	1.17
Status	115.321	3	38.440	4.23*
Residual	372.929	41	9.096	
Rater	94.840	1	94.840	37.85***
Rater X Group	64.276	16	4.017	1.60
Rater X Status	5.520	3	1.840	0.73
Residual	102.730	41	2.506	

* $p < .05$

*** $p < .001$

Table 12
Analysis of Variance for Asks for Suggestion

Source of Variation	SS	df	MS	F Ratio
Group	4.812	16	0.301	0.86
Status	0.122	3	0.041	0.12
Residual	14.420	41	0.352	
Rater	0.708	1	0.708	3.38
Rater X Group	5.652	16	0.353	1.69
Rater X Status	0.461	3	0.154	0.73
Residual	8.581	41	0.209	

Table 13
Analysis of Variance for Disagrees

Source of Variation	SS	df	MS	F Ratio
Group	823.683	16	51.480	3.71***
Status	58.328	3	19.443	1.40
Residual	569.380	41	13.887	
Rater	98.562	1	98.562	21.10***
Rater X Group	108.851	16	6.803	1.46
Rater X Status	14.693	3	4.898	1.05
Residual	191.515	41	4.671	

*** $p < .001$

Table 14
Analysis of Variance for Shows Tension

Source of Variation	SS	df	MS	F Ratio
Group	453.240	16	28.327	0.96
Status	327.997	3	109.332	3.69*
Residual	1214.545	41	29.623	
Rater	0.290	1	0.290	0.04
Rater X Group	162.488	16	10.156	1.29
Rater X Status	47.372	3	15.791	2.01
Residual	322.169	41	7.858	

* $p < .05$

Table 15
Analysis of Variance for Shows Antagonism

Source of Variation	SS	df	MS	F Ratio
Group	190.243	16	11.890	2.86**
Status	72.747	3	24.249	5.83**
Residual	170.420	41	4.157	
Rater	0.080	1	0.080	0.06
Rater X Group	41.221	16	2.576	1.89
Rater X Status	4.216	3	1.405	1.03
Residual	55.951	41	1.365	

** $p < .01$

Table 16
Analysis of Variance for Expressive-Malintegrative Behavior

Source of Variation	SS	df	MS	F Ratio
Group	1.510	16	0.094	5.39***
Status	0.176	3	0.059	3.35*
Residual	0.718	41	0.018	
Rater	0.012	1	0.012	2.46
Rater X Group	0.139	16	0.009	1.72
Rater X Status	0.026	3	0.009	1.72
Residual	0.208	41	0.005	

* $p < .05$

*** $p < .001$

Table 17
Analysis of Variance for Relative Inquiry

Source of Variation	SS	df	MS	F Ratio
Group	0.152	16	0.010	1.32
Status	0.065	3	0.022	3.02*
Residual	0.296	41	0.007	
Rater	0.009	1	0.009	7.08*
Rater X Group	0.029	16	0.002	1.40
Rater X Status	0.004	3	0.001	0.99
Residual	0.053	41	0.001	

* $p < .05$

Contrasts Among the Statuses. The results of the analyses of variance indicate that the identity statuses cannot be differentiated with respect to the following variables: Agrees, Gives Suggestion, Gives Opinion, Gives Orientation, Asks for Orientation, Asks for Suggestion and Disagrees. In this section we examine specific a priori and post hoc contrasts on those variables which the analyses of variance have indicated to be fruitful; these include Shows Solidarity, Releases Tension, Asks for Opinion, Shows Tension, Shows Antagonism, and the indices of Expressive-Malintegrative Behavior and Relative Inquiry.

The following contrasts take as the dependent variable the means of the scores assigned by the two raters. It is apparent from the analyses of variance, however, that groups are acting as suppressor variables, obscuring potential differences among the statuses. In order to test specific contrasts while eliminating the suppressing effects of group membership, a step-wise multiple regression procedure involving the dummy-coding of group variables and identity status contrasts was employed. Of the possible permutations of the identity statuses for which orthogonal contrasts could be performed, the following three were felt to be most remunerative for blanket testing: 1) Identity Achievements and Moratoriums combined versus Foreclosures and Identity Diffusions combined; 2) Identity Achievements versus Moratoriums, and; 3) Foreclosures versus Identity Diffusions. All sixteen group variables (one

being left out for the mean) were entered in the first stage of the regression analysis and the three orthogonal contrasts were entered in the second. The square roots of the resultant F values for the b weights were taken to be Student t's with 57 degrees of freedom, and these appear in Table 18.

A Scheffe multiple comparison procedure was employed in order to control experiment-wise alpha in the testing of contrasts for which no a priori hypotheses were made. On those variables where such hypotheses were formulated, a Bonferroni critical t procedure was used. With respect to the former category of contrast, it is apparent from Table 18 that persons in the high identity statuses scored significantly higher on the Shows Solidarity and Releases Tension categories than did persons in the low identity statuses. There were no significant differences between the identity statuses on the orthogonal contrasts for Asks for Opinion. Identity Diffusions scored higher on the Shows Tension category than did Foreclosures (albeit with marginal significance). With respect to the Shows Antagonism category, the high identity statuses scored lower than did the low identity statuses, and Diffusions scored lower than did Foreclosures. There were no differences on the orthogonal contrasts for the indices of Expressive-Malintegrative Behavior or Relative Inquiry; with respect to the former result, the hypothesis that persons in the two high identity statuses would exhibit less

Expressive-Malintegrative behavior was not supported.

In order to more accurately specify the sources of variance accounting for status differences, a number of non-orthogonal comparisons were computed using the same dummy-coding regression procedure described above. The methods for controlling experiment-wise alpha are likewise equivalent. The results of these analyses appear in Table 19.

Where no differences among the statuses for Asks for Opinion were observed with respect to the orthogonal contrasts, it is apparent from Table 19 that Achievements scored significantly higher than did the other three statuses combined on this variable. With respect to Shows Tension, there is a marginally significant difference between the committed statuses and the uncommitted statuses, the latter showing more tension than the former. The difference between Foreclosures and the other three statuses combined on Shows Antagonism is highly significant, a result which would appear to account for the differences observed in the two significant orthogonal contrasts on this variable. On the index of Expressive-Malintegrative Behavior a significant difference between the statuses is evinced when Achievements are contrasted with Moratoriums, Foreclosures and Diffusions combined, Achievements exhibiting proportionately less behavior of this type. Our hypothesis that Achievements would score higher than Foreclosures on the index of relative inquiry was not supported, although, when

Foreclosure are combined with Moratoriums and Diffusions,
Achievements do appear to score highest on this index.

Table 18

Orthogonal Contrasts Among the Identity Statuses

	AM vs FD	A vs M	F vs D
Shows Solidarity ¹	3.98***	.69	1.24
Releases Tension ¹	3.07**	.20	.87
Asks for Opinion ¹	2.14	2.39	.54
Shows Tension ¹	.73	1.28	2.82*
Shows Antagonism ¹	2.93**	.70	3.07**
Expressive Malintegrative ²	1.95	2.02	.84
Relative Inquiry ²	1.93	1.65	.99

¹ t-values evaluated against Scheffe critical F statistics

² t-values evaluated against Bonferroni critical t statistics

* marginally significant at $p < .06$

** $p < .05$

*** $p < .01$

Table 19

Selected Non-Orthogonal Contrasts Among the Identity Statuses

	A vs MFD	AF vs MD	F vs AMD	A vs F
Asks for Opinion ¹	3.41***			
Shows Tension ¹		2.79*		
Shows Antagonism ¹			4.01****	
Expressive-Malint. ²	2.96**			
Relative Inquiry ²	2.62**			1.93

¹ t-values evaluated against Scheffe critical F statistics

² t-values evaluated against Bonferroni critical t statistics

* marginally significant at $p < .07$

** $p < .05$

*** $p < .025$

**** $p < .01$

Discriminant Analysis. A step-wise discriminant analysis using the 12 Bales categories as predictors of identity status was performed. For this analysis there were no terms for either raters or groups; scores on the predictor variables were collapsed over raters and group effects were ignored. Using a partial F to enter criterion of 4.00, the procedure selected Shows Antagonism, Agrees and Asks for Opinion, in that order, as the best set of predictors for identity status membership. The classification function coefficients appear in Table 20.

Identity achievements and foreclosures seem to have been discriminated on the basis of high weightings relative to the other statuses for their performance on Agrees and Asks for Opinion. A high relative weighting on Shows Antagonism also appears to differentiate foreclosures from the other three statuses. On all three variables identity diffusions are distinguished by exhibiting particularly low relative weights, and only moratoriums seem to show no really discernable pattern on the three variables.

Table 20

Classification Function Coefficients

Status =	Achiev.	Morat.	Forec.	Diffus.
Agrees	0.90529	0.78519	1.06768	0.78195
Asks for Opinion	2.55334	2.01543	2.46447	1.85949
Shows Antagonism	2.91775	2.71181	3.94651	2.64649
(Constant)	-19.947	-14.719	-25.487	-13.940

Table 21

Discriminant Analysis Classification Results

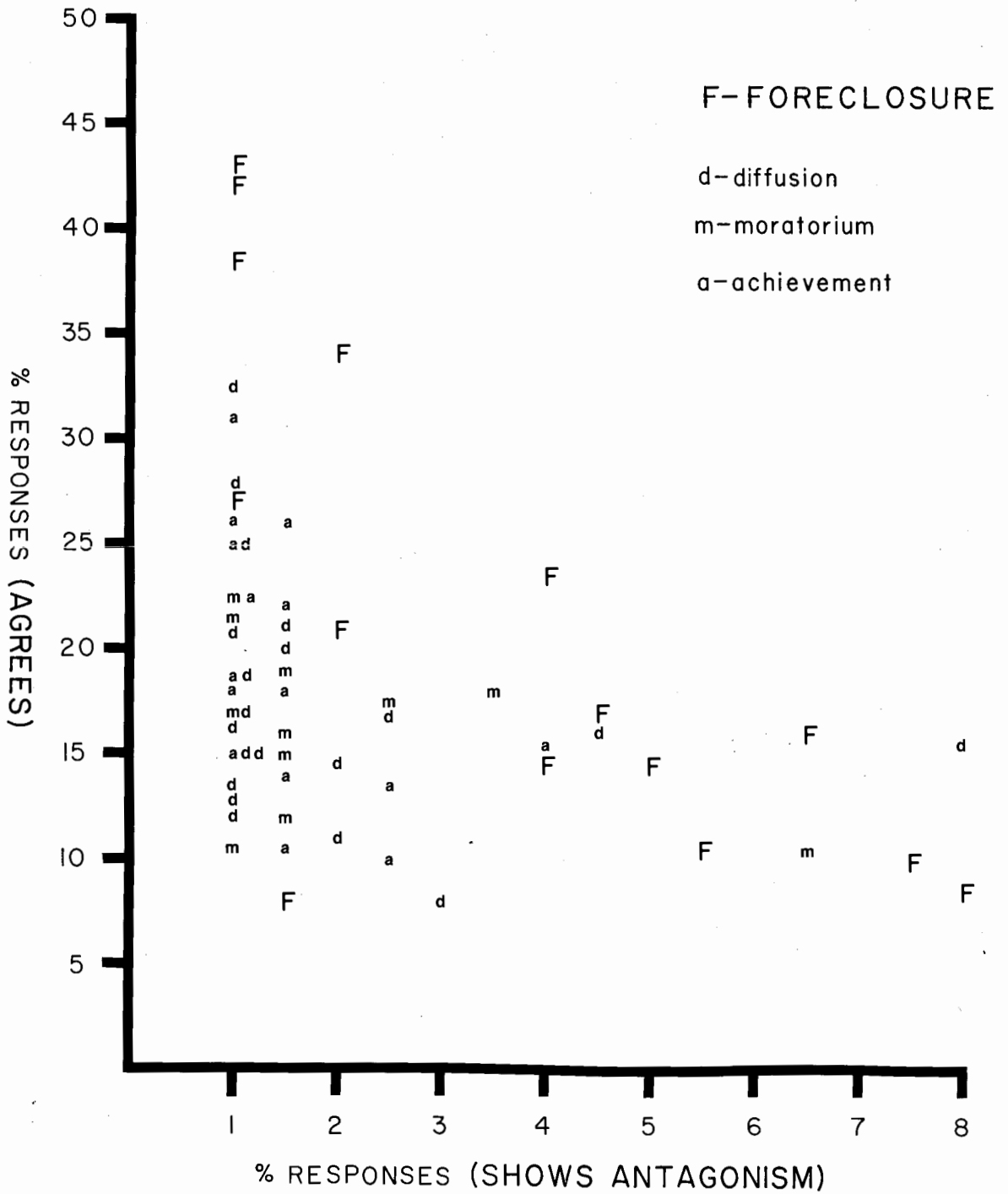
Actual Group	Predicted Group Membership			
	Achiev.	Morat.	Forec.	Diffus.
Achievement	9(60.0%)	1(6.7%)	2(13.3%)	3(20.0%)
Moratorium	3(27.3%)	2(18.2%)	1(9.1%)	5(45.5%)
Foreclosure	1(6.7%)	0(0.0%)	12(80.0%)	2(13.3%)
Diffusion	3(15.0%)	4(20.0%)	3(15.0%)	10(50.0%)

The failure of Moratoriums to present as distinct on these variables is reflected in an extremely low correct prediction rate for this status, as is evident from Table 21. Indeed, four times more Moratoriums were classified as Diffusions and Achievements than were correctly classified. Better hit-rates were obtained for Achievements (60.0% correctly classified) and Diffusions (50.0% correctly classified), while Foreclosures are the most reliably predicted of the statuses with 80.0% of them being correctly classified. In addition, Foreclosures would seem to have least in common with Moratoriums, as none of them were misclassified as being a member of that status. Overall, the percentage of cases correctly classified was a mediocre 54.10%. This is not surprising, however, given that the large amount of variance attributable to groups was completely neglected in this analysis. On the other hand, considering the small sample size, and the fact that the weights have not been cross-validated, this hit-rate is probably an unrealistic upper limit and should be looked upon with some skepticism, unspectacular though it is.

Of considerable interest is the finding that Foreclosures are distinguished by high weights relative to the other statuses on both Shows Antagonism and Agrees, two variables which would intuitively be expected to correlate negatively, and which, in fact, they do ($r=-0.533$, $p<.01$). Recognizing that an indeterminate portion of this negative correlation is an artifact of the forced proportionality of the two variables,

FIGURE 2

SCATTERPLOT OF THE IDENTITY STATUSES ON
"AGREES" AND "SHOWS ANTAGONISM"



these two observations nevertheless led us to speculate on the nature of the distribution of Foreclosures when plotted against these variables, and a scatterplot of this distribution, and the distributions of the other statuses, is presented in Figure 2. It is apparent from the scatterplot that the Foreclosures do not form a homogenous group relative to the other statuses who, as a whole, appear as low on Shows Antagonism and low to moderate on Agrees.³ Rather, there appear to be two more or less distinct subsets of Foreclosures, one of which scores low on Shows Antagonism and very high on Agrees, and one of which scores low on Agrees and high on Shows Antagonism.

³ It is recognized that this finding casts in doubt the assumption of homogeneity of covariance upon which the discriminant analysis was based. For descriptive purposes, however, this is not anticipated to be a major problem.

DISCUSSION

This investigation has attempted to assess the relationship between ego identity formation and style of social interaction, a relationship in which these two variables are presumed to have reciprocally reinforcing effects on one another. That is, the ability of the ego to sustain its structural integrity in the face of potentially disconfirming information was expected to be reflected in particular behavioral modes of dealing with that information and/or its source. Conversely, style of interaction is presumed to maintain and enhance the structural properties which generated it. Based on the evidence examined here, support for these notions was mixed.

Most conspicuously, not one of our three hypotheses was supported as formulated; Identity Achievements were not proportionately more inquisitive regarding others' suggestions, opinions and information than were Foreclosures; they were not proportionately more opinionated than were Identity Diffusions; and, low identity status individuals did not exhibit proportionately more Expressive-Malintegrative behavior than did high identity status individuals. Each of these results will be examined in turn.

With regard to the first finding, it turns out that although Achievements were not more inquisitive than were Foreclosures as an isolated status, they did appear as the most inquisitive when compared to all the other statuses combined.

From this perspective, it would appear as though a tendency to probe the other members' ideas is facilitated by a secure sense of self and an open cognitive system which holding enduring but flexible (for having gone through a crisis) commitments implies. Identity Diffusions, lacking both crisis and commitment, would hardly go out of their way to provoke a confrontation with themselves which they had so far managed to elude by soliciting others' provocative ideas. Moratoriums, for perhaps the opposite reason of being presently overloaded with alternative perspectives, would be loath to overwhelm even more their conceptual systems by soliciting for additional perspectives. Foreclosures, for want of a crisis period, refrain from soliciting others' ideas because they are so invested in their vicariously adopted commitments that to do so would be to invite considerable cognitive dissonance.

Contrary to the second hypothesis, Identity Diffusions appeared little concerned about making themselves transparent to others through voicing their opinions, at least to the degree that they collectively hold the highest mean score in this category. Perhaps this is because, in as much as they seem to lack the cognitive or motivational resources necessary to examine and confront their own 'selves', they would be at a loss to project either this ability, or the motivation for doing so, onto others, and would thus feel little threatened by the potential responses of others to their utterances. In this

study, and as noted elsewhere (Marcia, 1976b), Diffusions expressed numerous ideas but there was a distinct lack of depth to them. Their ideas seemed not to be articulated in a logical or cohesive structure of argumentation; they tended, rather, to be ejaculated impulsively and were ill-systematized in consequence. Though not more opinionated than Diffusions, Achievements exhibited particularly well organized ideas with what appeared to be a conscious attempt at cogency, an attempt which, at its extreme, verged on a recalcitrant preoccupation with arriving at the solution.

Though the two low identity statuses combined did not exhibit a significantly higher proportion of Expressive-Malintegrative behavior than did the two high identity statuses combined, when the Moratoriums were combined with the low identity statuses a significant difference between Identity Achievements and this subset was revealed. The failure of Moratoriums to form a homogeneous subset with Identity Achievements on this variable is most likely due to their having received relatively high scores on the Shows Tension category, which is one component of the Negative Reactions cluster forming the numerator of the index. Because the variables for which significant differences remain all contribute to the index of Expressive-Malintegrative behavior they shall be examined individually.

Identity Achievements and Moratoriums did perform as a homogeneous subset relative to the low identity statuses on two of the variables constituting Positive Reactions; that is, on Shows Solidarity and on Releases Tension. With regard to the former, having gone through, or being presently in, a crisis period apparently implies the cognitive and motivational resources to enter into an empathic and supportive relationship with the other. One must first be well on the road to forming an identity of one's own in order to promote the autonomy of the other by reinforcing the expression of their beliefs and commitments. Further, the tendency for Achievements and Moratoriums to behave in a more personal, comradely manner in the interactions might be a reflection of the ability of these statuses to enter into more intimate interpersonal relationships outside the laboratory (Orlofsky et al., 1973).

As mentioned, the high identity statuses also showed more behavior indicative of releasing tension in the interactions, that is, joking, laughing and expressing positive affect. Marcia (1979) has previously commented on the sense of humor exhibited by Identity Achievements but it is not obvious why Moratoriums, who are also high on Shows Tension, should distinguish themselves on this measure. One might expect that, because of the intensity of their own identity struggles, Moratoriums would engage with more earnest, and therefore with more subdued affect in the interactions. If techniques for reducing tension are seen

as normative social skills developed in frequent encounters of the type we have fabricated, however, it is possible to view this behavior as simply reflecting more experiences of this kind. That is, we suggest that for Identity Diffusions and Foreclosures these interactions were, if not unprecedented, at least far from being representative of their day to day experience. Engaging in discourse over controversial subjects with peers who subscribe to different belief systems would probably be a matter of marked indifference to Diffusions and something to be avoided like the plague for Foreclosures. For Moratoriums, and for at least some period, for Achievements, however, it is probable that interactions of this type were very frequent occurrences, sought out if for no other reason than as opportunities to work through their own identity issues. It may be, then, that the relatively high occurrence of tension reducing behavior is a result of a familiarity with the normative expectations for such behavior typically displayed in actions of this type.

One parsimonious, if only marginally significant, finding revealed in this study is that persons in the uncommitted statuses were found to exhibit more behavior indicative of tension than were persons in the committed statuses. The stable belief systems characterizing the latter group seem to have provided them with a frame of reference within which they could coordinate their own ideological positions vis a vis those of

the other members of the group and act accordingly with little trepidation. The precise nature of the tense behavior appeared somewhat different for Diffusions and Moratoriums, however. Contrary to the findings of other studies (Donovan, 1975; Bob, 1968), Diffusions did not, in general, respond to the stress of the interactions by withdrawing from the field. This is also evinced by their relatively high proportion of expressed opinions. Rather, a capsule description of their behavior would be a kind of 'nervous agitation', expressed variously as inappropriate laughter, fidgetiness, overexcitement in debate, impatience etc. These behaviors may indicate a lack of cognitive and emotional resources necessary to engage with peers on controversial issues, an interpretation consistent with previous research indicating Diffusions' perception of a lack of parental support. One reason why Diffusions failed to exhibit more withdrawal-type behavior in the present study may relate to the experimental demands of the situation. The instructions, for example, made it clear that a consensus among all participants was necessary to conclude an interaction sequence and the Diffusion was certainly under some, quite often explicit, pressure from the other participants to contribute to such a resolution. The more he might attempt to withdraw, the more attention and pressure was focussed upon him, negating the original motivation for withdrawing and perhaps contributing to those manifestations we have noted above.

The tension exhibited by Moratoriums seemed to be predominantly frustration related; that is, attempts to convey their ideas to others were perceived by them to be largely unsuccessful and they appeared flustered in consequence. This appeared not so much to be a function of an inability to articulate their ideas as it was their expressing unorthodox views which required more sophisticated and convoluted chains of reasoning, a task for which the other statuses seemed either to lack the patience or the intellectual resources. Ever-vigilant, Moratoriums easily picked up on this and responded with frustration mixed with withdrawal.

Of most interest in the present study was the emergence of two fairly distinctive interactional patterns on the part of Foreclosures, one subset of which scored high on Shows Antagonism and one of which scored high on Agrees. Behaviors representative of 'antagonistic' Foreclosures ranged from relatively mild techniques for asserting their own autonomy, such as steamrolling their opinions and interrupting the expression of others' opinions, to more aggressive acts of which sarcasm, condescension and self-righteous negativism are representative. This profile may provide one answer to the question posed in the introduction concerning what means a Foreclosure utilizes to successfully complete four years of college encountering views different from his own yet continuing to hold tightly to his opinions. A cognitive balance

interpretation would suggest that by either deflating the status of the source of dissonant information or, by fiat, setting his opinions beyond reproach of the group, the Foreclosure may just render the content of the incoming information personally discountable. This interpretation gets some support from, and perhaps reflects the interpersonal concomitants of, research showing Foreclosures to be cognitively rigid (Marcia, 1966, 1967), cognitively constricted under stress (Bob, 1968) and prone to invoke perceptual defences in the face of conflicting information (Mahler, 1969).

The 'acquiescing' Foreclosures pose a different problem. On the one hand it is feasible to hypothesize that they are 'developmental' Foreclosures who are presently in a transition to another status. Except for this one reversal, however, there are no other interaction variables on which this group departs at all significantly from the other Foreclosures, and on their identity interviews there were no anomalies that would be indicative of a particularly strong recessive assignment. More to the point is a consideration of what purpose the use of wholesale agreement might serve for a Foreclosure. A tempting explanation is that blanket concurrence provides a means of not getting personally involved in the interactions, a tactic which may be an expedient route when one is simply not prepared to exert the energy to fight for one's ideas. In the latter case one must at least assimilate what has been said and be prepared

for what might be an even more cogent or vociferous argument in the next round. By agreeing forthwith, then, at least the Foreclosure deflects the impact of the information by keeping it at its most superficial, and therefore, discountable level. Peripheral evidence for this interpretation is provided simply in the sheer magnitude of concurrence exhibited by these people. These levels indicate that they were agreeing indiscriminately, and with often contradictory opinions voiced by other members of the group. It is thus hardly likely that their agreements constituted a sincere response to these opinions (i.e., implied a willingness to entertain these ideas as their own). Rather, this tactic is, in consequence, formally equivalent to that of the 'antagonistic' Foreclosures - it is a defensive technique for warding off dissonant information so as to insure against structural accommodation.

The question remains whether we have, in fact, isolated two distinct 'types' of Foreclosures or whether we have merely observed Foreclosures manifesting different types of behavior in this instance. The design of the present experiment is clearly inadequate to give any unequivocal answer to this question, and we feel that only a longitudinal study designed to assess divergences in development would be adequate to the task. But it is even doubtful whether such a study would be warranted on the basis of this data. It is quite conceivable that our subset of 'acquiescing' Foreclosures did not find the content areas

provided for debate to be of that much personal relevance in the first place, and were thus not as motivated for active defensive posturing as were the 'antagonistic' Foreclosures. Thus a study testing the consistency of Foreclosures' reactions over different content areas might be a first step toward determining whether there are two types of Foreclosures.

Our finding that a majority of Foreclosures exhibited at least some behavior interpreted to be autocratic or hostile would appear to contradict the characterization of Foreclosures' interpersonal behavior provided by Donovan (1975). He found them, on the contrary, to be polite, deferential and to exhibit almost no overt hostility, qualities reminiscent of our own 'acquiescing' Foreclosures. It is possible that Donovan's sampling procedure - the voluntary enrolment of liberal arts majors in a course on interpersonal behavior - biased his pool of Foreclosures. There would certainly seem to be something odd about any Foreclosure who would voluntarily enlist in a course where psychological testing, introspective behavior and vulnerability to personal criticism by one's peers were the stated norm. In fact, this would appear to give some credence to the notion of 'acquiescing' Foreclosures as being in a transition to a crisis period. But, in addition to the fact that Donovan draws no such conclusion after an intensive analysis of his own Foreclosures, there are two salient differences between his study and the present one which would also account for the

different observations. First, in the present study the actors were quite anonymous to one another, and therefore relatively deindividuated in comparison to the participants in Donovan's study where they met regularly over 39 weeks and presumably shared a great deal of personal information. The presence of deindividuated subjects, as opposed to subjects familiar with one another and expected to interact closely with each other again, would clearly facilitate authoritarian and aggressive types of behavior (Zimbardo, 1970), especially when the structure of the interactions was such that opportunities for confrontation were maximized to begin with. A second factor contributing to the differences observed between Foreclosures in the two studies is the absence of any a priori identifiable authority figure in the present interactions. In Donovan's study it is likely that the presence of the teacher in the interactions interacted with Foreclosures' authoritarian tendencies (Marcia, 1966, 1967) and strong oedipal ties (Donovan, 1975) to inhibit the direct expression of hostile reactions.

By virtue of the emergence of significant effects for both groups and identity statuses on the index of Expressive-Malintegrative behavior the present study has inadvertently lent some support to the Lewinian formulation that behavior is a function of both the disposition of the person and the environmental context in which it occurs (Lewin, 1935). But,

because of the lack of orthogonality between groups and identity statuses, we were unable to assess the veracity of the strong interactionist claim that the largest amount of variance would be attributable to a person by situation interaction, a claim which might be an interesting question to consider in future studies of this type. Nevertheless, the main effects appear to be salient enough to at least speculate about apart from any possible interaction.

It would appear that as the proportion of negative reactions escalates, all of the identity statuses, including Achievements, rise to the occasion, but, consistent with dispositional trait theory, they do so in a status-specific way. Thus, when the ambience of a group is known beforehand it is possible to predict the statuses from levels of negative behavior, but without such foreknowledge prediction is largely a matter of chance. This was evinced dramatically in the discriminant analysis where, with all the spurious benefits of a foldback procedure, only about 54% of the subjects were correctly classified. Because the physical environment in which the subjects participated was held constant we remain quite ignorant of the situational parameters contributing to the group effects. More pessimistically, we suspect that these parameters are largely uncontrollable and that prediction will remain mediocre at best. That is, it is almost a matter of chance whether an individual in the interaction utters something,

perhaps innocuously, but interpreted otherwise by another participant whose nerve it touches because his evil step-father once used the same intonation, and launches the interaction into an autocatalytic spiral of negative reactions. This observation does not mean that these factors are not susceptible to quantitative treatment, only that such a 'random walk' process presents an analytical problem not to be solved by searching for a systematic class of differences in the usual sense (see Meehl, 1978).

Though by no means a direct test of the theories of Selman and Habermas the results of this study are such that we can offer some modest support for these formulations and, in turn, add to the nomological validity of the identity status paradigm. As noted earlier, for Selman the critical variable determining social-cognitive understanding and, by extension, social role-taking abilities, is the decentering of the ego. Another class of social behavior for which ego decentration is a crucial variable is that of moral judgement as operationalized by Kohlberg (1958). Investigations into the relationship between moral development and the identity statuses have found the high identity statuses to cluster around the post-conventional stages of moral development while the low identity statuses tended to fall within the pre-conventional or conventional stages (Podd, 1973; Rowe, 1980), indicating that the former statuses are more decentered than are the latter. Research examining the

relationship between the identity statuses and the more purely intellectual concomitants of ego decentration (i.e., Piagetian cognitive development), though less than unequivocal, has also lent some support to the hypothesis that the higher identity statuses are more decentered than are the low statuses (Rowe, 1980). Following from these findings the higher identity statuses would be expected to have attained higher levels of social-cognitive understanding and to manifest this understanding in their interpersonal behavior. This expectation was clearly redeemed; with the development of capabilities to coordinate multiple perspectives and to appreciate the normative structure of social interactions the high identity statuses engaged in more pro-social behaviors (i.e., showing solidarity and releasing tension) than did the low identity statuses and Identity Achievements exhibited the smallest overall proportion of negative reactions.

For Habermas an 'ideal speech situation' is approximated when the participating members are interactively competent, the major determinant of which is the degree of repression operative in those members. Donovan (1975) has found the low identity statuses to be more prone to repression than the high identity statuses. Thus the relative lack of repressive tendencies evident in the latter statuses may have allowed them to more freely attempt to enter into a 'pact' with the other members as exhibited in their higher proportion of acts of solidarity and

affection. This is also indicative of a capacity to better meet the sincerity and reciprocity requirements necessary for communication eventuating in an unconstrained consensus. By virtue of their high proportion of 'antagonistic' responses, this subset of foreclosures would appear to be the most repressive of the statuses. It is clear that these acts are completely antithetical to the four reciprocity requirements outlined by McCarthy (1976). Conversely, it would appear that a group of Identity Achievements would come closest to fulfilling the conditions necessary for an ideal speech situation; their low scores on the index of Expressive-Malintegrative behavior and their tendency to probe the opinions of other members make these people the most open to the 'force of the better argument', and, in as much as this implies rational motivation, the most ego autonomous in Habermas' sense.

In sum, although the three substantive hypotheses were not supported, the pattern of results relating the identity statuses and interactive behavior has presented a more or less parsimonious picture. Other studies, however, will be required to pick up many of the loose ends left by the present one. First, the discriminant function weights remain to be cross-validated before the interpretations made with respect to the present sample can attain more than conjectural status. Second, as noted earlier, more research is necessary to substantiate what is perhaps the most interesting finding

revealed in the study, that is, the emergence of two types of Foreclosures. We wonder whether this duality will be directly replicated and, if so, into what other areas of cognitive and interactive functioning it might extend. Third, when the Identity Status Interview has been validated for use with females it would be of interest to see how their interactive behavior compares with what we have observed for males. In order to more confidently interpret their results than we have been able to do here future investigators would have to control for the two glaring methodological flaws encountered in the present study; these are, poor inter-rater reliabilities in the scoring of the Bales' categories, and a lack of complete orthogonality between the groups and the identity statuses. In sharp contrast to the latter caveat, perhaps the most interesting extension of the present research would be a study in which other permutations of the identity statuses were to be examined. What, for example, would interactions composed of only the uncommitted statuses be like, and how would they compare with interactions involving Foreclosures and Identity Achievements? Clearly, a great deal of work remains to be done in this area.

Appendix 1

Identity Status Interview

Introduction:

What year are you in?

Where are you from? Living at home?

How did you happen to come to (name of school)?

Did your father go to college? Where? What does he do now?

Did your mother go to college? Where? What does she do now?

Occupation:

You said you were majoring in ____; what do you plan to do with it?

When did you come to decide on ____? Did you ever consider anything else?

What seems attractive about ____?

Most parents have plans for their children, things they'd like them to go into or do - did yours have any plans like that for you?

How do your folks feel about your plans now?

How willing do you think you'd be to change this if something better came along? (If S responds: "What do you mean by better?") Well, what might be better in your terms?

Religion:

Do you have any particular religious affiliation or preference? How about your folks?

Ever very active in the church? How about now? Get into many religious discussions?

How do your parents feel about your beliefs now?

Are yours any different from theirs?

Was there any time when you came to doubt any of your religious beliefs?
When? How did it happen? How did you resolve your questions? How are things for you now?

Politics:

Do you have any particular political preference?
How about your parents?
Ever take any kind of political action - join groups, write letters, participate in demonstrations - anything at all like that?
Any issues you feel pretty strongly about?
Any particular time when you decided on your political beliefs?
What did you think of the past election?

Sex Role:

I'd like to find out something about how you think and feel about yourself as a male (female). What characteristics do you associate with masculinity? (femininity)

Do you think that there are psychological differences between men and women? If so, what are they? If not, do you see any differences in behavior between the sexes. If so, how do you account for them?

How does all of this apply to you? What difference has it made in things that you do? Can you give me some examples?

Where do you think that your ideas on this came from?

Have they always been pretty much the same?

How about your parents, what do they think. Do you discuss this with them?

Are there any areas of uncertainty remaining for you? What do you think may resolve them?

Can you see your ideas changing substantially in the future or are they pretty stable?

Sexual Intercourse:

Finally, I'd like to ask you about your beliefs regarding your own sexual behavior. (Check on sexual preference and frame questions appropriately.) What are your attitudes concerning sexual intercourse - when do you think its all right? When not?

How do these ideas apply to you yourself? Does it make a difference in what you do? How?

Have you always felt this way? If not, how have your ideas changed?

How about your parents, what do they think?

Do you discuss your views with them?

How likely do you think you are to change your views in the future?

In this interview, we've covered five areas: occupational plans, religious beliefs, political attitudes, sex role attitudes, and personal standards for participating in sexual intercourse. Which of these areas do you think is most important in defining who you are? That is, if you could pick only one area upon which to base your identity, which would you pick? Which would be next in importance? Which is least important? Which is next least in importance?

Appendix 2

Selected Dilemmas from the Defining Issues Test
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*** SAMPLE QUESTION ***

Frank Jones has been thinking about buying a car. He is married, has two small children and earns an average income. The car he buys will be his family's only car. It will be used mostly to get to work and drive around town, but sometimes for vacation trips also. In trying to decide what car to buy, Frank Jones realized that there were a lot of questions to consider. Below there is a list of some of these questions.

If you were Frank Jones, how important would each of these questions be in deciding what car to buy?

- 1) Whether the car dealer was in the same block as where Frank lives.
- 2) Would a used car be more economical in the long run than a new car.
- 3) Whether the color was green, Frank's favorite color.
- 4) Whether the cubic inch displacement was at least 200.
- 5) Would a large, roomy car be better than a compact car.
- 6) Whether the front connibilies were differential.

Problem Number 1

*** ESCAPED PRISONER ***

A man has been sentenced to prison for ten years. After one year, however, he escaped from prison, moved to a new area of the country, and took on the name of Thompson. For eight years he worked hard, and gradually he saved enough money to buy his own business. He was fair to his customers, gave his employees top wages, and gave most of his own profits to charity. Then one day, Mrs. Jones, an old neighbor, recognized him as the man who had escaped from prison 8 years before, and whom the police had been looking for.

Of the following 12 considerations rank the 3 most important in deciding whether Mrs. Jones should report Mr. Thompson to the police and have him sent back to prison.

- 1) Hasn't Mr. Thompson been good enough for such a long time to prove he isn't a bad person?
- 2) Every time someone escapes punishment for a crime, doesn't that just encourage more crime?
- 3) Wouldn't we be better off without prisons and the oppression of our legal systems?
- 4) Has Mr. Thompson really paid his debt to society?
- 5) Would society be failing what Mr. Thompson should fairly expect?
- 6) What benefits would prisons be apart from society, especially for a charitable man?
- 7) How could anyone be so cruel and heartless as to send Mr. Thompson to prison?
- 8) Would it be fair to all the prisoners who had to serve out their full sentences if Mr. Thompson was let off?
- 9) Was Mrs. Jones a good friend of Mr. Thompson?
- 10) How would the will of the people and the public good best be served?
- 11) Wouldn't it be a citizen's duty to report an escaped criminal, regardless of the circumstances?
- 12) Would going to prison do any good for Mr. Thompson or protect anybody?

Problem Number 2

*** DOCTOR'S DILEMMA ***

A lady was dying of cancer which could not be cured and she had only about six months to live. She was in terrible pain, but she was so weak that a good dose of pain-killer like morphine would make her die sooner. She was delirious and almost crazy with pain, and in her calm periods, she would ask the doctor to give her enough morphine to kill her. She said she couldn't stand the pain and that she was going to die in a few months anyway.

Of the following 12 considerations rank the three most important in deciding what the doctor should do.

- 1) Whether the woman's family is in favor of giving her the overdose or not.
- 2) Is the doctor obliged by the same laws as everybody else if giving her an overdose would be the same as killing her?
- 3) Whether people would be much better off without society regimenting their lives and even their deaths.
- 4) Whether the doctor could make it appear like an accident.
- 5) Does the state have the right to force continued existence on those who don't want to live?
- 6) What is the value of death prior to society's perspective on personal values?
- 7) Whether the doctor has sympathy for the woman's suffering or cares more about what society might think.
- 8) Is helping to end another's life ever a responsible act of cooperation?
- 9) Whether only God should decide when a person's life should end.
- 10) What values the doctor has set for himself in his own personal code of behavior.
- 11) Can society afford to let everybody end their lives when they want to?
- 12) Can society allow suicides or mercy killing and still protect the lives of individuals who want to live?

Problem Number 3

*** STUDENT TAKE-OVER ***

At Harvard University a group of students, called the Students for a Democratic Society (SDS), believe that the university should not have an army ROTC program. SDS students are against the war in Viet Nam, and the army training program helps send men to fight in Viet Nam. The SDS students demanded that Harvard end the army ROTC training program as a university course. This would mean that Harvard students could not get army training as part of their regular course work and not get credit for it towards their degrees.

Agreeing with the SDS students, the Harvard professors voted to end the ROTC program as a University course. But the President of the University stated that he wanted to keep the army program on campus as a course. The SDS students felt that the President was not going to pay attention to the faculty vote or to their demands.

So, one day last April, 200 SDS students walked into the university's administration building, and told everyone else to get out. They said that they were doing this to force Harvard to get rid of the army training program as a course.

Of the following twelve considerations rank the 3 most important in deciding whether the students should have taken over the administration building.

- 1) Are the students doing this to really help other people or are they doing it just for kicks?
- 2) Do the students have any right to take over property that doesn't belong to them?
- 3) Do the students realize that they might be arrested and fined, and even expelled from school?
- 4) Would taking over the building in the long run benefit more people to a greater extent?
- 5) Whether the President stayed within the limits of his authority in ignoring the faculty vote.
- 6) Will the takeover anger the public and give all students a bad name?
- 7) Is taking over a building consistent with principles of justice?
- 8) Would allowing one student take-over encourage many other

student take-overs?

9) Did the President bring this misunderstanding on himself by being so unreasonable and uncooperative?

10) Whether running the University ought to be in the hands of a few administrators or in the hands of all the people.

11) Are the students following principles which they believe are above the law?

12) Whether or not university decisions ought to be respected by students.

Appendix 3

Instructions to Subjects - Part II

"Thank you for finding time to make it to the second session of our study. In this session you are to work as a group in solving some socially oriented problems. As you will see there are no right answers to these problems in the way that there are right answers to math problems. The idea is that through discussion amongst yourselves you will be able to arrive at a mutually agreed upon answer to the problems. There are no right answers beyond your own consensus.

*** Sample dilemmas were handed out to the subjects at this point *** (see Appendix 2) ***

"Here is a story as an example of what you will be doing. I will read it aloud....

The problem, as you can see, is to decide what car Frank should buy. Such a problem will be stated explicitly at the end of each story you will be discussing."

"You will notice that following the story is a list of important questions a person would have to consider in making a final decision. As you can see, there are six such questions in this example.... I will read them aloud...."

"Your task would be to order these issues in their order of importance in deciding what car to buy. Thus in this sample question someone might consider #1, whether the car dealer was on the same block as where Frank lives, as being not very important in deciding what car to buy. They may consider #2 to be more important, as they would #5. Number 6 might sound like nonsense and would thus be judged to be of little importance. But I want to emphasize that there are no right or wrong answers."

"The problems you will be dealing with will have 12 such issues for consideration. You are simply to choose and rank the 3 most important issues from the 12. Once you have arrived at a consensus as to 1st most important, 2nd most important and 3rd most important you are to carry on to the next problem. Once you

have ranked the three issues most important in deciding about the problem you need not answer the problem itself....in this example, you would not decide what type of car Frank should buy."

"I want to emphasize that although you will have a half hour to work on these problems there is no time limit for individual problems....thus you should not rush through them and it is quite alright if you spend the entire half hour on the first problem."

"As you have probably surmised, this exercise will be video-taped- but once again I want to reassure you that your responses will be kept strictly confidential. They will be coded and used only for data analysis."

"Do you have any questions?"

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